May 1st, 3:30 PM - 5:00 PM

Movements of sub-adult Chinook salmon, Oncorhynchus tshawytscha, in Puget Sound, Washington, as indicated by ultrasonic tracking

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Speaker
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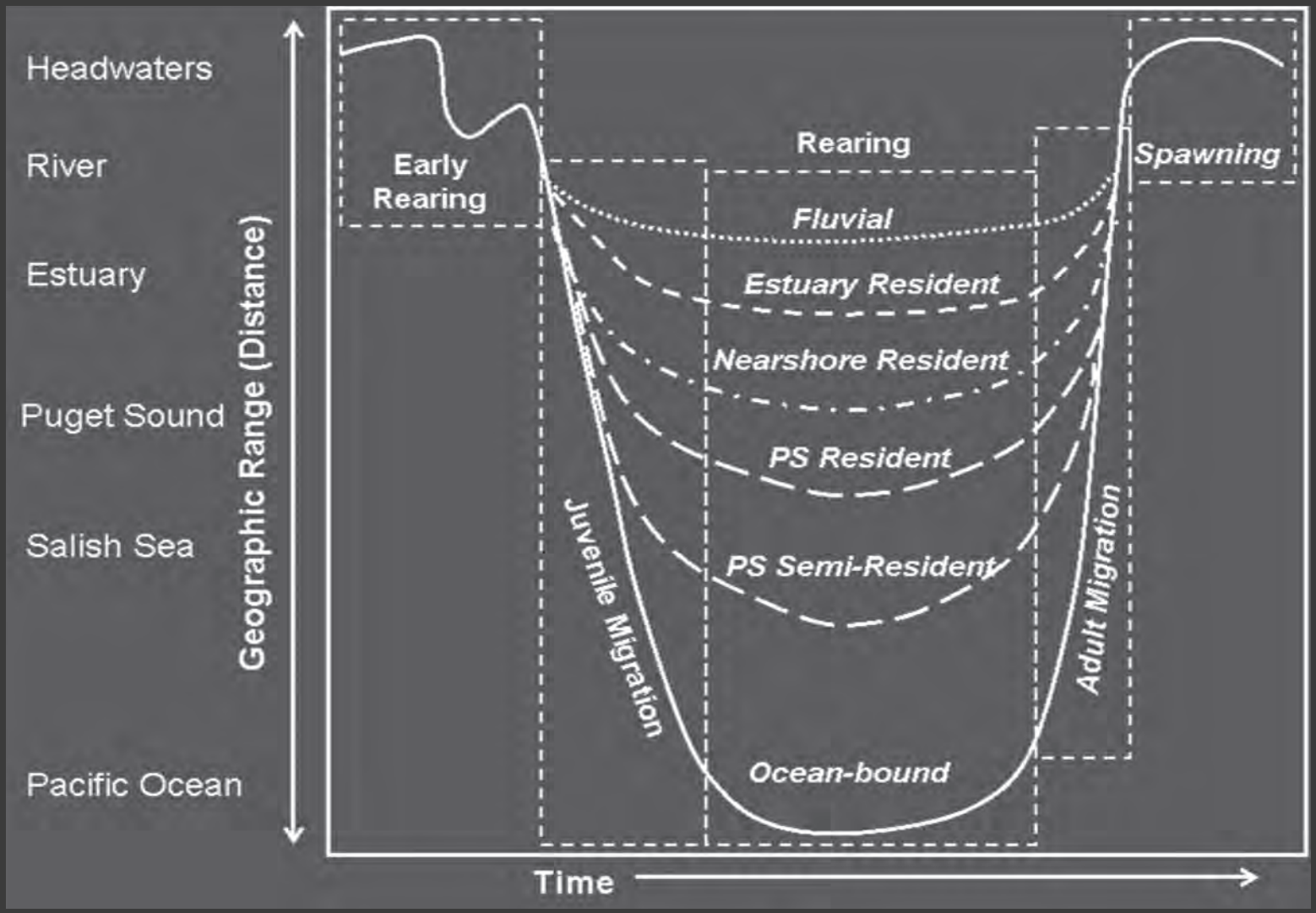
MOVEMENTS OF SUB-ADULT SALMON IN THE SALISH SEA

Anna Kagley, Joe Smith, Kurt Fresh, Thomas Quinn,
Dawn Spilsbury-Pucci, Stephanie Moore,
Joshua Chamberlin & Fred Goetz

RESIDENT OR MIGRANT?



Jessica Rohde

CHINOOK AND COHO SALMON:

Differences between resident and migrant

Resident movements on a spatial scale:

1. Puget Sound
2. Between basins
3. Within basin habitat-use
4. Vertical

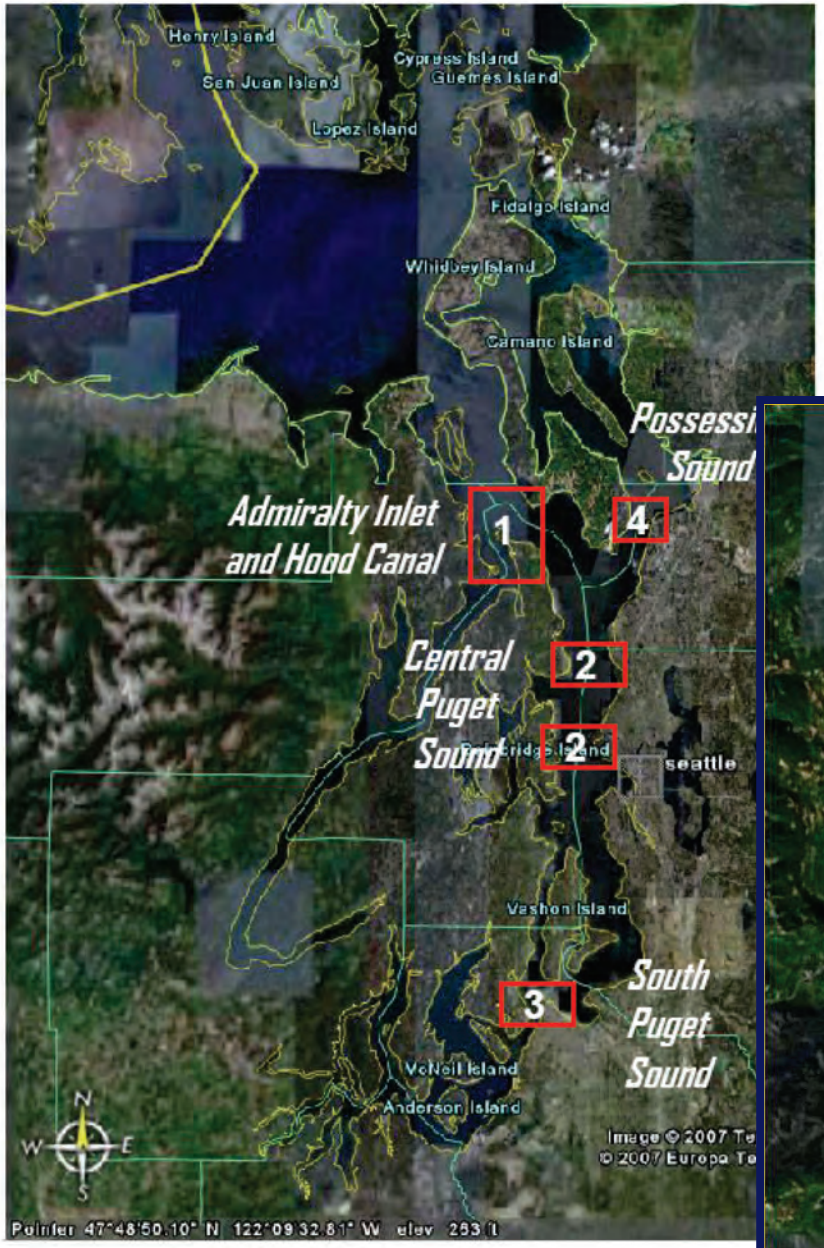
Movements of individual residents on temporal scales:

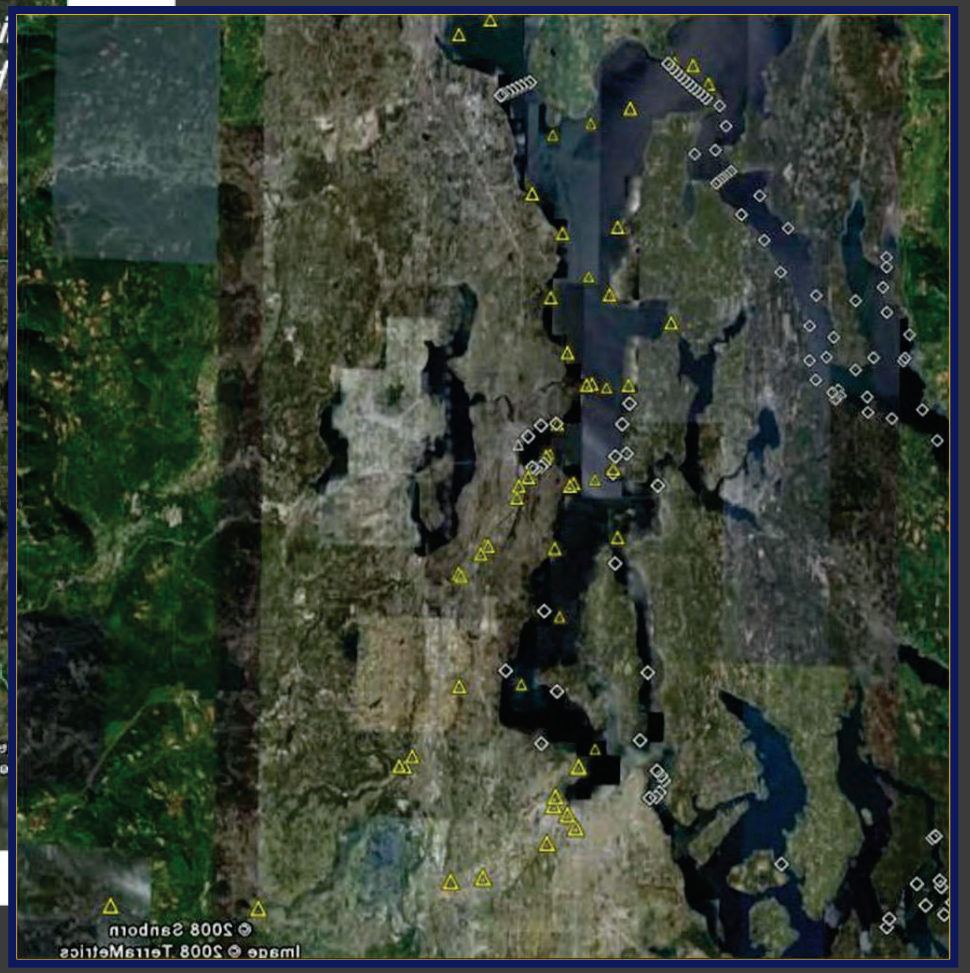
1. Seasonal
2. Diel

Possible abiotic/biotic drivers

Movements of the population

RECEIVER'S


Henry Island
San Juan Island
Cypress Island
Guemes Island
Lopez Island
Fidalgo Island
Whidbey Island
Camano Island
Possessi
Sound
Admiralty Inlet
and Hood Canal
1
4
Central
Puget
Sound
2
2
seattle
Vashon Island
South
Puget
Sound
3
McNeil Island
Anderson Island
N
W
E
S
Pointer 47°48'50.10" N 122°09'32.81" W elev 253 ft



TAGGING

DEMOGRAPHICS (CHINOOK SALMON)

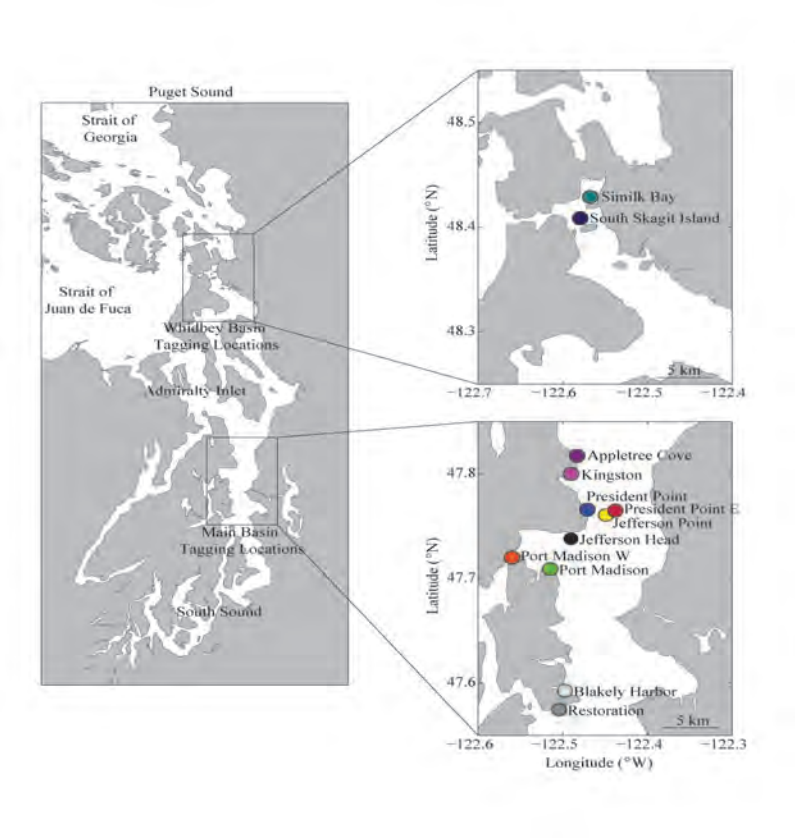
criteria	category	n
Analyses	Included	55
	Excluded	65
Tagging Event	Fall	27
	Summer	28
Type	Resident (H)	39 (24)
	Migrant (H)	16 (12)
Genetics	Migrant	5 SSF/HC
		1 Whidbey
		1 LF
	Resident	11 SSF/HC
		2 Whidbey
		2 LF & 1 HC

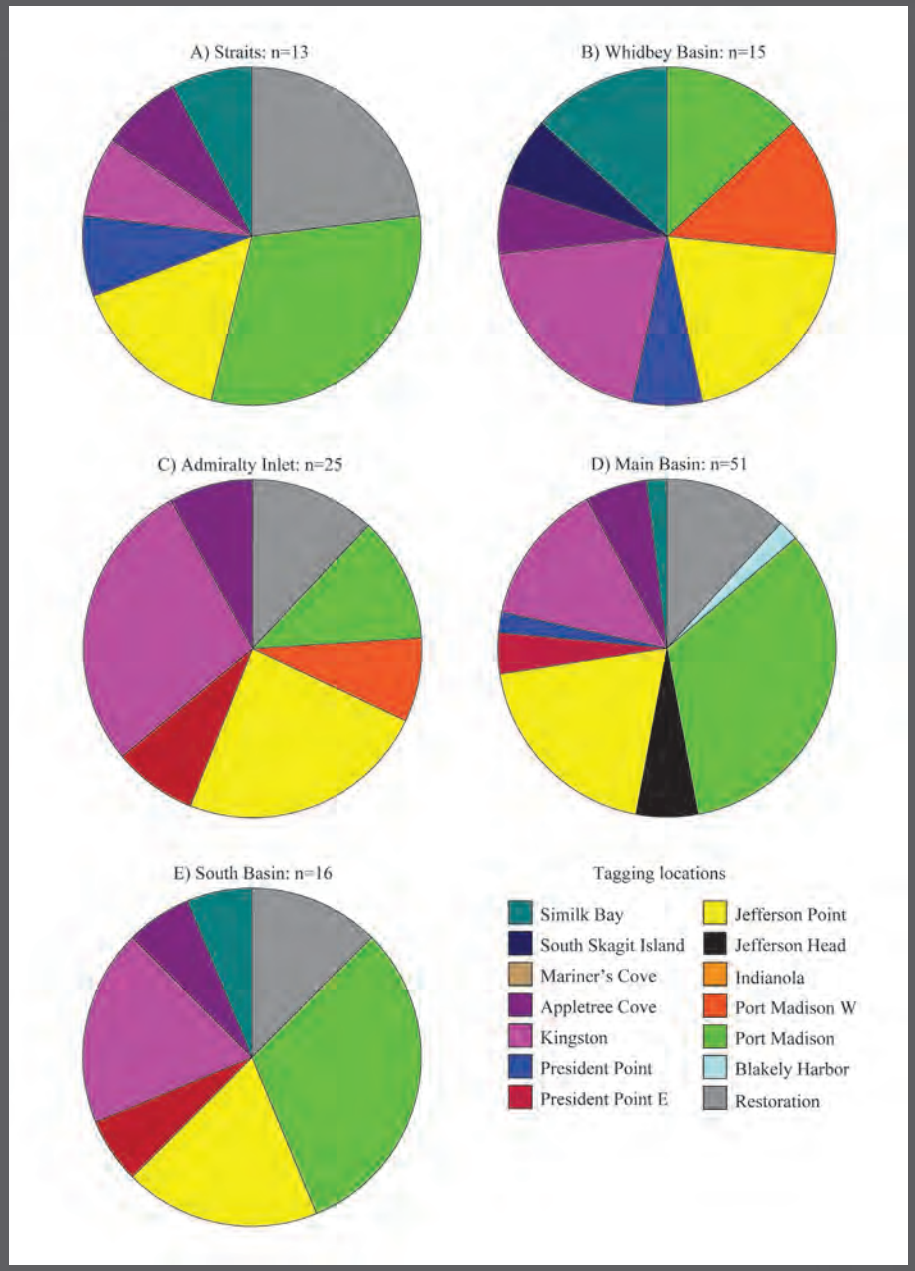
DEMOGRAPHICS (CHINOOK SALMON)

Biotics	Group	Avg (STDEV)
Length	Resident	276 (58.2) mm
	Migrant	275 (44.5) mm
Weight	Resident	267 (143.7) g
	Migrant	276 (157.2) g
Condition Index	Resident	1.2 (0.09)
	Migrant	1.2 (0311)

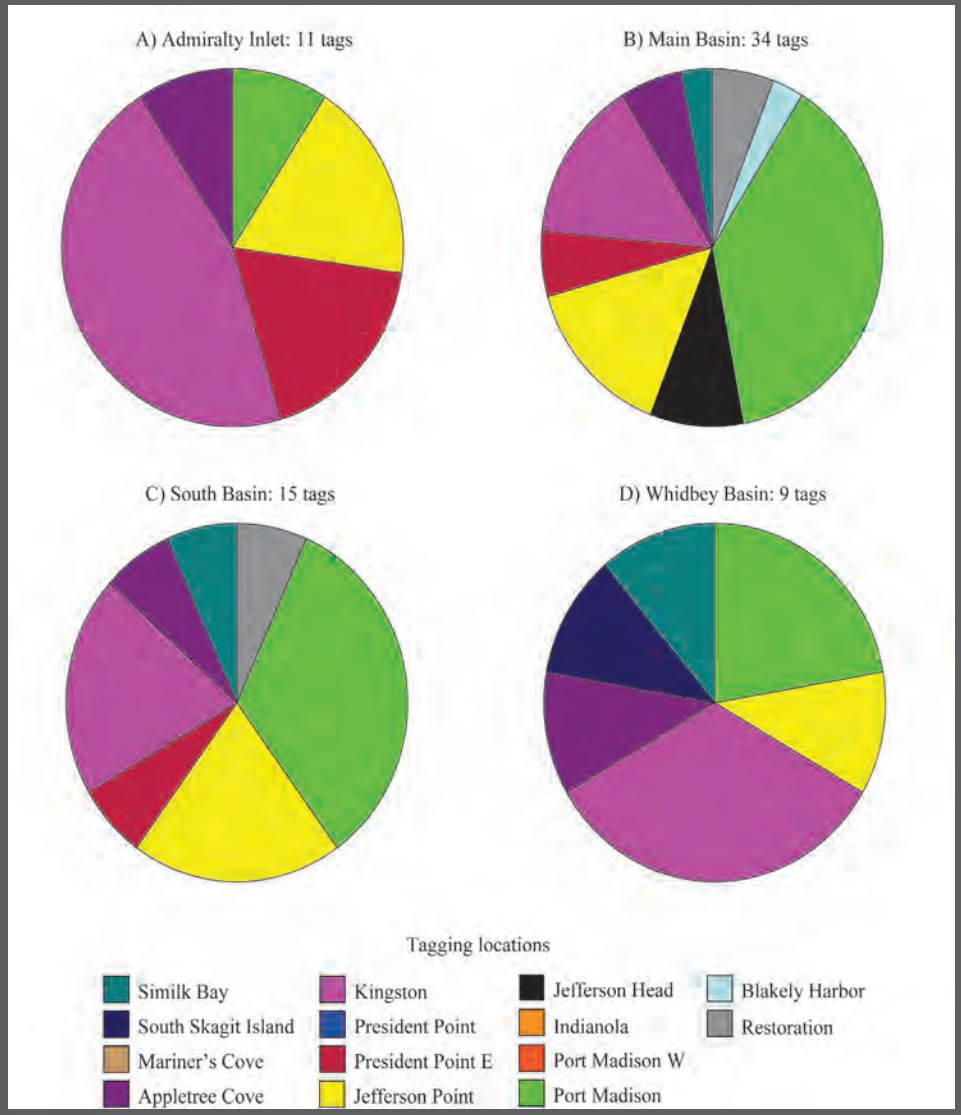
HORIZONTAL MOVEMENT

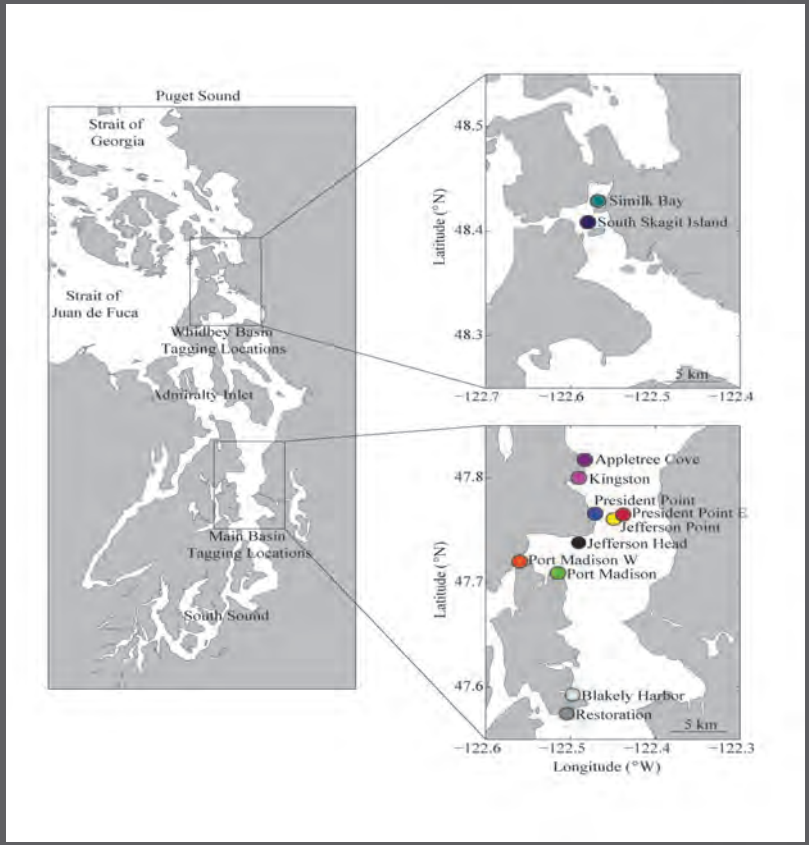
All fish detected by basins:



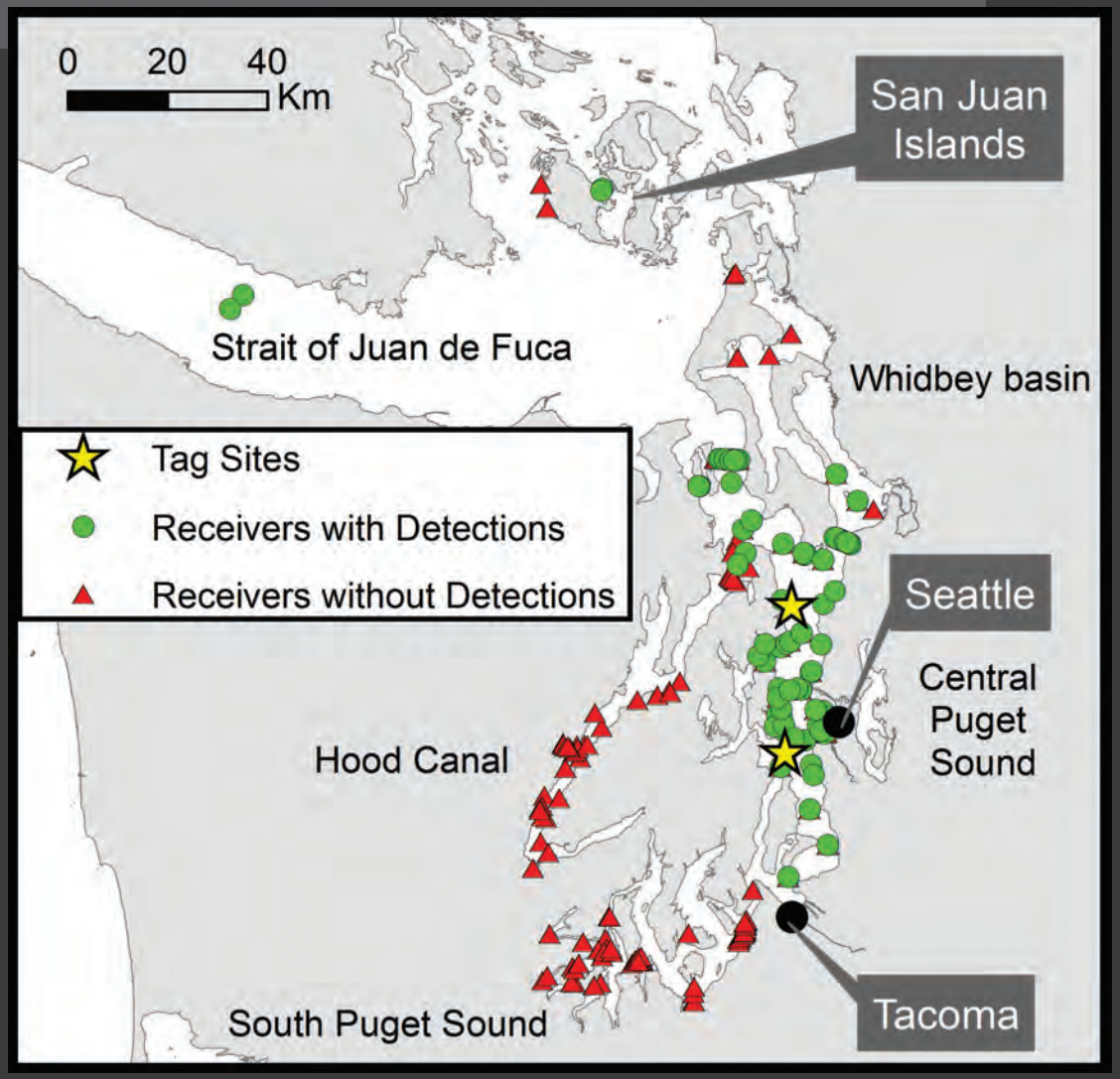


Residents detected by basin:





FISH DISTRIBUTION

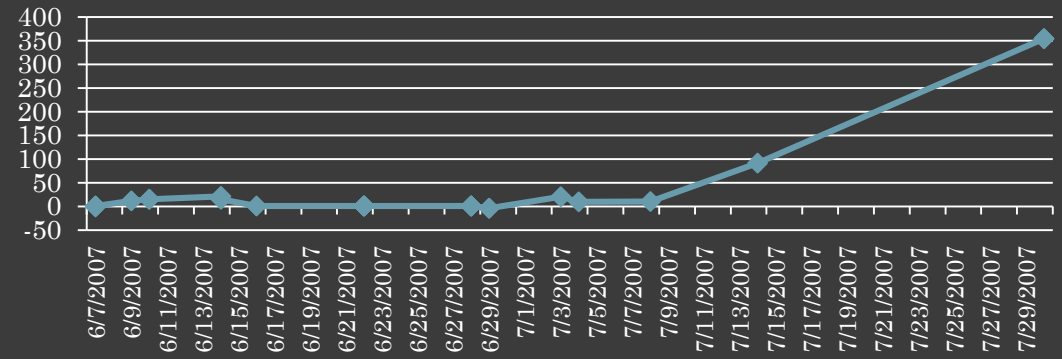


Most detections in Central Puget Sound – where tagged

1 Resident and 1 Migrant Briefly entered HC

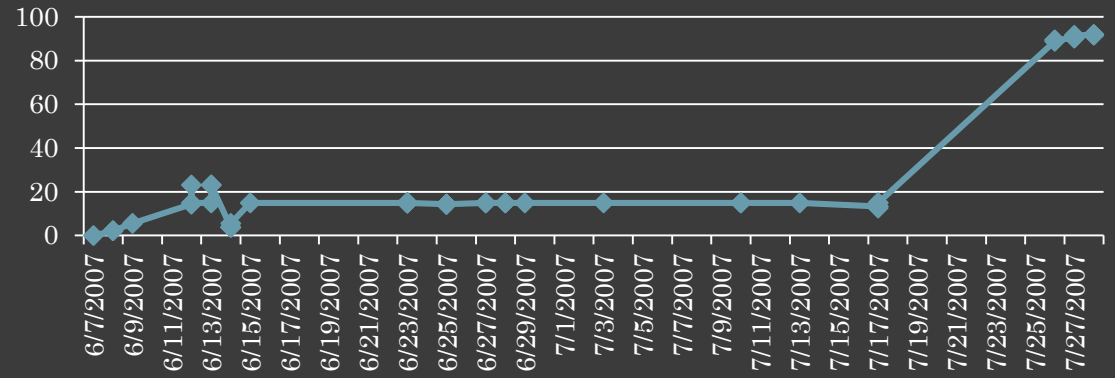
6 Residents and 2 Migrants entered Whidbey Basin. (3 of those were tagged there)

3133 Distance Travelled from Tagging (miles)

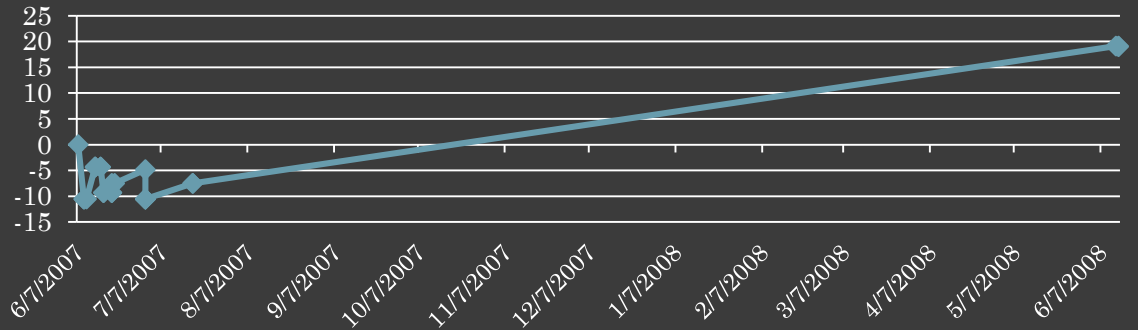


MIGRANTS

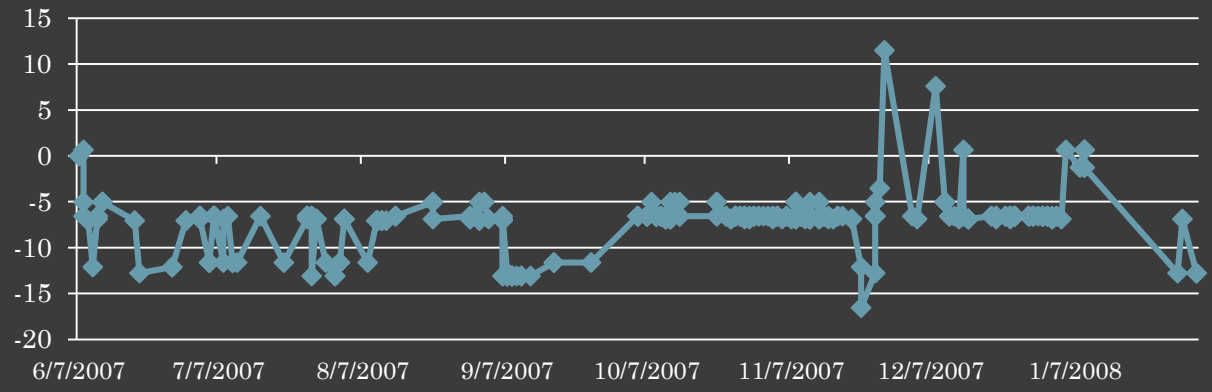
1040305 Distance Travelled from Tagging (miles)



1040676 Distance Travelled from Tagging (miles)

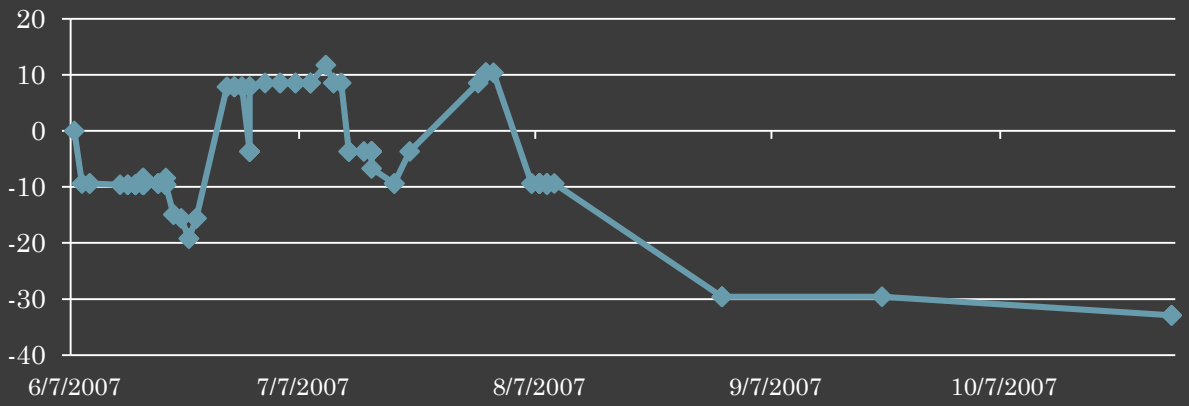


4997 Distance Travelled from Tagging (miles)

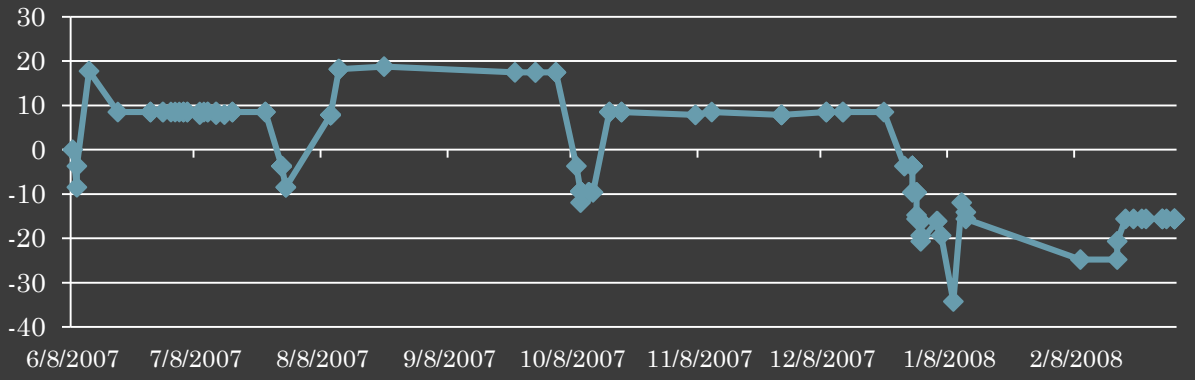


RESIDENTS

1040301 Distance Travelled from Tagging (miles)



1040306 Distance Travelled from Tagging (miles)



PATTERNS:

Differences between resident and migrant:

30% of presumed residents left

no obvious H/W, size, genetic differences

Resident movements on a spatial scale:

1. Puget Sound: basin fidelity
2. Between basins, didn't follow N to S pattern
3. Within basin habitat-use: receivers closer to shore
4. Vertical: residents move slower, behavior patterns

Movements of individual residents on temporal scales:

1. Seasonal: no large scale differences
2. Diel: Go see Joe's talk!

Possible abiotic/biotic drivers: Temp, Sal, DO, predators?

Movements of the population: **TBD!**

FUTURE WORK: SAN JUAN ISLANDS

COLLABORATION:

Sharing Receivers:

- Steelhead Recovery
- Orcas

Sharing Data:

- OTN/ATN
- IOOS
- Hydra

THANKS!

- Jay Field
- Iris Kemp
- Jessica Rohde
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- Kinsey Frick
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- Scott Stelzner
- Kelly Andrews
- Mary Moser
- Eric Jeanes