

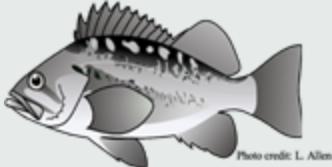
Rockfish Road Trip:

Spatial variation in life history traits of black rockfish (*Sebastes melanops*) in the California Current and Gulf of Alaska

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Cheryl Barnes (OSU/ODFW), Scott Heppell (OSU), Leif Rasmussen (ODFW), and Jason Cope (NWFSC)

PICES, Yokohama, Japan, November 11, 2025



Oregon State University
Coastal Oregon Marine
Experiment Station



Black rockfish (*Sebastes schlegelii*)



Found off the coast of China, Korea, and Japan

Black rockfish (*Sebastes melanops*)



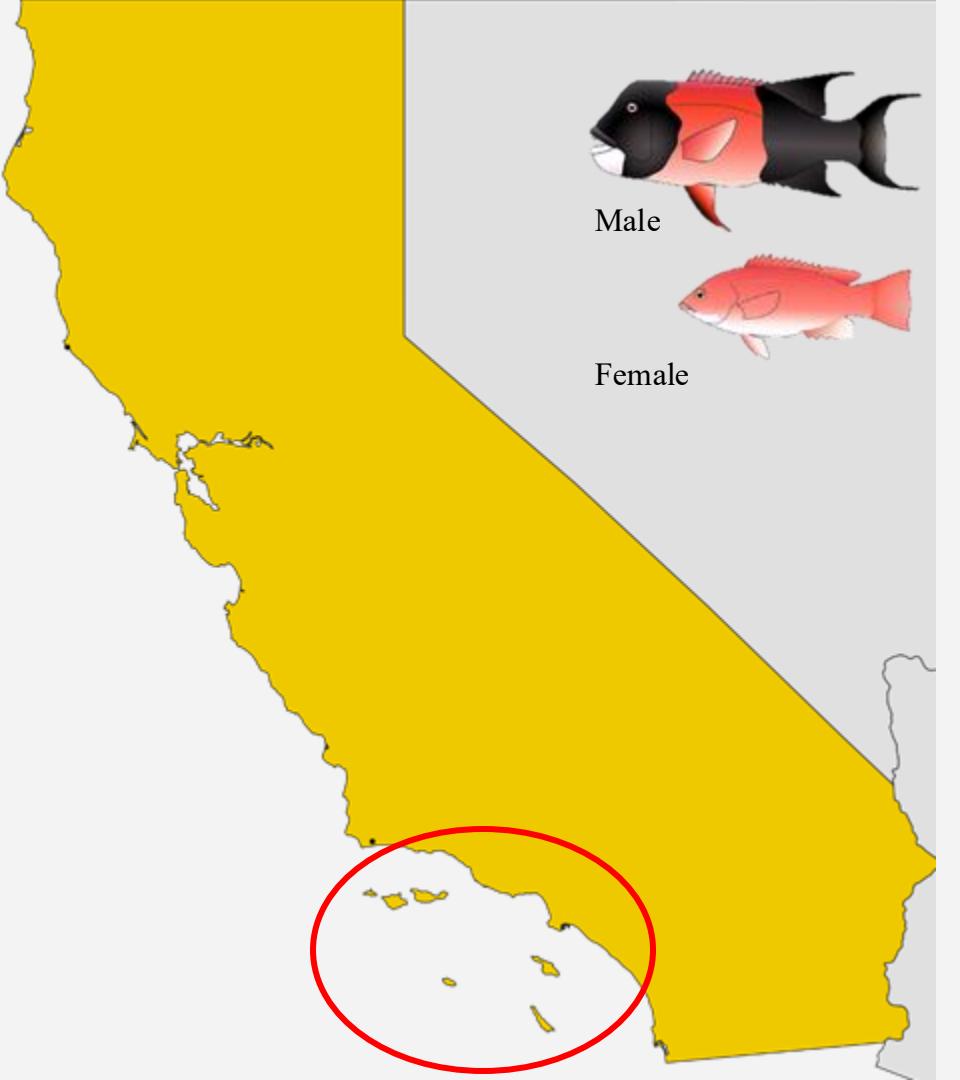
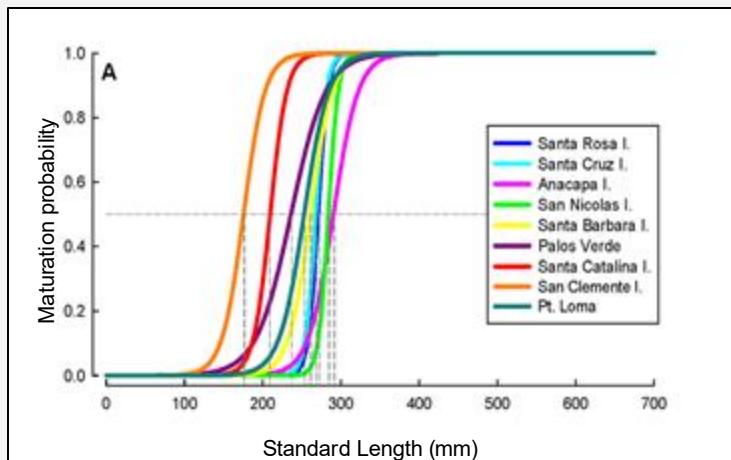
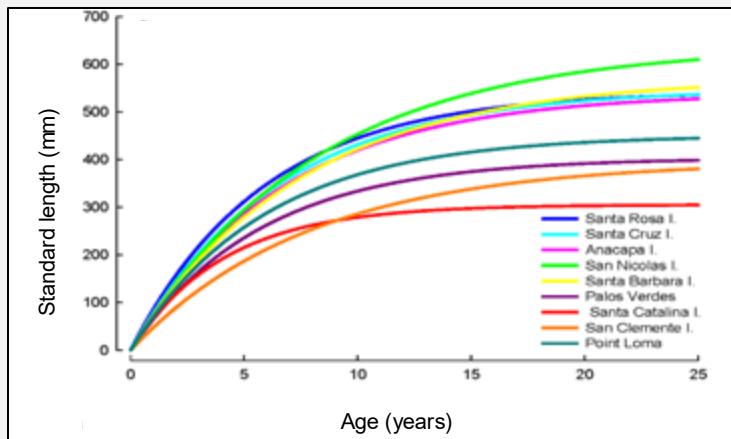
Found off the US West Coast and Alaska



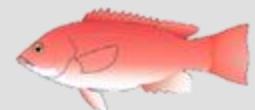
PICES
US West Coast



California sheephead (*Semicossyphus pulcher*)

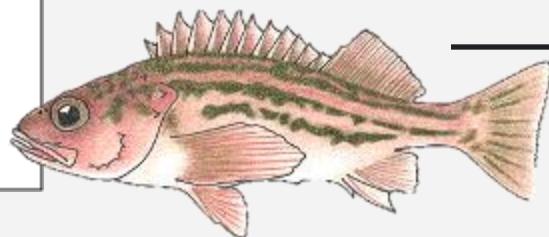
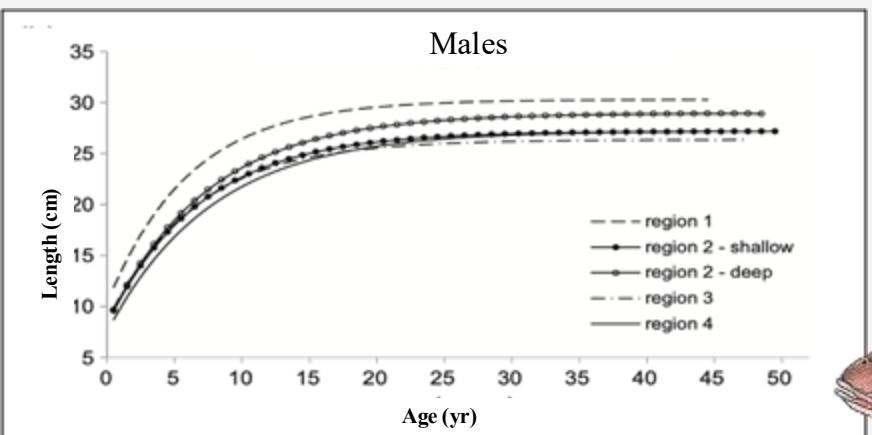
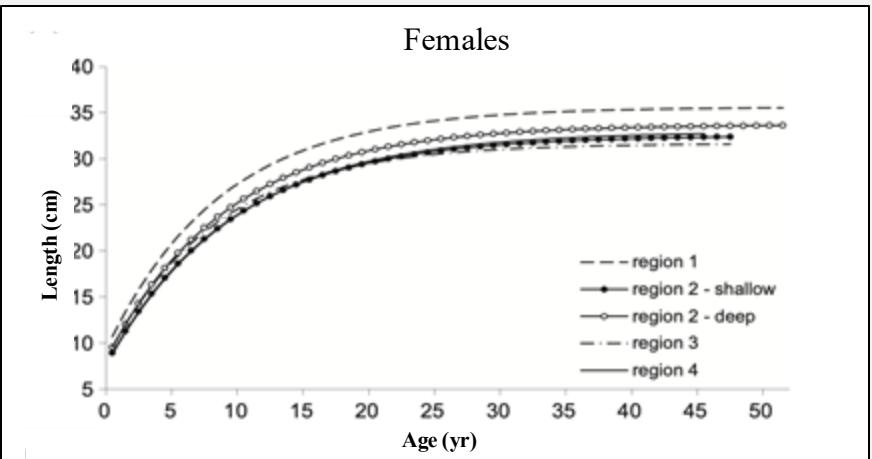


Male



Female

Greenstriped rockfish (*Sebastes elongatus*)

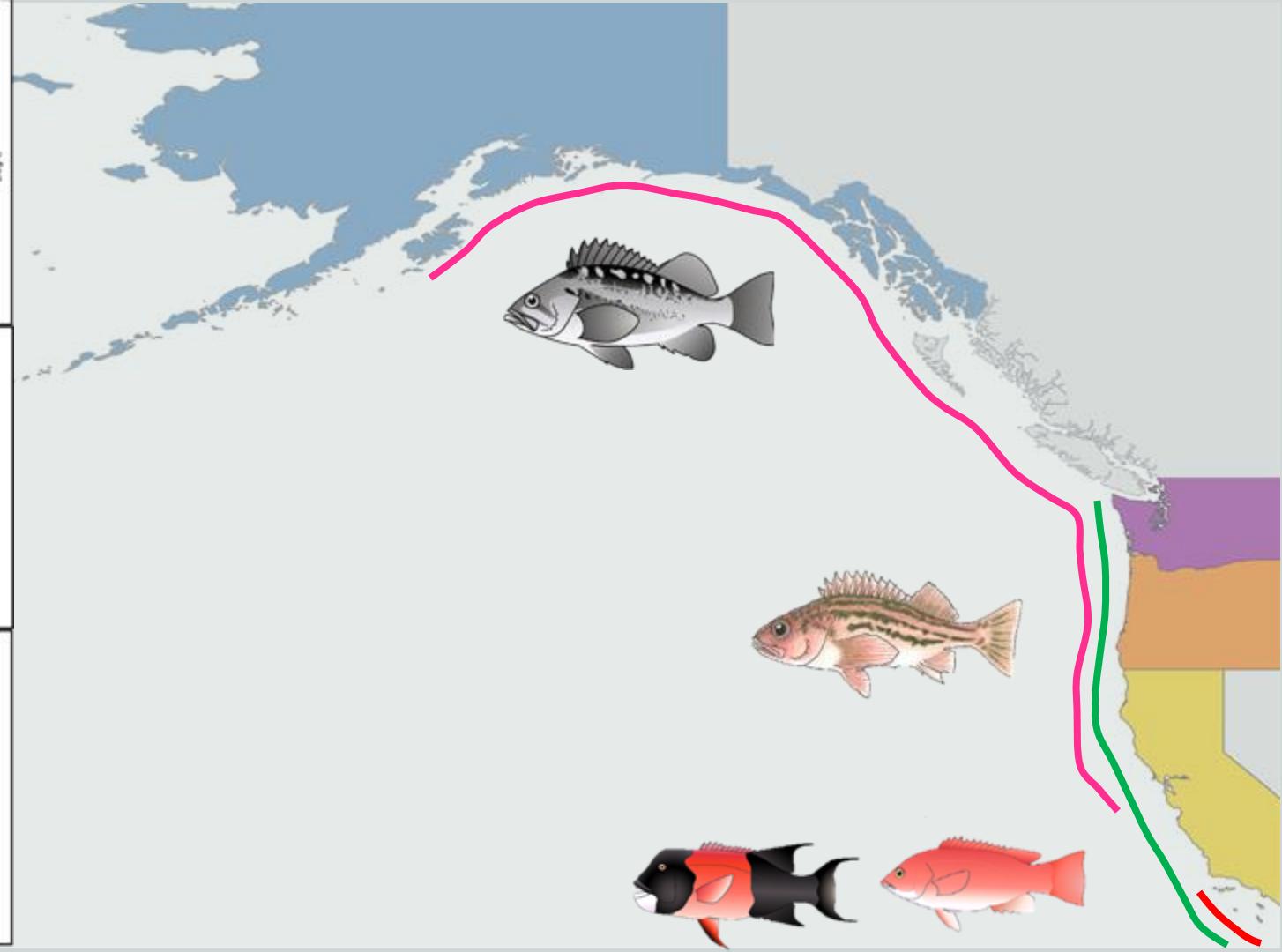
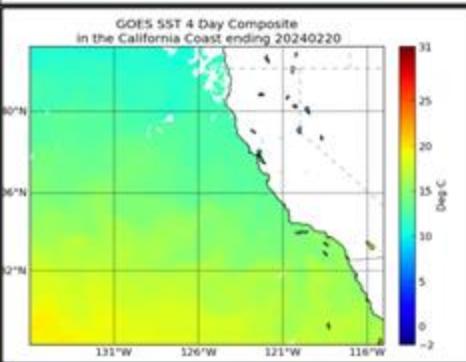
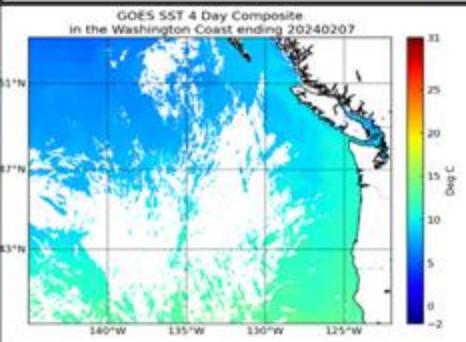
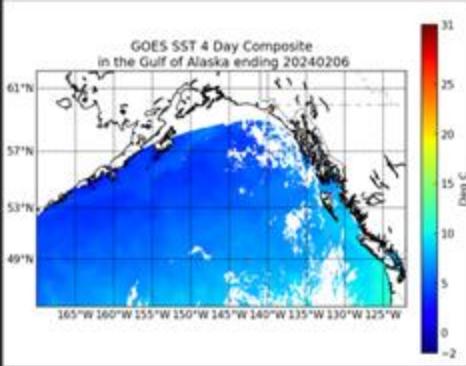


Region 1

Region 2

Region 3

Region 4







Black rockfish (*Sebastes melanops*)



Dave Kuehn, President OSCF

Black rockfish are one of more than 60 species of rockfish in the Gulf of Alaska and California Current Ecosystem

Valuable species!

- Alaska: Statewide Rockfish Initiative formed in 2016 to improve data management of yelloweye (*Sebastes ruberrimus*) and black rockfish²
- Washington: black rockfish make up about 80% of nearshore recreational landings¹
- Oregon: black rockfish brings in \$20.6 million in annual revenue³
- California: black rockfish comprise 15% to 31% of nearshore recreational landings⁴

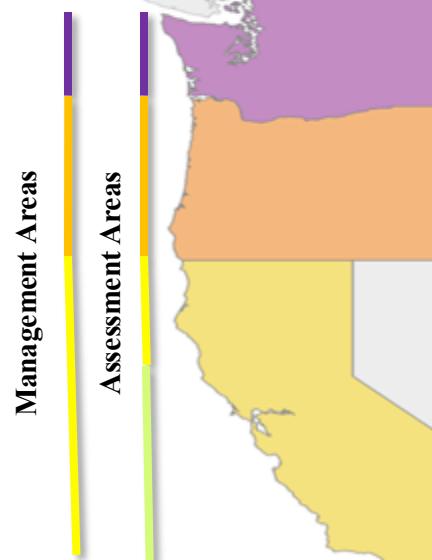


Pacific Fishery Management Council has allocated 3 management areas and 4 assessment areas black rockfish

The Alaska Department of Fish and Game is currently underway with the first black rockfish stock assessment in the Southeast, North Coast, and Westward regions

Fundamental purpose of fisheries management: ensure sustainable production over time and to promote economic well being of fishers and industries relying on the production

There is a strong time series of age and maturity data from Newport, OR (2014 – 2021)



Black rockfish (*Sebastes melanops*)

What about comparing coast wide data?

Research Question: How does growth and maturity of black rockfish vary in the California Current and Gulf of Alaska?



Alaska

Washington

Oregon

California





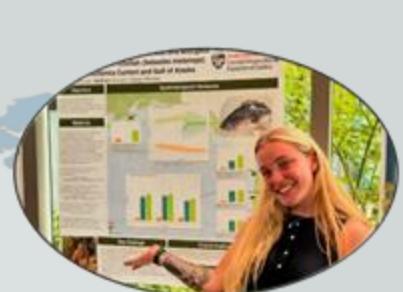
Peri Gerson, OSU



Landon Sharrar, OSU Undergraduate



Oregon South Coast Fishermen (OSCF)



Sadie Lockwood, OSU Undergraduate



Steve Godin, President Oregon Coast Anglers



CCFRP Angler



Grace Godfrey, OSU Undergraduate



Sara McDonald, OSU Undergraduate



Wes Langell, HMB Charter Captain



Holland Vernon, WSU Undergraduate



Issac Nyameke, ADFG/UAF



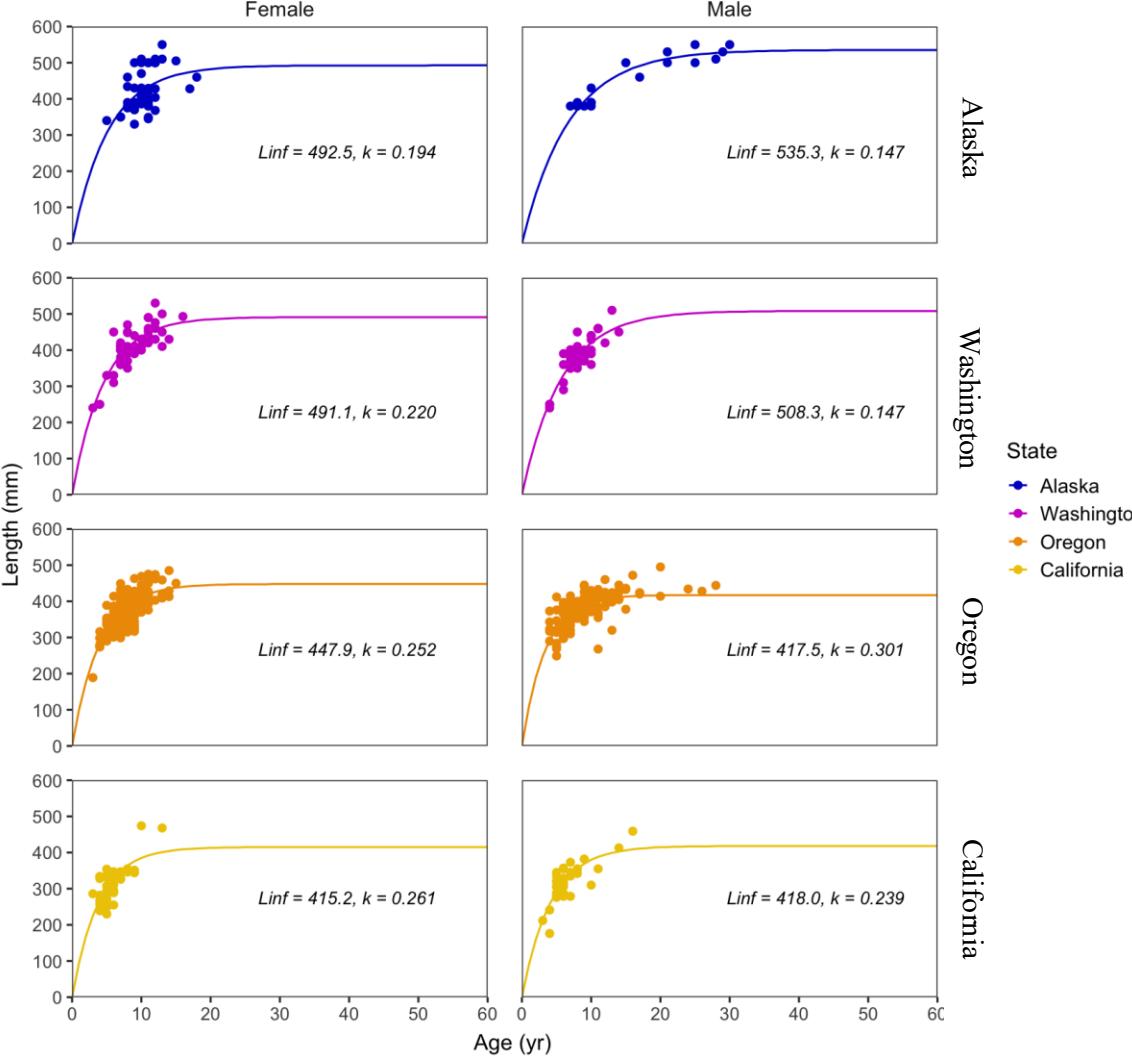
Dave Kuehn, President OSCF

Estimating fish age by counting rings

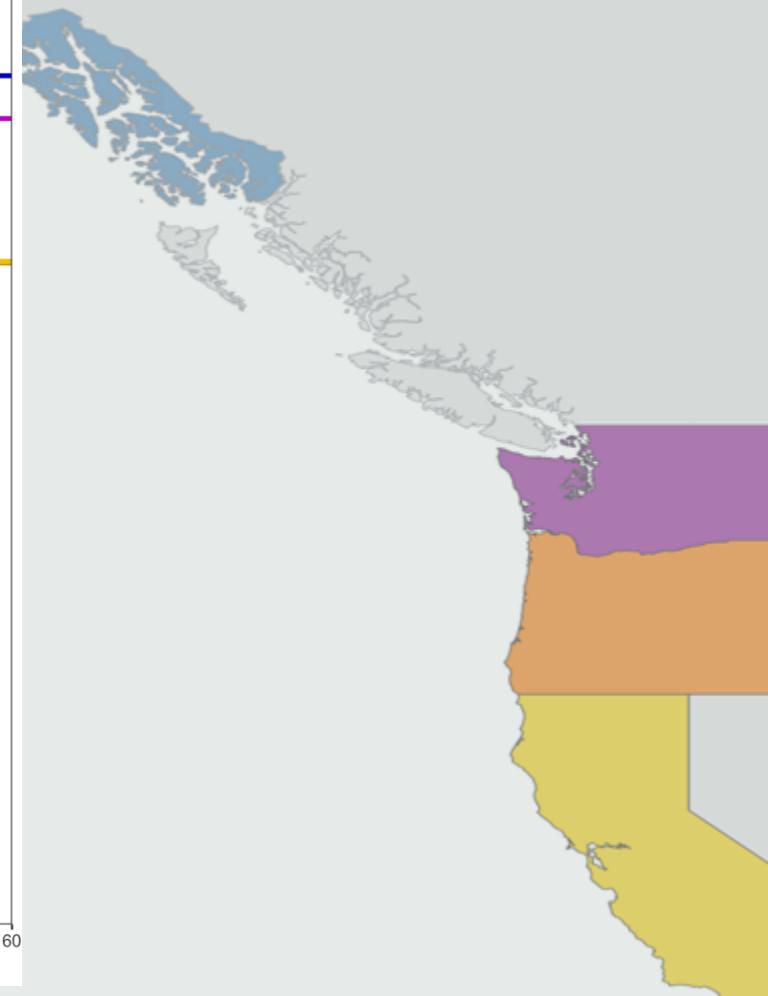
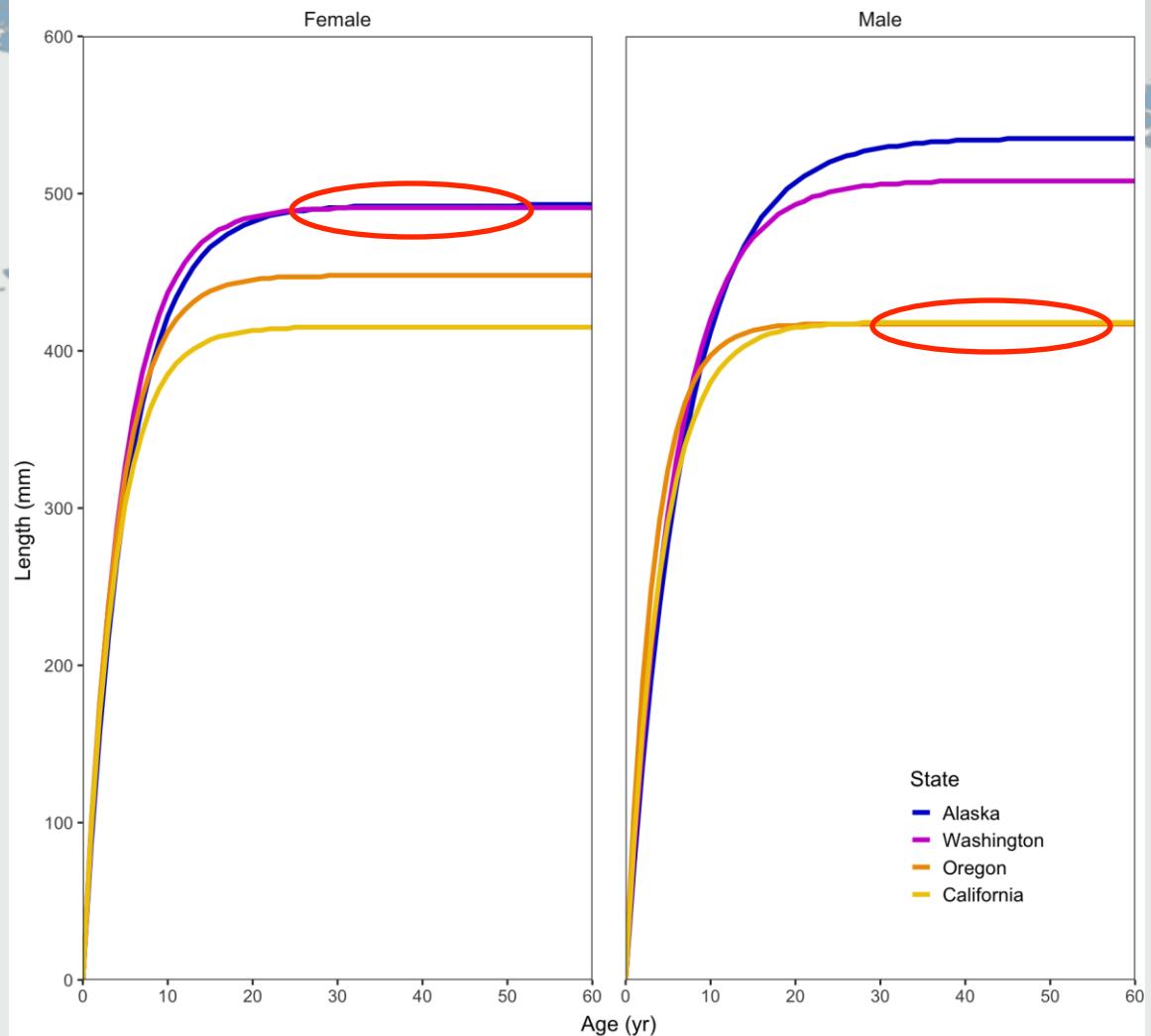




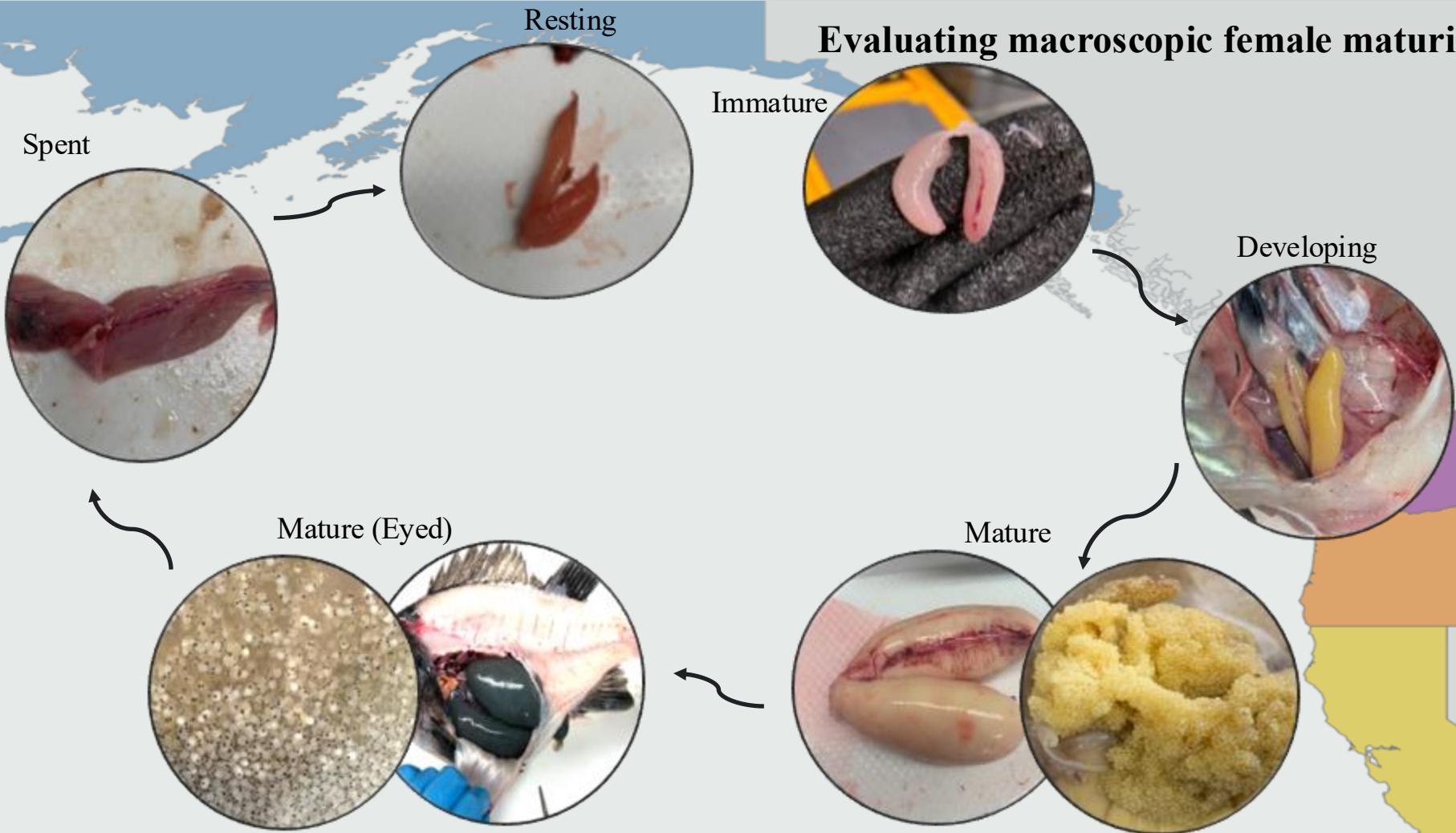
von Bertalanffy Growth Curves

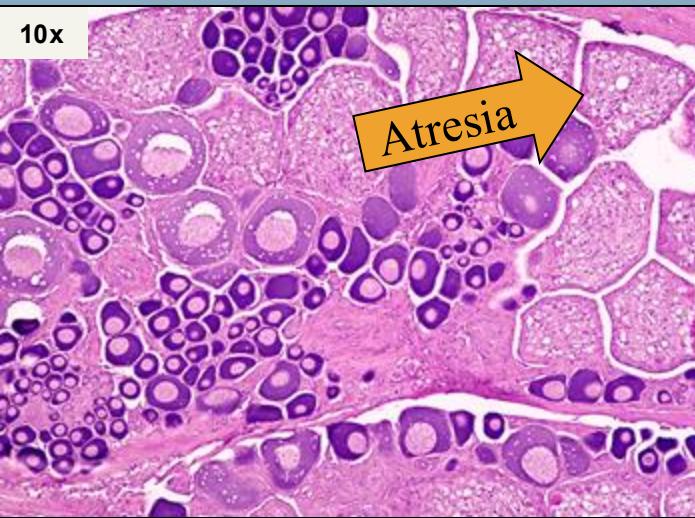


von Bertalanffy Growth Curves



Evaluating macroscopic female maturity





Estimating microscopic female maturity



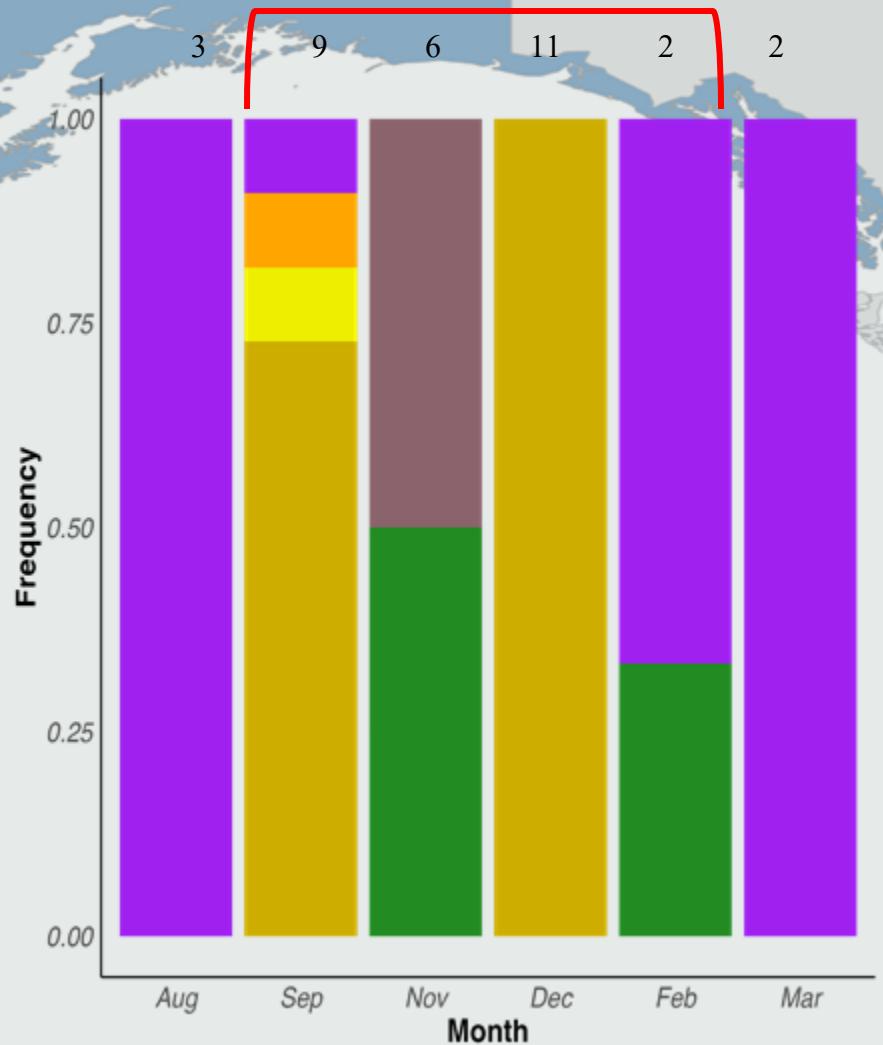
Atresia - resorption of mature oocytes

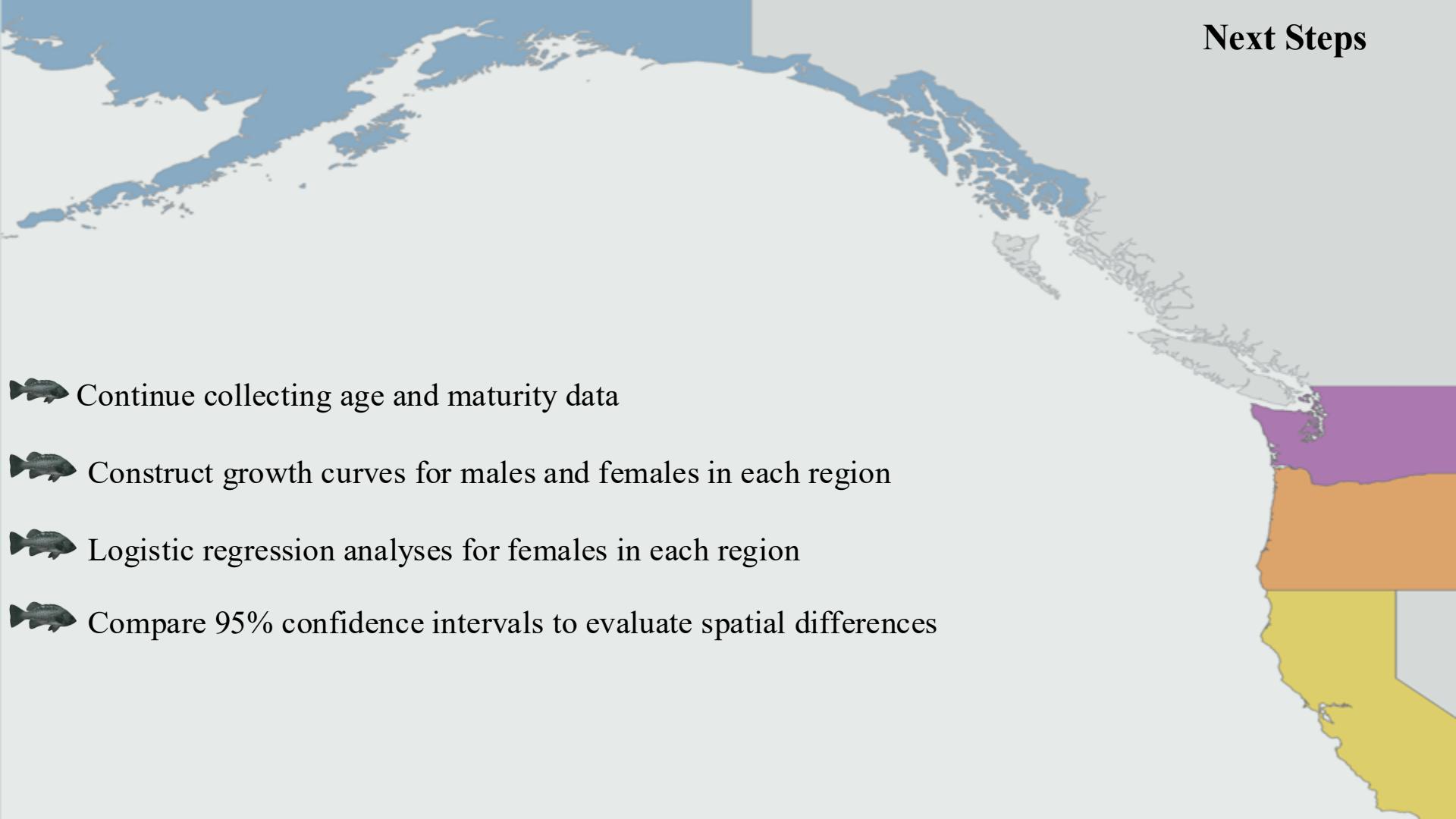
Vitellogenic – mature oocytes

Biological maturity - capable of reproduction

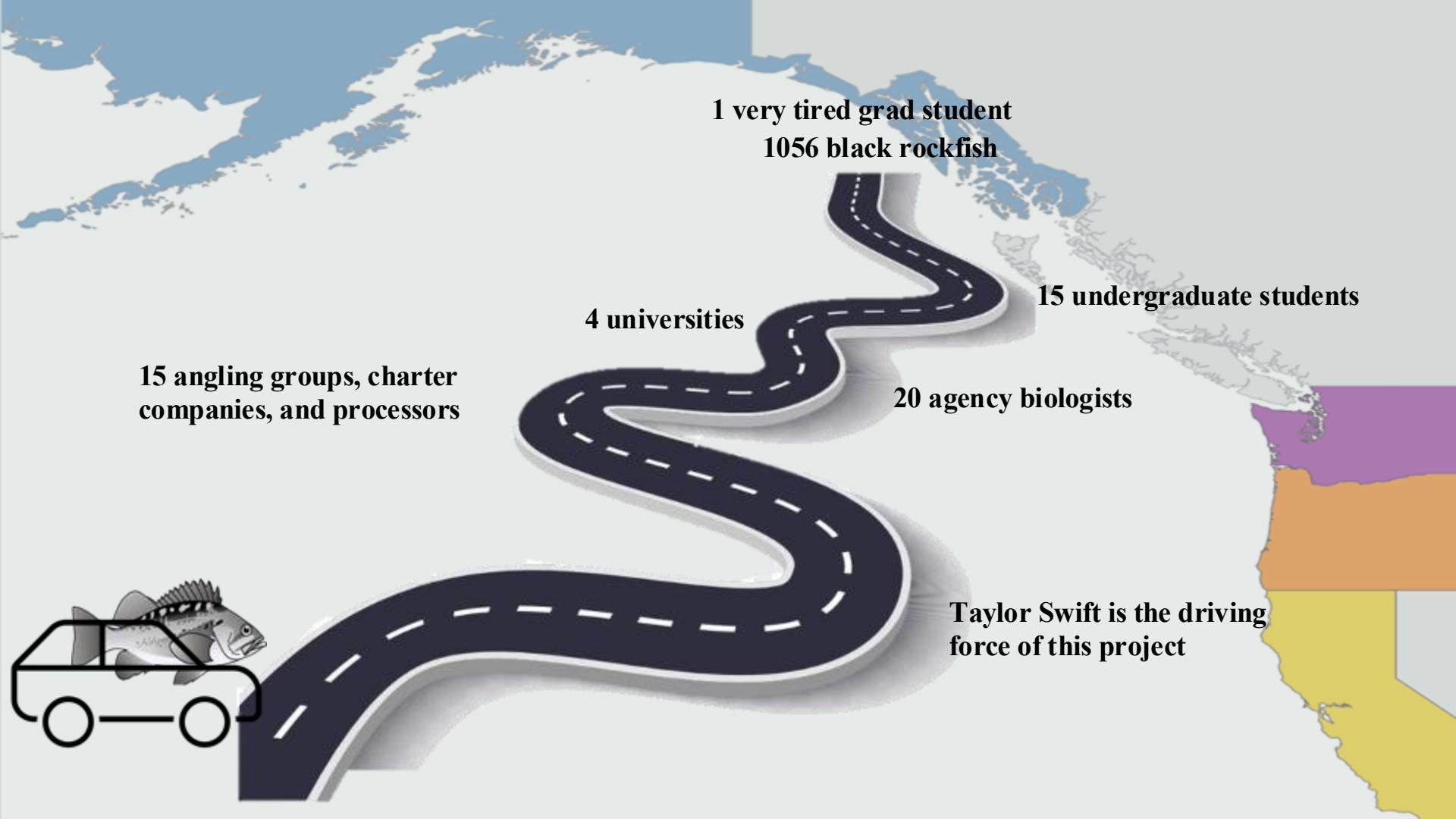
Functional maturity - potential spawners in a given year

Preliminary maturity





- ▶ Continue collecting age and maturity data
- ▶ Construct growth curves for males and females in each region
- ▶ Logistic regression analyses for females in each region
- ▶ Compare 95% confidence intervals to evaluate spatial differences



Funding Sources



Oregon State University
Coastal Oregon Marine
Experiment Station

North Pacific Research Board

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Oregon Chapter, American Fisheries Society

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McNeil Award

Coombs-Simpson Memorial Fellowship

Oregon State University



Oregon State University
Hatfield



Oregon State University
Marine and Coastal
Opportunities

This project would not be feasible without the collaboration and assistance of the following angling groups, charter companies, and biologists;



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Graduate committee: Cheryl Barnes, Scott Heppell, Leif Rasmussen, and Jason Cope

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Thank you!

