

Update on Salmon Research Relevant to Bycatch Task Force Research Recommendations

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Western Alaska Salmon

- Improved information on marine migration patterns and its relation to fishery locations and timing
- Understand critical survival periods for western Alaska salmon through integrated ecosystem assessment surveys including expansion of the northern Bering Sea pelagic trawl survey into the near shore waters north of the Yukon River including Norton Sound
- Studies that help understand how ocean/climate conditions impact future runs
- Studies that help us understand the role of diet, health and disease on the survival and spawning success of Western AK Chinook and chum

Gulf of Alaska Salmon

- Research that can provide an additional (non-adult) abundance estimate. This is powerful for helping triangulate which life stages are most important for determining productivity
- Studies that help us understand how ocean/climate conditions impact future runs

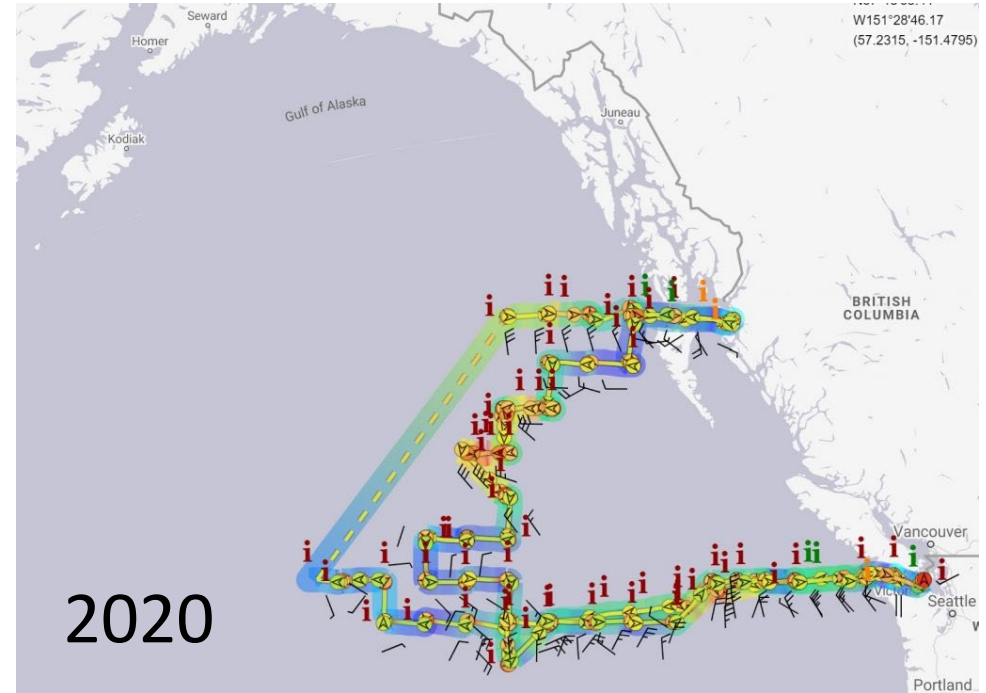
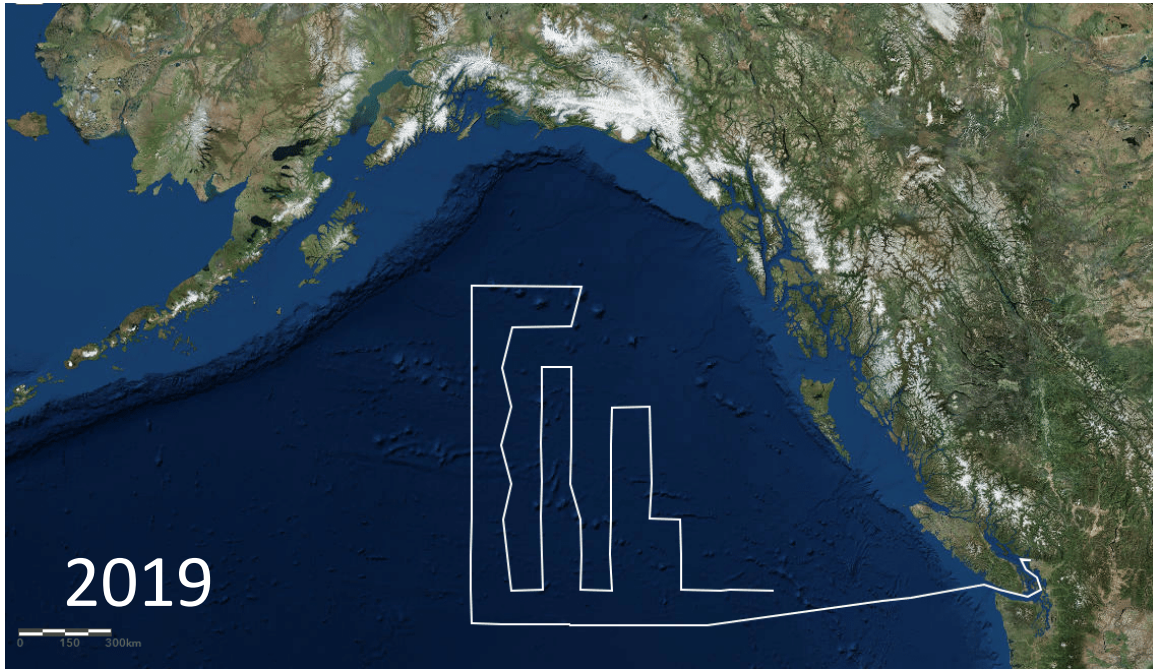
- **International Year of the Salmon (IYS) Surveys**
- **Juvenile Marine Salmon Surveys**
- **WAK Chinook salmon tagging and Species Distribution Model (SDM) development**
- **Yukon Chinook and Climate Drivers Study**

International Year of the Salmon



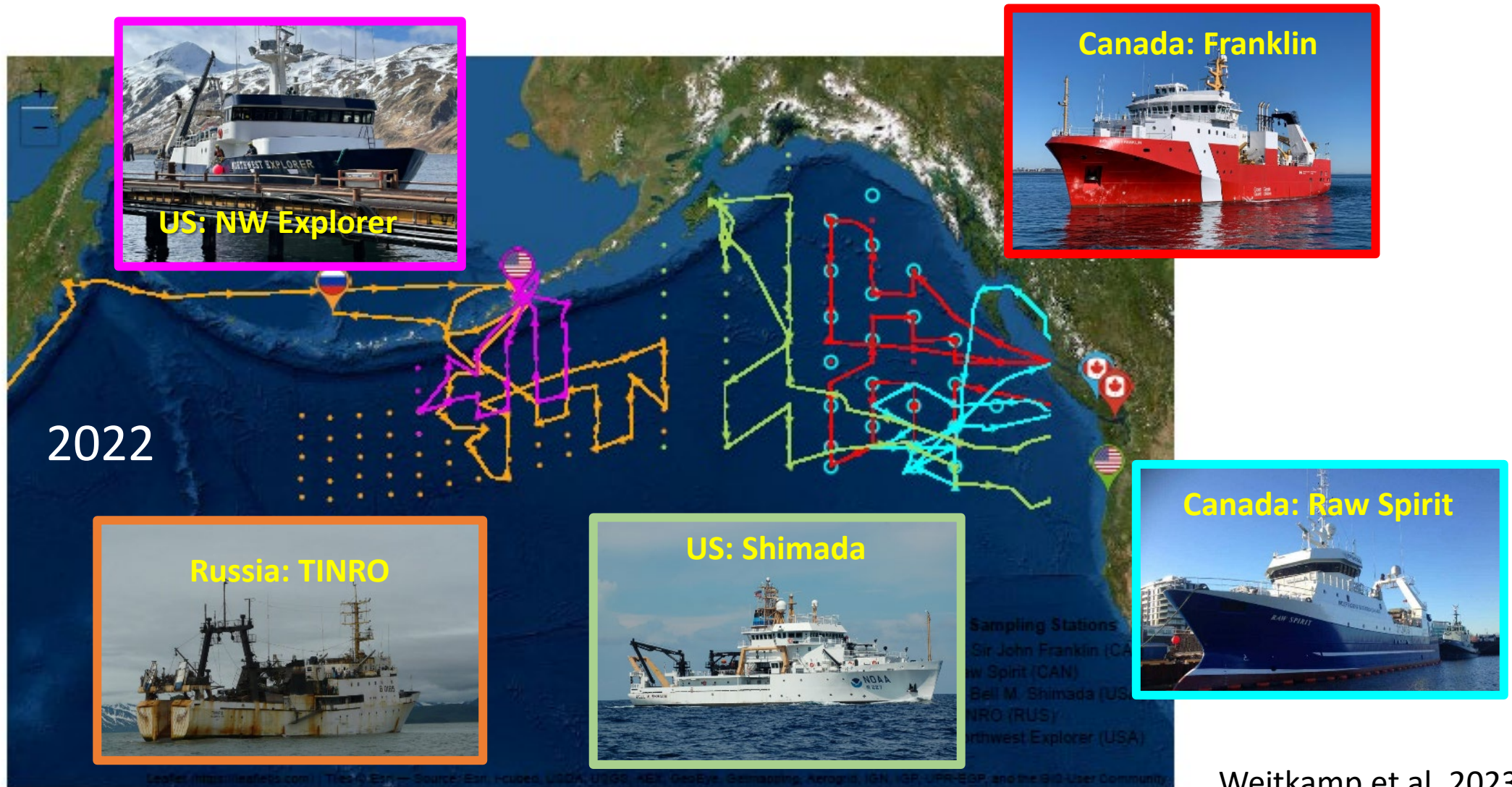
5-year initiative to support resilience for salmon and the people who depend on them by collectively generating and sharing knowledge across the international community





Projects included eastern Gulf of Alaska surveys in winter of 2019 and 2020

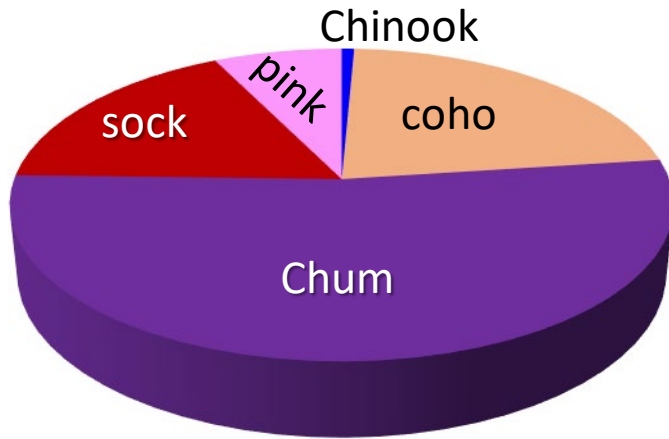
Five ships sampled 131 stations across 2.5 million km²



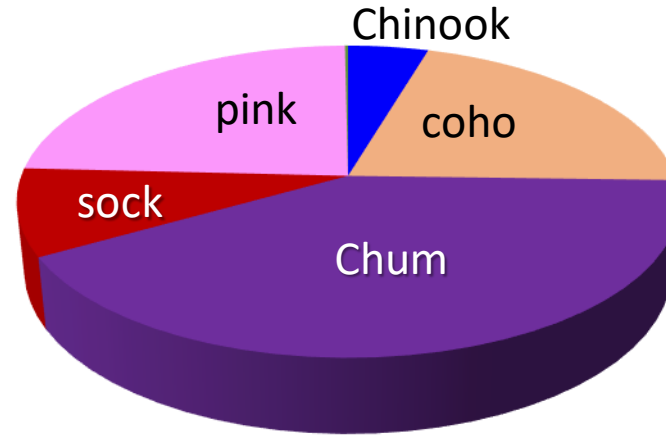
Weitkamp et al. 2023

2022 catches versus 2019 and 2020

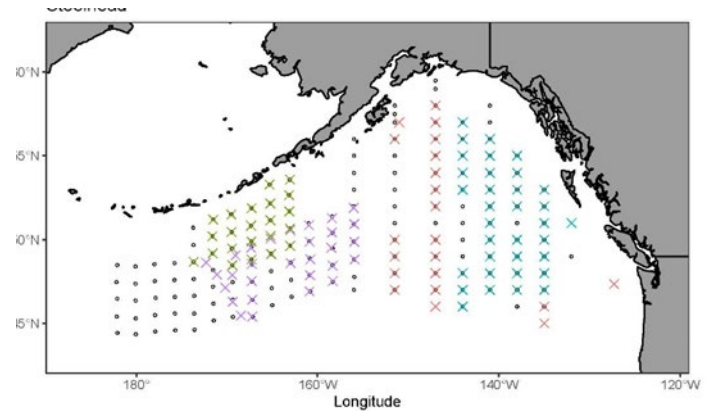
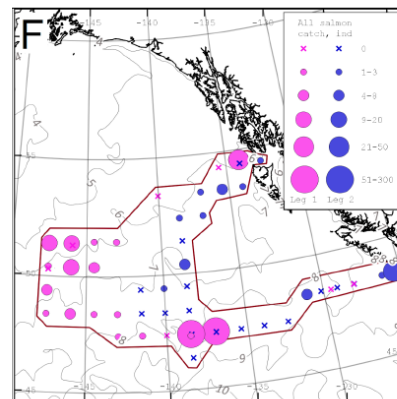
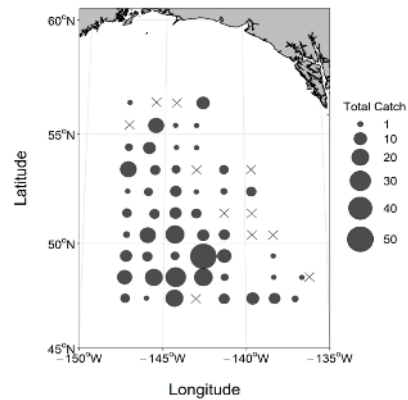
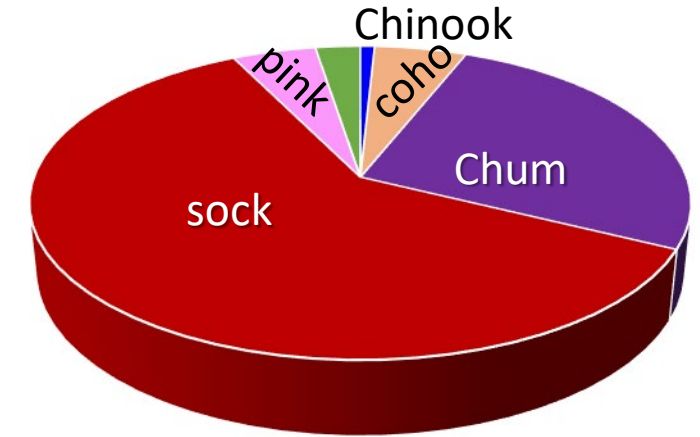
2019 (423)



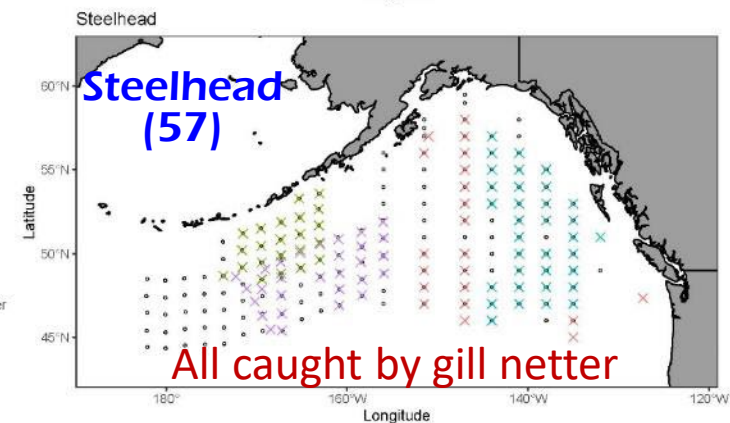
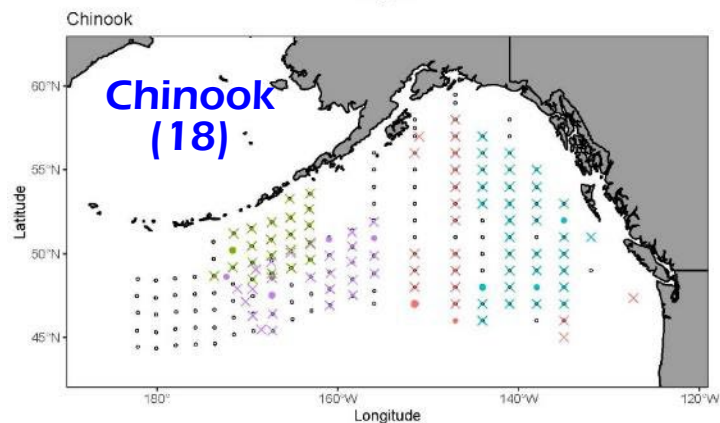
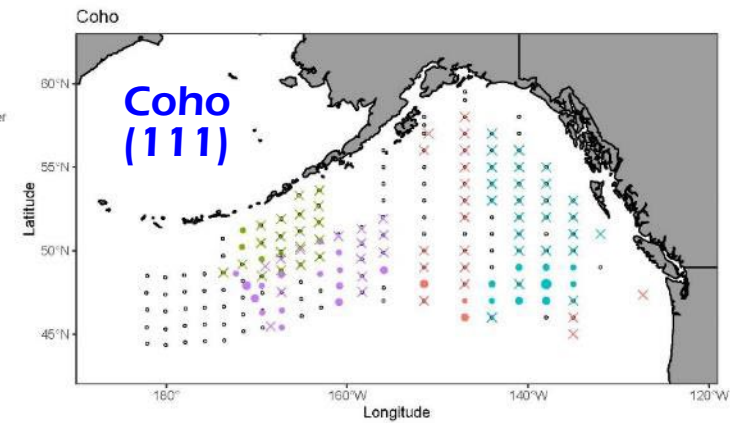
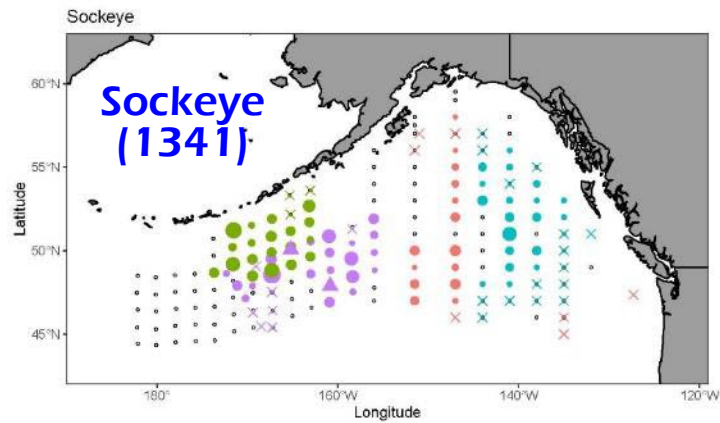
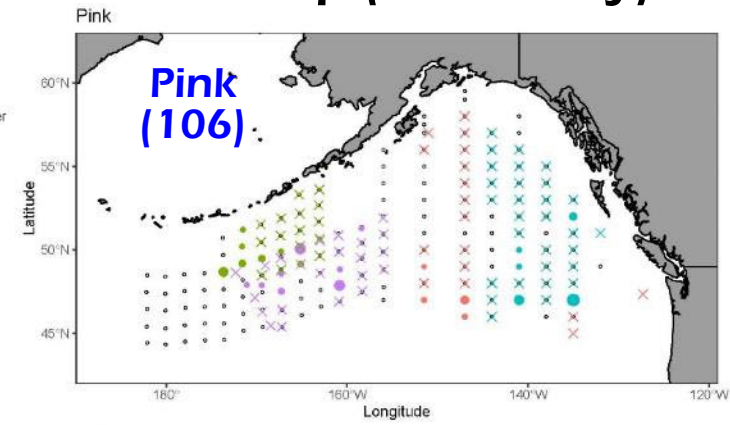
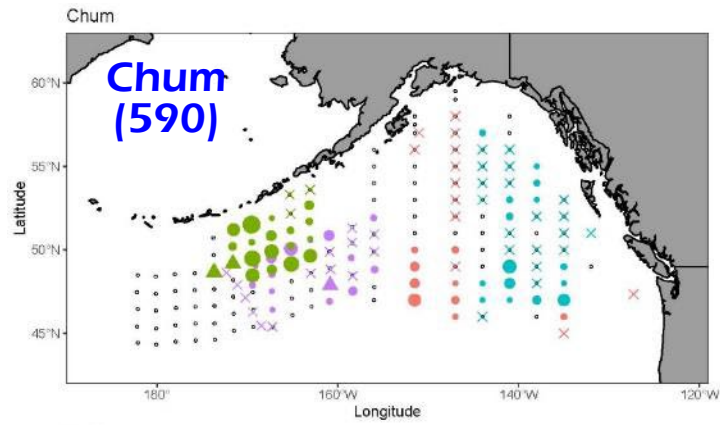
2020 (566)



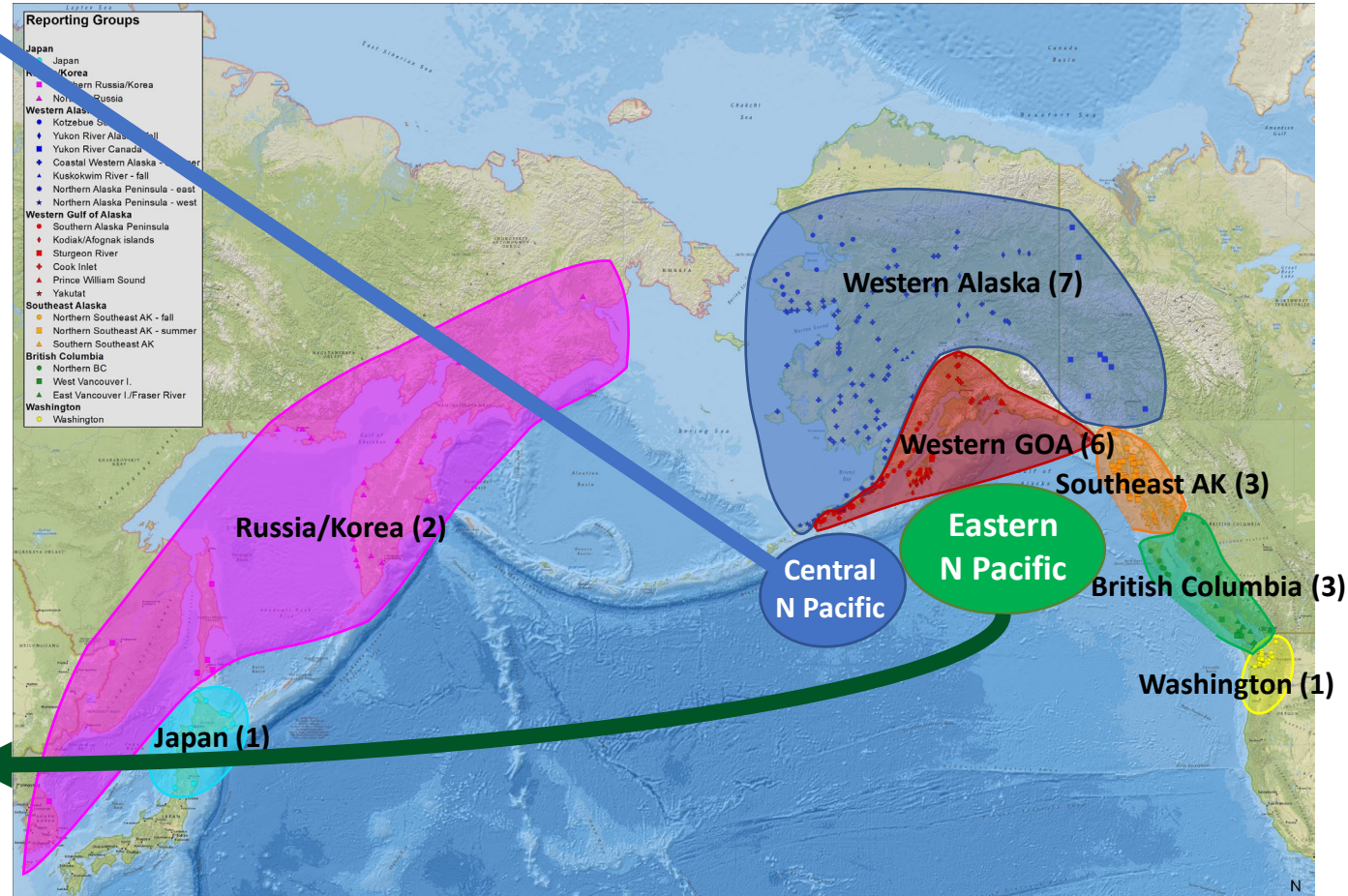
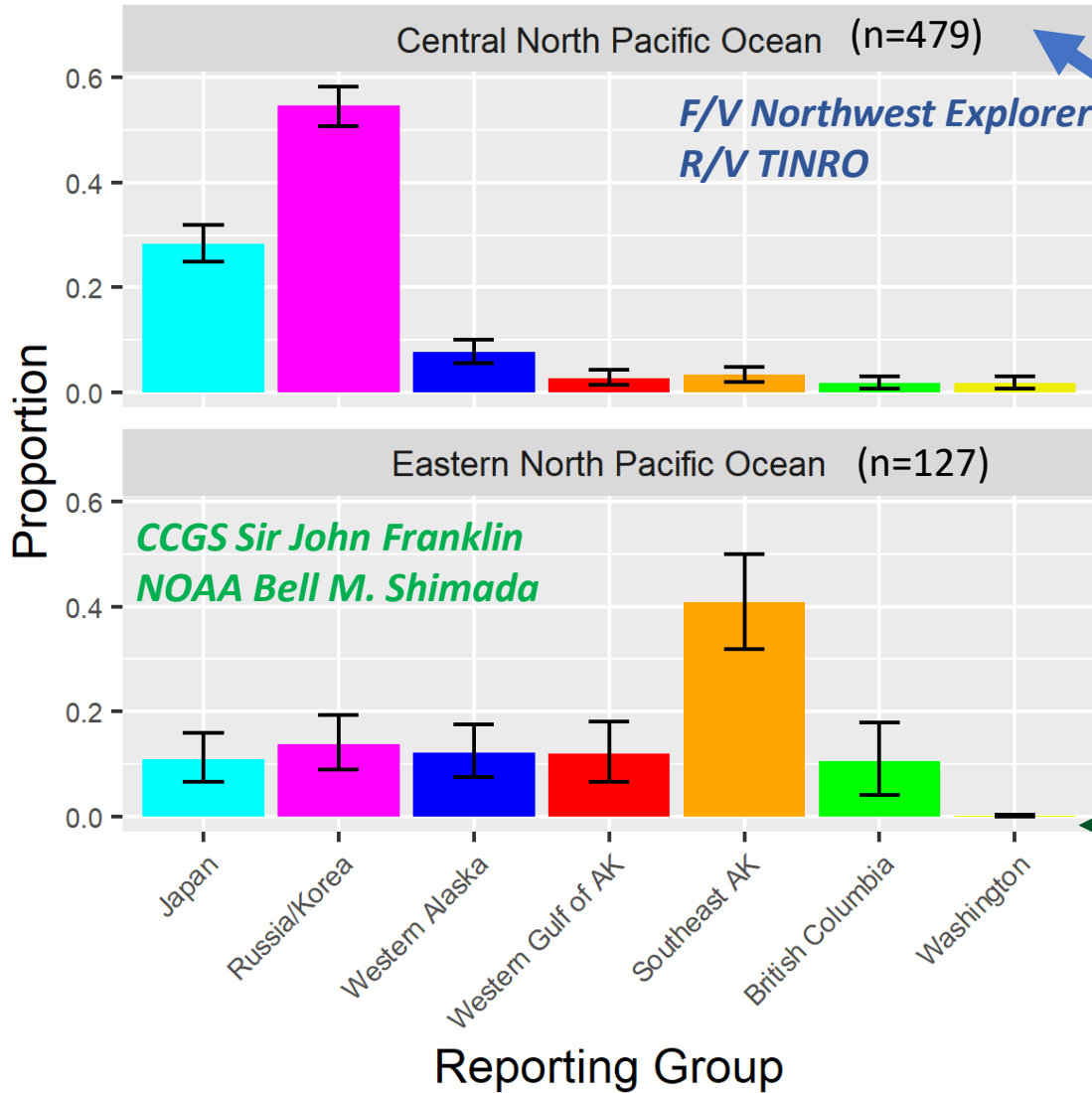
2022 (2,323)



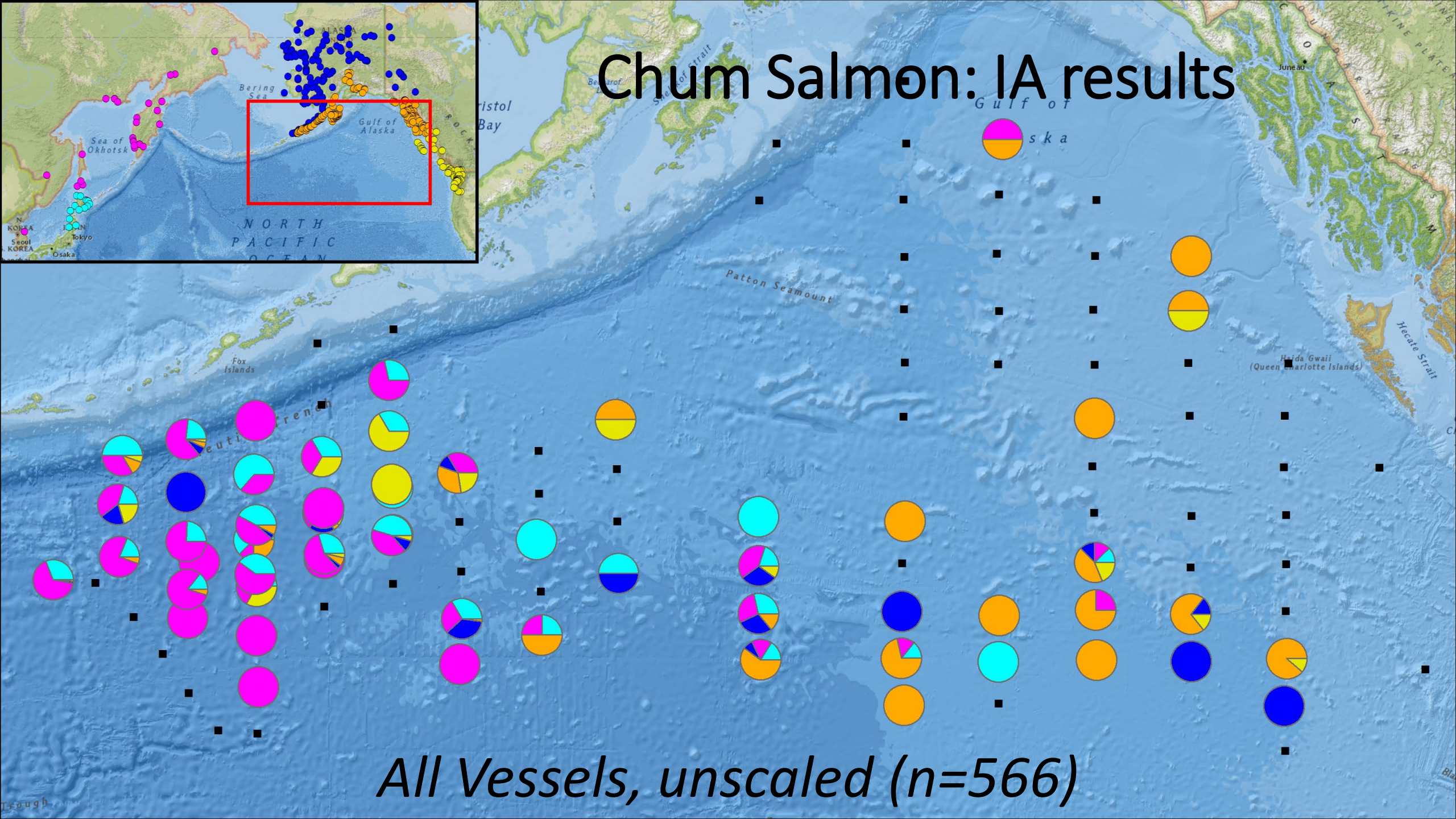
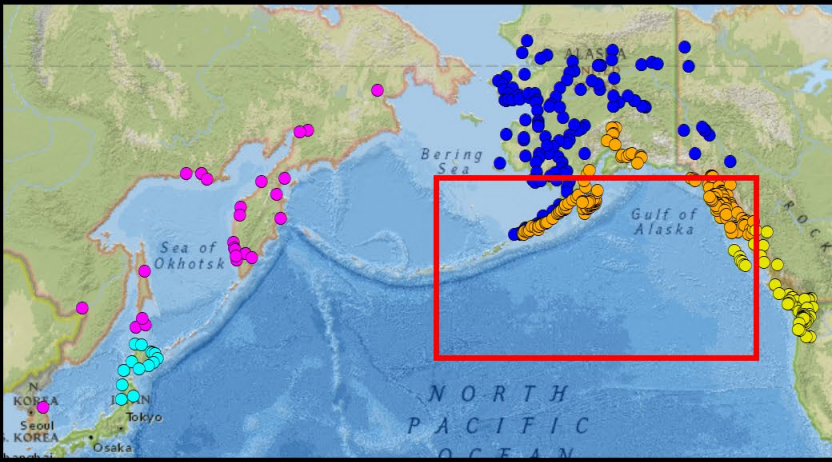
2022 salmon catches by species and ship (trawl only)



Chum Salmon: MSA results (broad)

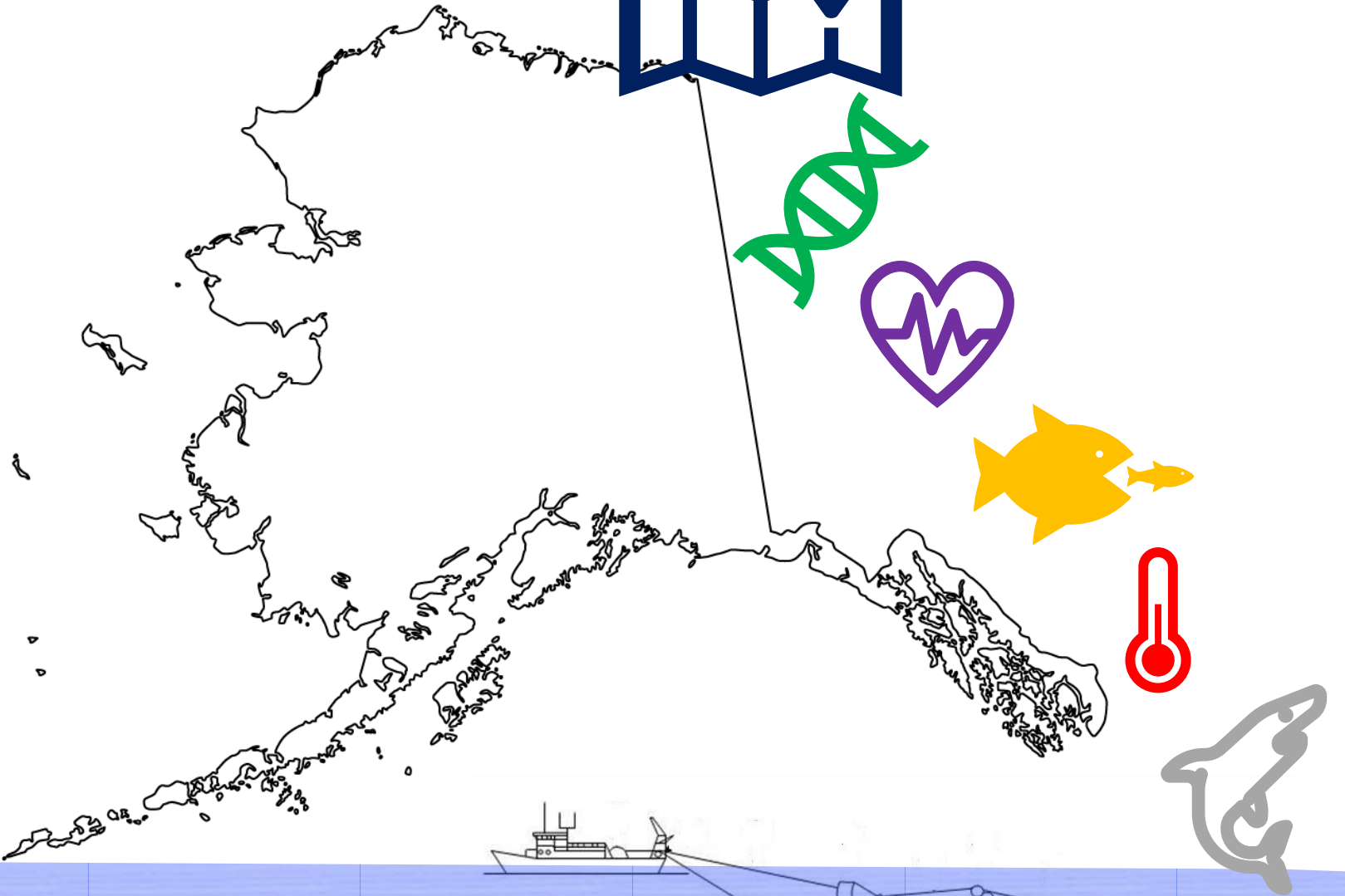


Chum Salmon: IA results



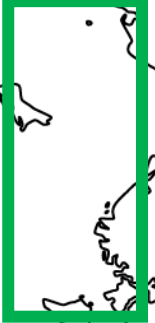
All Vessels, unscaled (n=566)

Juvenile Marine Salmon Surveys





Northern Bering Sea Survey



Southeast Alaska Coastal Monitoring (SECM)



Southern Bering Sea Survey



Western Gulf of Alaska Survey



WAK Chinook salmon tagging and Species Distribution Model (SDM) development



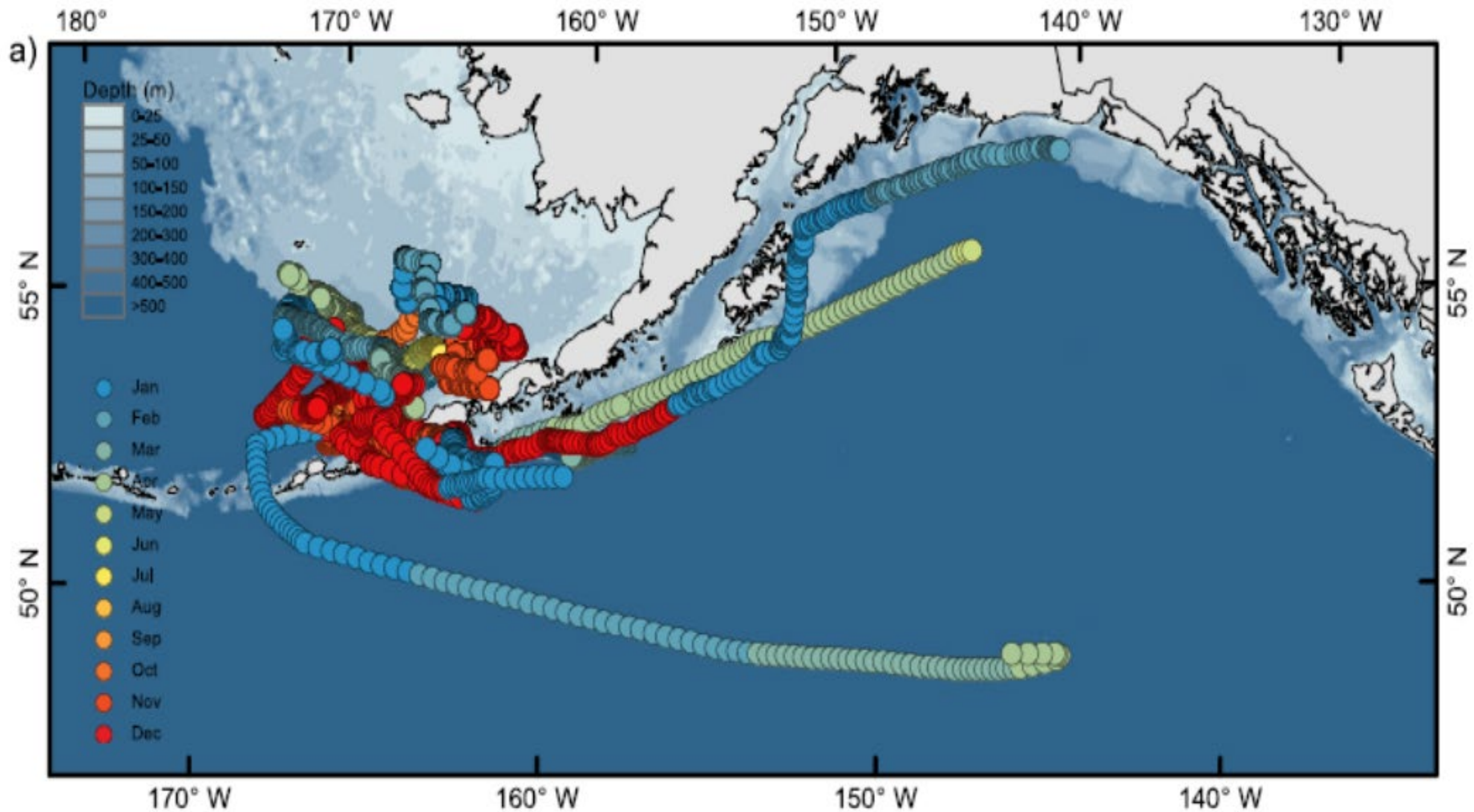
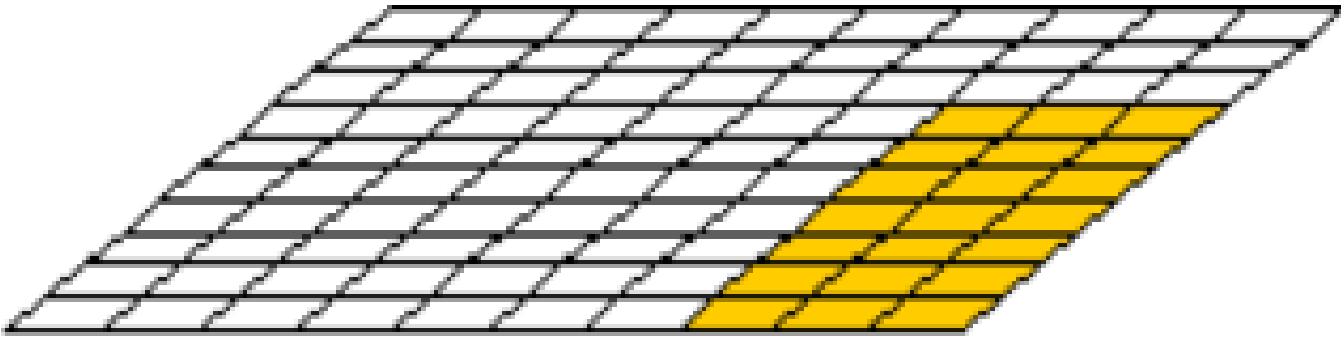
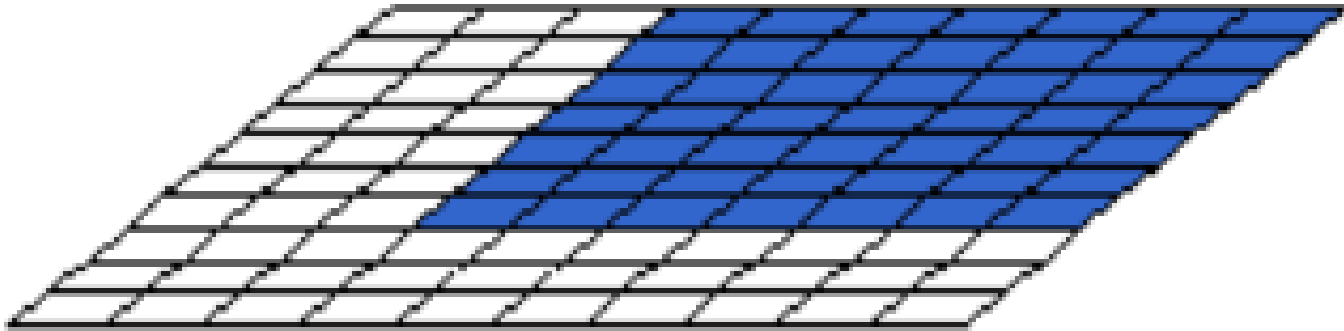


Figure 4 in Courtney et al. 2019. *Environ Biol Fish*.



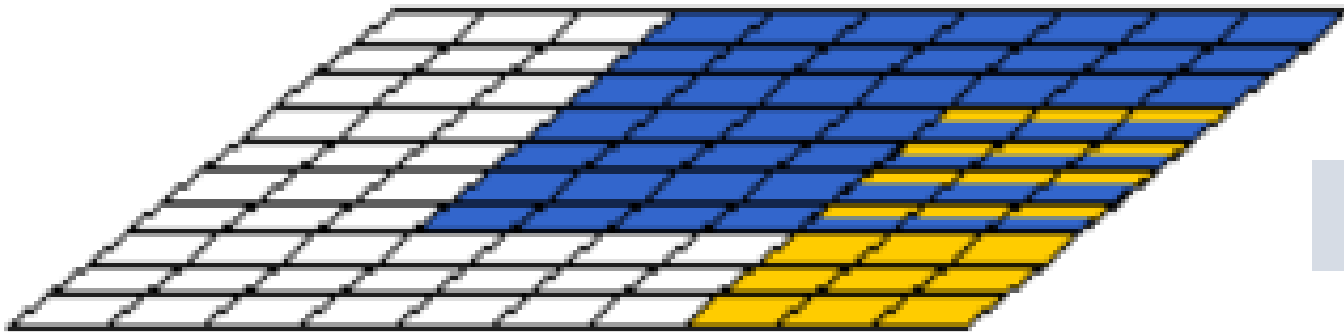
Chinook salmon
temperature preference

+



Pollock fishing effort

=



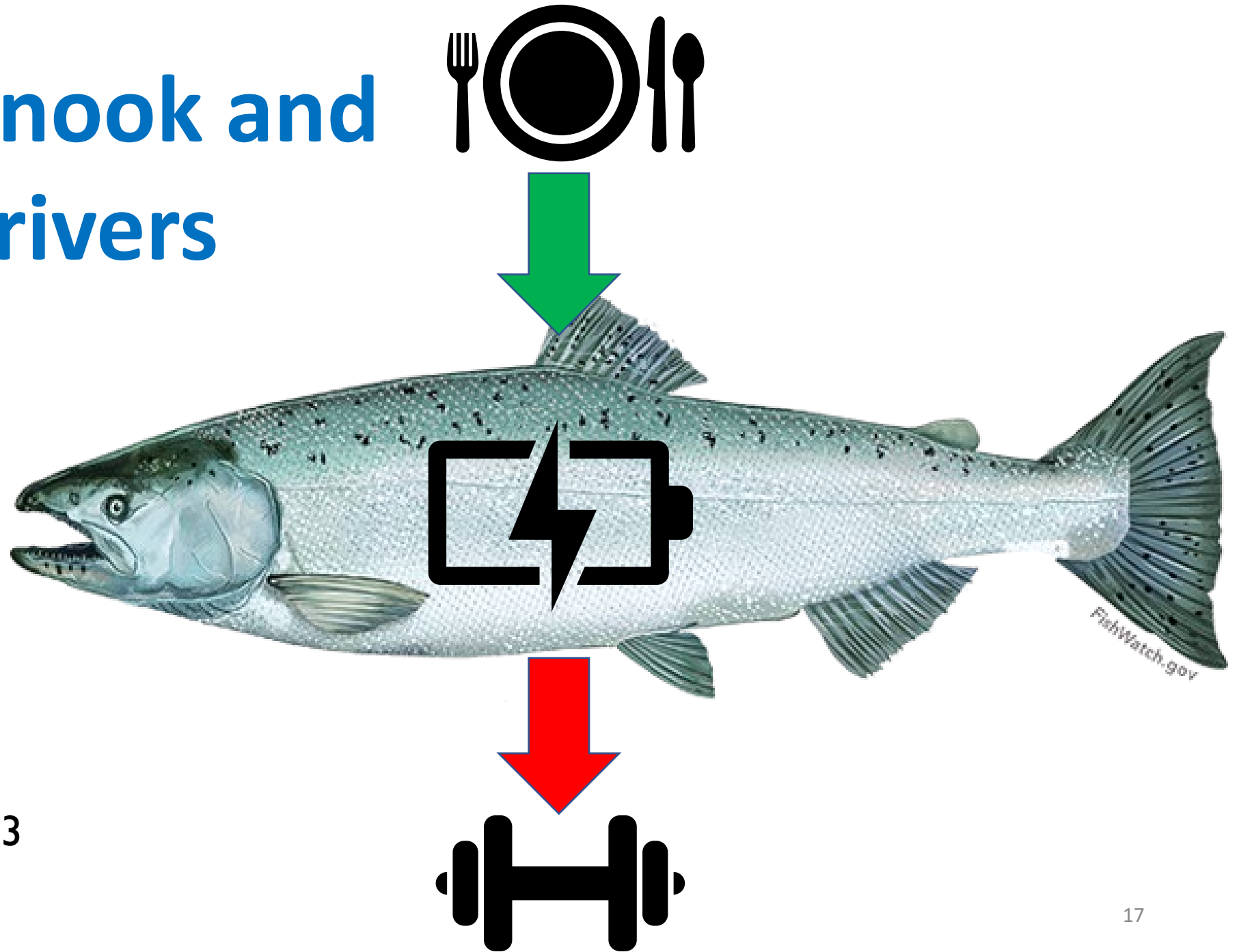
Identify areas with overlap

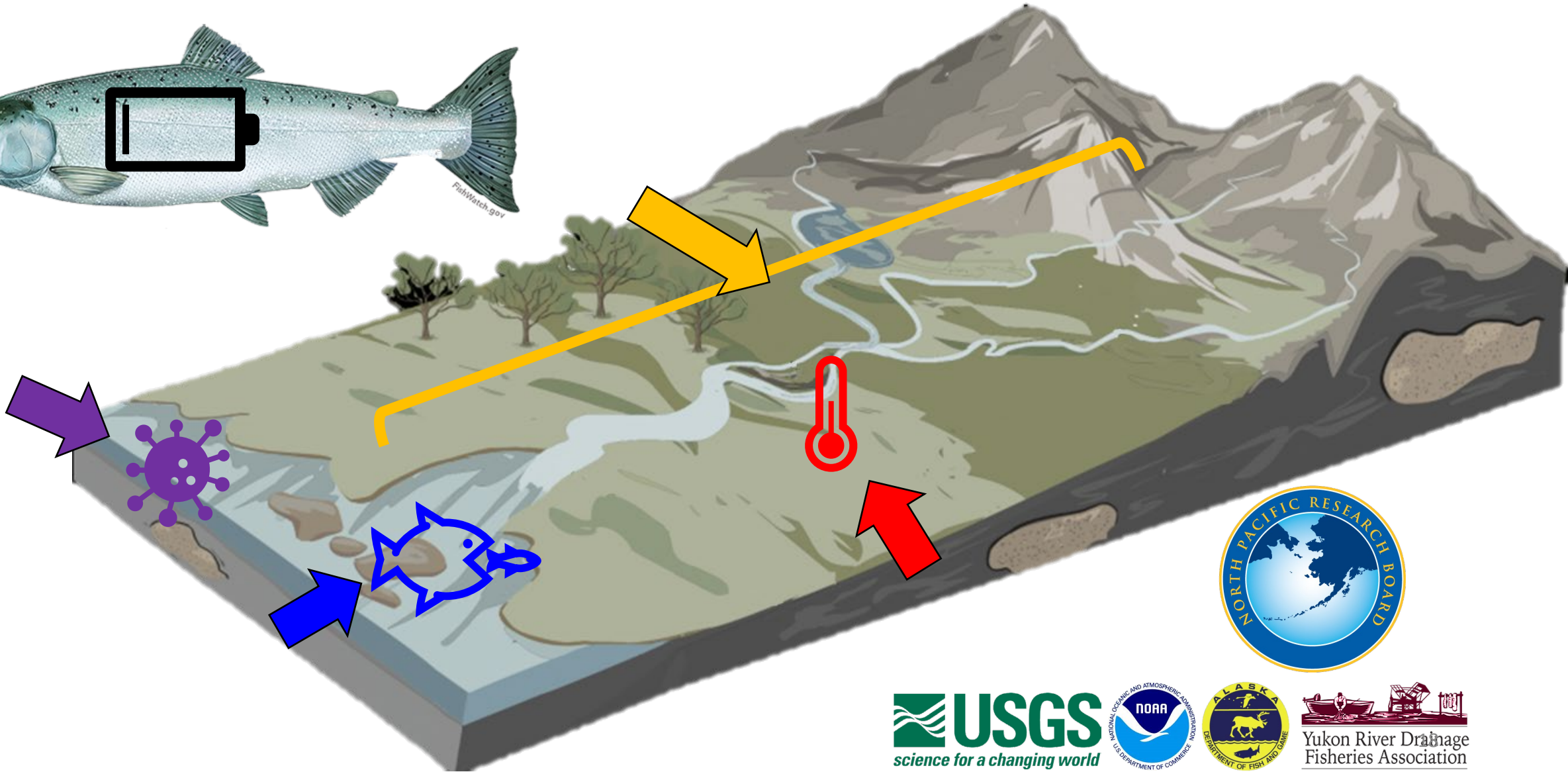
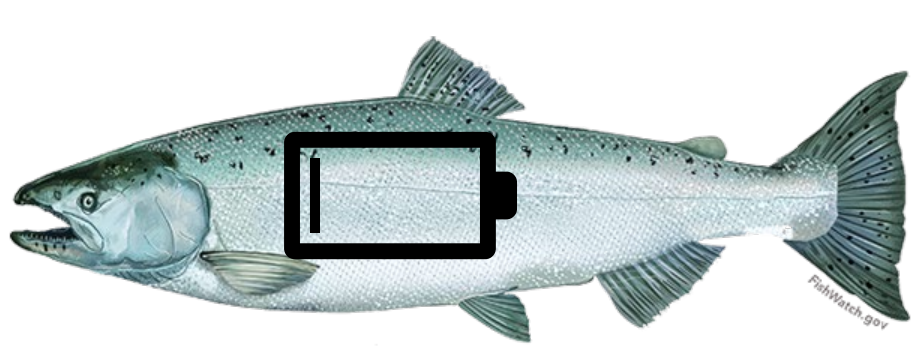


SDMs & RHS

Yukon Chinook and Climate Drivers Study

Honeyfield et al. 2016
Murphy et al. 2017
Larson & Howard 2019
Howard et al. 2020
von Biela et al. 2020
Murphy et al. 2022
Howard & von Biela 2023





Thank you

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