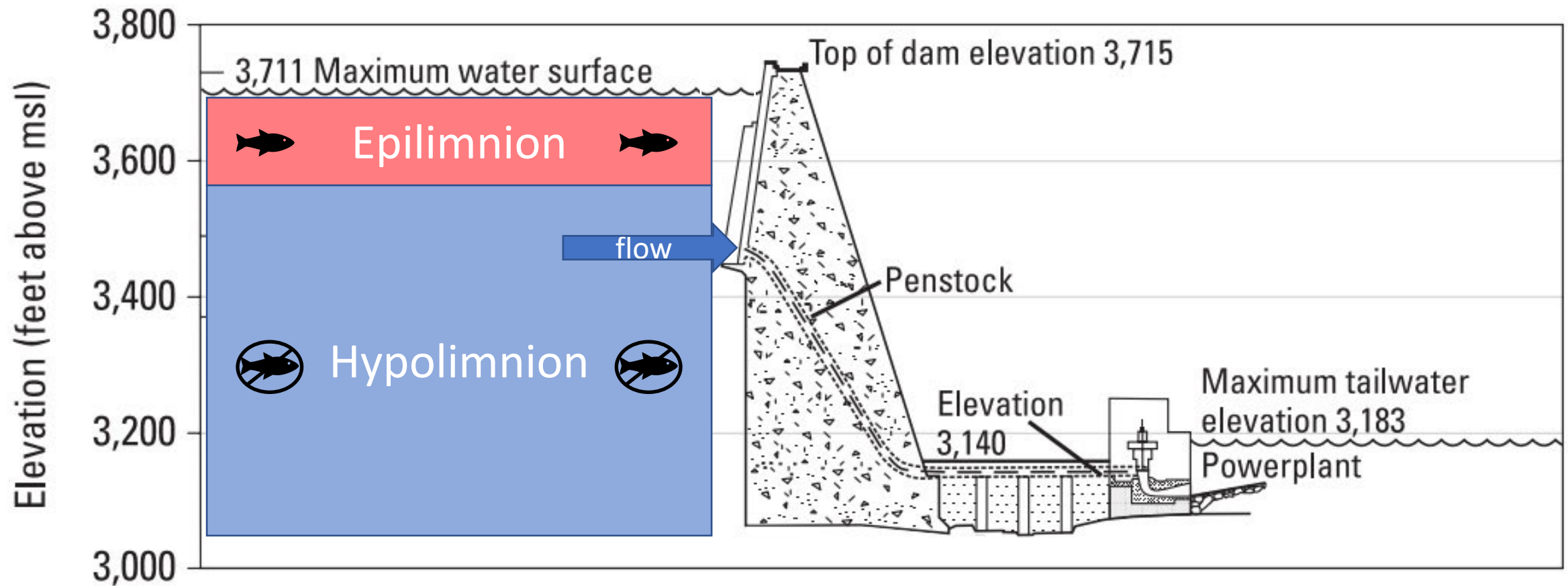


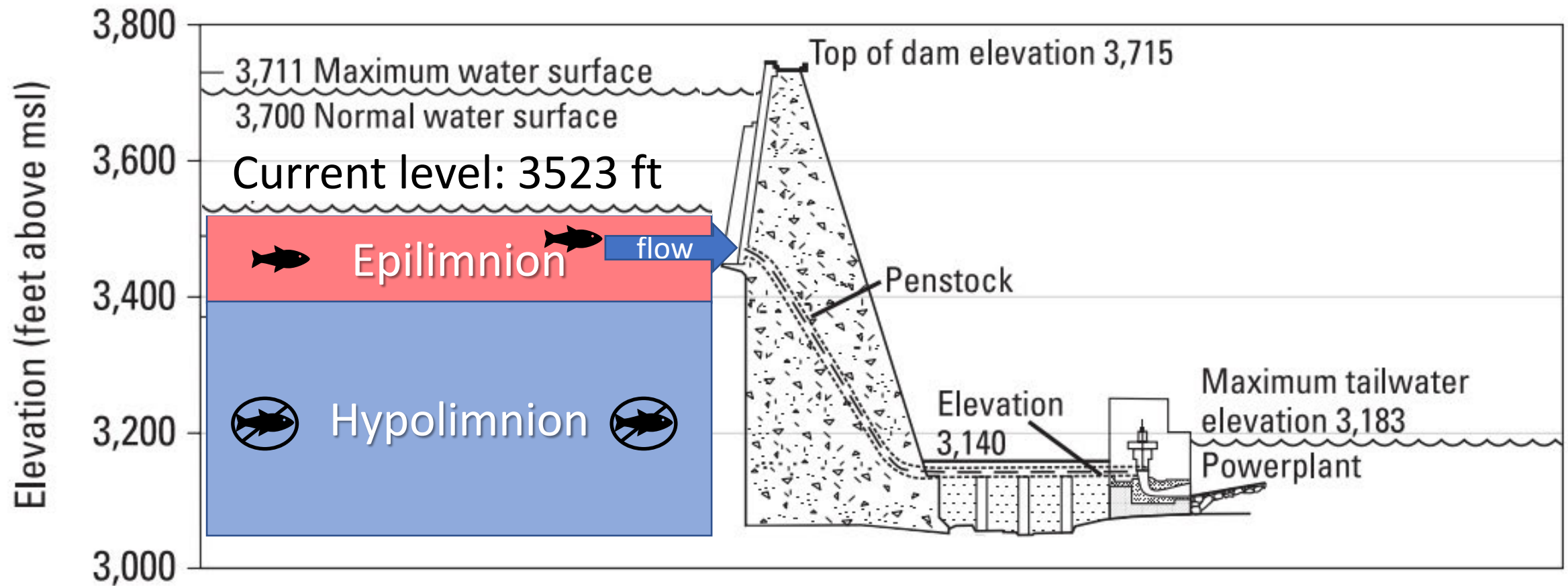
Characterizing the fish assemblage of the Lake Powell forebay: identifying the potential for nonnative fish escapement through Glen Canyon Dam and into the lower Colorado River

Phaedra Budy, Casey Pennock, Barrett Friesen, and
Gary P. Thiede

Historical conditions: withdrawal from hypolimnion



Current conditions: withdrawal from epilimnion



Objectives

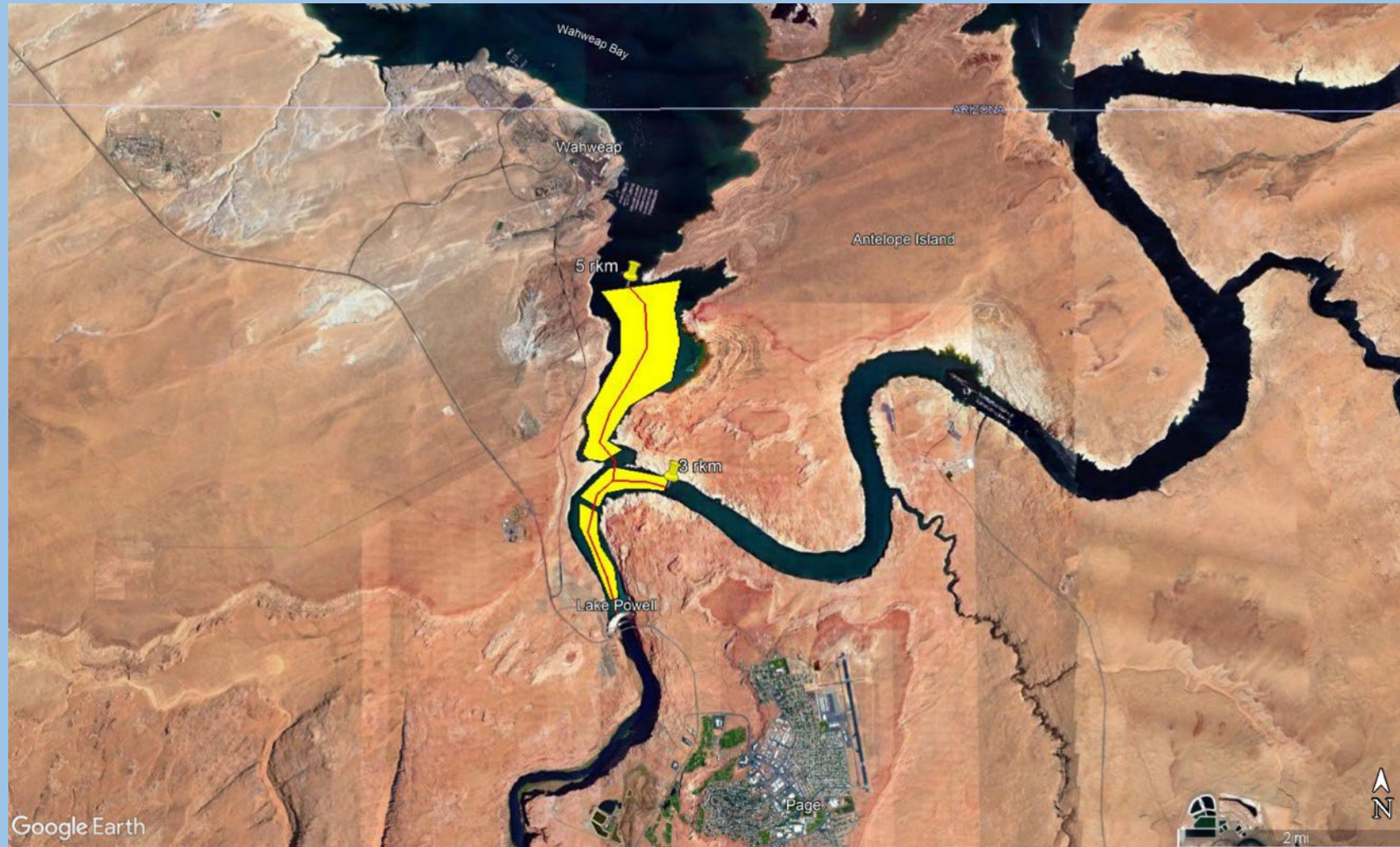
1. Characterize the potentially 'entrainable' fish population in Lake Powell
 - Space, depth, and seasons
2. Determine the likelihood that a fish that does get entrained, will survive the journey

Efforts to date

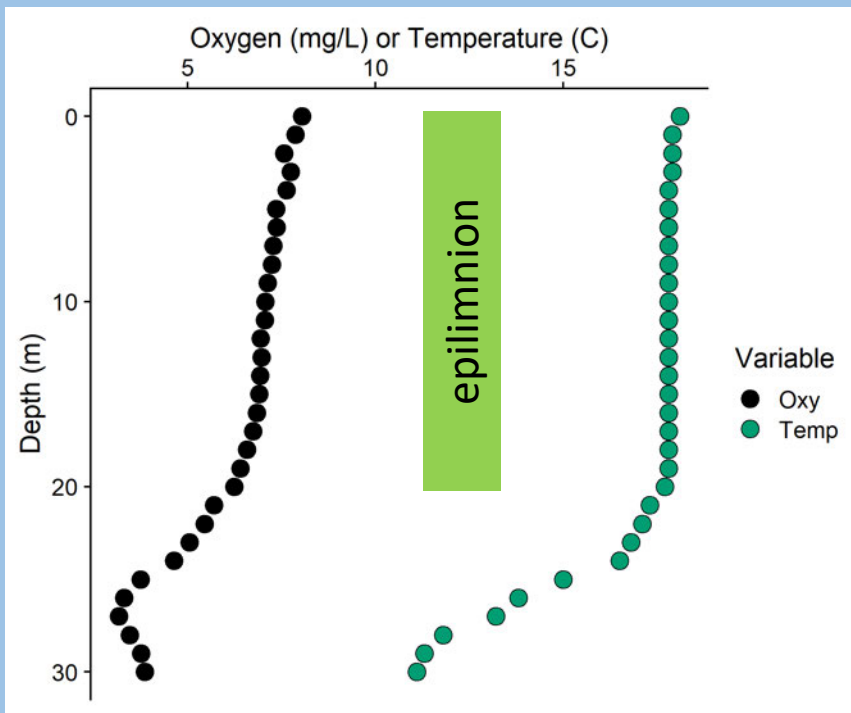
- November *pilot* sampling
- March full sampling
 - Temperature and Oxygen Profile
 - Gill netting
 - Minnow trapping
 - Larval fish tows
 - Each of three sites sampled three times
 - *BoR TSC = Hydroacoustics*
- New graduate student Barrett Friesen
 - Pre-project presentation 4/8



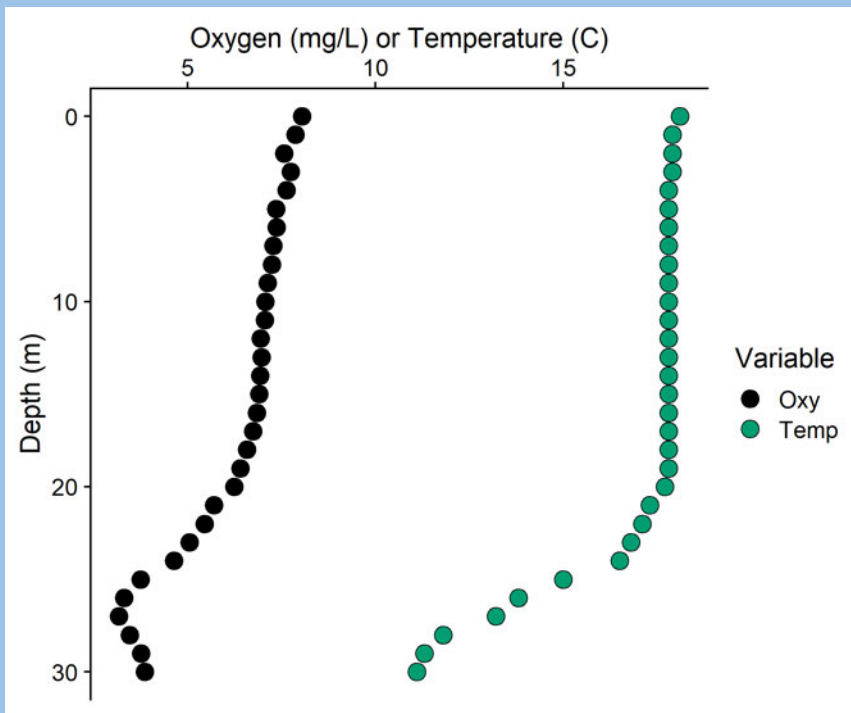
Sample locations



Wahweap
Confluence
Forebay

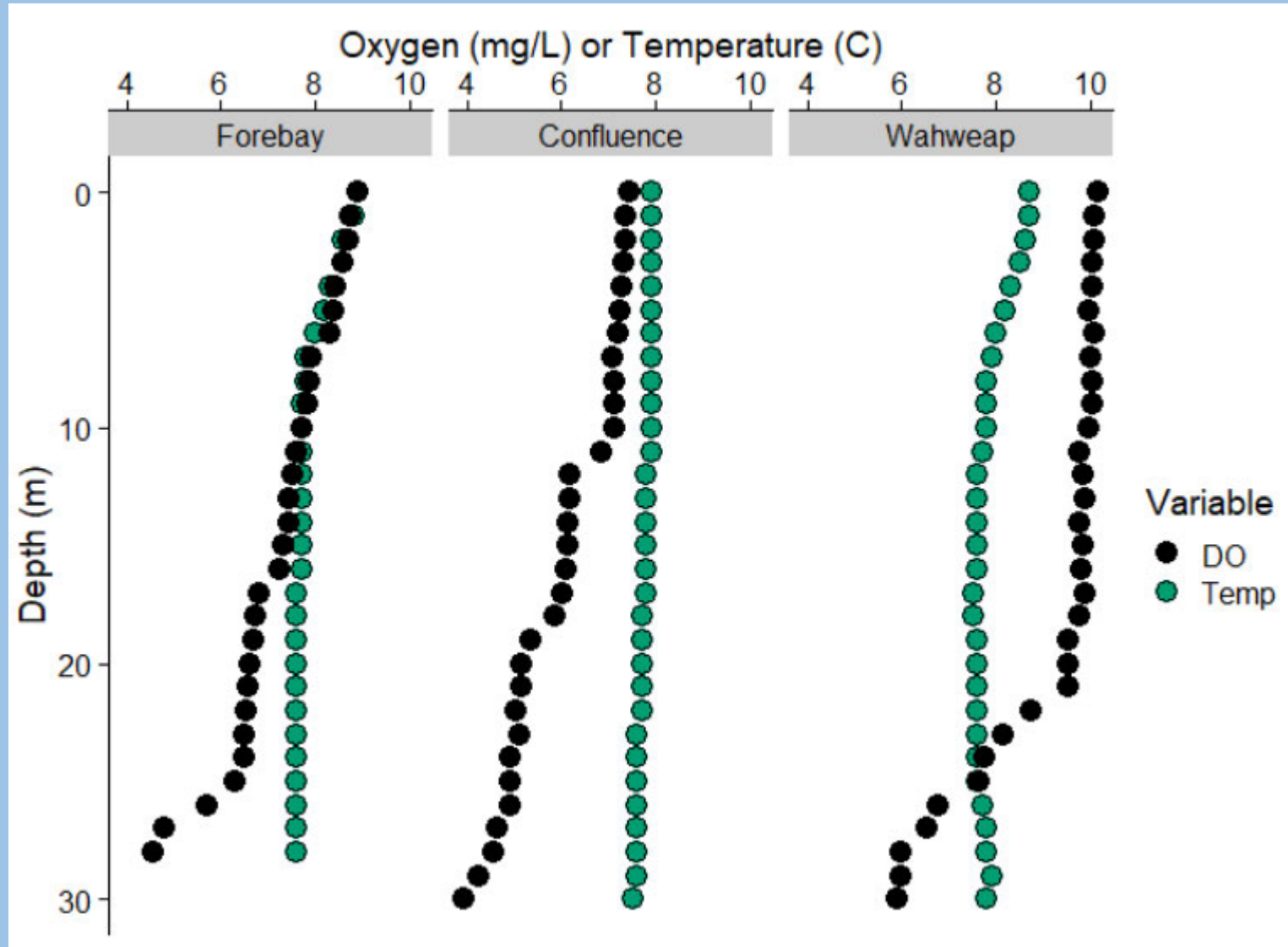


November 2021
(forebay)

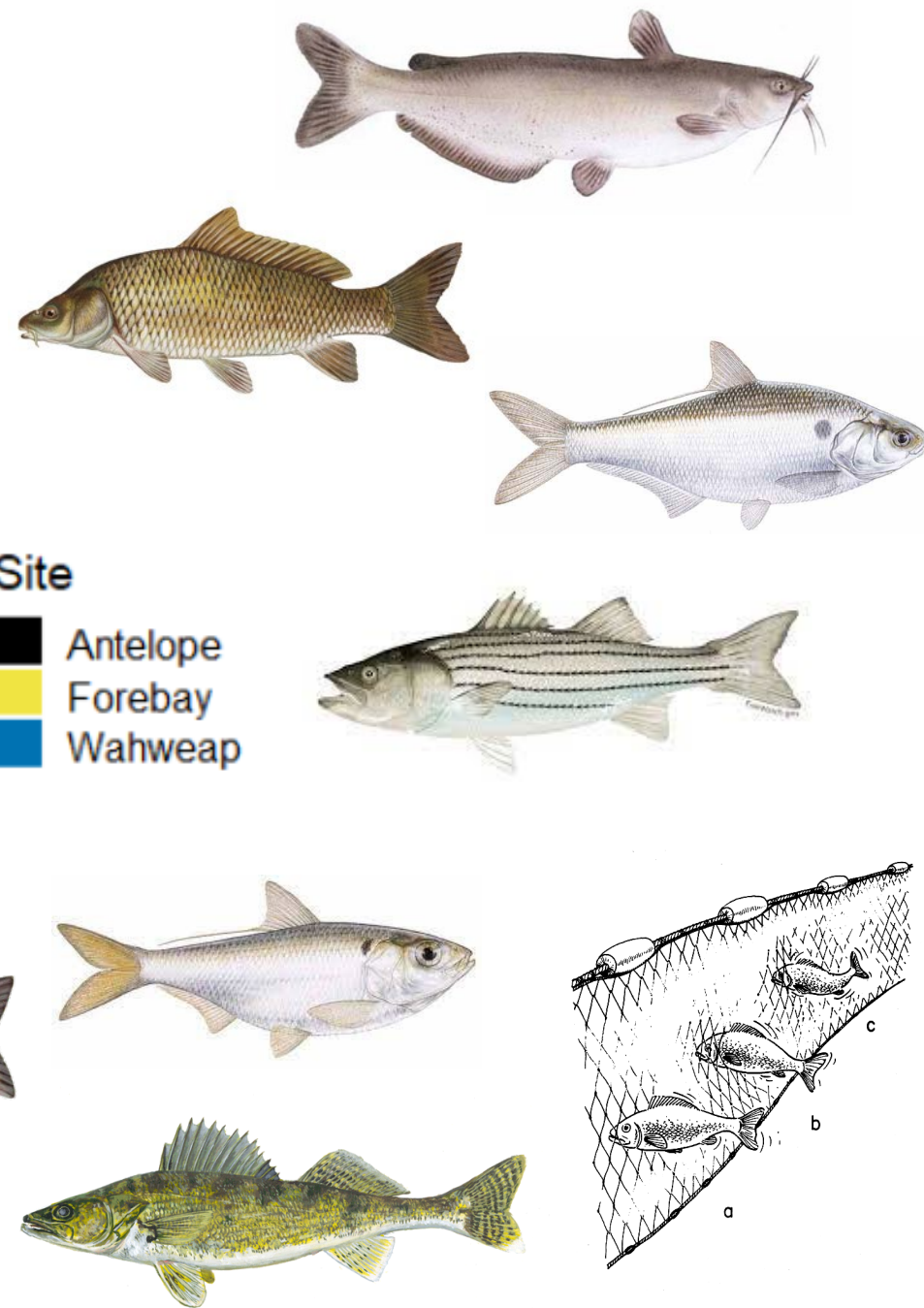
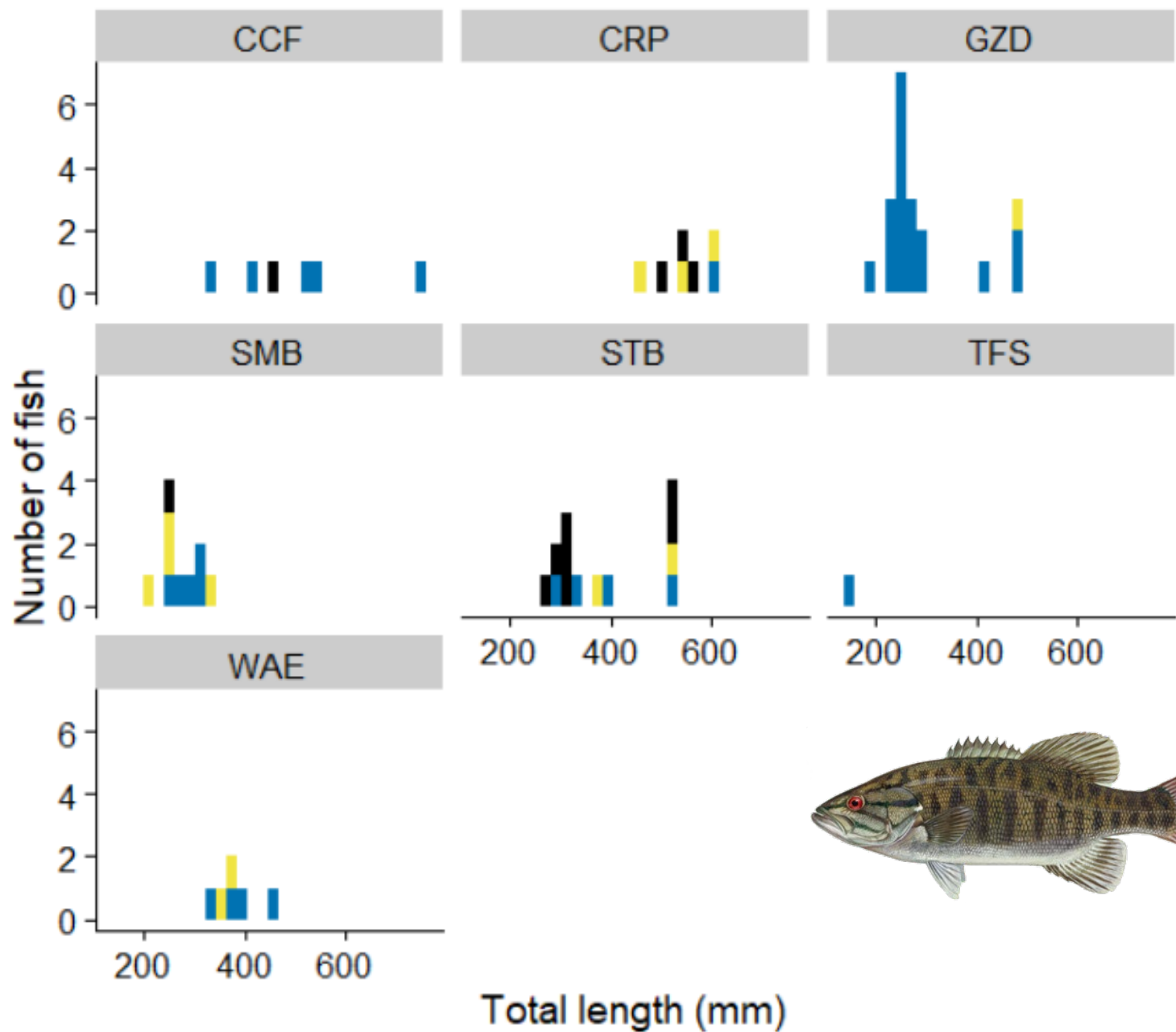


November 2021
(forebay)

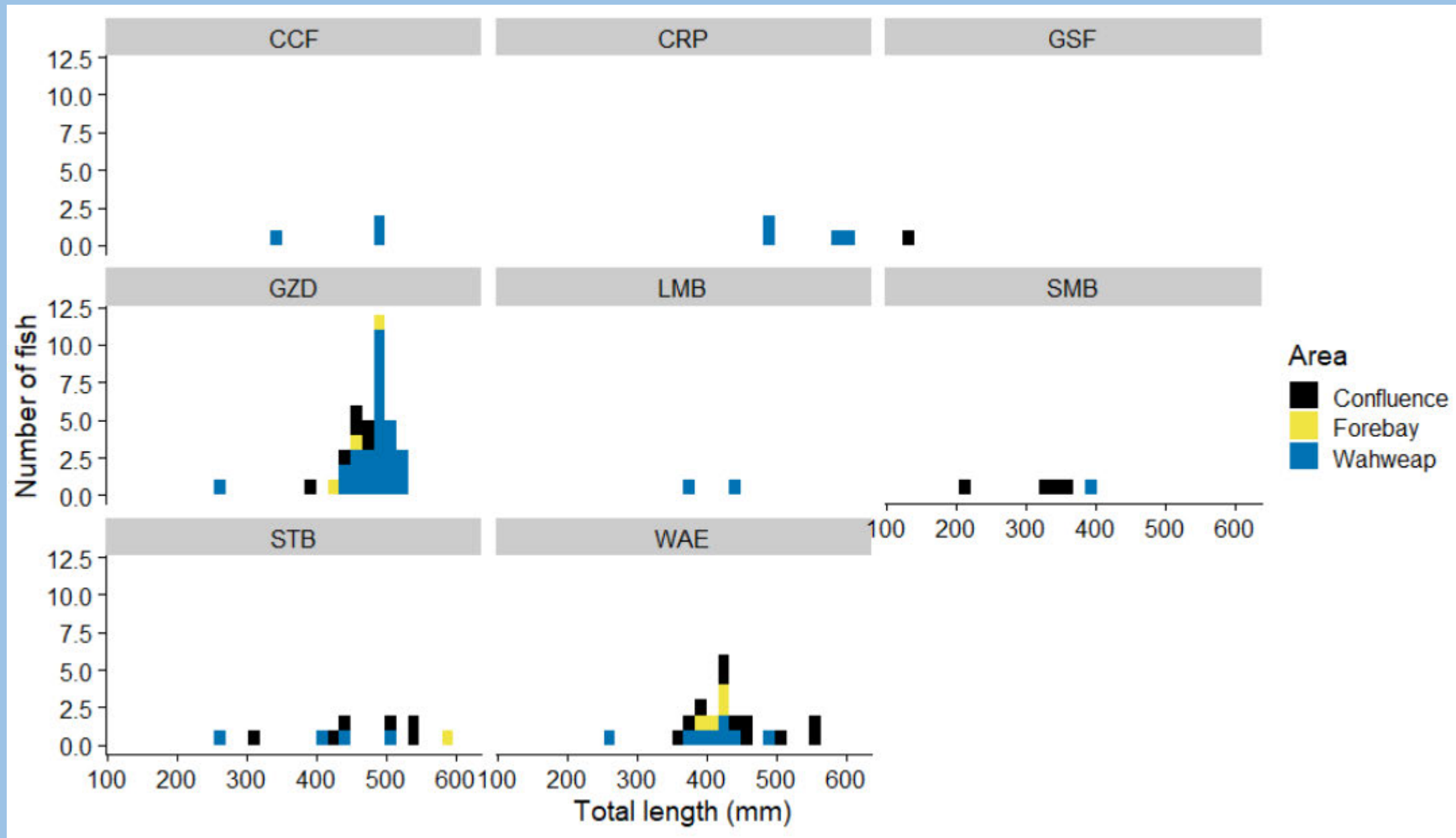
March 2022



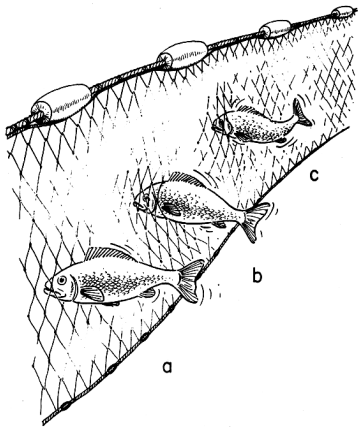
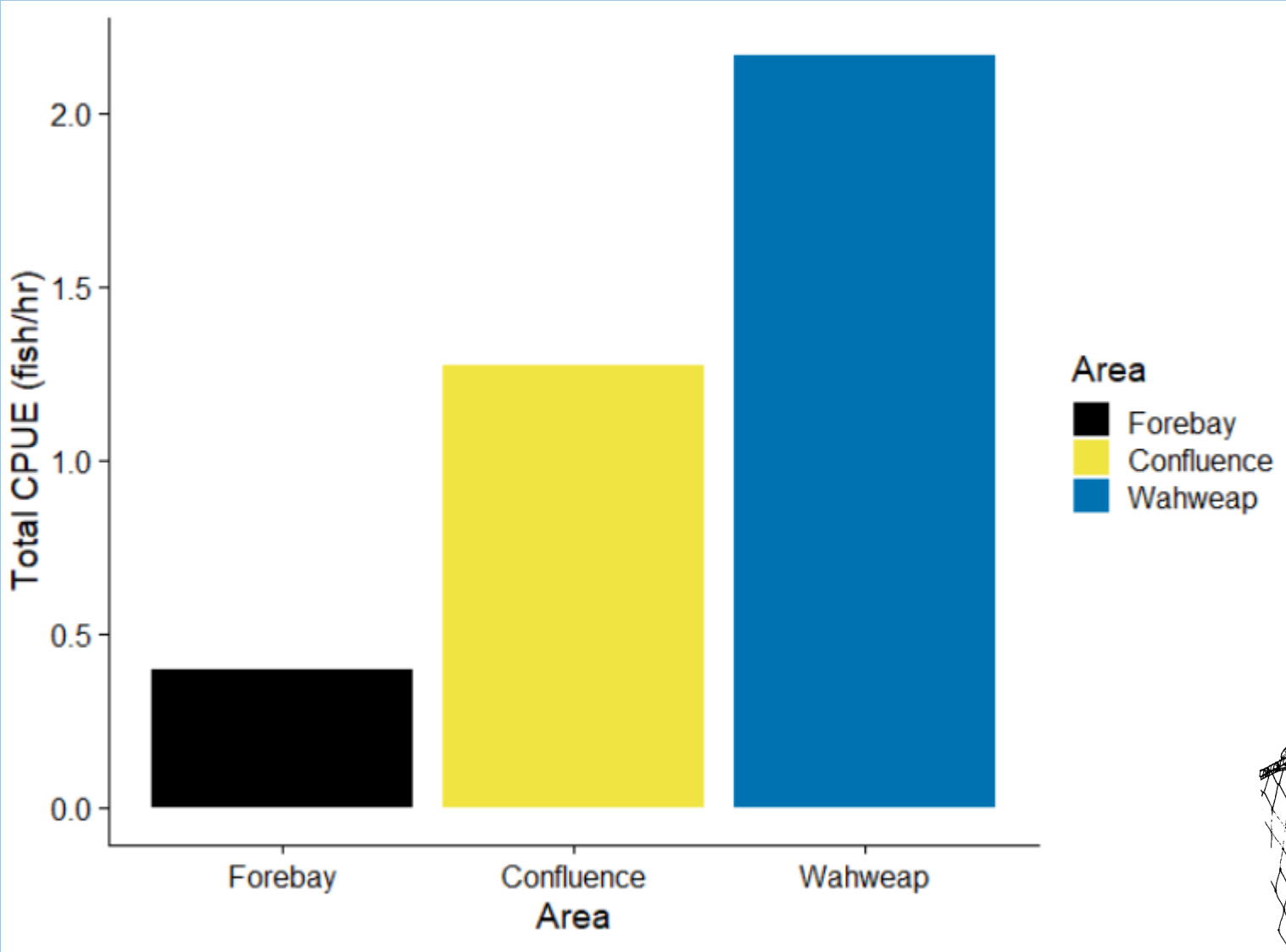
November *pilot* sampling



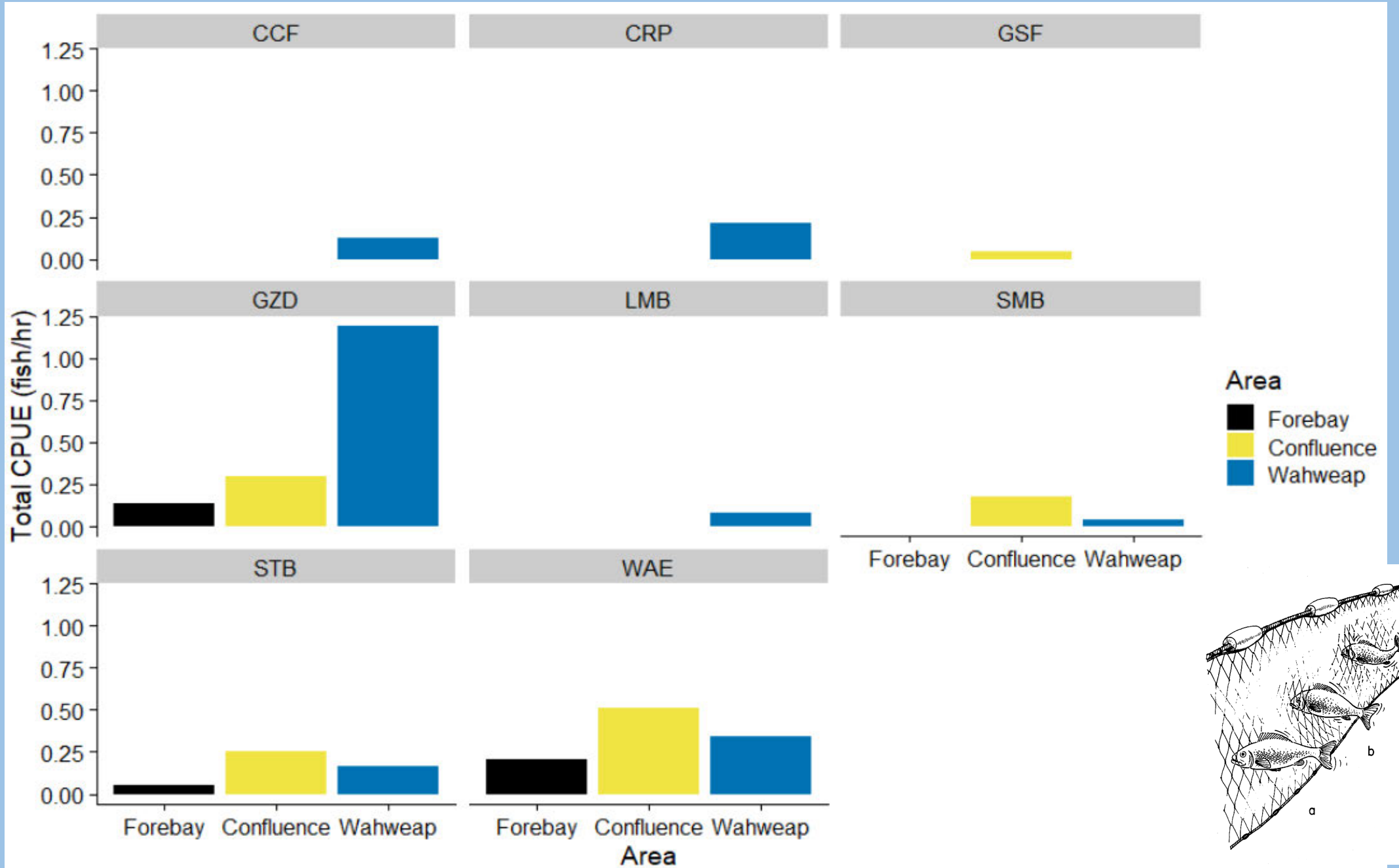
March full spring sampling, n= 137



March full spring sampling: gillnets



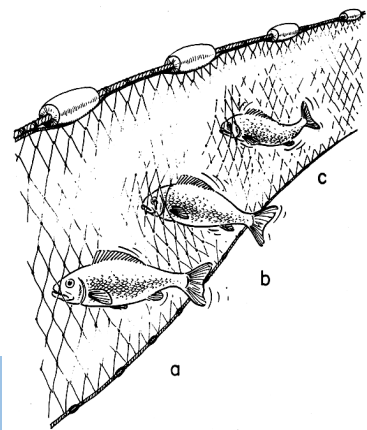
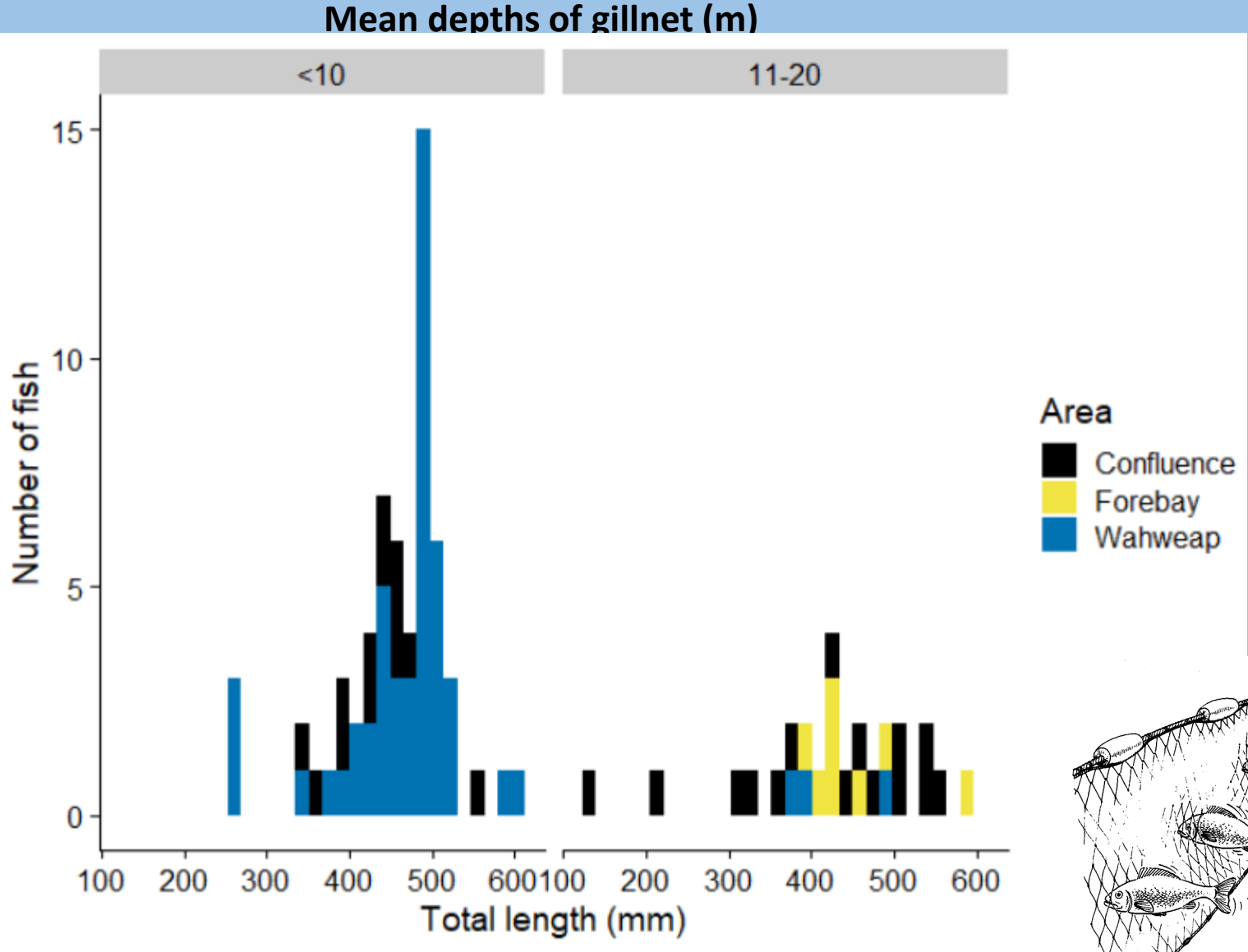
March full spring sampling: gillnets



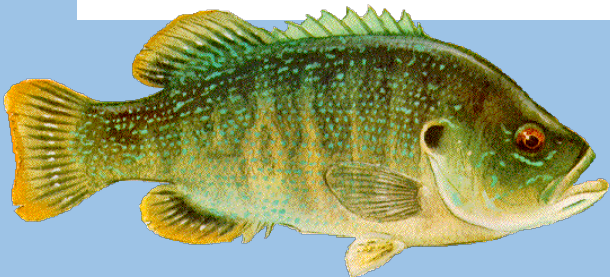
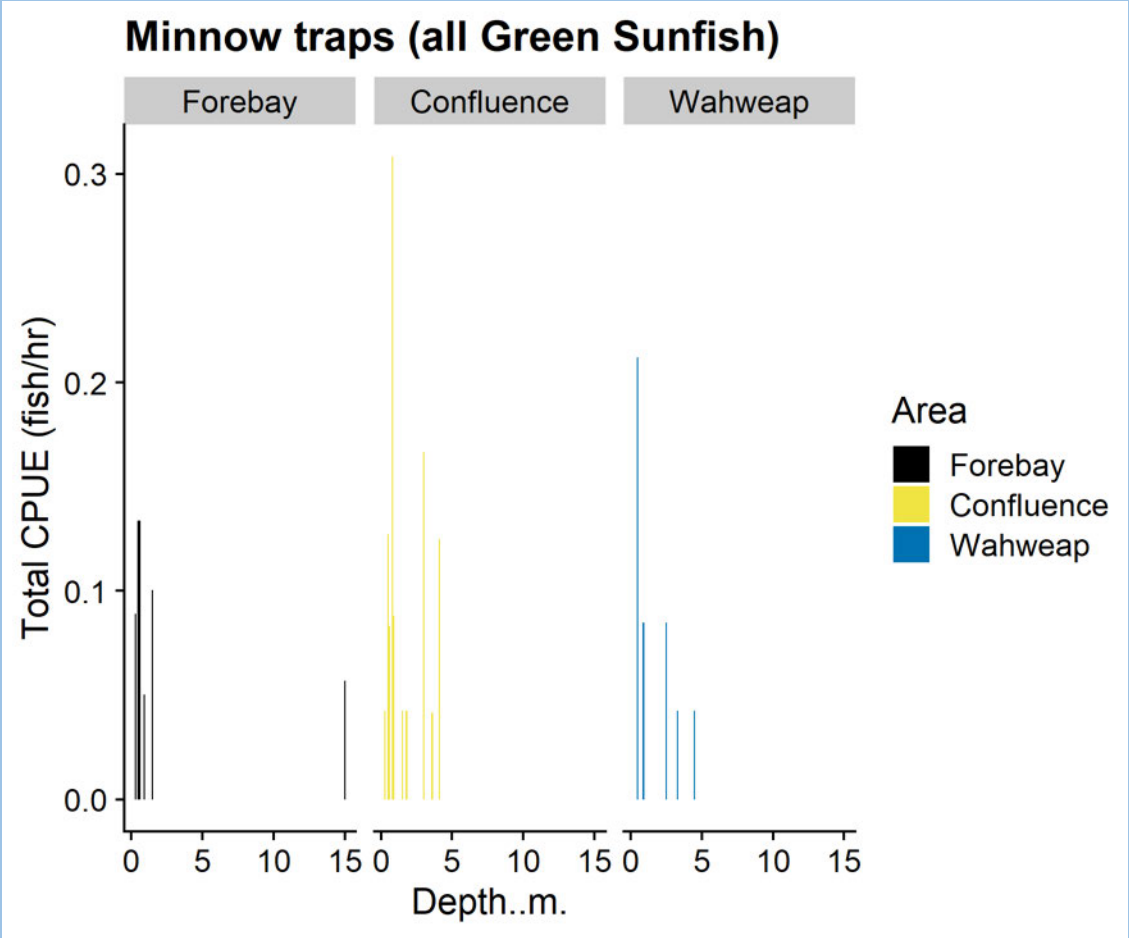
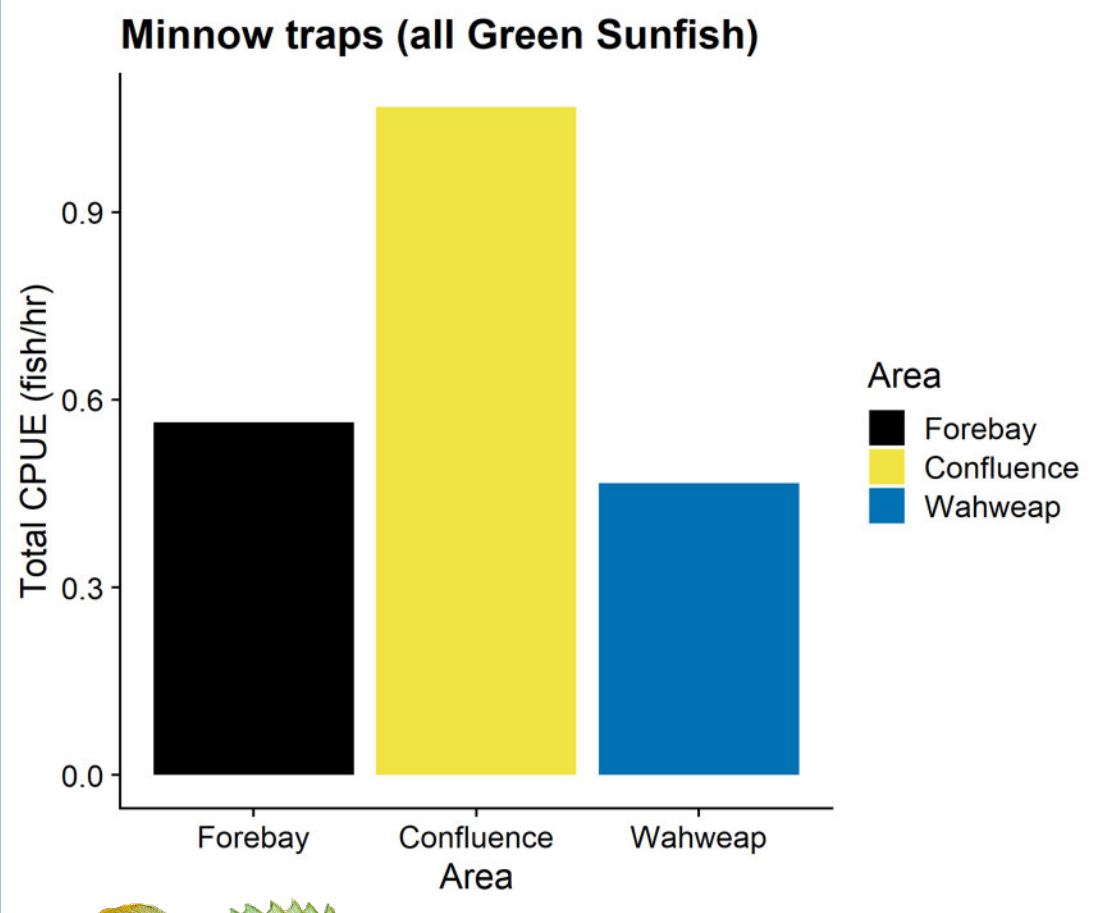
Walleye were very gravid and eating lots of shad



March full spring sampling: gillnets



March full spring sampling: minnow traps



Juveniles Average = 46 mm TL (31-71 mm)

Next steps

- Intensive larval tows continuing in May
- Next full sample early June (August, Autumn)

- Telemetry ~ Summer

- Depths
- Movement

- Fish Sensor tags ~ Summer

Sensor Fish



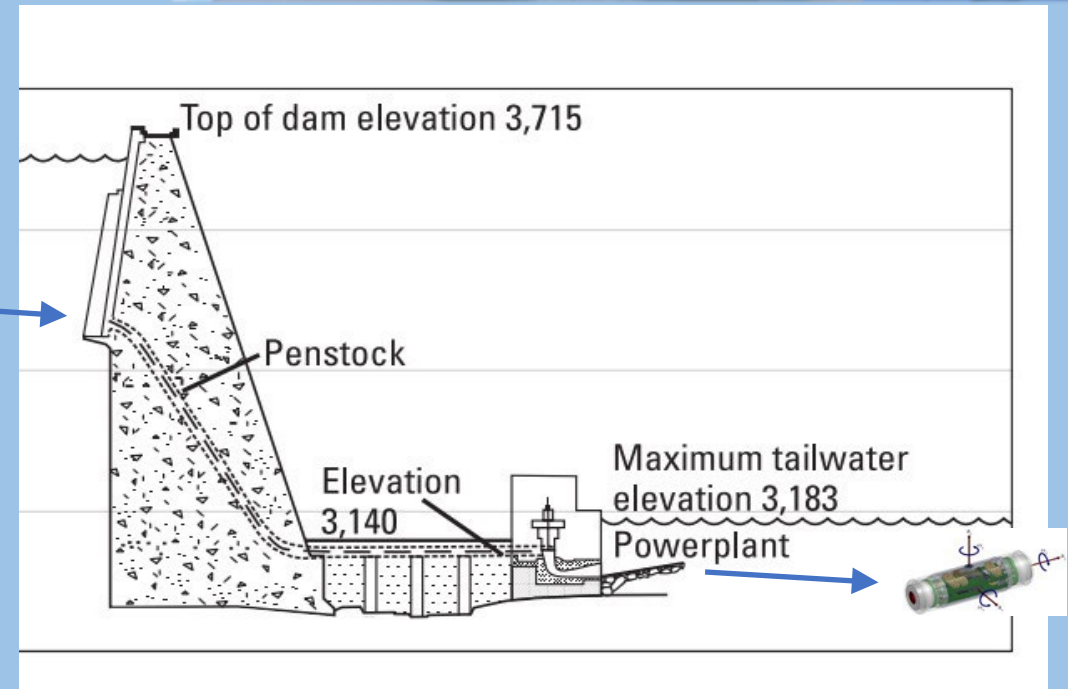
90 mm

Temperature

Pressure

Gyroscope (orientation)

Tri-axial accelerometer (change in acceleration)



Acknowledgments

Bureau of Reclamation

- Clarence Fullard
- Kerri Pedersen
- Mike Horn
- Mark McKinstry

Utah State University

- ### Glen Canyon Recreation Area
- Jeff Arnold

U.S. Geological Survey

March full spring sampling: gillnets

