

Monitoring Biodiversity of Georgica Pond



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Friends of Georgica Pond | August 27th, 2023

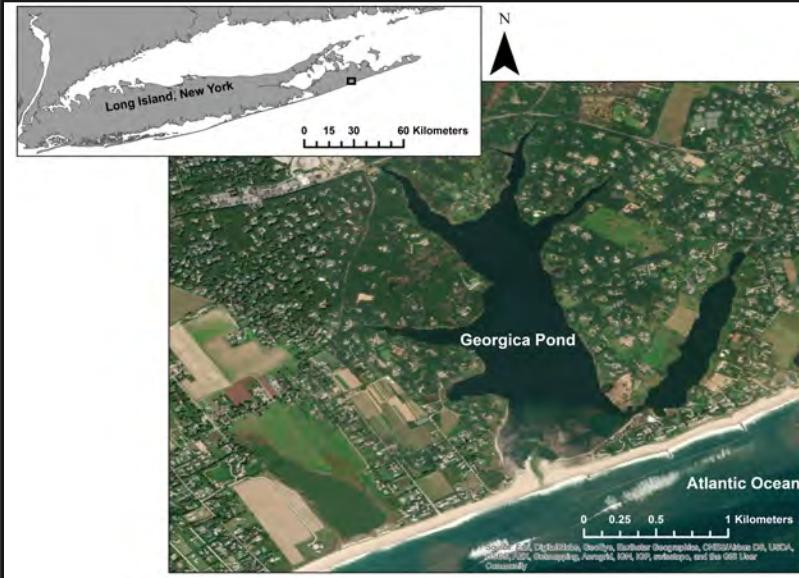


Stony Brook University
School of Marine and
Atmospheric Sciences



Marine Community Ecology
Peterson Lab

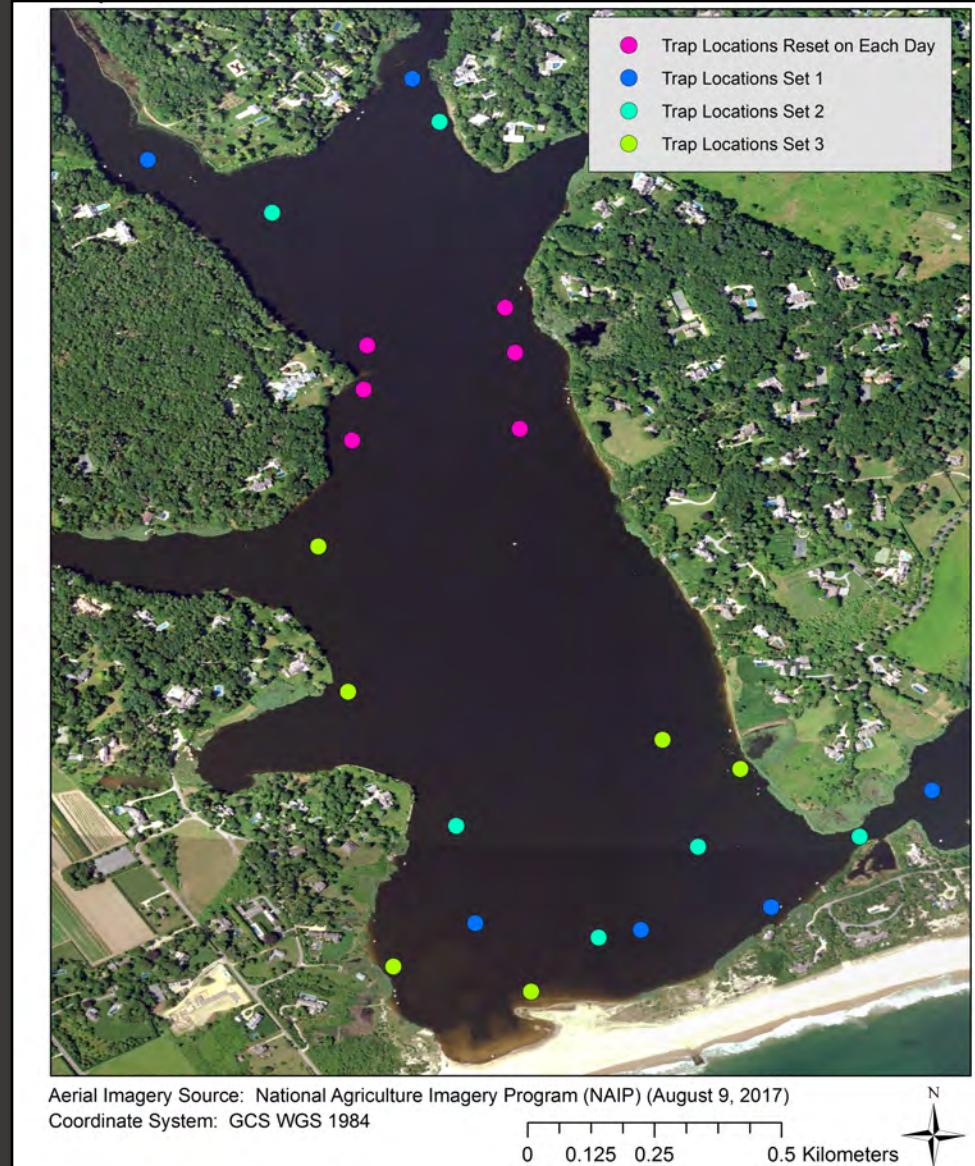
Monitoring Biodiversity of Georgica Pond



Trap Surveys of Georgica Pond



- Spring and Autumn Survey
- 2018 – 2023
- 12 locations each set
- 3 consecutive 48-hour sets



Trap Surveys of Georgica Pond

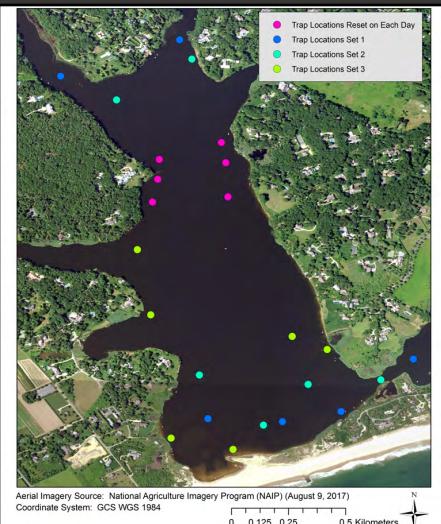


Trap Surveys of Georgica Pond



Trap Surveys of Georgica Pond

Blue crabs (*Callinectes sapidus*)



- Catch rates fluctuate
- 3/4 sampling seasons there are more blue crabs captured in fall than spring
- More males than females
- Females on southern end

Number of Georgica Pond Blue Crabs



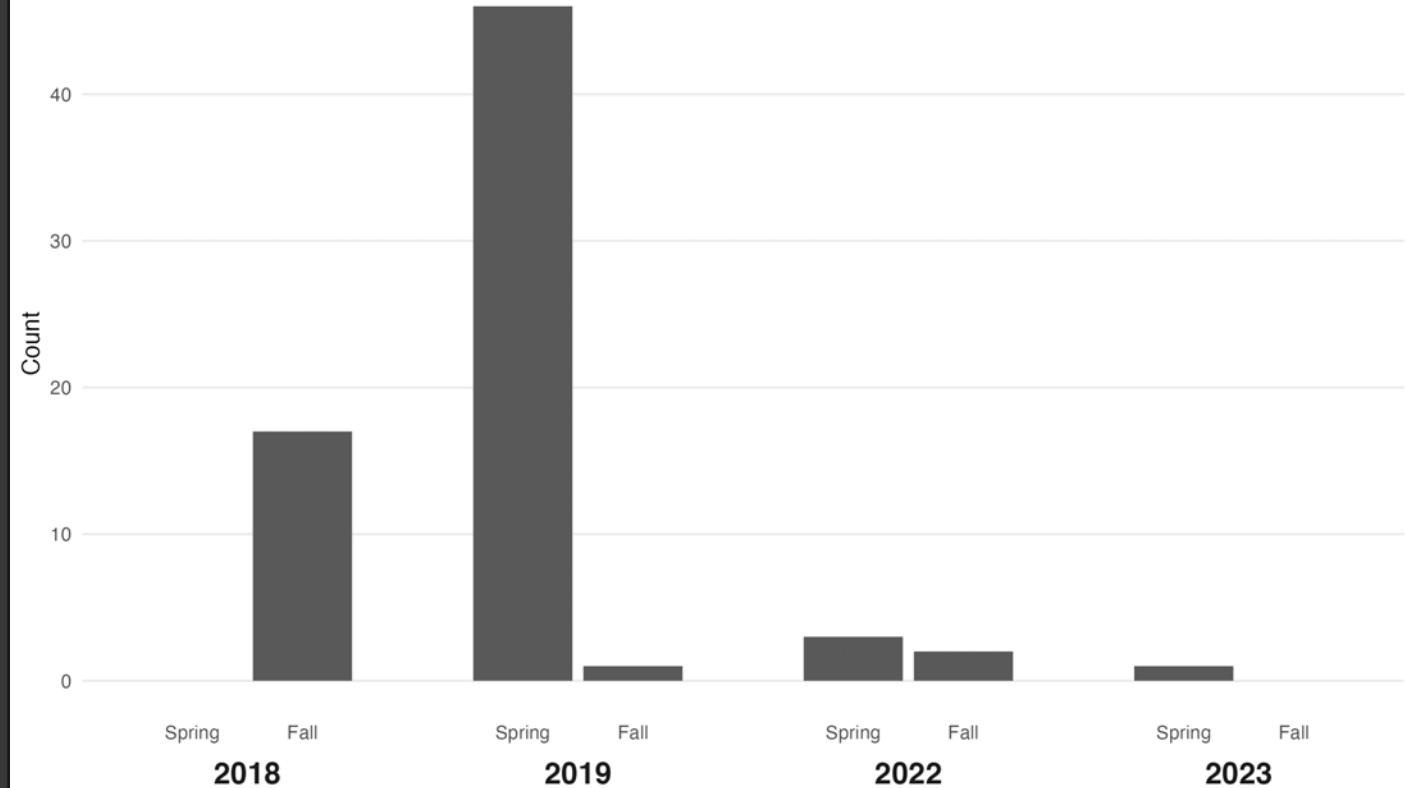
Trap Surveys of Georgica Pond

White perch (*Morone americana*)



- Peak during prolonged breach opening of the spring of 2019
- Very low abundance comparatively since then

Number of Georgica Pond White Perch



Trap Surveys of Georgica Pond



2019
Rock crab
(*Cancer irroratus*)



2018
American eel
(*Anguilla rostrata*)



2018
Summer flounder
(*Paralichthys dentatus*)

Beach Seine Surveys of Georgica Pond

- Spring and Autumn Survey
- 2018 – 2023
- 4 beach seine locations
- ~50 meters x 7.6 meters wide



Beach Seine Surveys of Georgica Pond

- Fish identified to species
- Subset of 50 individuals were measured

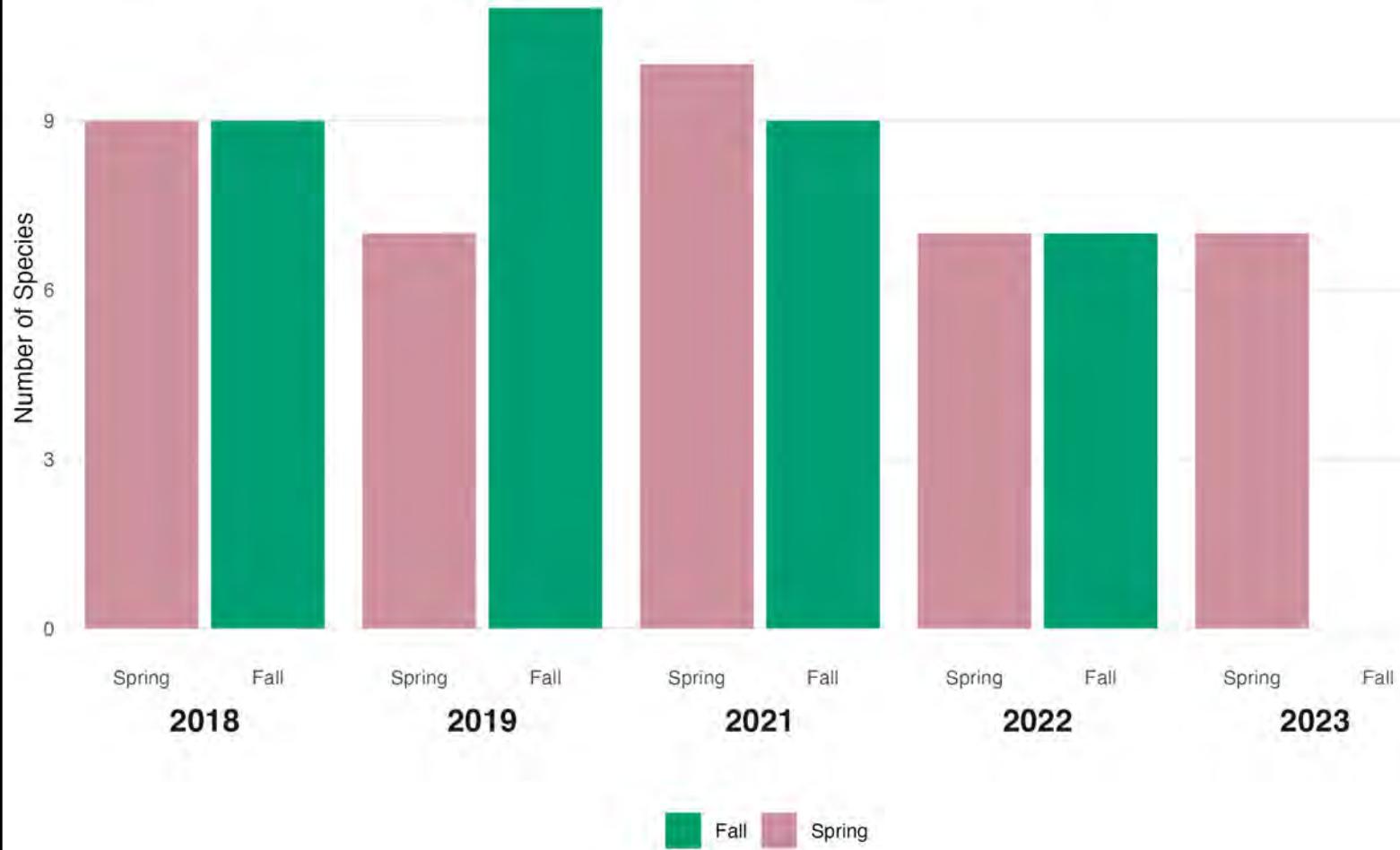


Beach Seine Surveys of Georgica Pond

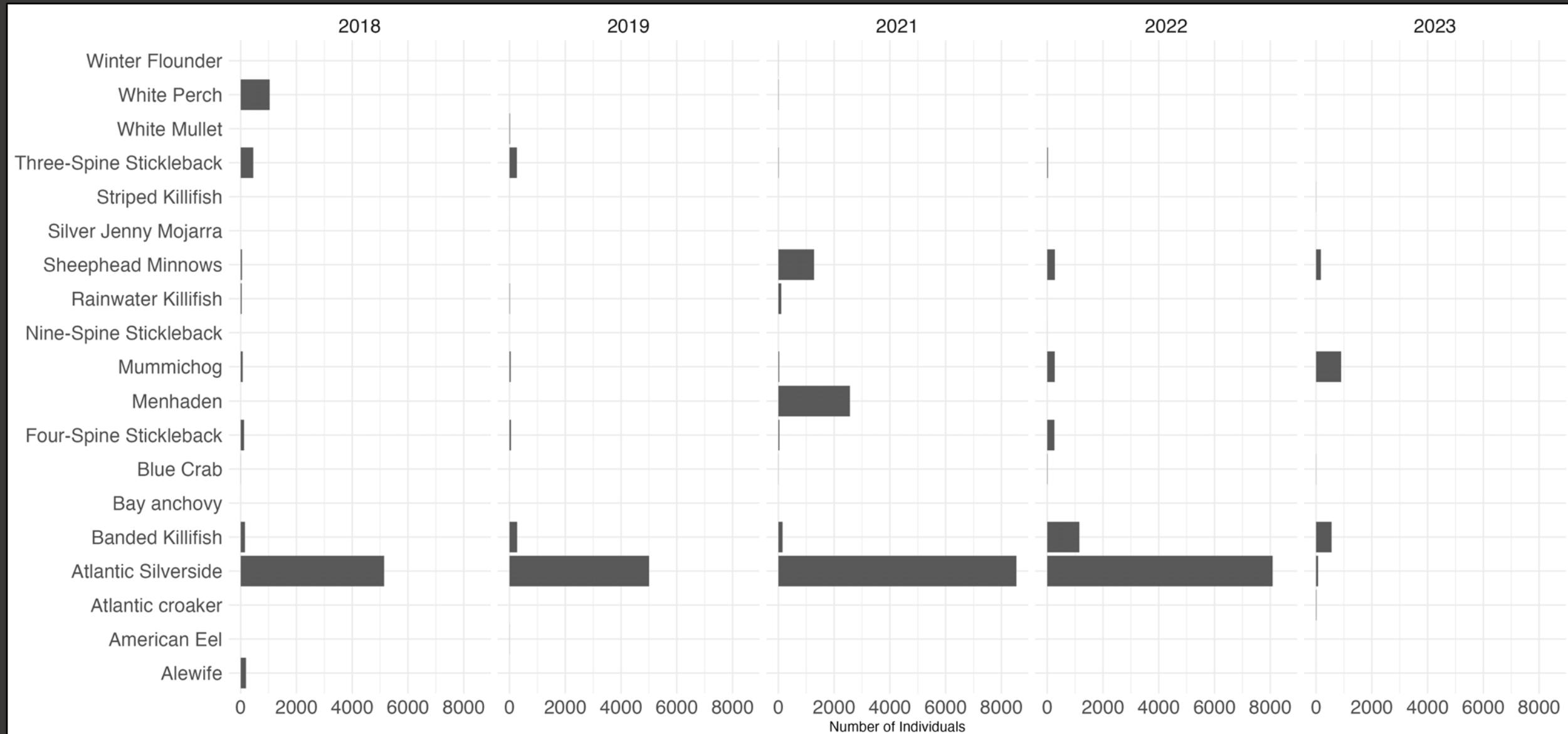
- Min. of 7 species
- Max. of 11 species
- 19 species over all years (18 fish, 1 crustacean)



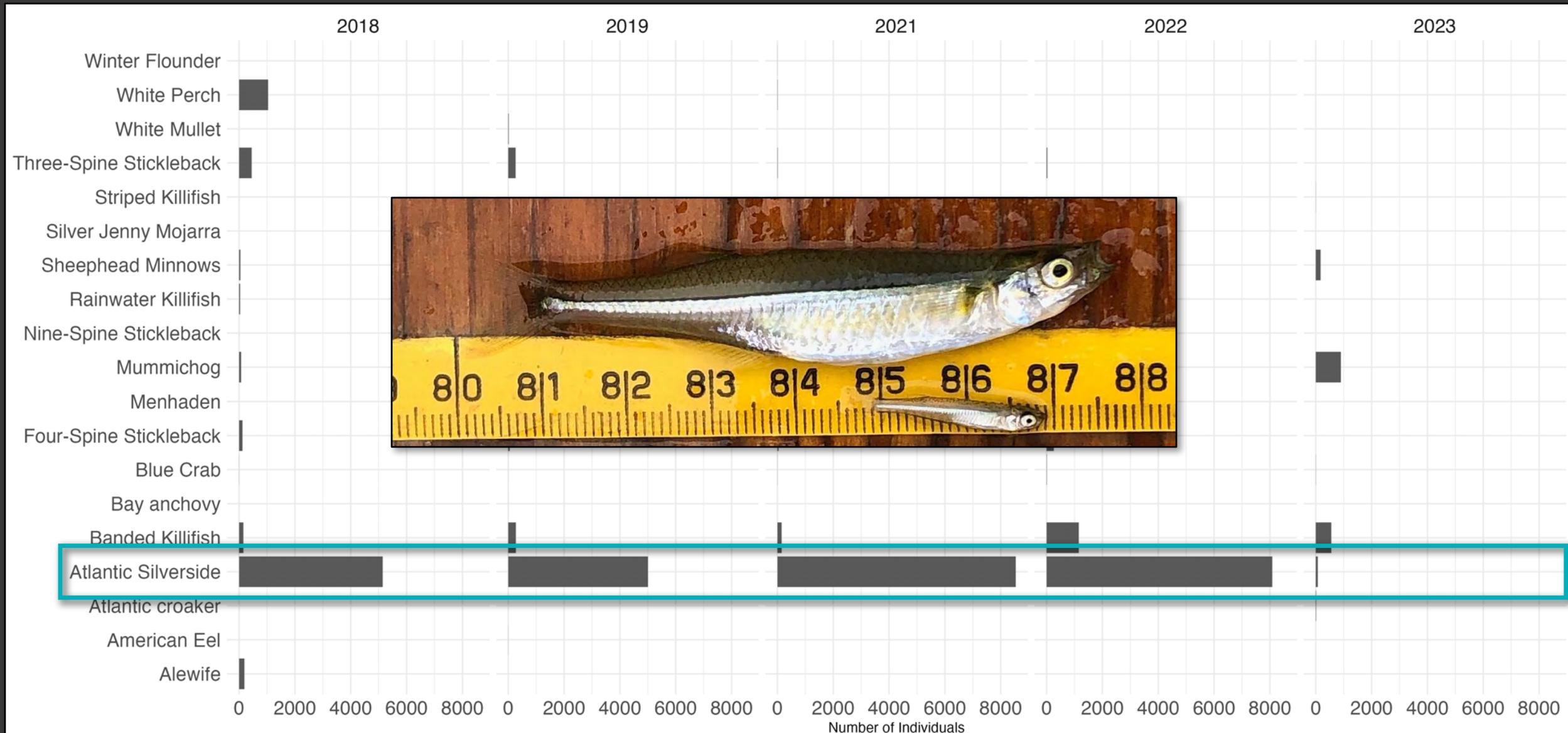
Number of Species Caught in Georgica Pond Seines



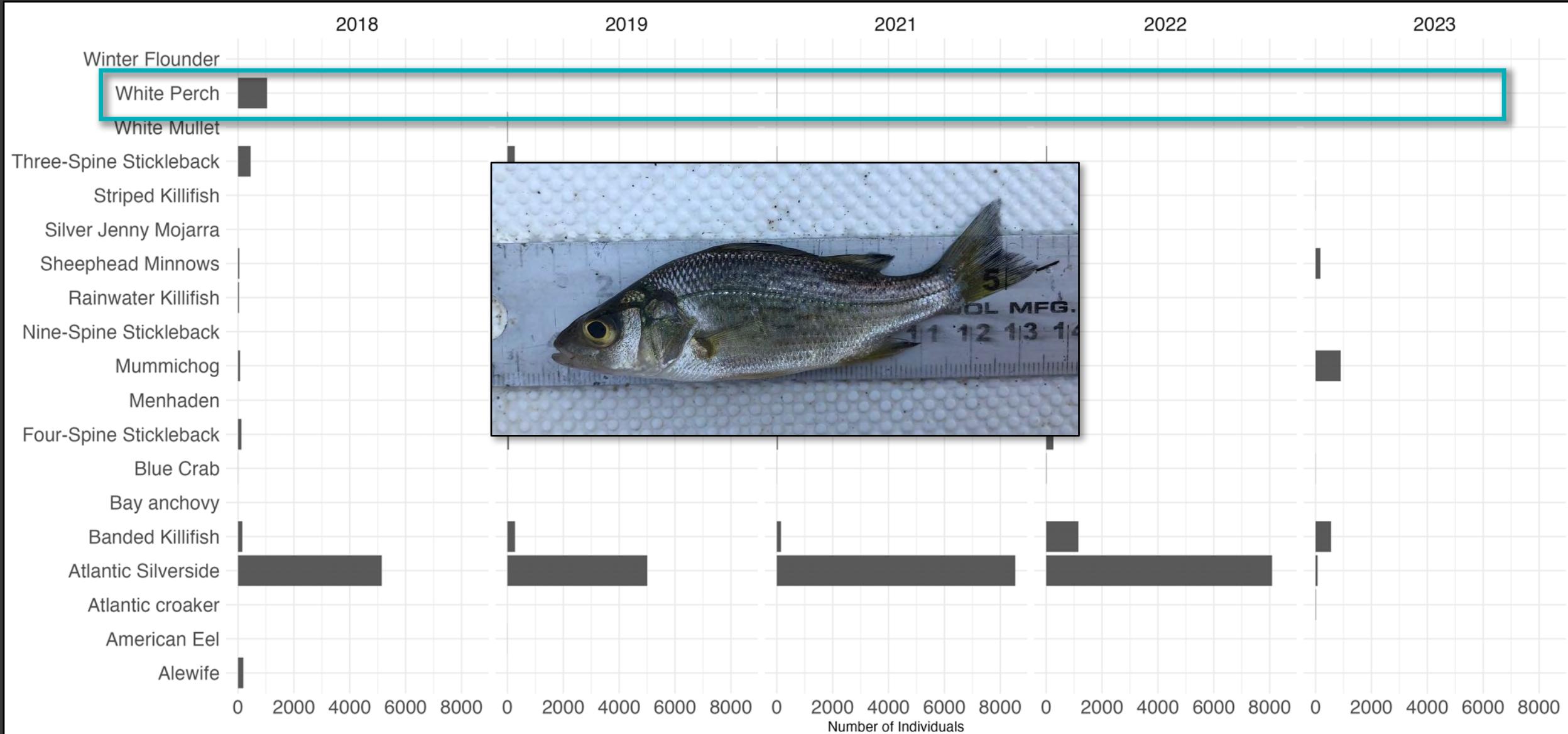
Beach Seine Surveys of Georgica Pond



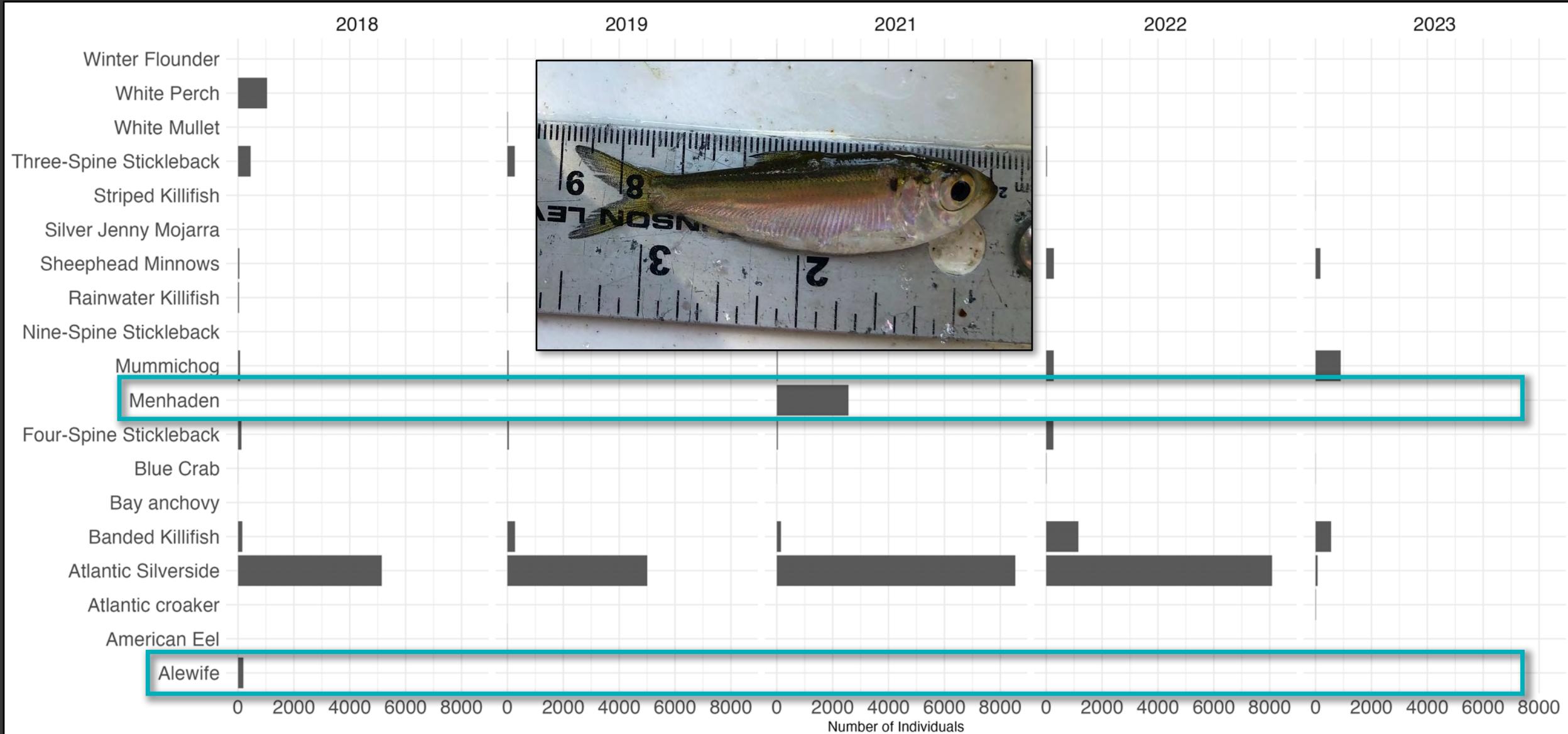
Beach Seine Surveys of Georgica Pond



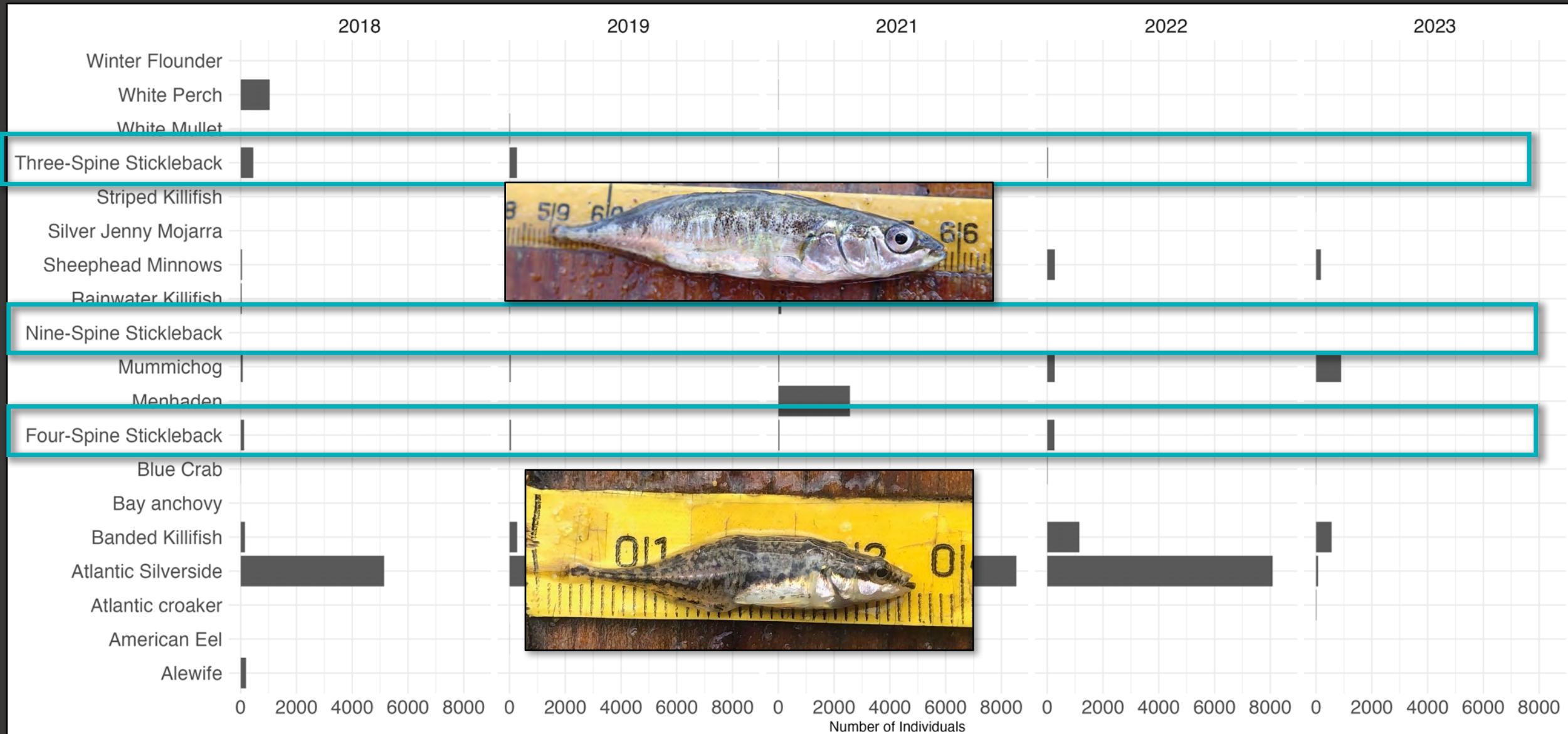
Beach Seine Surveys of Georgica Pond



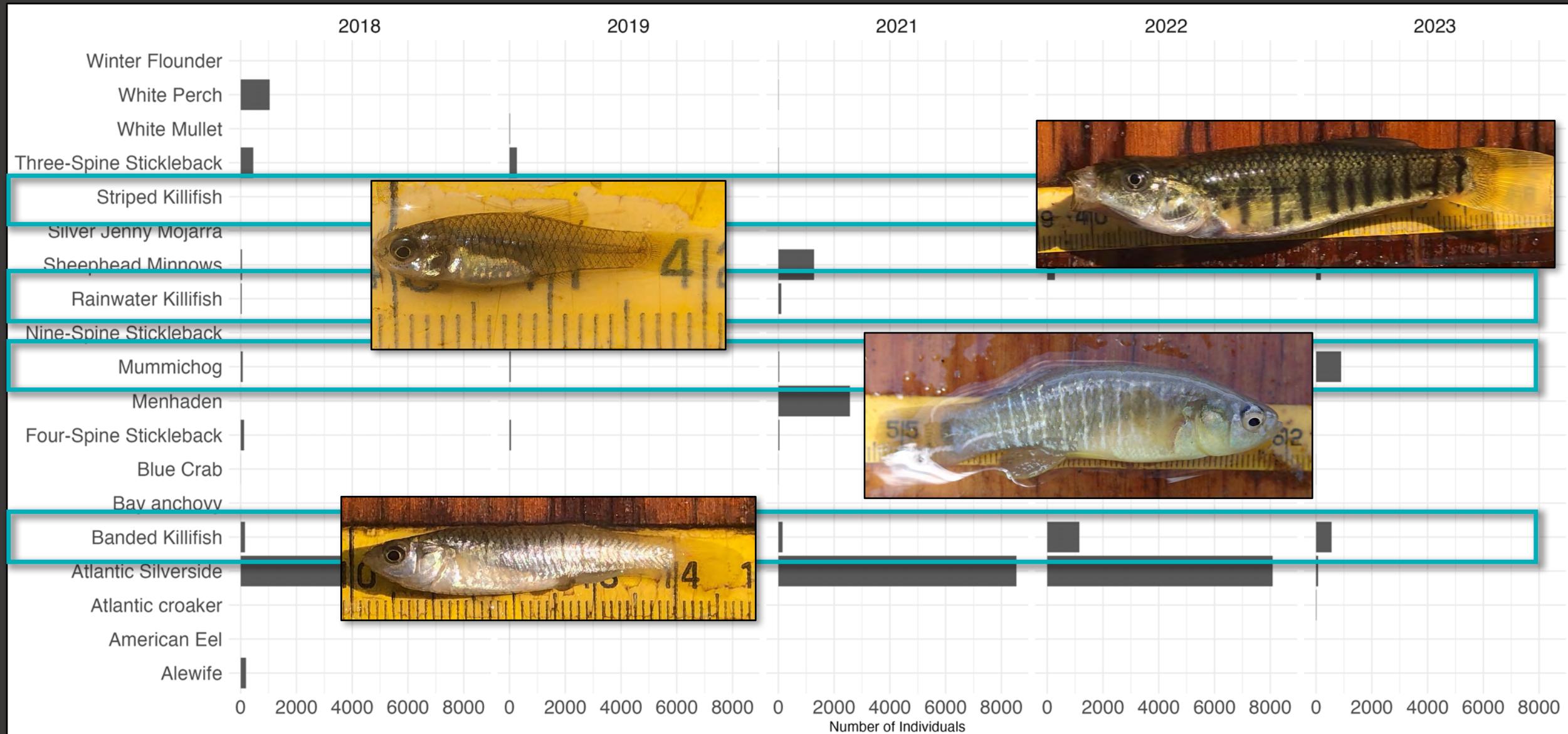
Beach Seine Surveys of Georgica Pond



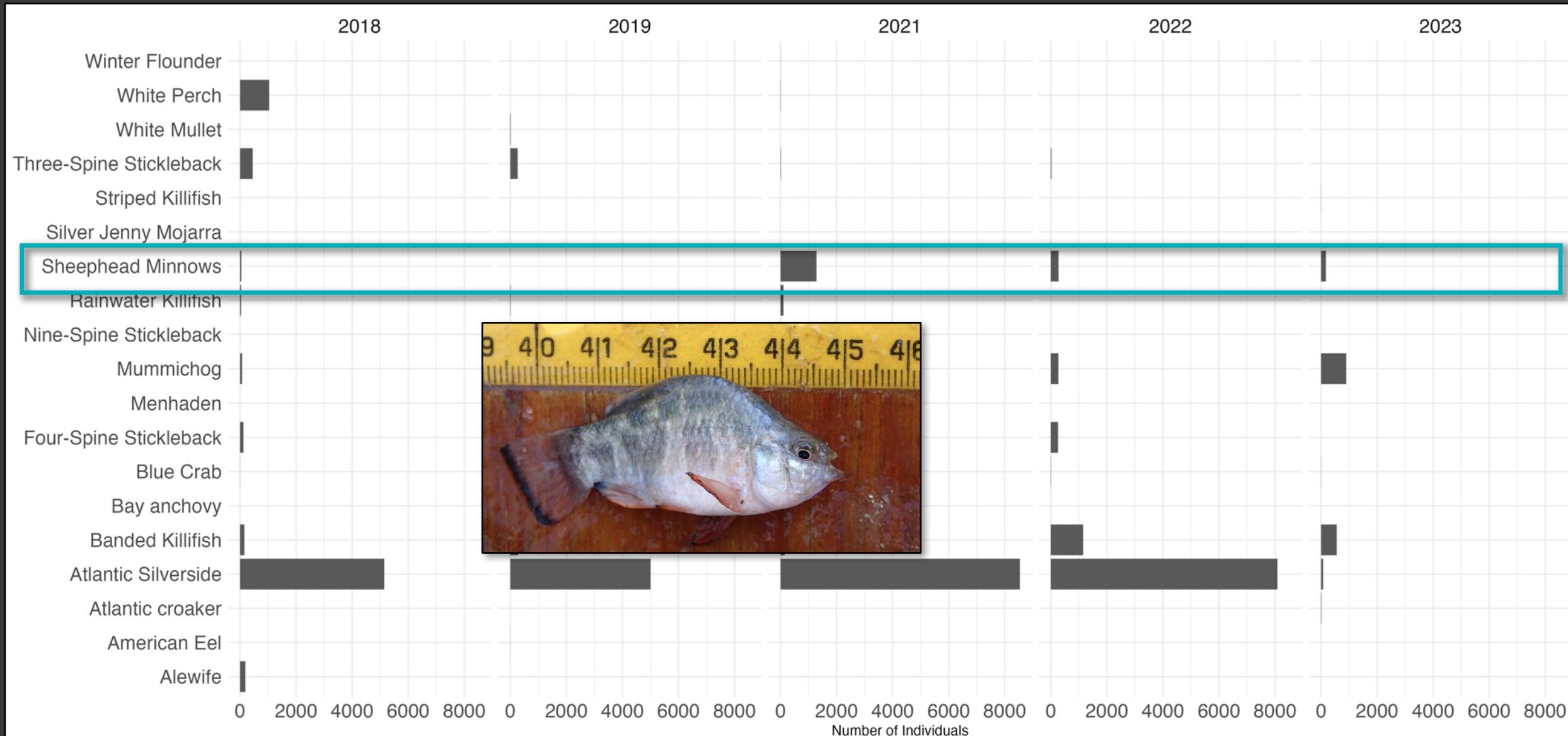
Beach Seine Surveys of Georgica Pond



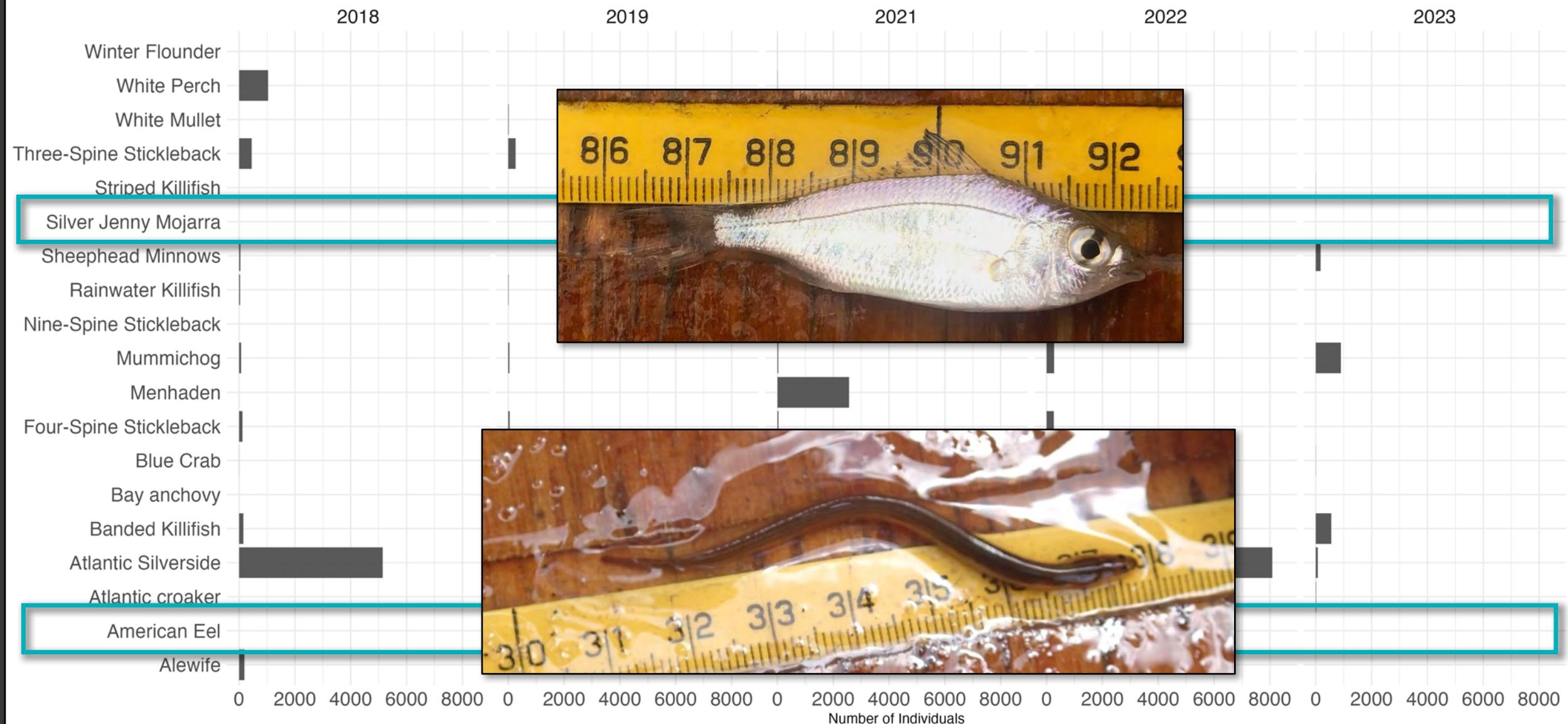
Beach Seine Surveys of Georgica Pond



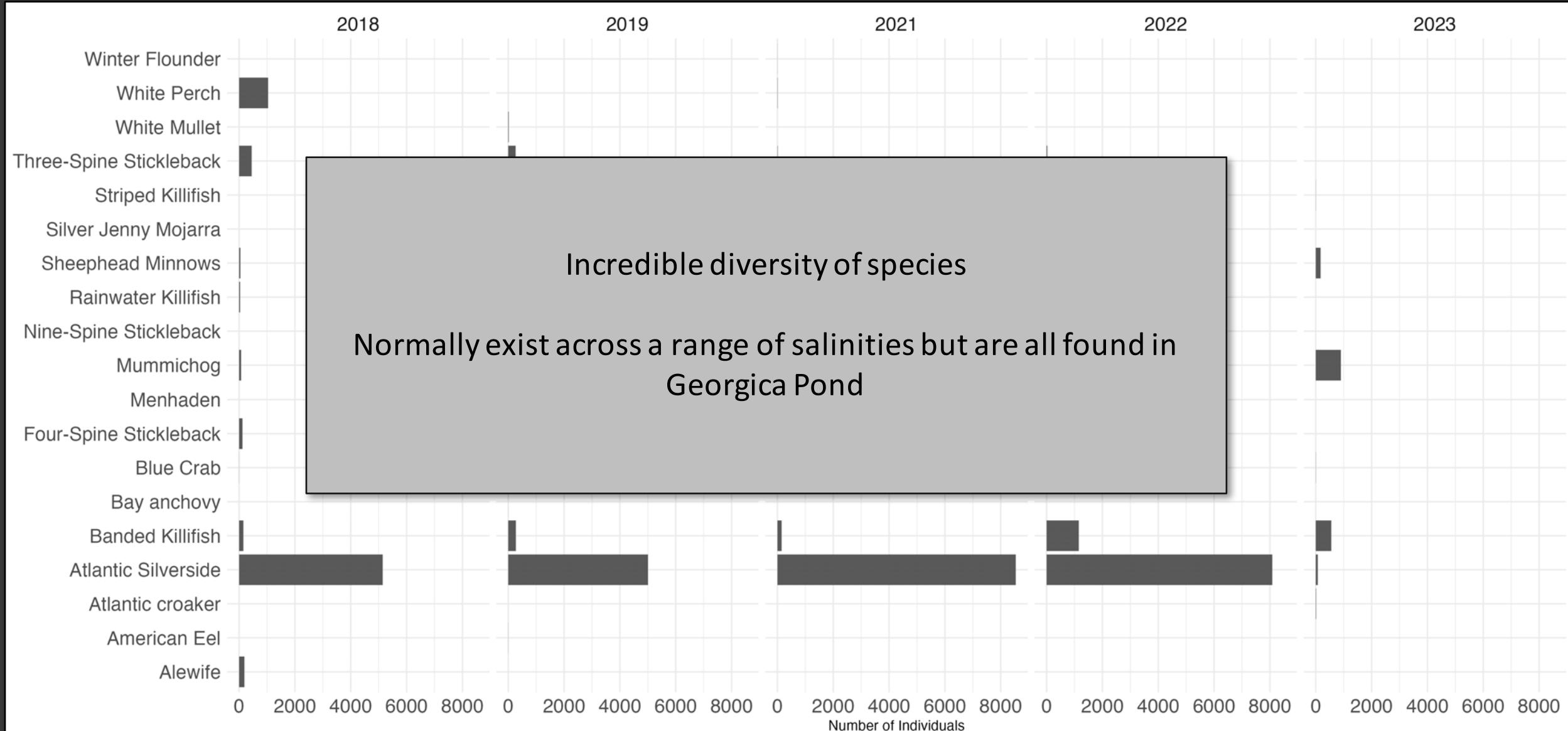
Beach Seine Surveys of Georgica Pond



Beach Seine Surveys of Georgica Pond



Beach Seine Surveys of Georgica Pond



Aquatic Vegetation Surveys of Georgica Pond

- Spring and Autumn Survey
- 2019 – 2023
- 80 locations



0 No plants present

1 Less than 25% of the rake is full



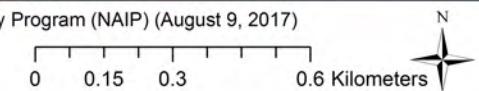
2 25% to 100% of the rake is full



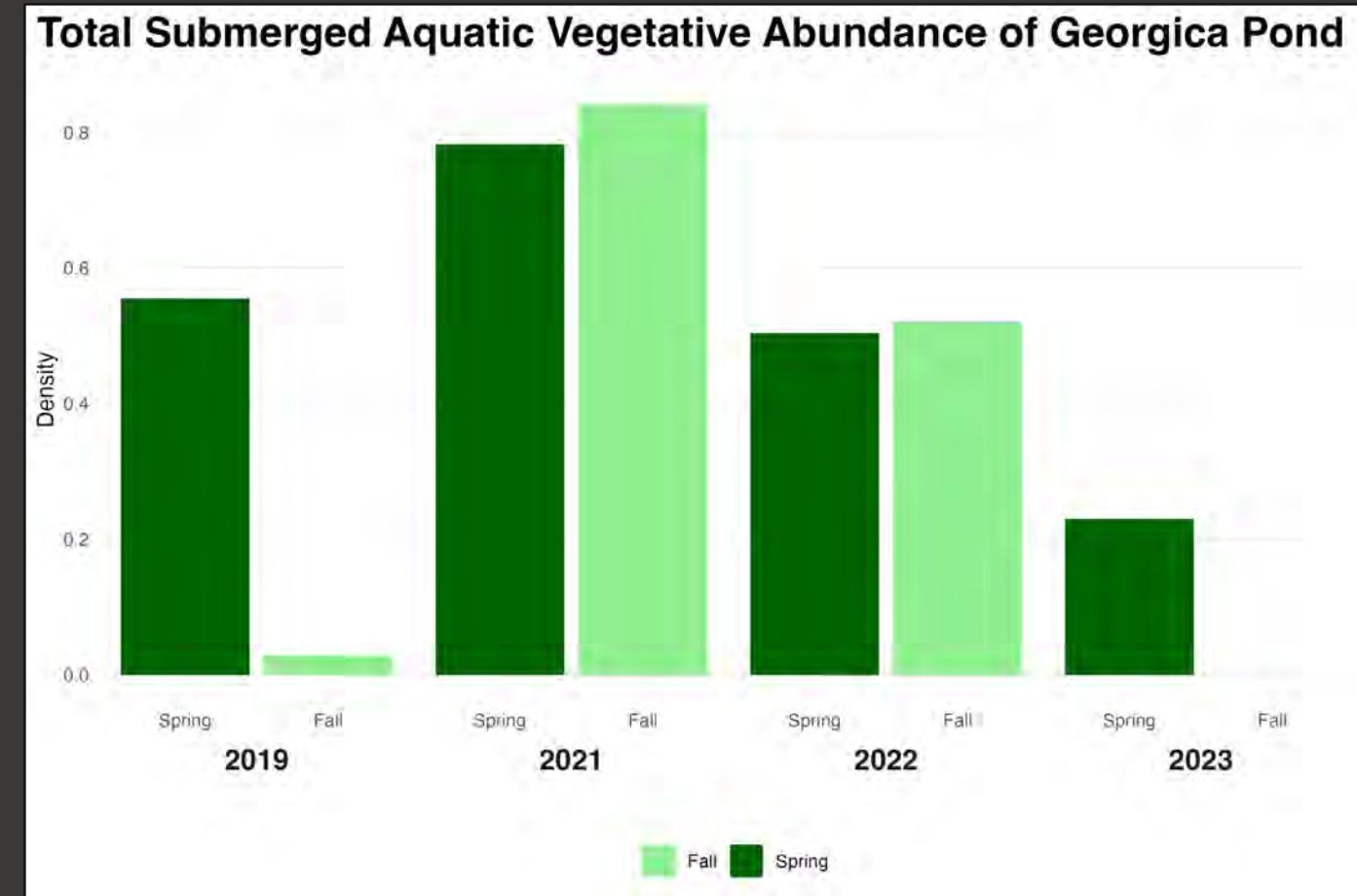
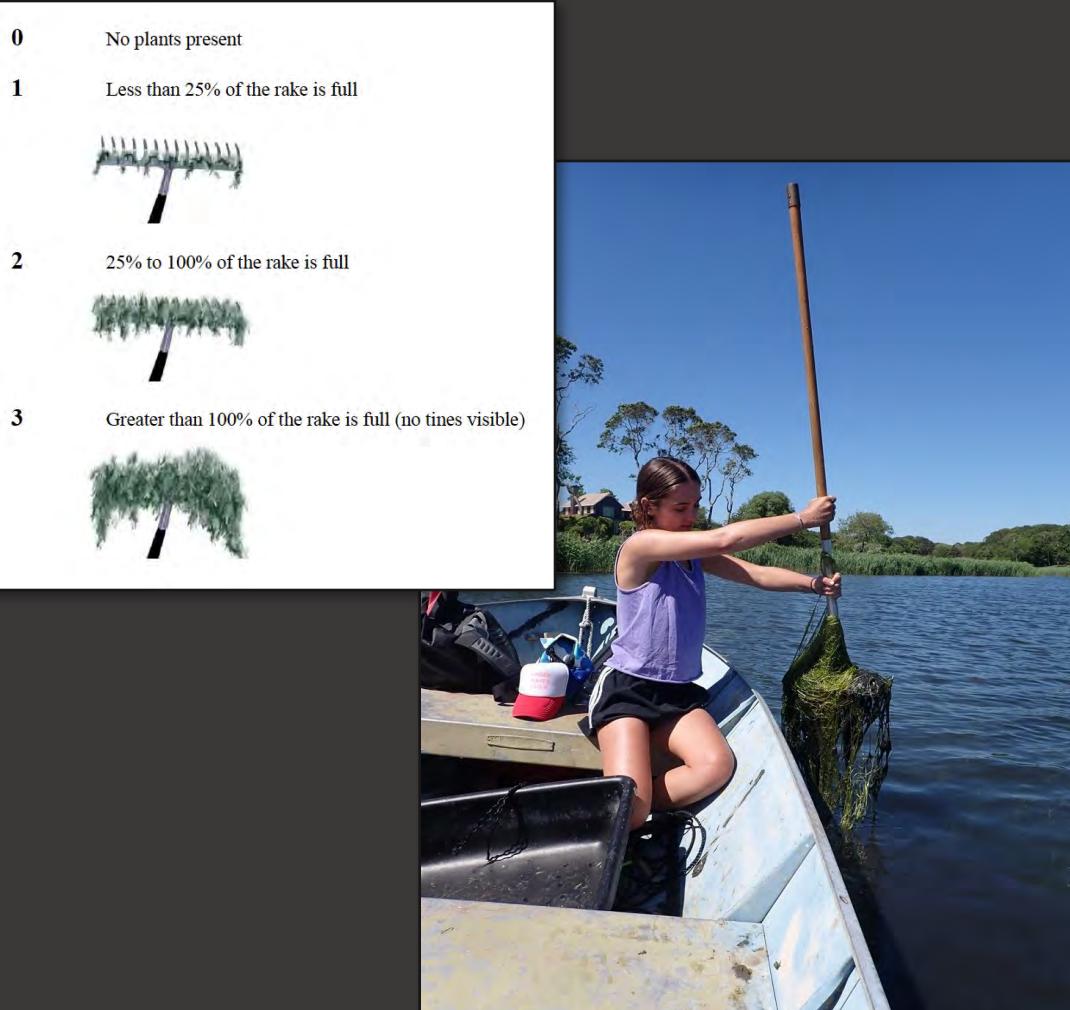
3 Greater than 100% of the rake is full (no tines visible)



Aerial Imagery Source: National Agriculture Imagery Program (NAIP) (August 9, 2017)
Coordinate System: GCS WGS 1984



Aquatic Vegetation Surveys of Georgica Pond



Aquatic Vegetation Surveys of Georgica Pond

Sago Pondweed
(*Stuckenia pectinata*)



Claspingleaf Pondweed
(*Potamogeton perfoliatus*)



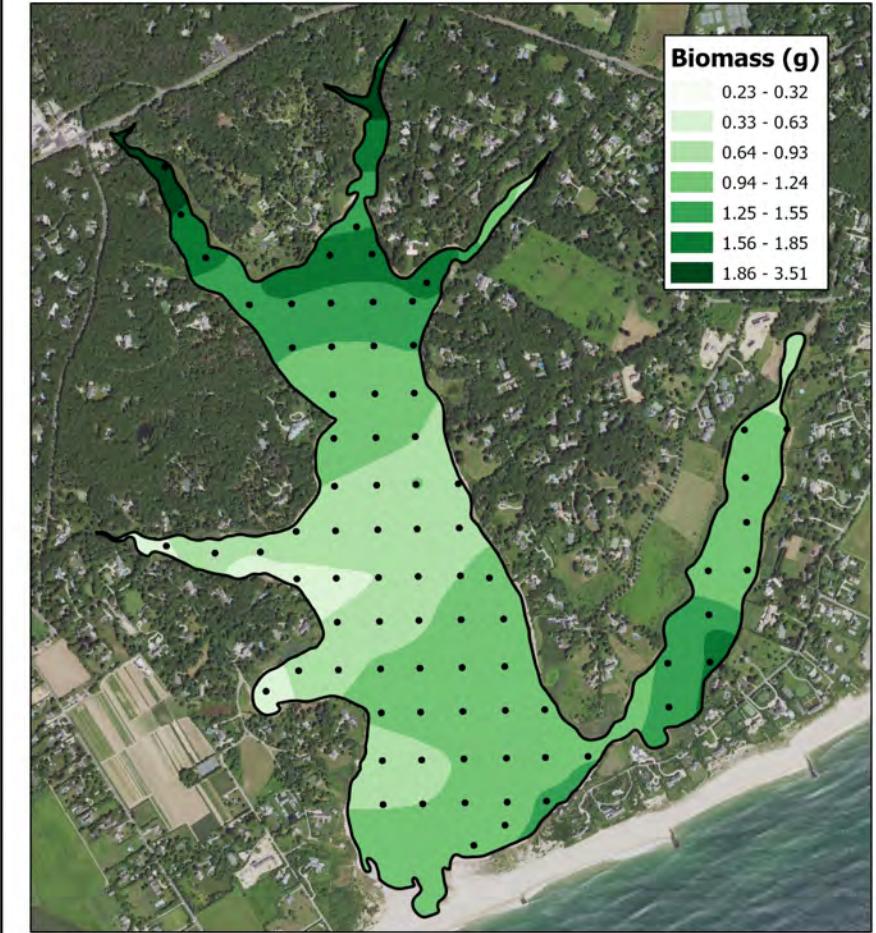
Cladophora vagabunda



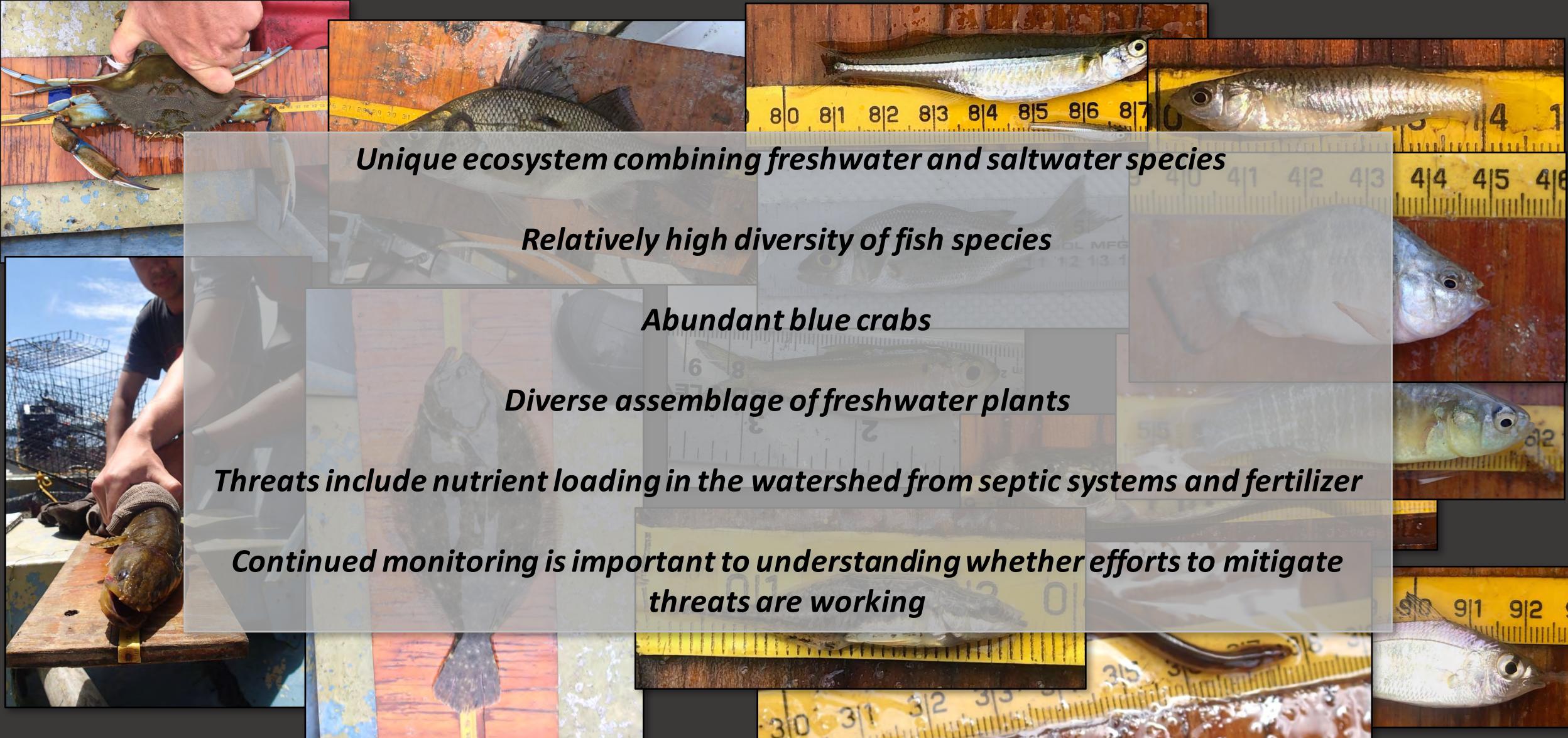
Ulva spp.



Georgica Pond - Wainscott, NY
2022 - June - SAV Dry-Weight Biomass



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Thank you!