A seasonal video-trawl survey to assess the population size of yellowtail flounder (*Pleuronectes ferruginea*) and windowpane (*Scophthalmus aquosus*) on Georges Bank.

Kevin D.E. Stokesbury Ph.D., Stephanie L. Merhoff, Amber D. Delargy, and Nicholas M. Calabrese Ph.D.

2026 Scallop Research Share Day

May 12th, 2026

Department of Fisheries Oceanography

School for Marine Science and Technology

University of Massachusetts Dartmouth

The SMAST Video Trawl Survey

Objective: To increase the information on the abundance and distribution of groundfish stocks while reducing mortality of sampled fish.

Short Tow Duration

- **Codend never fills**

Mortality Associated With Sampling

- **Fish don't have to be caught**

Violation of Uniform Distribution

- **Survey stratification (Details Later)**

Industry Based

- **Cooperative survey builds trust**

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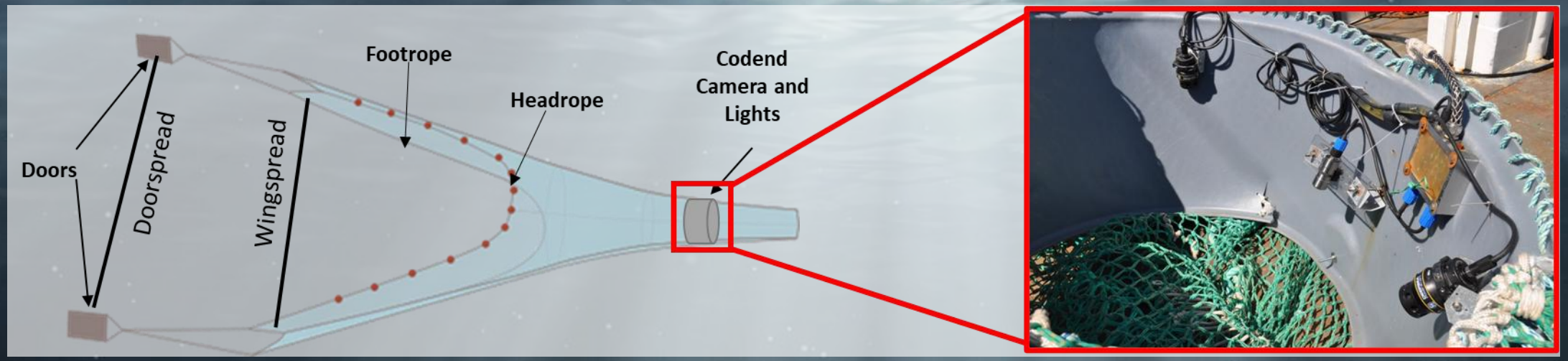
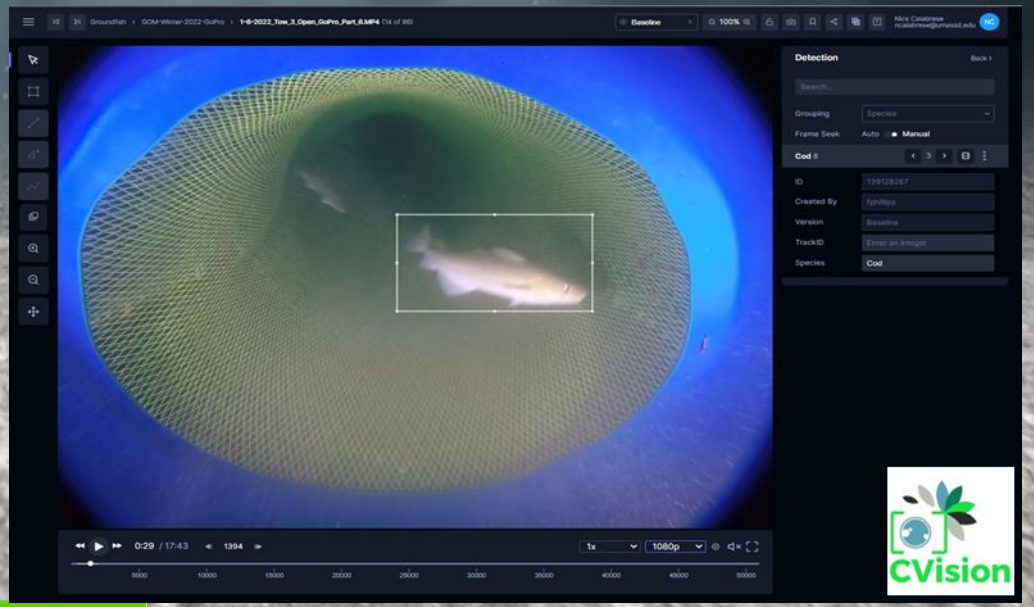
The SMAST Video Trawl Survey





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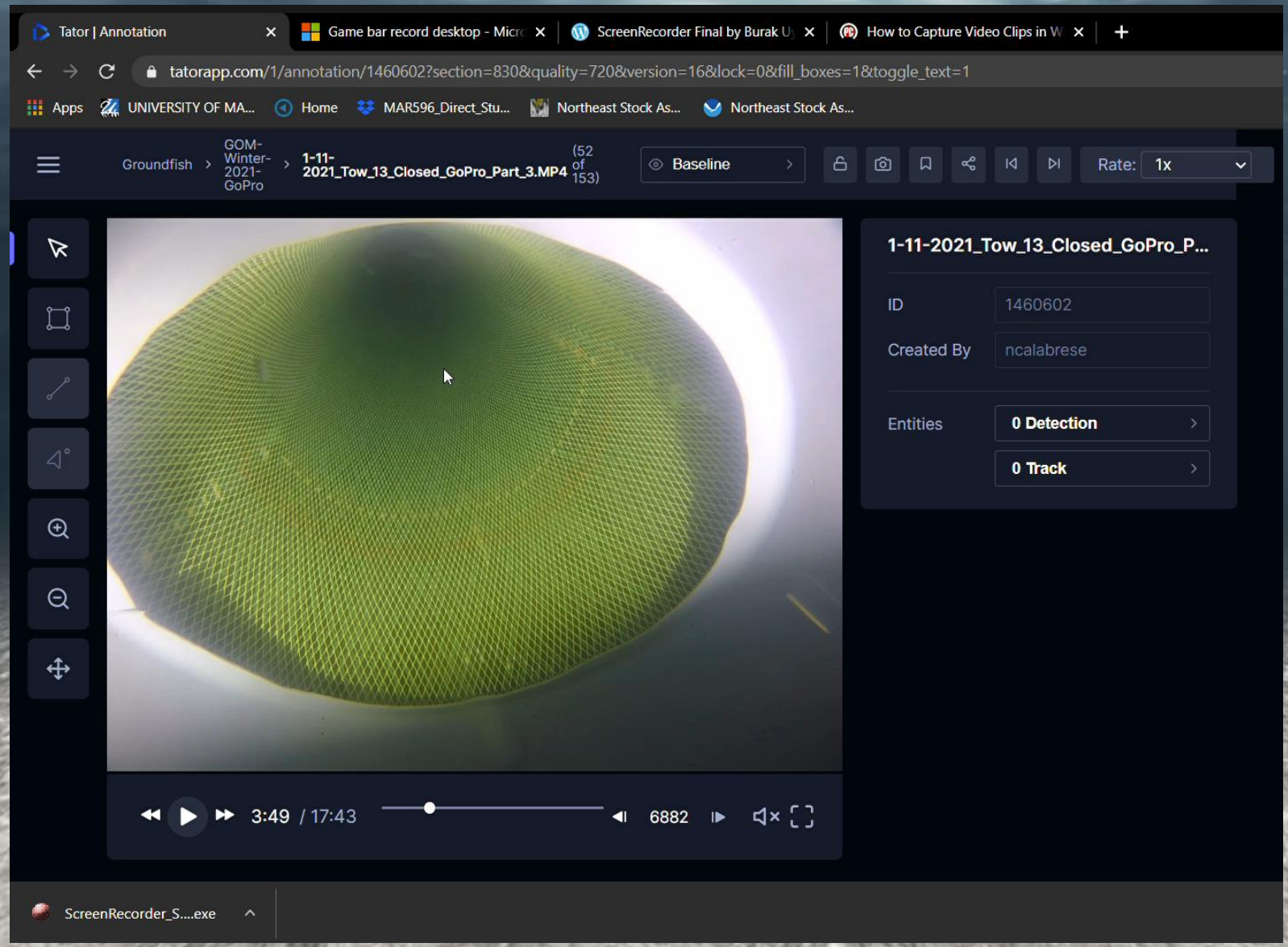
The SMAST Video Trawl Survey



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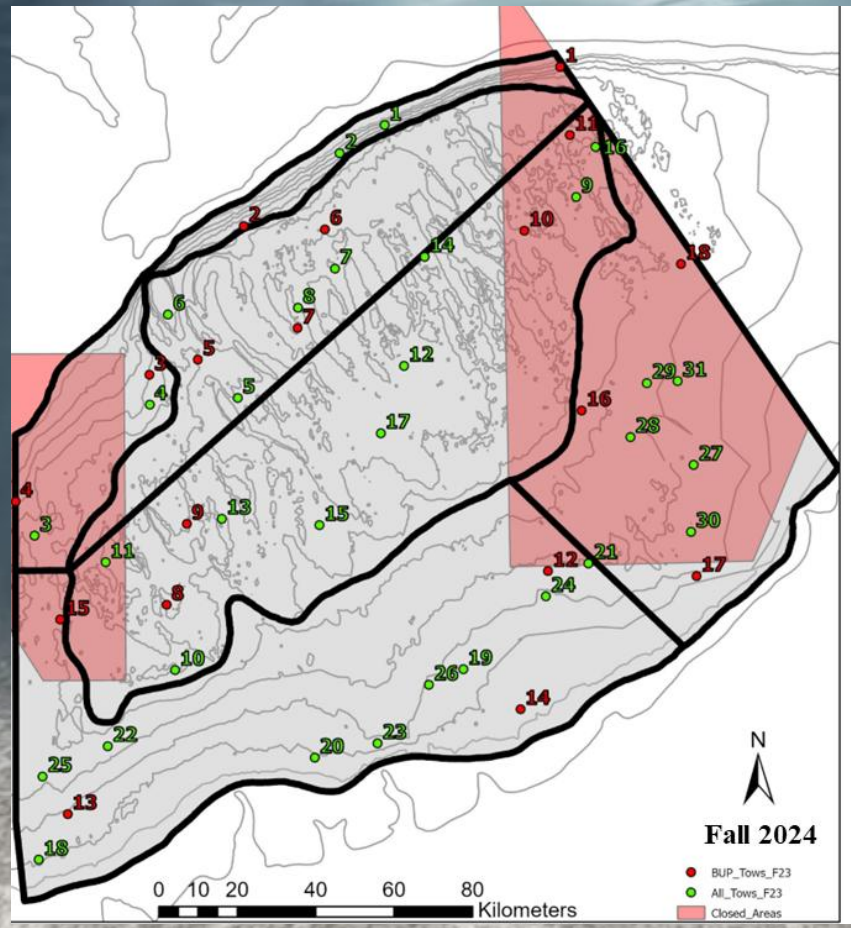
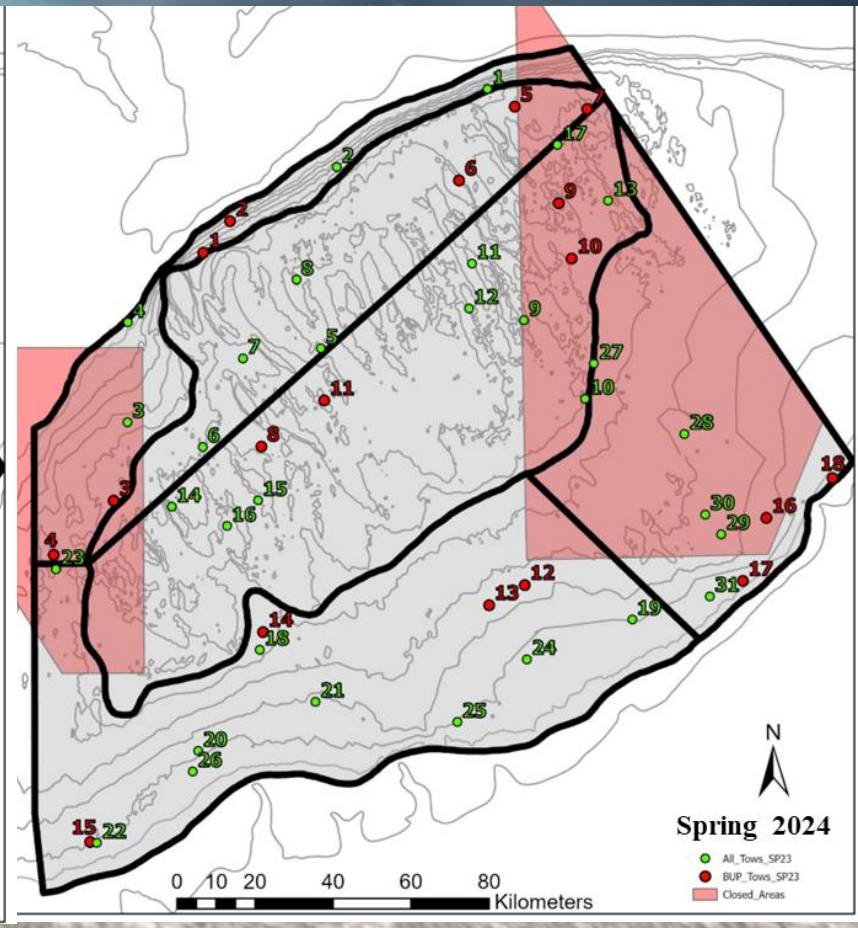
Methods

- EGB stock area <100m
- Stat Areas:5Zeh 5Zen 5Zej 5Zem
- Four NEFSC survey strata
- 28,117 km^2
- Tows allocated by area
- 30 Tows randomly assigned
- 1 Hour open codend tows
- 5 Random closed codend tows
- Stratified mean abundance
- Converted to biomass with closed codend tow data





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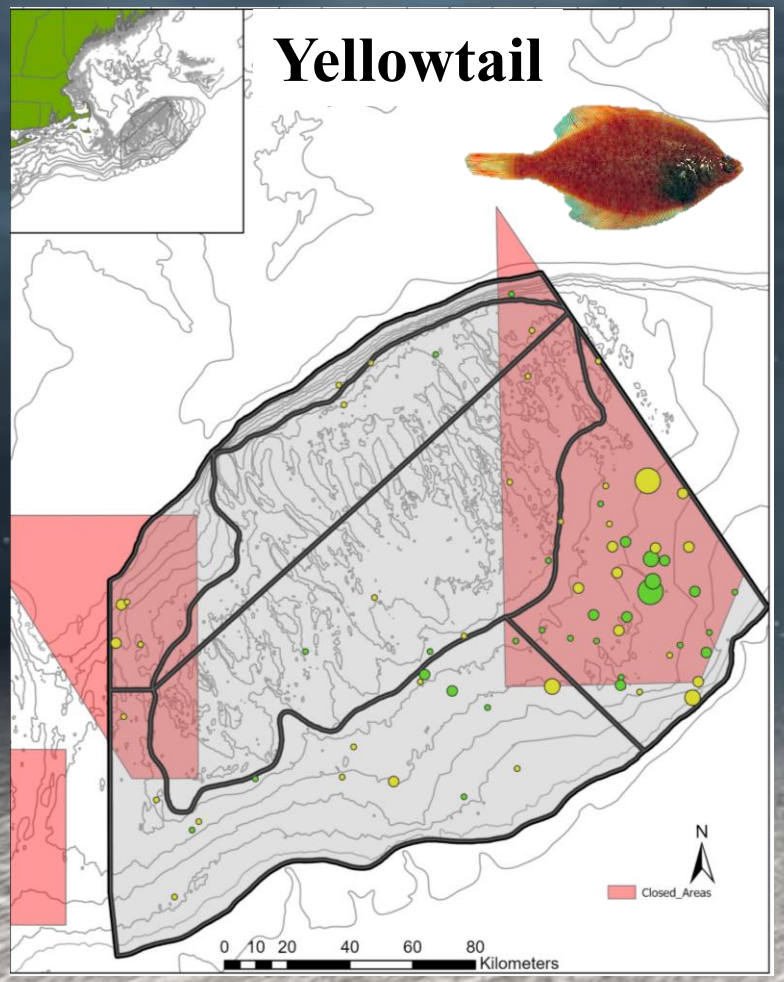
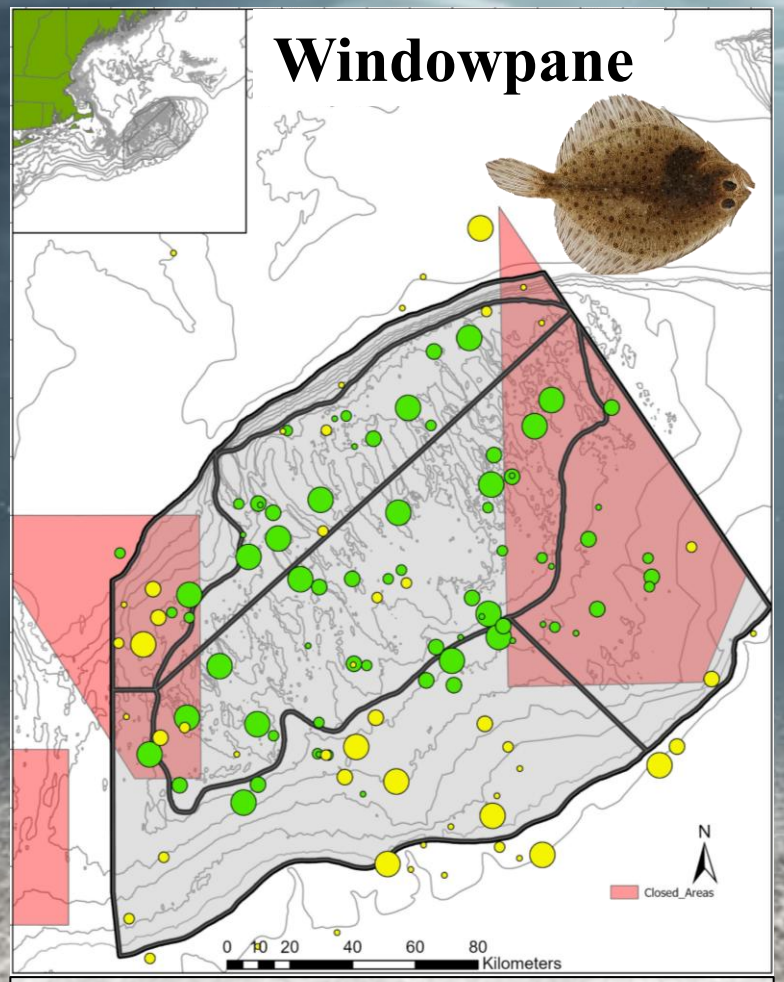
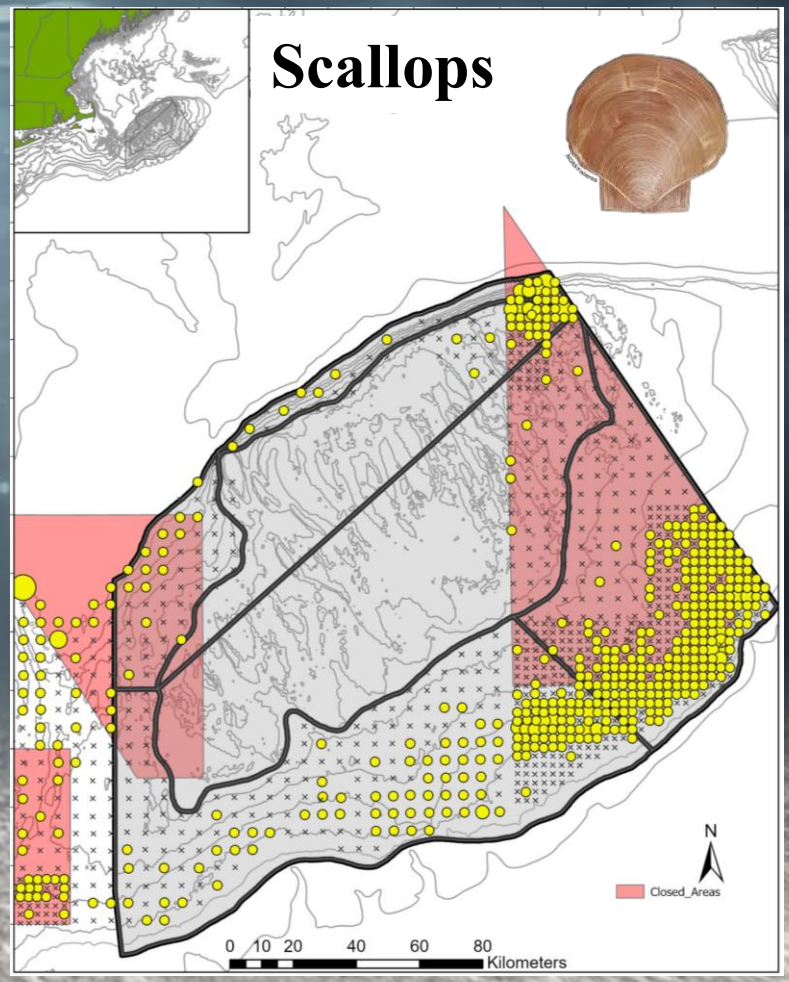
Methods



100% of NEFSC Yellowtail catch on GB (2017-2024)



91% of NEFSC Windowpane catch on GB (2017-2024)



75 % of GB Scallop Stock (2024)

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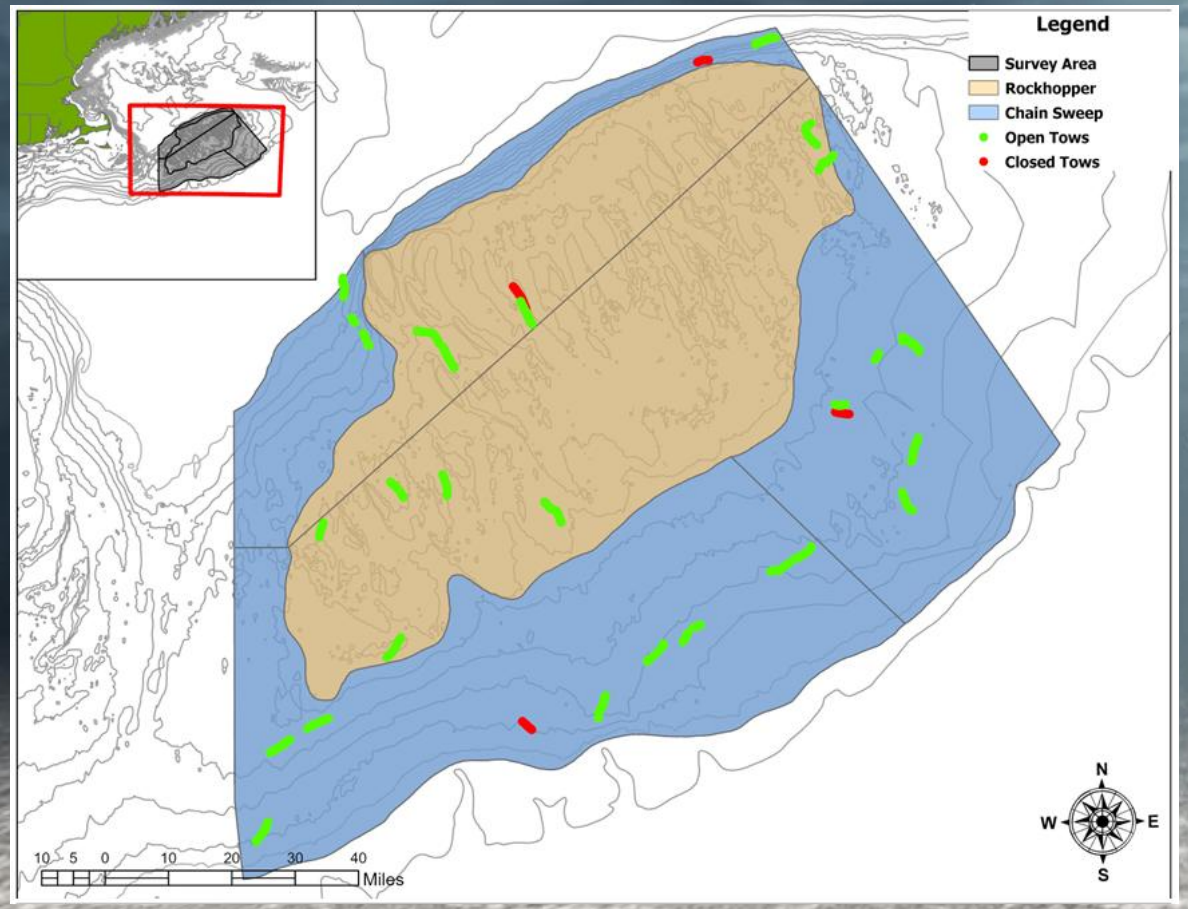
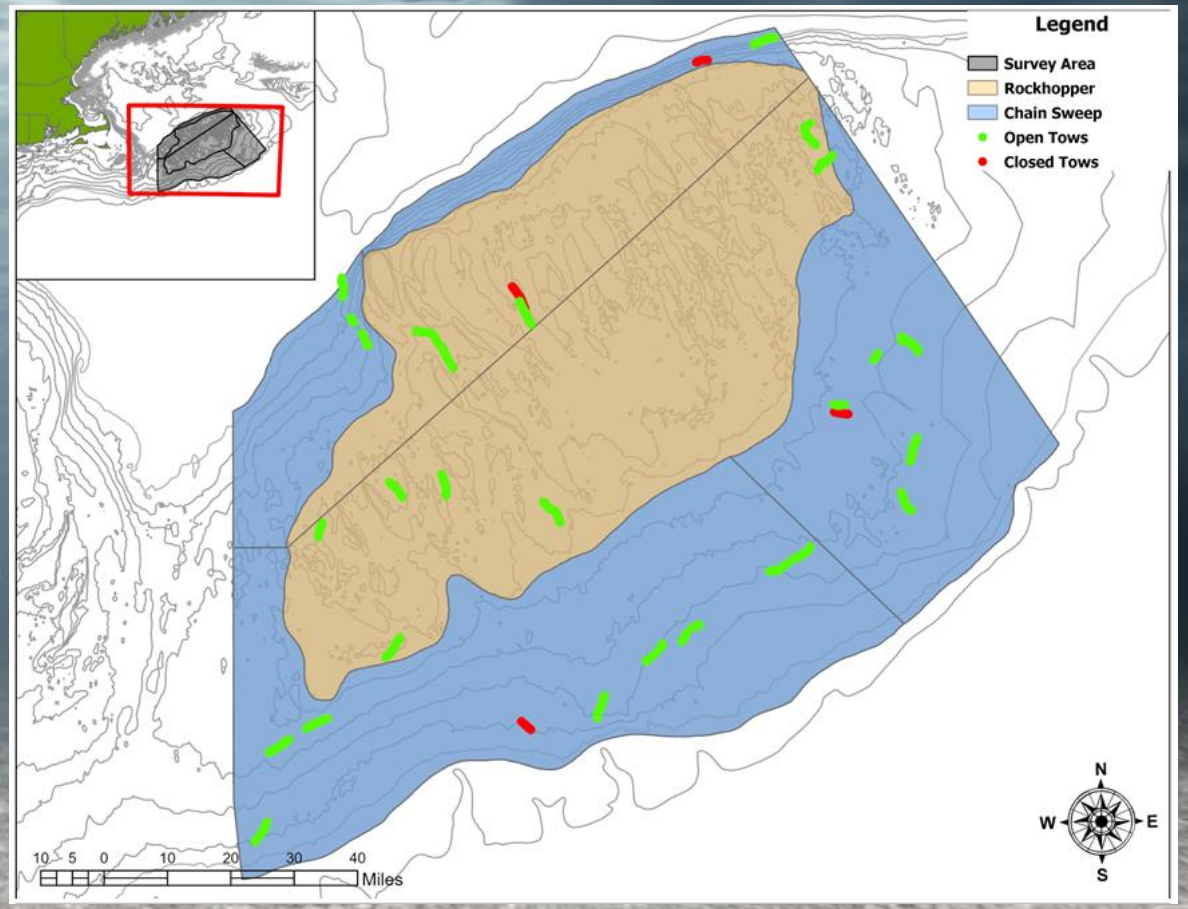
Tows



34 Tows (26 hrs)

Depth: 34-94 m

Temp: 9°-16° C



38 Tows (30 hrs)

Depth: 29-108 m

Temp: 5°-9° C

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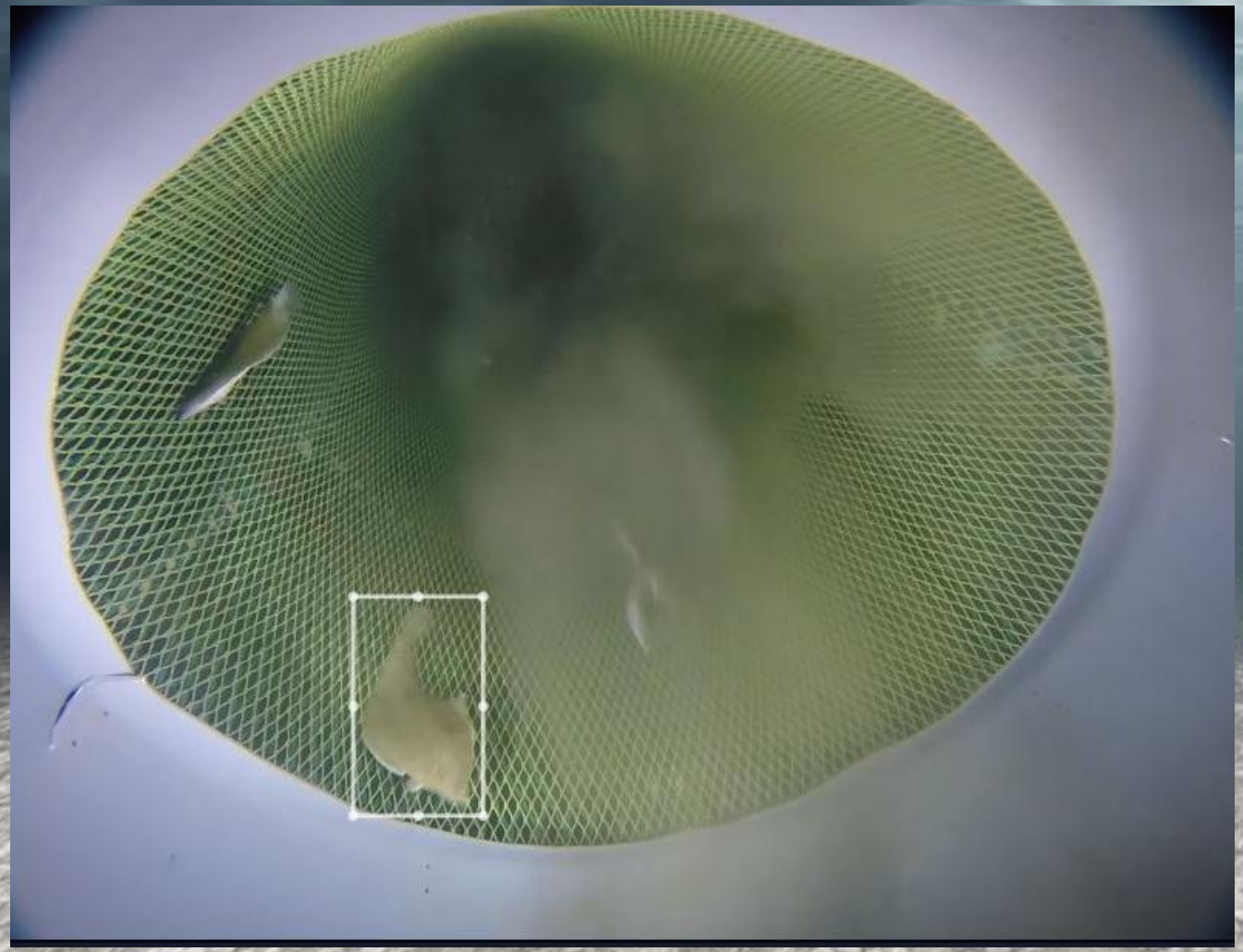
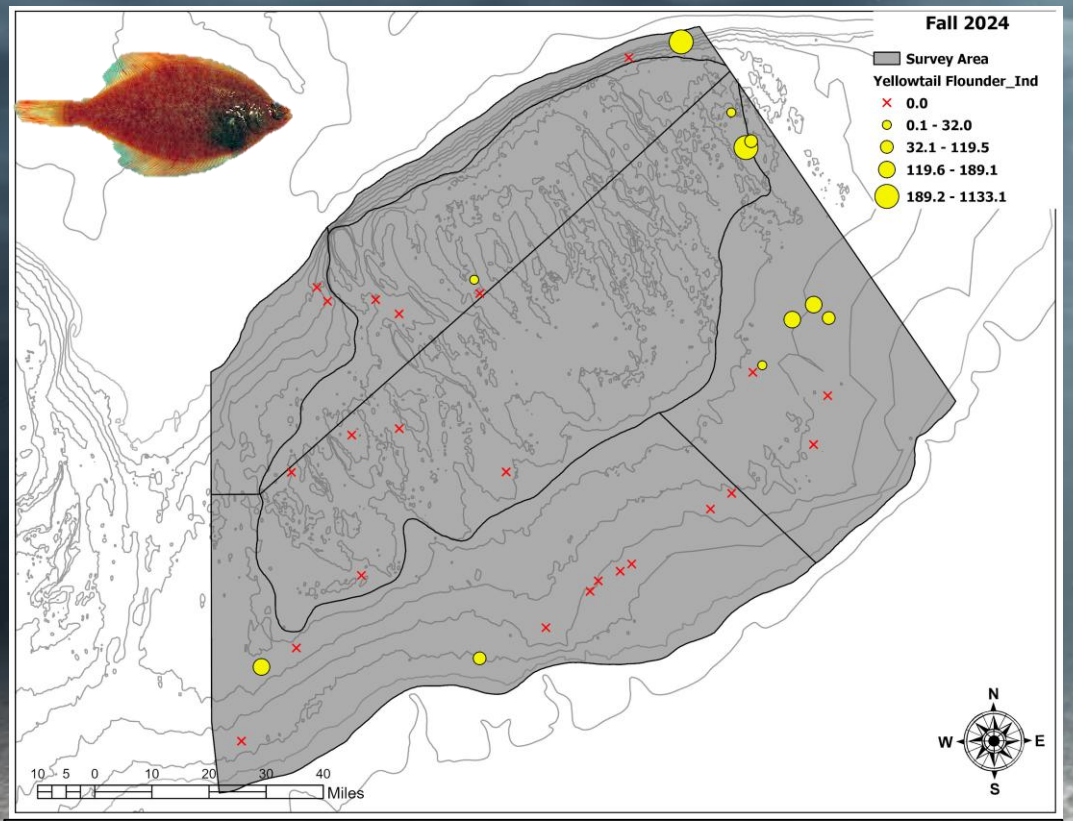
Video Accuracy



Species	Video	Catch	Percent
Yellowtail	10	12	83%
Windowpane	33	43	77%
Fourspot	209	217	96%
Winter	27	28	96%
Summer	10	9	111%
Witch	11	13	85%
Plaice	1	1	100%
Unidentified	43	-	-

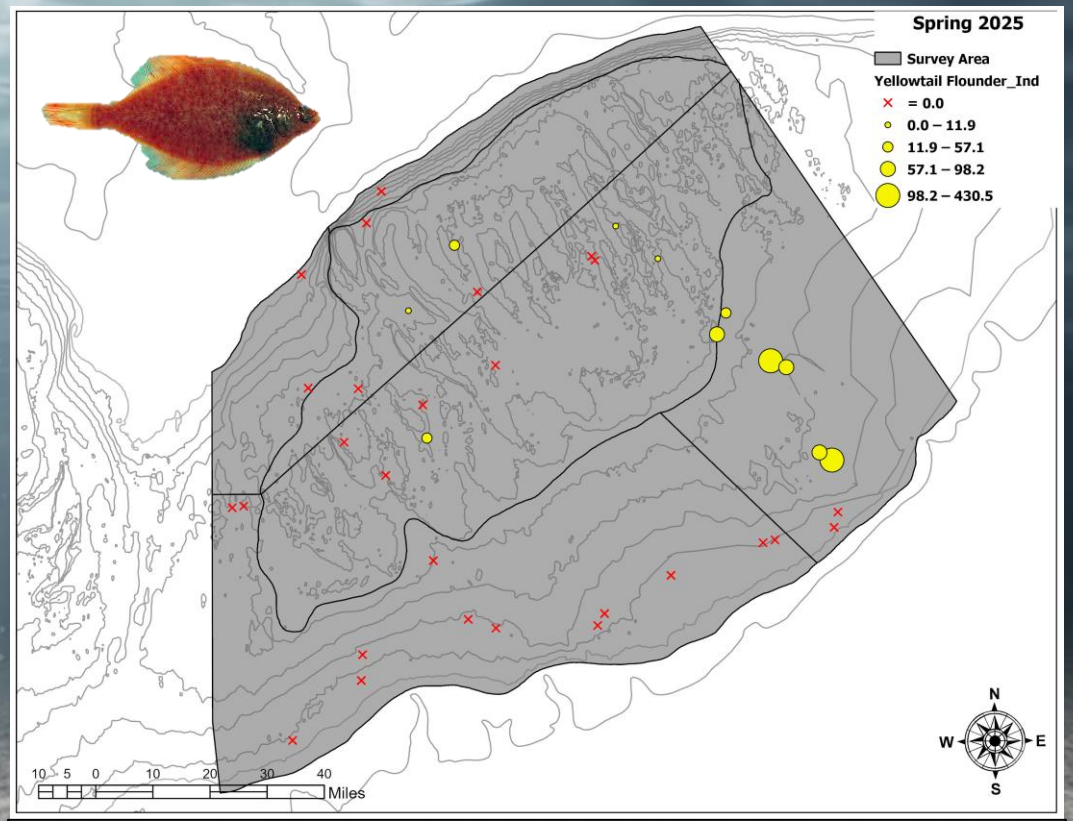
Yellowtail



Mean Density = 64 ind/km²

Abundance = 1,622,298

Biomass = 863 MT



Mean Density = 25 ind/km²

Abundance = 372,779

Biomass = 283 MT

100% Efficiency 2025 Mean Biomass = 573 MT

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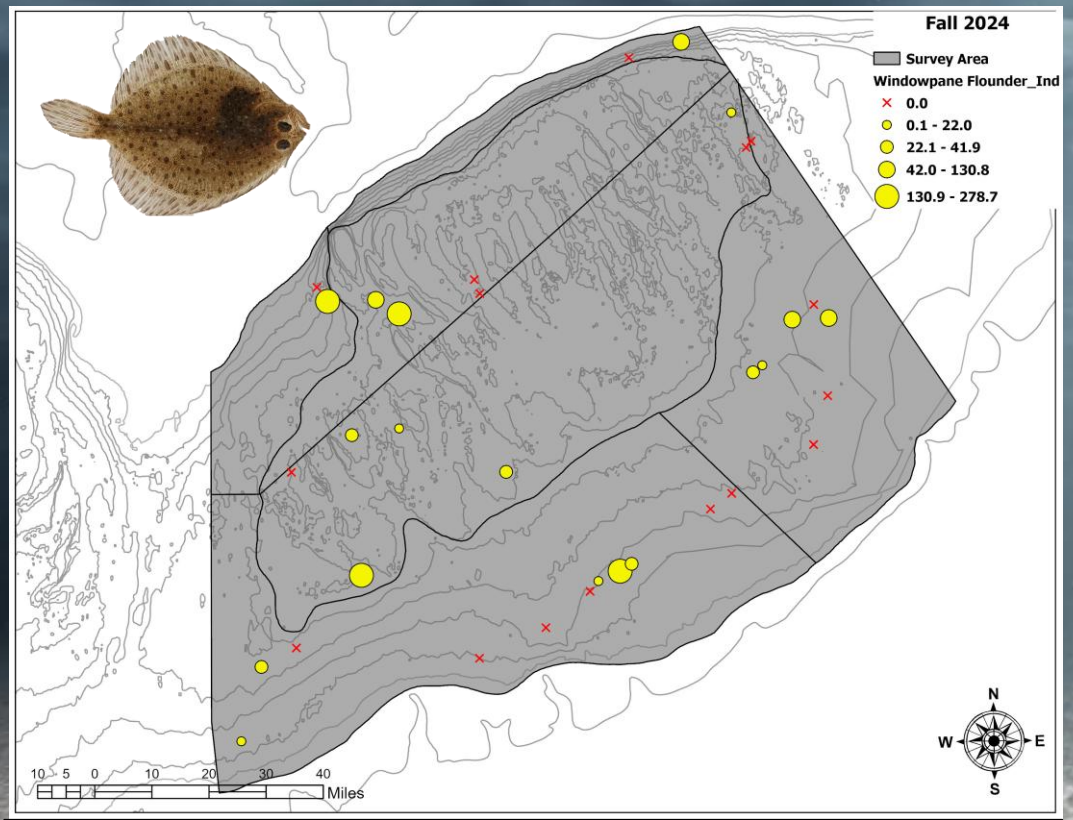
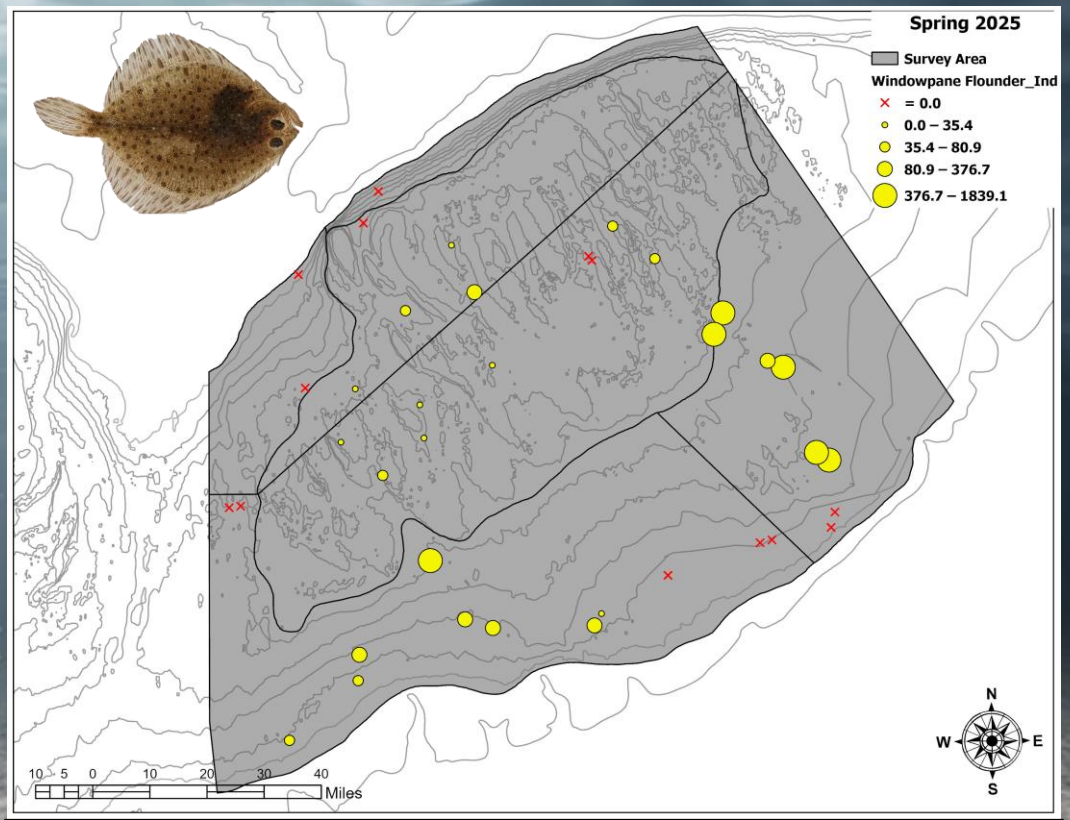
Windowpane



Mean Density = 42 ind/km^2

Abundance = 1,110,989

Biomass = 184 MT



Mean Density = 198 ind/km^2

Abundance = 5,657,083

Biomass = 787 MT

100% Efficiency 2025 Mean Biomass = 476 MT

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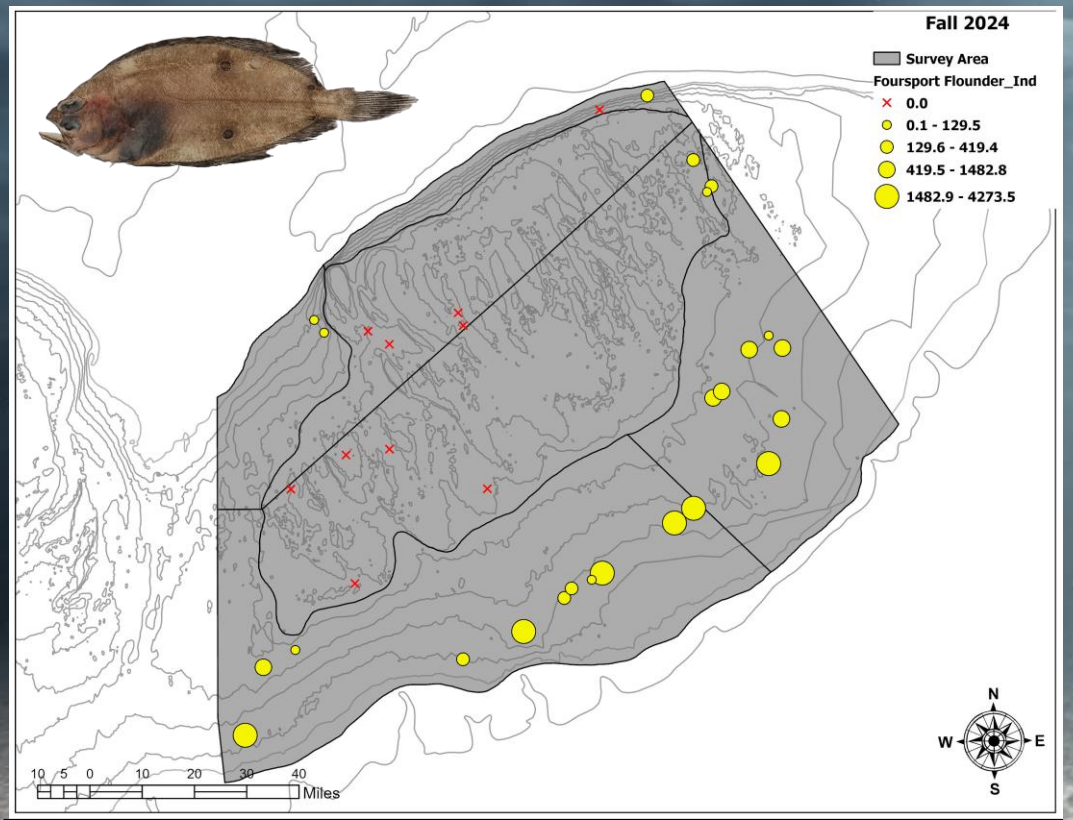
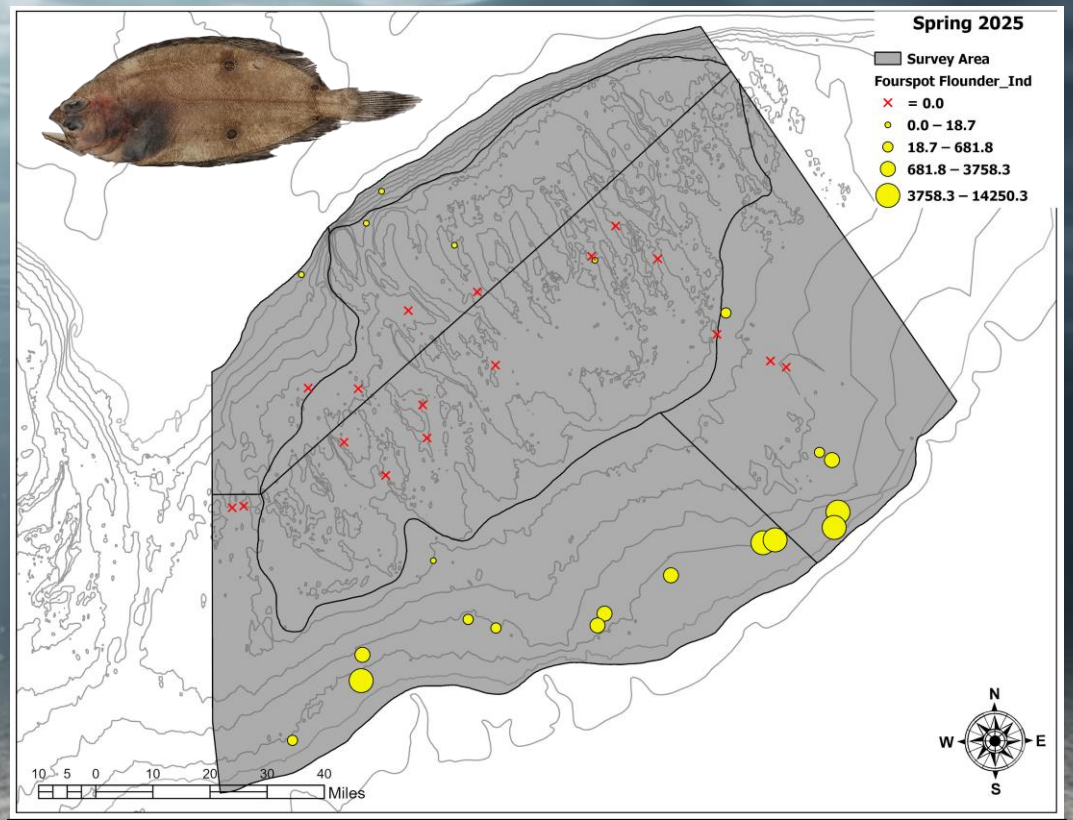
Fourspot



Mean Density = 704 ind/km²

Abundance = 17,740,267

Biomass = 13,920 MT



Mean Density = 1,747 ind/km²

Abundance = 48,393,715

Biomass = 7,423 MT

100% Efficiency 2025 Mean Biomass = 10,672 MT

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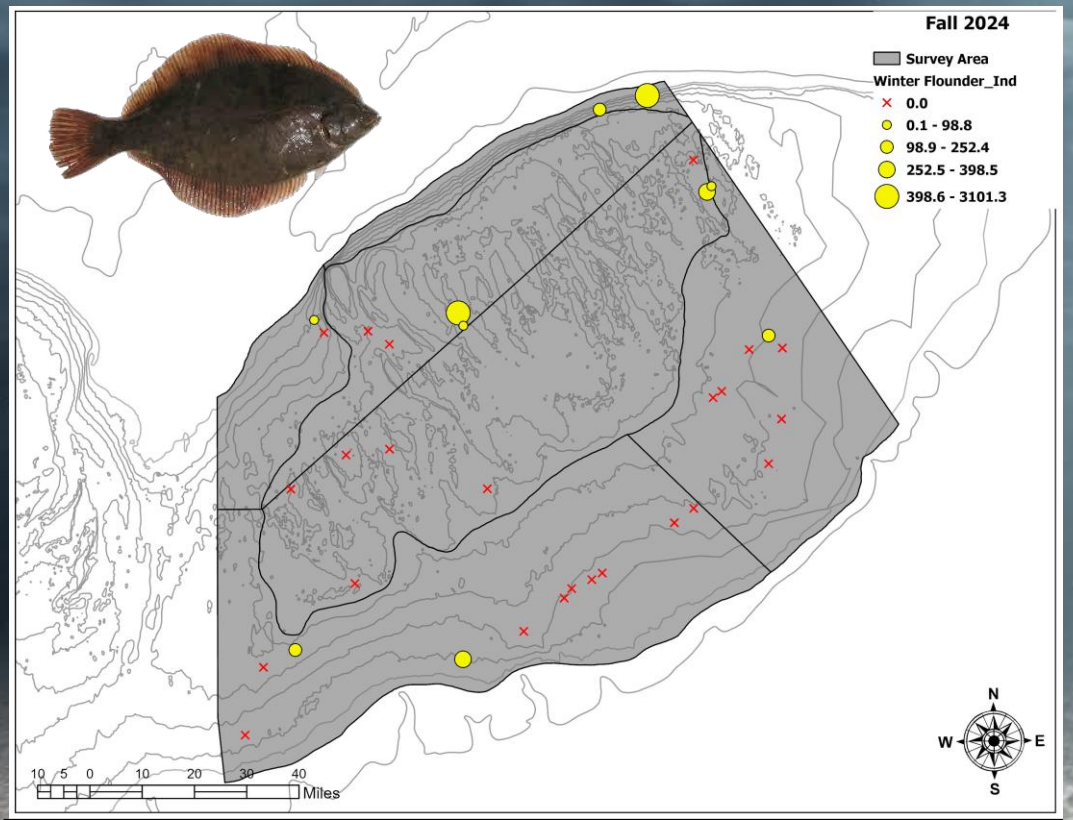
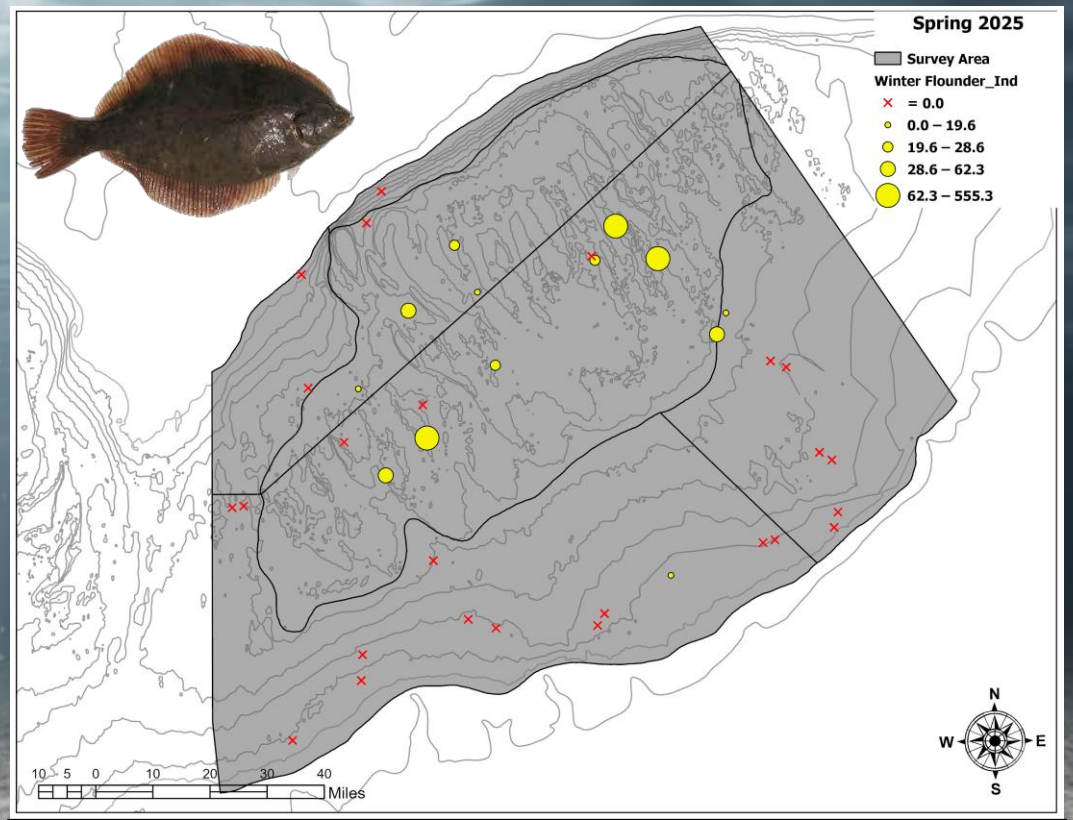
Winter Flounder



Mean Density = 157 ind/km²

Abundance = 4,746,509

Biomass = 3,607 MT



Mean Density = 32 ind/km²

Abundance = 1,212,211

Biomass = 711 MT

100% Efficiency 2025 Mean Biomass = 2,159 MT

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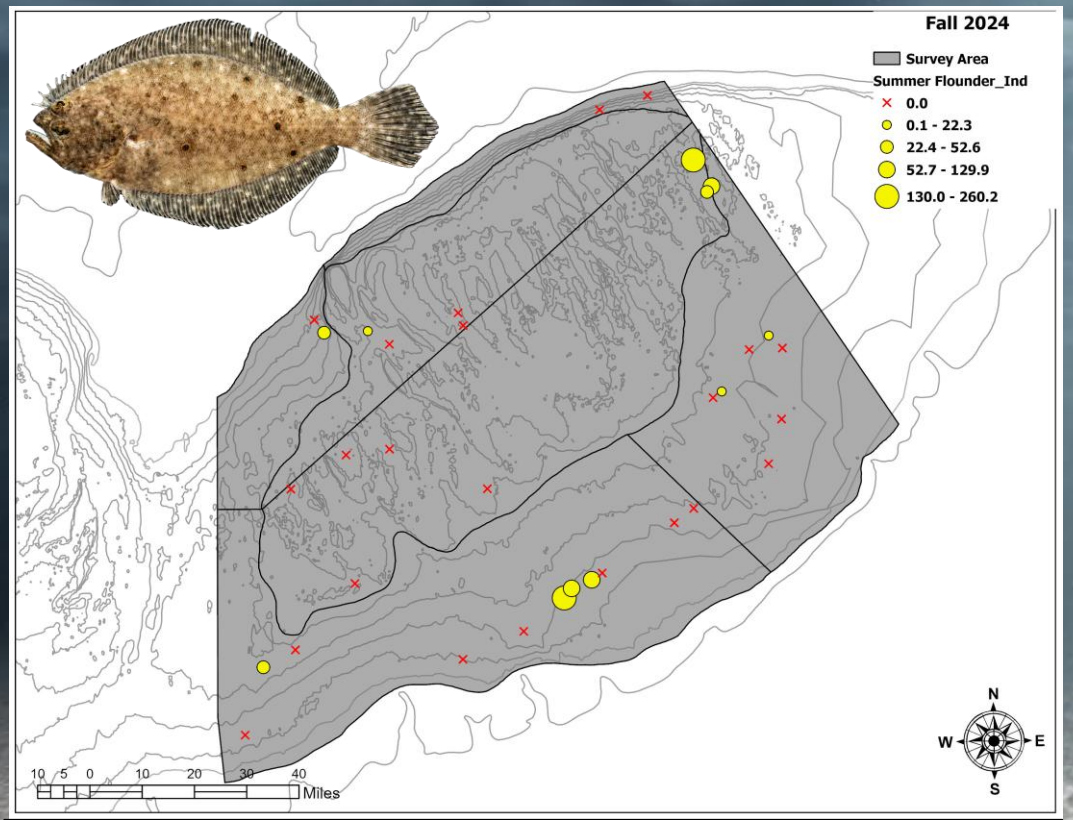
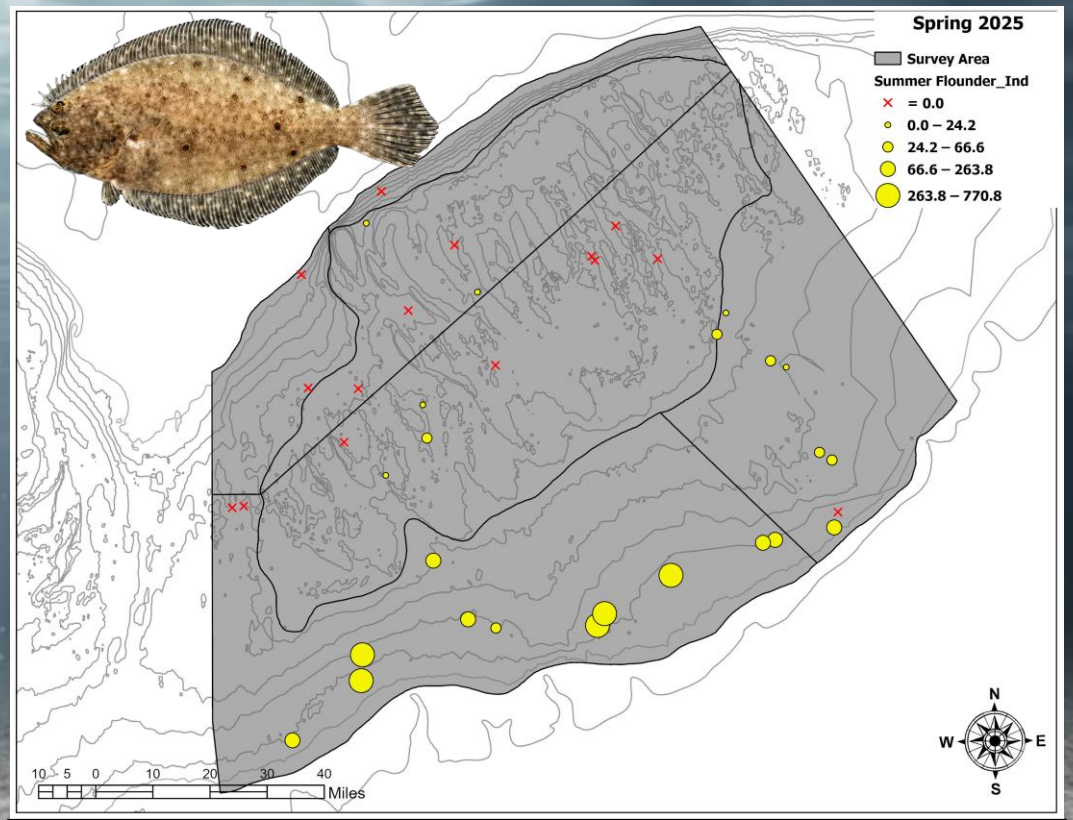
Summer Flounder



Mean Density = 26 ind/km²

Abundance = 666,097

Biomass = 1,133 MT



Mean Density = 88 ind/km²

Abundance = 2,464,852

Biomass = 2,387 MT

100% Efficiency 2025 Mean Biomass = 1,760 MT

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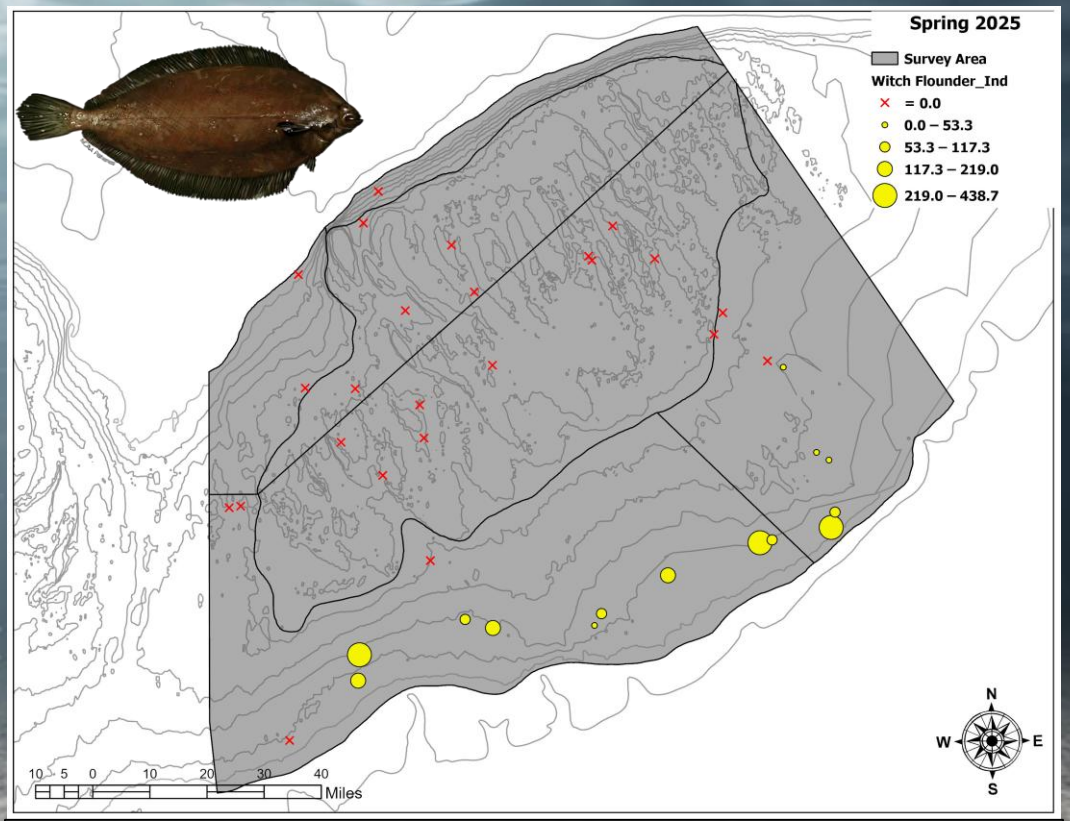
Witch Flounder

NO FALL CATCH



Mean Density = 54 ind/km^2

Abundance = 1,513,635

Biomass = 445 MT

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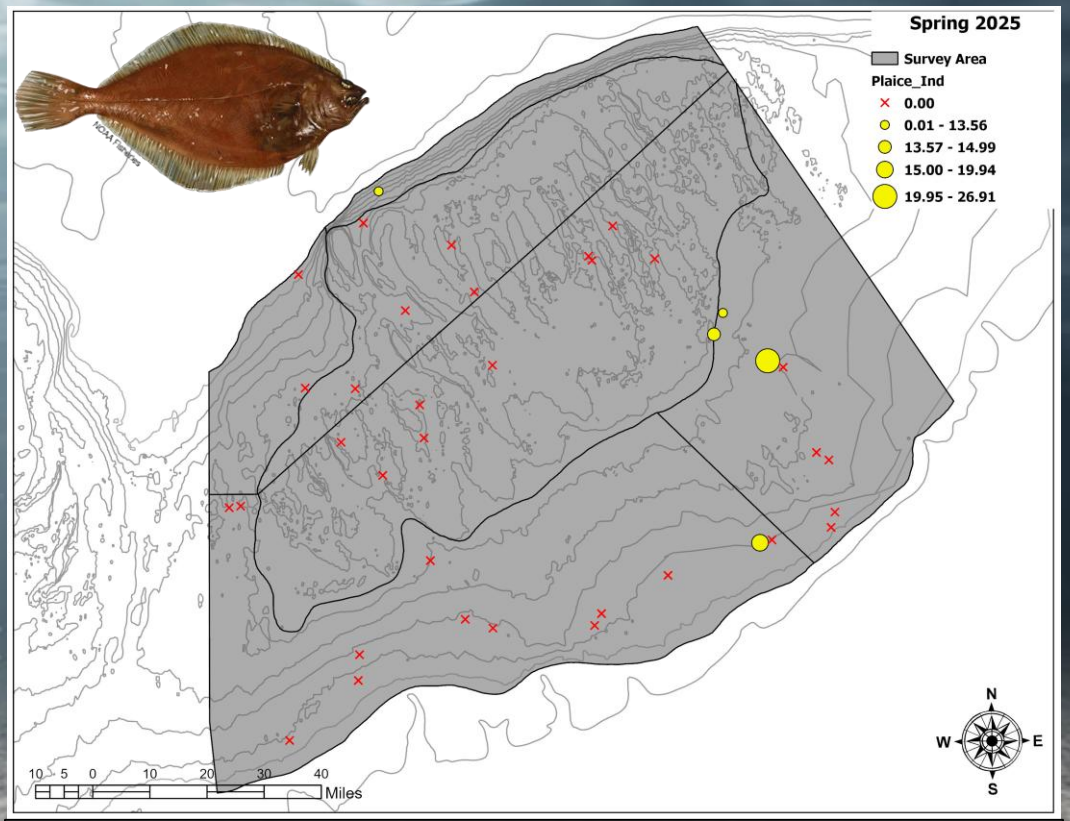
American Plaice

NO FALL CATCH



Mean Density = 2 ind/km^2

Abundance = 63,926

Biomass = 102 MT

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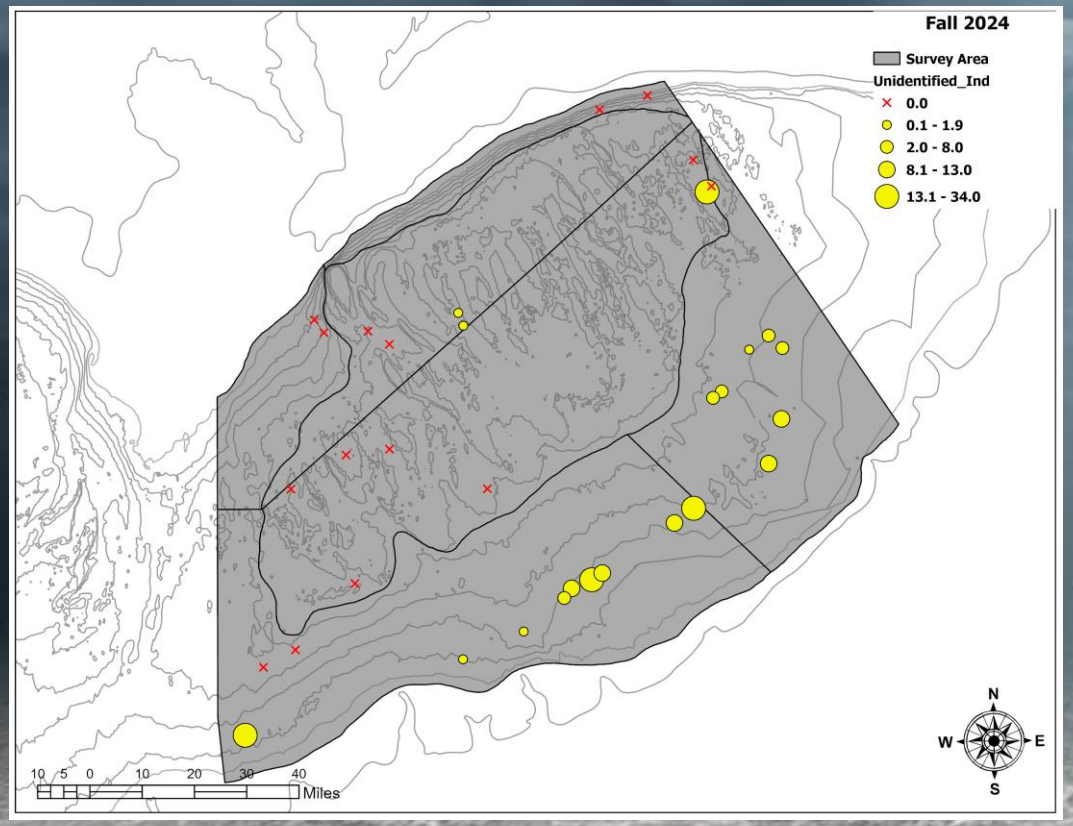
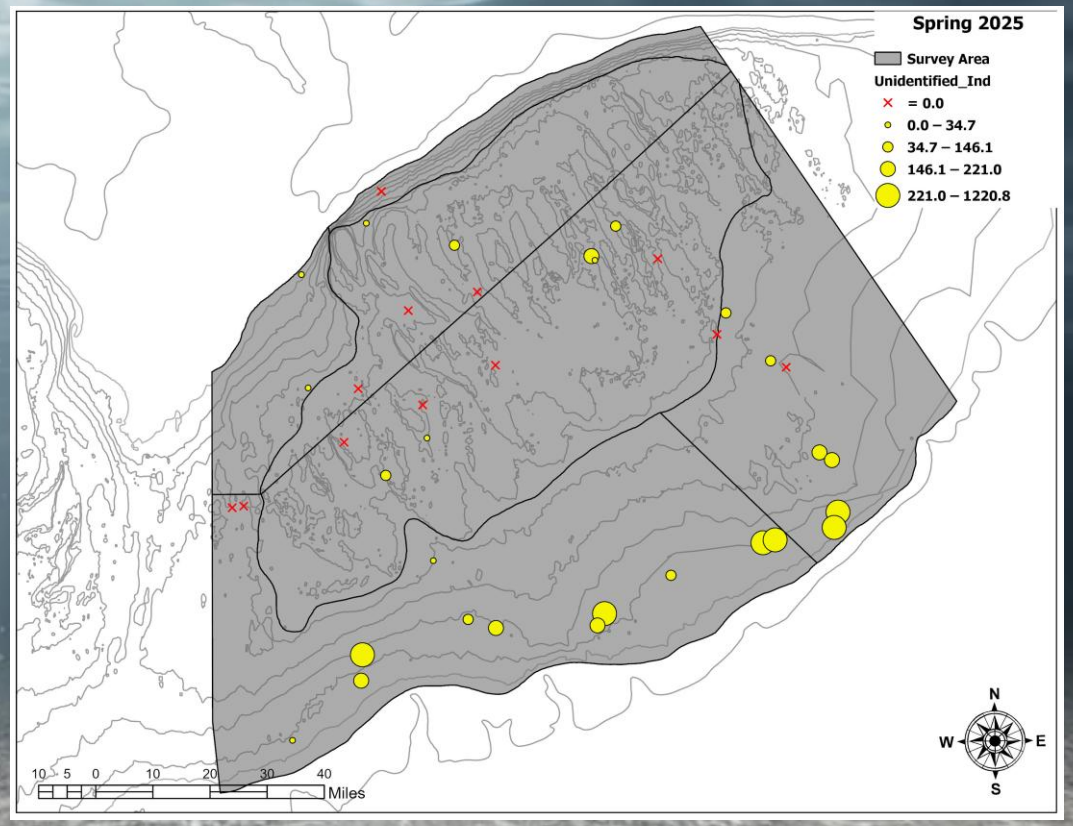
Unidentified Flatfish





***Most unidentified flatfish occur in deep softer bottom due to sediment suspension and algae in the water column in those areas**

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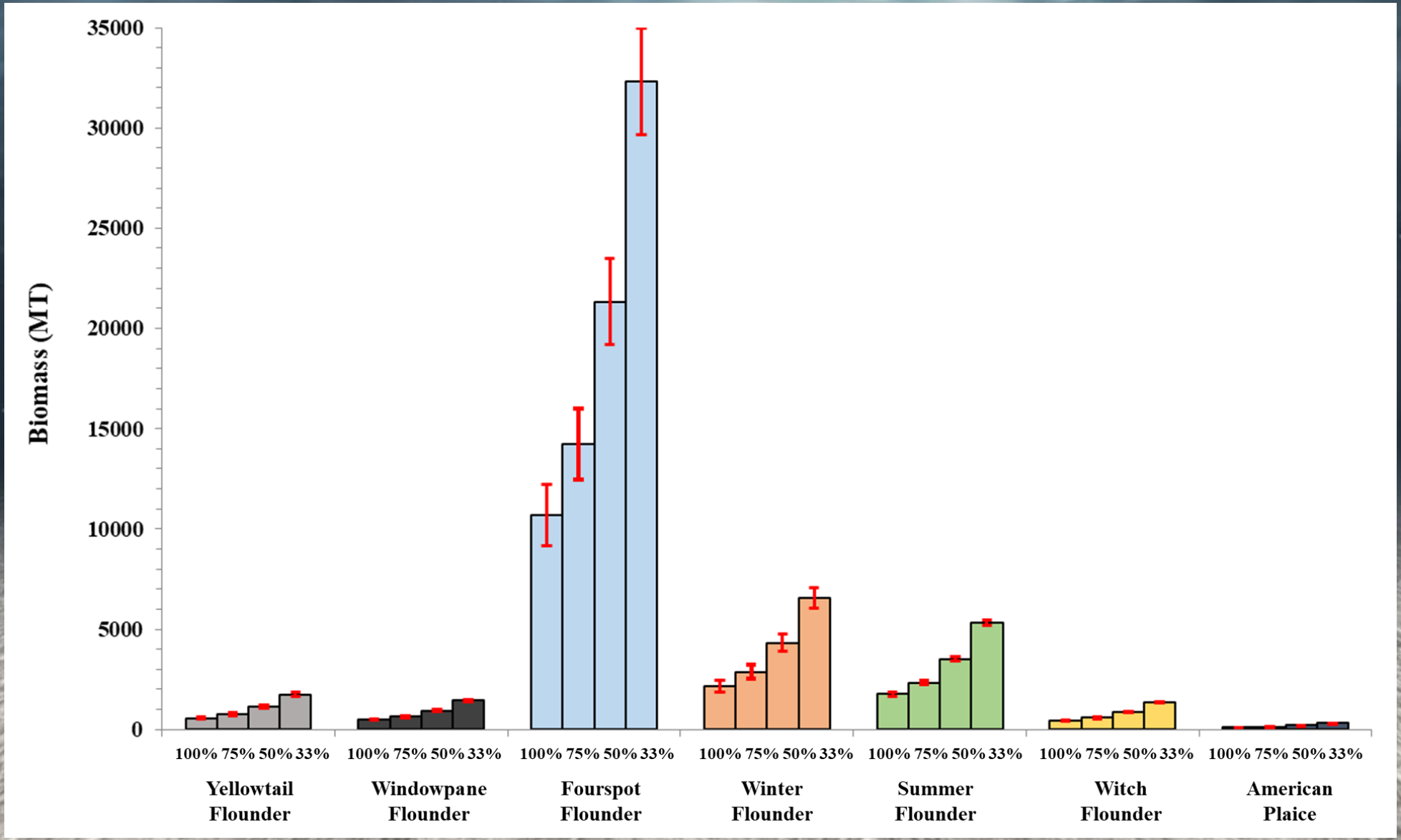
Summary



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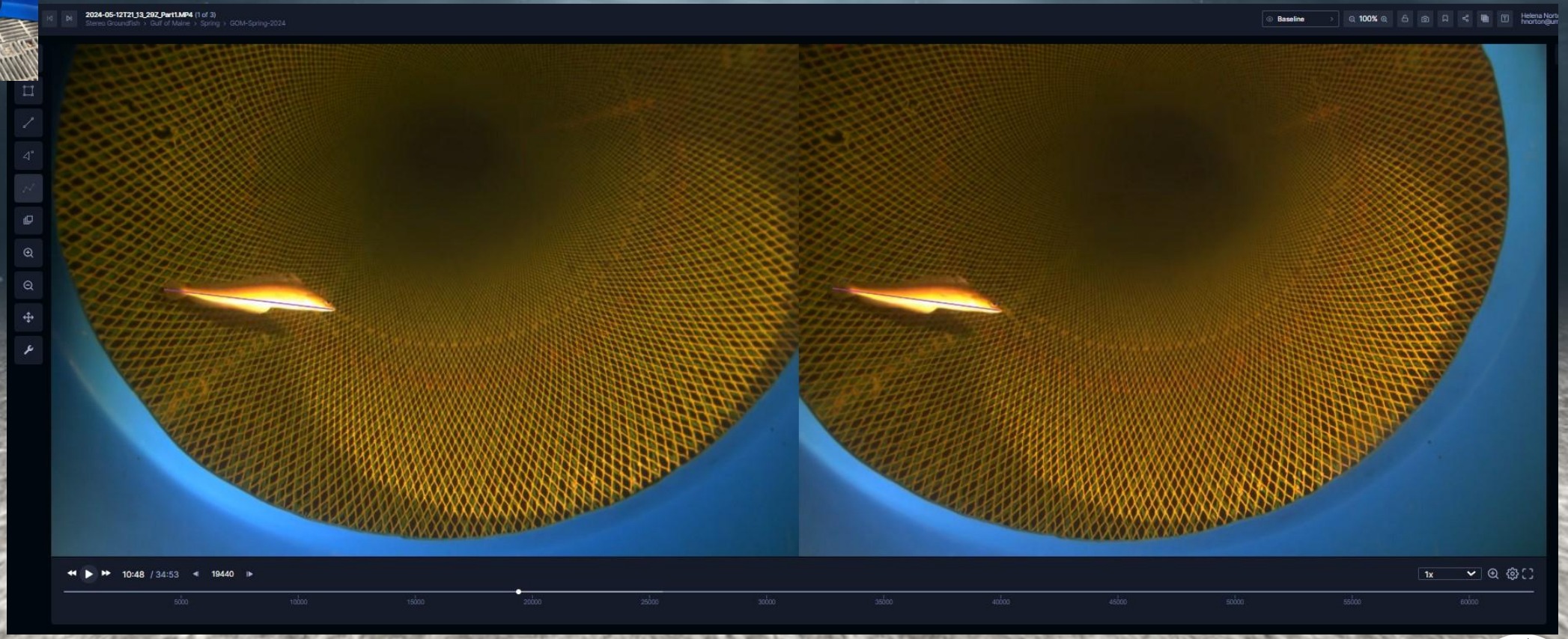
Stereoscopic Camera

*Algorithm training is ongoing



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Sea Robin Migration

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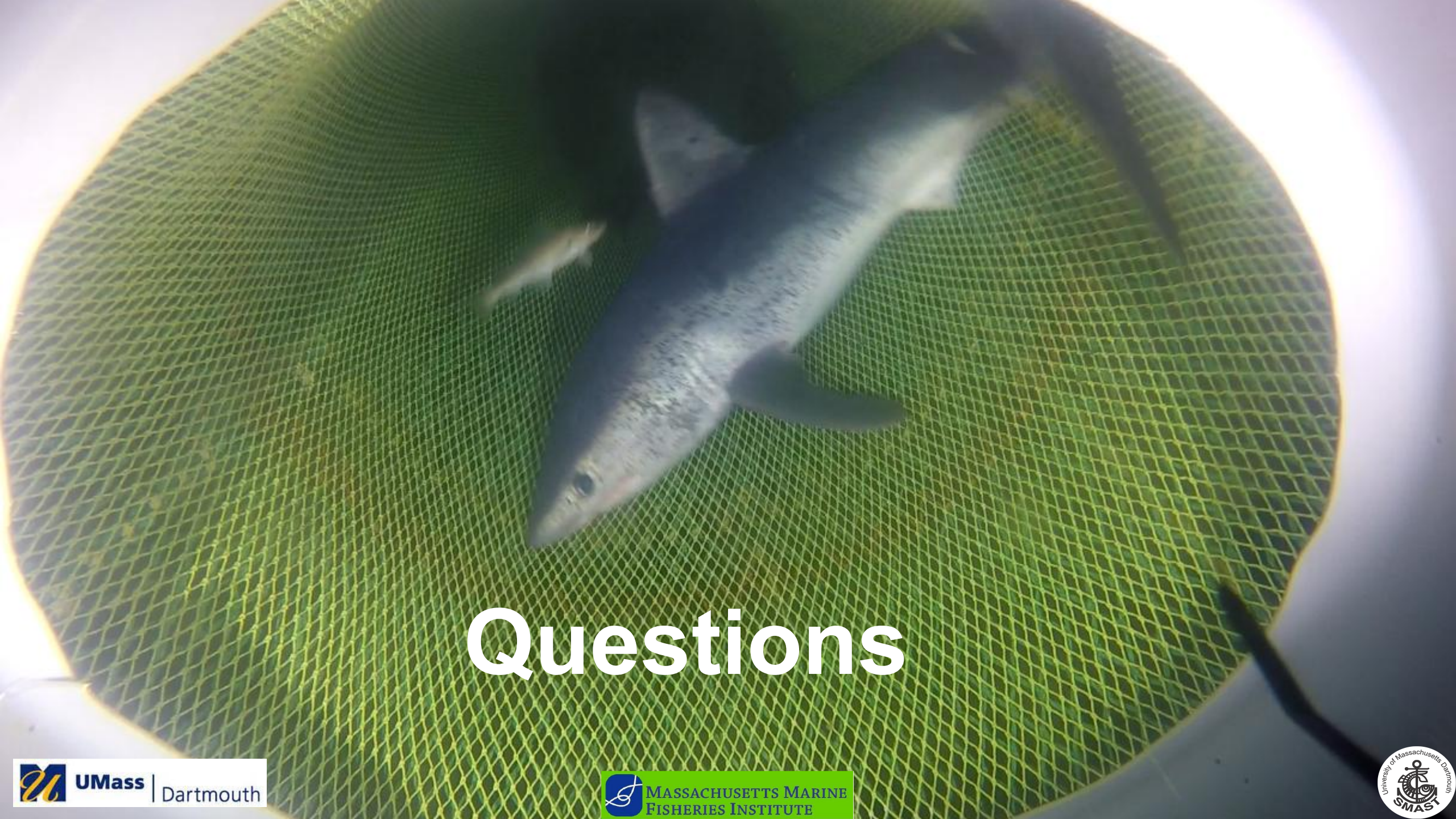

Questions

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