

Fishing & Boating Services



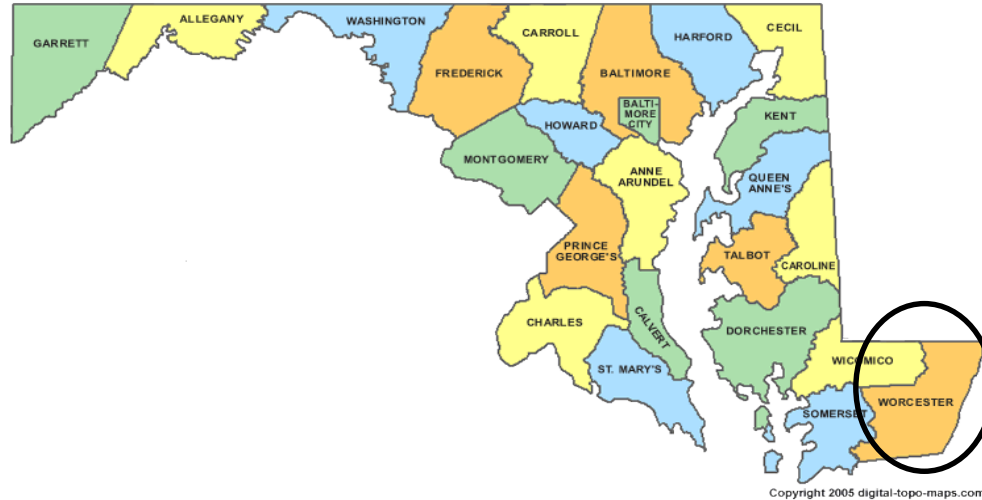
Juvenile finfish relative abundance surveys in Maryland's Coastal Bays

Craig Weedon, Steve Doctor, Gary Tyler and Angel Willey

Fishing & Boating Services

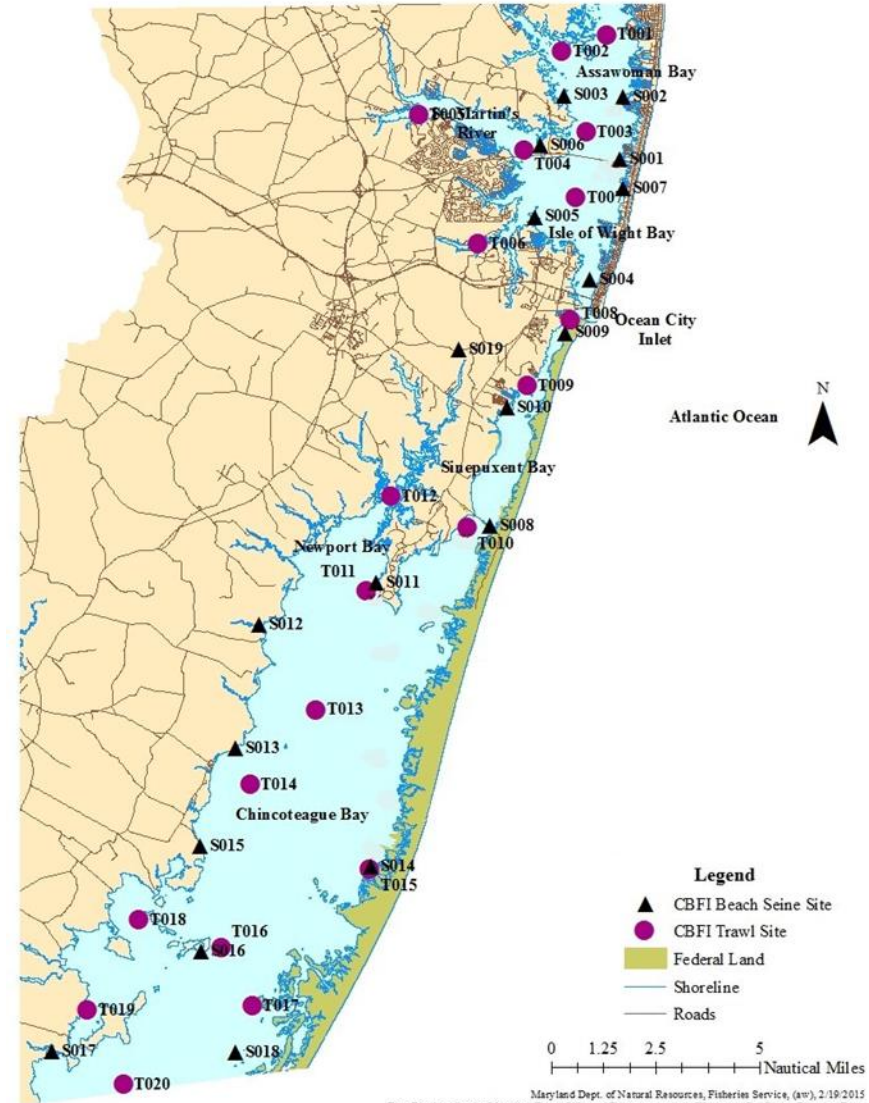


Overview of survey area



Survey Overview and History

- Trawl Survey (1989-2021)
- Beach Seine Survey (1989-2021)
- SAV Habitat Survey (2015-2021)



Trawl Survey



Survey Overview and History

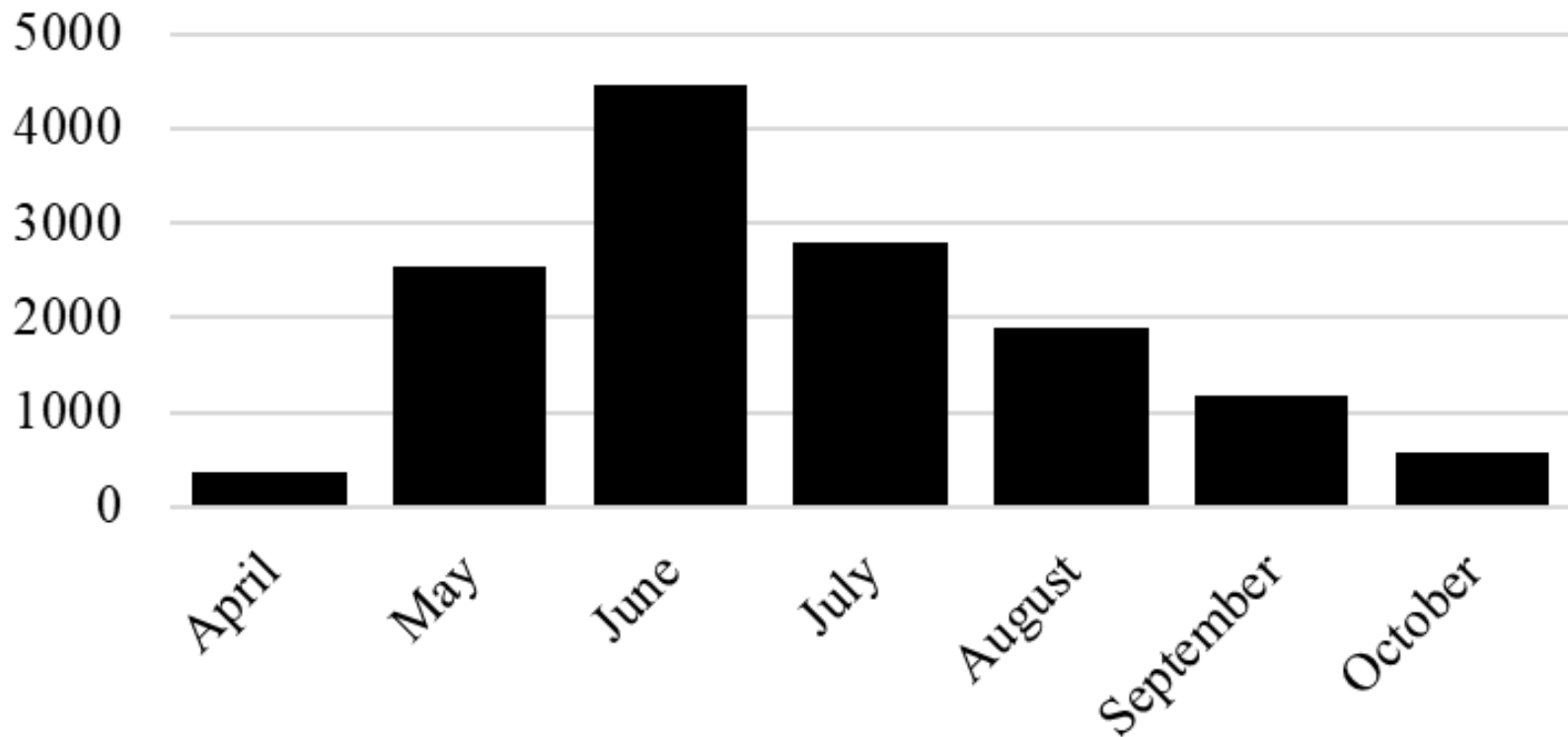
- Trawl Survey started in 1972 and standardized data from 1989-2021
- April through October
- 20 fixed sites each month from Assawoman Bay to Chincoteague Bay
- 140 sites (trawls) per year
- A standard 16 ft semi-balloon trawl net was used in areas with a depth greater than 3.5 ft. Each trawl was a standard six-minute tow at a speed of approximately 2.5 to 2.8 knots.

Data Outputs

- Stock assessments for Summer Flounder, Black Sea Bass and Atlantic Menhaden
- State IFMP Compliance for above species and American Eel, Atlantic Croaker, Spot and Weakfish
- USF&WS Annual Report 13 species highlighted
- Government and Non-Governmental Organization Data Requests

Trawl Survey

**Summer Flounder Trawl Catch
by Month (1989-2021; n = 13,805)**



Beach Seine Survey



Survey Overview and History

- Beach Seine Survey started in 1972 and standardized data from 1989-2021
- June and September
- 18 fixed sites from Assawoman Bay to Chincoteague Bay and one site in Ayres Creek.
- 38 sites (seine hauls) per year
- 100 ft X 6 ft X 0.25 inch mesh bag seine with a buoyed float line and a weighted footrope.

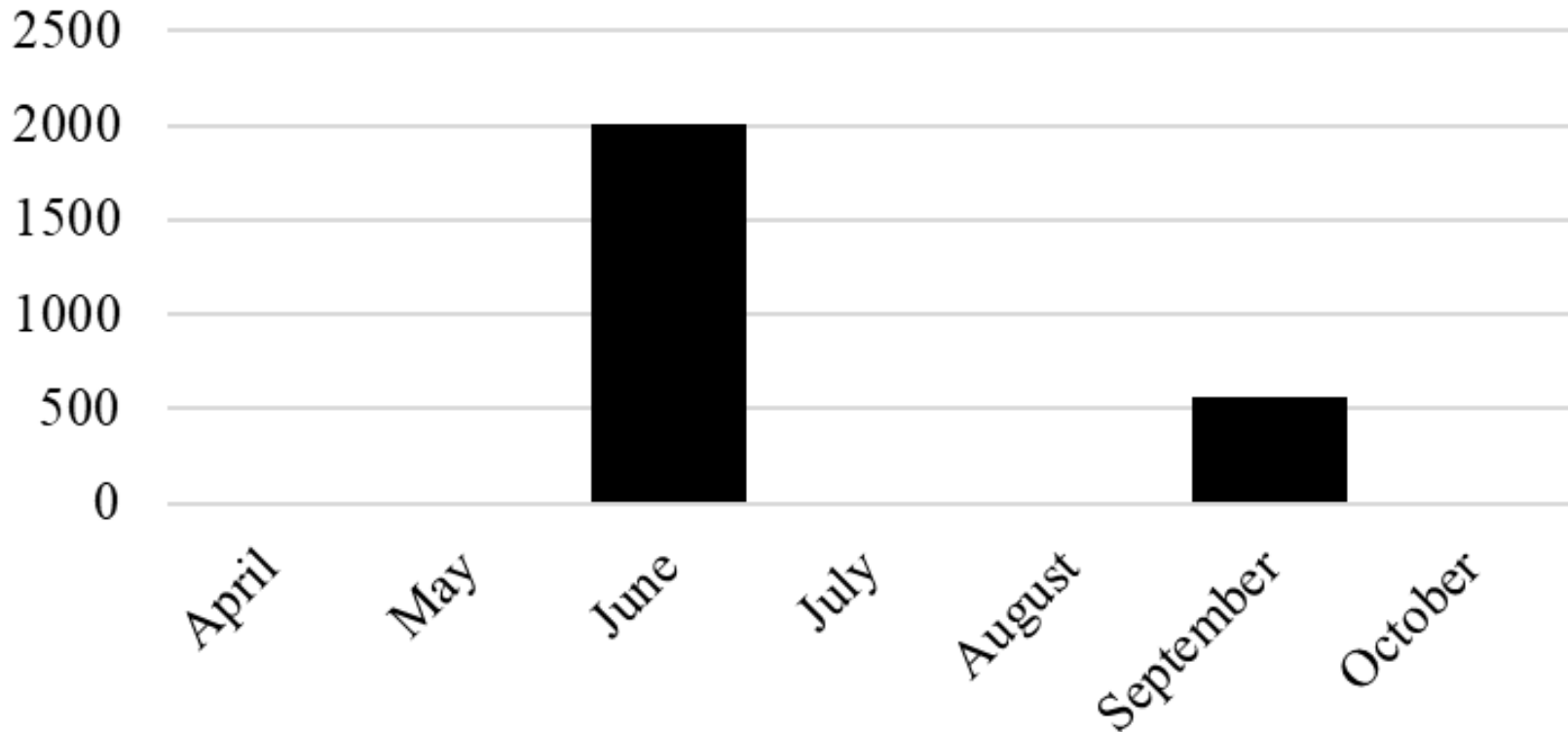
Data Outputs

- Stock Assessments for Atlantic Menhaden, Spotted Seatrout and Black Drum
- State IFMP Compliance for above species, Summer flounder, Spot and Bluefish
- USF&WS Annual Report 13 species highlighted
- Government and Non-Governmental Organization Data Requests

Beach Seine Survey



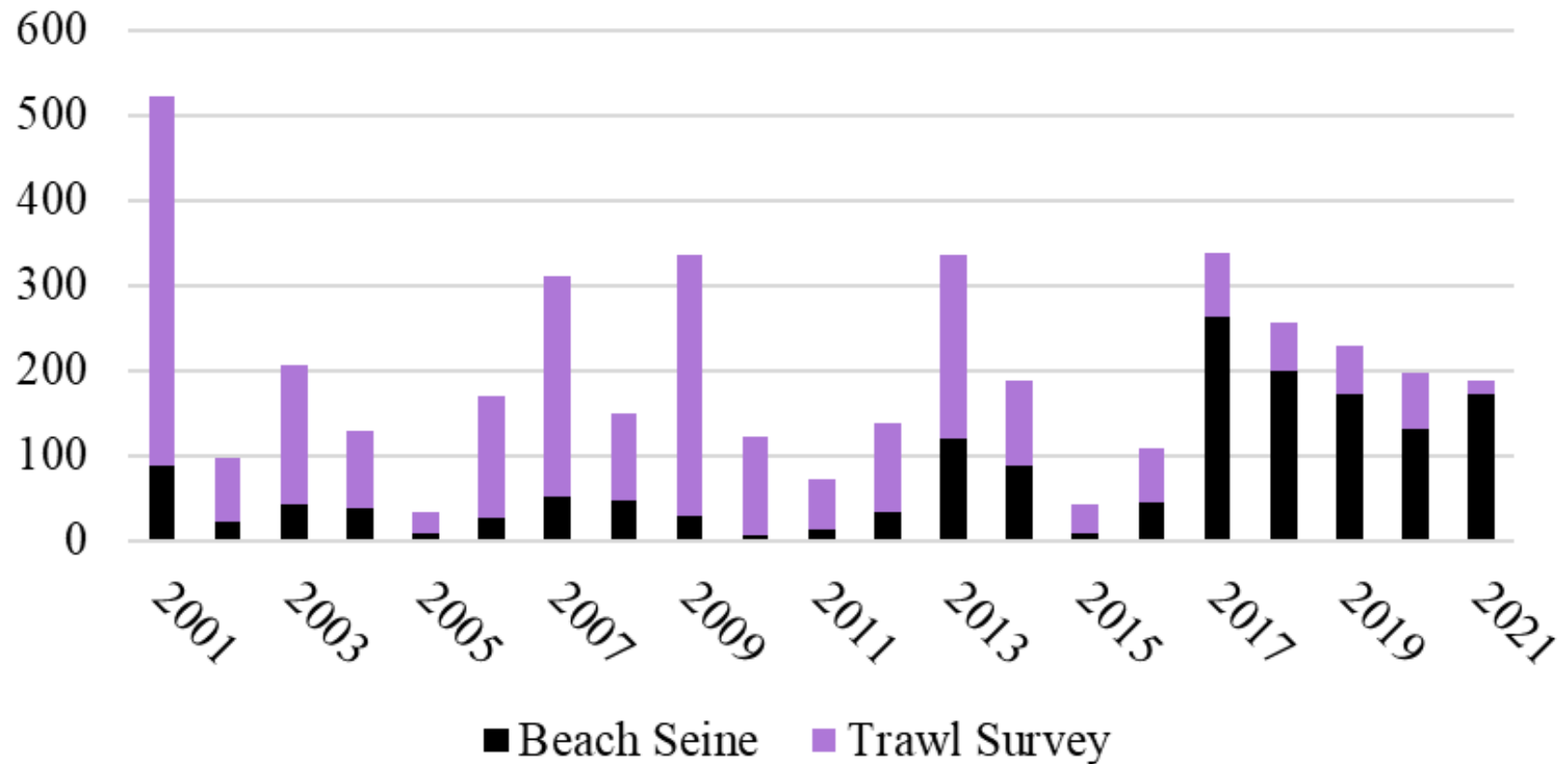
**Summer Flounder Beach Seine Catch
by Month (1989-2021; n = 2,563)**



Beach Seine Survey



Summer Flounder June Abundance by Survey since 2001



SAV Habitat Survey



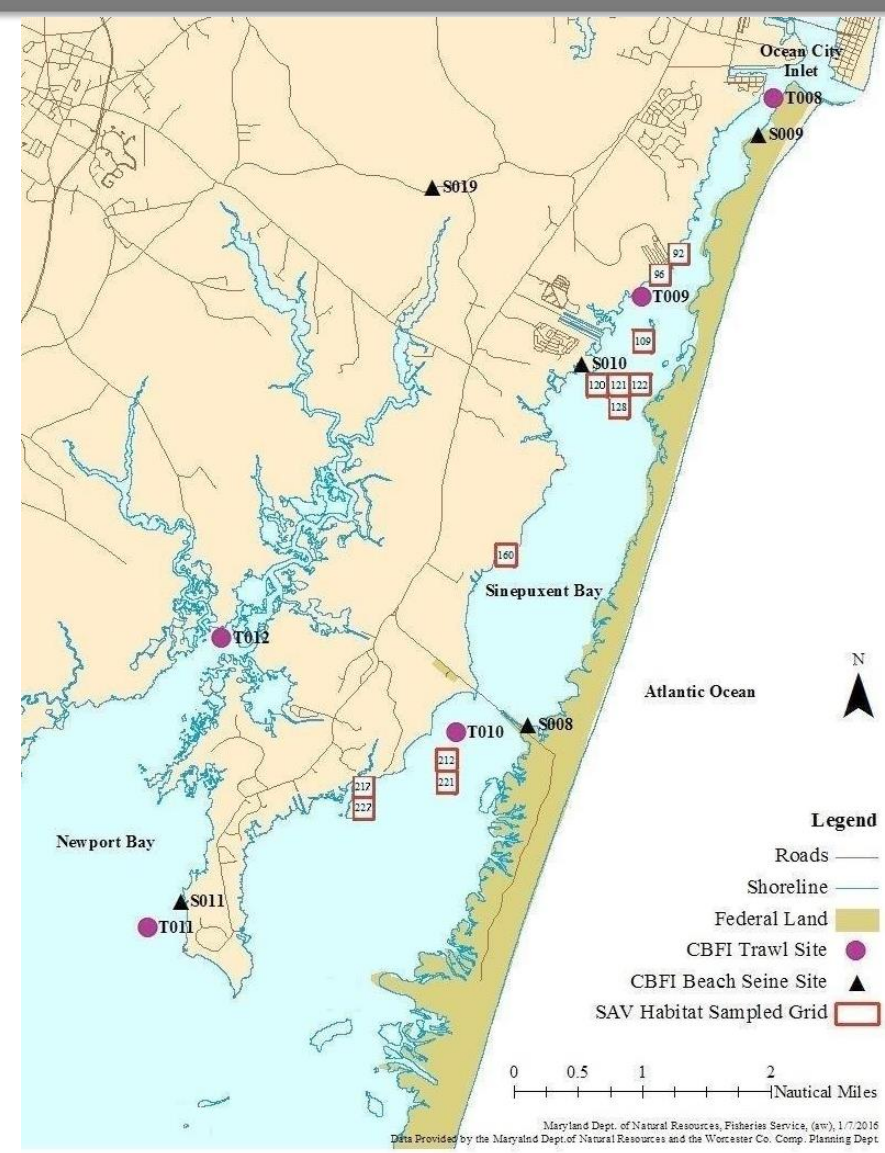
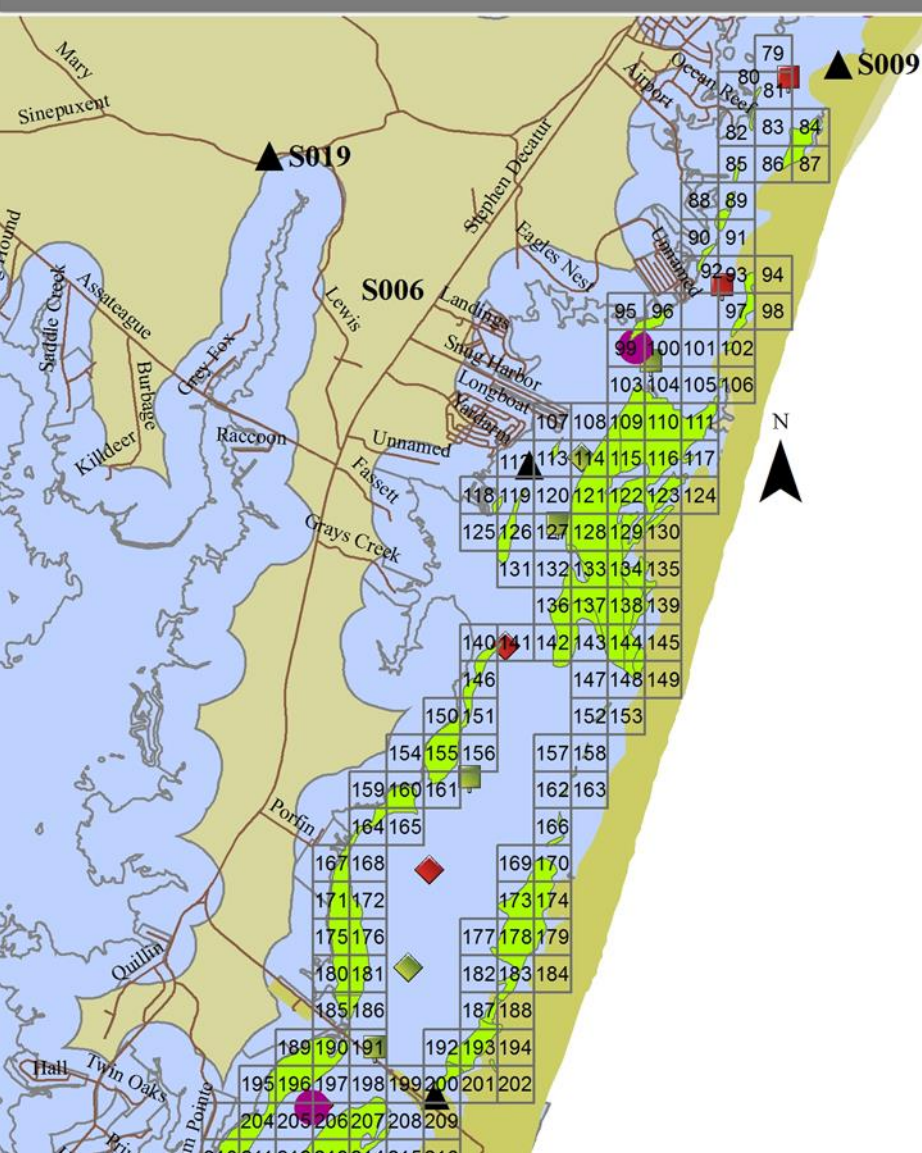
Survey Overview and History

- SAV Habitat Survey (2015-2021)
- September, Sinpuxent Bay
- Mobile sites within zones
- Less effort than Trawl or Beach Seine
- Average number of sites (seine hauls) per year is 12
- 50 ft X 6 ft X 0.25 inch zippered mesh bag seine with a buoyed float line and a weighted footrope.

Data Outputs

- In consideration for the next Tautog stock assessment
- State IFMP Compliance for Tautog
- USF&WS Annual Report focused on fish CPUE by SAV characteristics
- Government and Non-Governmental Organization Data Requests

SAV Habitat Survey



Maryland Dept. of Natural Resources, Fisheries Service, (aw), 1/7/2016
Data Provided by the Maryland Dept. of Natural Resources and the Worcester Co. Comp. Planning Dept.

SAV Habitat Survey





SAV Habitat Survey



SAV Habitat Survey



Atlantic silverside (<i>Menidia menidia</i>)	7054
Silver perch (<i>Bairdiella chrysoura</i>)	5939
Tautog (<i>Tautoga onitis</i>)	566
Sheepshead (<i>Archosargus probatocephalus</i>)	423
Halfbeak (<i>Hyporhamphus unifasciatus</i>)	246
Black sea bass (<i>Centropristis striata</i>)	181
Striped anchovy (<i>Anchoa hepsetus</i>)	165
Dusky pipefish (<i>Syngnathus floridae</i>)	136
Spotfin mojarra (<i>Eucinostomus argenteus</i>)	136
Northern pipefish (<i>Syngnathus fuscus</i>)	128
Pigfish (<i>Orthopristis chrysoptera</i>)	109
Oyster toadfish (<i>Opsanus tau</i>)	100
Striped blenny (<i>Chasmodes bosquianus</i>)	100
Pinfish (<i>Lagodon rhomboides</i>)	98
Bay anchovy (<i>Anchoa mitchilli</i>)	71
Spot (<i>Leiostomus xanthurus</i>)	67
Summer flounder (<i>Paralichthys dentatus</i>)	27
Northern puffer (<i>Spherooides maculatus</i>)	26
Gray snapper (<i>Lutjanus griseus</i>)	24
Striped burrfish (<i>Chilomycterus schoepfii</i>)	20
Bluespotted cornetfish (<i>Fistularia tabacaria</i>)	18
Spotfin butterflyfish (<i>Chaetodon ocellatus</i>)	14
Atlantic menhaden (<i>Brevoortia tyrannus</i>)	11
Atlantic needlefish (<i>Strongylura marina</i>)	10

Rainwater killifish (<i>Lucania parva</i>)	10
White mullet (<i>Mugil curema</i>)	10
Feather blenny (<i>Hypsoblennius hentz</i>)	7
Naked goby (<i>Gobiosoma bosc</i>)	6
Spotted seatrout (<i>Cynoscion nebulosus</i>)	6
Southern kingfish (<i>Menticirrhus americanus</i>)	5
American eel (<i>Anguilla rostrata</i>)	4
Blackcheek tonguefish (<i>Symphurus plagiusa</i>)	4
Bluefish (<i>Pomatomus saltatrix</i>)	4
Lined seahorse (<i>Hippocampus erectus</i>)	4
Northern kingfish (<i>Menticirrhus saxatilis</i>)	4
Striped mullet (<i>Mugil cephalus</i>)	4
Black drum (<i>Pogonias cromis</i>)	3
Inshore lizardfish (<i>Synodus foetens</i>)	3
Atlantic croaker (<i>Micropogonias undulatus</i>)	2
Atlantic spadefish (<i>Chaetodipterus faber</i>)	2
Southern stingray (<i>Dasyatis americana</i>)	2
Cobia (<i>Rachycentron canadum</i>)	1
Gag (<i>Mycteroperca microlepis</i>)	1
Harvestfish (<i>Peprilus paru</i>)	1
Lookdown (<i>Selene vomer</i>)	1
Skilletfish (<i>Gobiesox strumosus</i>)	1
Spanish mackerel (<i>Scomberomorus maculatus</i>)	1
Striped killifish (<i>Fundulus majalis</i>)	1

SAV Habitat Survey

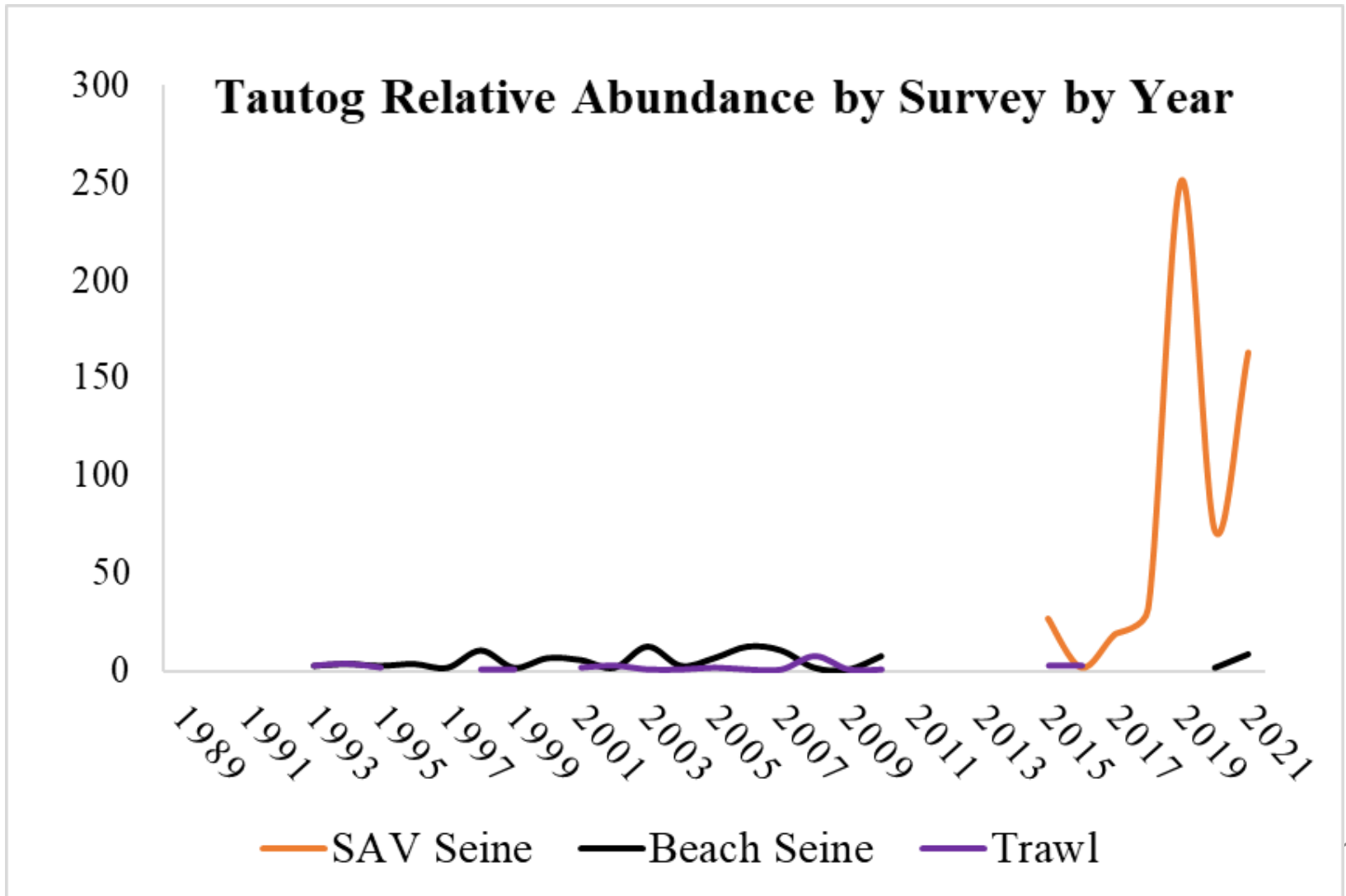


Tautog Relative Abundance by Survey by Month



	Apr	May	Jun	Jul	Aug	Sep	Oct
■ SAV Seine ('15-'21)						566	
■ Beach Seine ('89-'21)			5			121	
■ Trawl ('89-'21)	3	1	5	4	6	11	11

SAV Habitat Survey



Questions

