Florida Fish and Wildlife Conservation Commission
Fish & Wildlife Research Institute

Fisheries-Independent Monitoring Program 2025 Annual Data Summary Report

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FLORIDA SALTWATER RECREATIONAL FISHING LICENSES

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Preface

Changes from previous reports

Starting with the 2022 version of this report, several changes were made from previous versions, including:

- Addition of Santa Rosa Sound, Choctawhatchee Bay, and Sarasota Bay to data summaries
- Order of estuaries in data summaries was changed to reflect a more logical geographical order (i.e., west to east, north to south)
- Species profiles were amended to include a more quantitative, objective interpretation of Indices of Abundance figures
- Addition of section detailing annual monitoring of Gulf of America (formerly Gulf of Mexico) polyhaline seagrass habitats
- Included more species in our list of selected species to account for reef-associated juvenile stages

Overview

This report provides a summary of the data collected in 2025 by the Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute's (FWRI) Fisheries-Independent Monitoring (FIM) program. Monitoring was conducted following a stratified-random sampling (SRS) design in Fort Walton including the Santa Rosa Sound and Choctawhatchee Bay (monthly, June to December), Apalachicola Bay (monthly, January to December), Cedar Key (monthly, January to December), Tampa Bay (monthly, January to December), Sarasota Bay (bimonthly, January to December), Charlotte Harbor (monthly, January to December), Northeast Florida (monthly, January to December), and the northern and southern portions of the Indian River Lagoon (IRL; monthly, January to December). Gears used for routine monitoring in the various areas included 21.3-m seines set in bays and rivers, 6.1-m otter trawls, and 183-m haul seines (Table 1). See Chapter 2 for more details on these gears.

Table 1: Gear usage by estuary for FIM program stratified-random-sampling, 2025.

Study Area	**21.3-m Seine**		**183-m Haul Seine**	**6.1-m Otter Trawl**
	Bay	**River**		
Santa Rosa Sound	–	–	X	–
Choctawhatchee Bay	–	–	X	–
Apalachicola Bay	X	X	X	X
Cedar Key	X	X	X	X
Tampa Bay	X	X	X	X
Sarasota Bay	X	–	X	–
Charlotte Harbor	X	X	X	X
Northeast Florida	–	X	X	X
Northern Indian River Lagoon	X	X	X	–
Southern Indian River Lagoon	–	X	X	–

There were 1,673,976 animals collected in 6,018 samples from all estuaries (Figure 1). The most samples were collected with 21.3-m seines (n=3,590), followed by 183-m haul seines (n=1,452), and 6.1-m otter trawls (n=976). Total sampling effort in each estuary ranged from eight hauls made in Santa Rosa Sound to 1,356 hauls made in Northeast Florida (Table 2). The total number of animals collected ranged from 955 in Santa Rosa Sound to 470,106 in Tampa Bay (Table 2). The majority of animals were collected in 21.3-m seines (n=1,255,628; 75.0% of the total catch; Table 2).

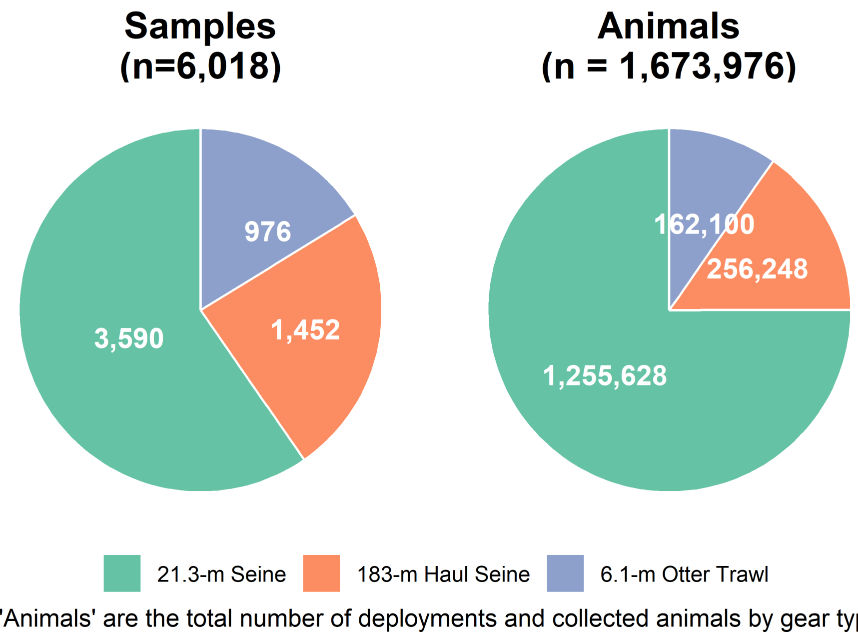

Figure 1: Summary of 2025 FIM program catch and effort data.

The top five dominant taxa were *Anchoa mitchilli*, *Lagodon rhomboides*, *Eucinostomus* spp., *Harengula jaguana*, and *Menidia* spp.. Recreationally and commercially important animals (i.e., Selected Taxa; see Table 4) accounted for 14.8% (n=247,664) of the overall catch and comprised between 3.6% (Charlotte Harbor) and 39.1% (Apalachicola Bay) of the total SRS catches from each estuary. The number of selected taxa appearing in the top ten abundant taxa for each estuary ranged from zero (Charlotte Harbor) to six (Choctawhatchee Bay; Table 5).

A total of 1,109 fish and selected invertebrates were culled for fish health analyses of gross external abnormalities (including external parasites). Numbers of reported abnormalities from each estuary ranged from zero (Santa Rosa Sound, Choctawhatchee Bay) to 590 (Northern Indian River Lagoon; see Chapter 6).

Species profiles, including indices of young-of-the-year relative abundance, were generated for many species of commercial, recreational, or ecological importance: *Centropomus undecimalis* (Common Snook), *Sciaenops ocellatus* (Red Drum), *Cynoscion nebulosus* (Spotted Seatrout), *Archosargus probatocephalus* (Sheepshead), *Lagodon rhomboides* (Pinfish), *Mugil cephalus* (Striped Mullet), and *Callinectes sapidus* (Blue Crab; see Section 5.1).

Table 2: Summary of catch and effort data by estuary for FIM program stratified-random sampling, 2025.

Field Lab	21.3-m Seine		183-m Haul Seine		6.1-m Otter Trawl		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
Santa Rosa Sound			8	955			8	955
Choctawhatchee Bay			10	2,169			10	2,169
Apalachicola Bay	324	113,927	198	52,344	72	40,101	594	206,372
Cedar Key	420	64,839	192	25,299	40	1,361	652	91,499
Tampa Bay	732	392,665	240	65,920	144	11,521	1,116	470,106
Sarasota Bay	120	61,002	36	8,817			156	69,819
Charlotte Harbor	785	233,252	204	29,212	132	57,012	1,121	319,476
Northeast Florida	576	137,810	192	4,880	588	52,105	1,356	194,795
Northern Indian River Lagoon	426	224,341	228	39,974			654	264,315
Southern Indian River Lagoon	207	27,792	144	26,678			351	54,470

’Hauls’ are the total number of net deployments by each gear type and ’Animals’ are the total number of animals collected by each gear type.

Table 3: Top 10 numerically dominant taxa collected in FIM program stratified-random sampling, 2025.

Bay	Scientific Name		Number
Santa Rosa Sound	*Lagodon rhomboides*		787
	Leiostomus xanthurus		**67**
	Mugil cephalus		**31**
	Fundulus similis		16
	Fundulus grandis		8
	Sciaenops ocellatus		**7**
	Callinectes sapidus		**6**
	Eucinostomus harengulus		6
	Hypanus sabinus		5
	Ariopsis felis		4
		Total (Top Ten)	**937**
		Total (Selected Taxa)	**115**
		Grand Total of Animals Collected	**955**
Choctawhatchee Bay	*Lagodon rhomboides*		1,605
	Bairdiella chrysoura		158
	Orthopristis chrysoptera		130
	Leiostomus xanthurus		**90**
	Mugil cephalus		**33**
	Sciaenops ocellatus		**27**
	Eucinostomus harengulus		26
	Micropogonias undulatus		**21**
	Lutjanus griseus		**17**
	Mugil curema		**11**
		Total (Top Ten)	**2,118**
		Total (Selected Taxa)	**217**
		Grand Total of Animals Collected	**2,169**

Bay	Scientific Name	Number
Apalachicola Bay	*Anchoa mitchilli*	41,927
	***Brevoortia* spp.**	**37,577**
	Lagodon rhomboides	28,289
	Harengula jaguana	17,686
	Leiostomus xanthurus	**14,649**
	Litopenaeus setiferus	**9,399**
	Lucania parva	8,091
	Mugil cephalus	**7,063**
	Bairdiella chrysoura	6,160
	Orthopristis chrysoptera	6,091
	Total (Top Ten)	**176,932**
	Total (Selected Taxa)	**80,736**
	Grand Total of Animals Collected	**206,372**
Cedar Key	*Anchoa mitchilli*	24,206
	Leiostomus xanthurus	**15,371**
	Membras martinica	6,880
	Litopenaeus setiferus	**5,721**
	Lagodon rhomboides	4,816
	Mugil cephalus	**4,256**
	Eucinostomus spp.	3,488
	Bairdiella chrysoura	3,287
	Menidia spp.	2,250
	Anchoa hepsetus	2,183
	Total (Top Ten)	**72,458**
	Total (Selected Taxa)	**33,233**
	Grand Total of Animals Collected	**91,499**

Bay	Scientific Name	Number
Tampa Bay	*Anchoa mitchilli*	278,338
	Lagodon rhomboides	45,888
	Eucinostomus spp.	30,065
	Eucinostomus gula	21,752
	Menidia spp.	19,446
	Harengula jaguana	9,069
	Opisthonema oglinum	6,372
	Lucania parva	5,900
	Leiostomus xanthurus	**5,595**
	Eucinostomus harengulus	4,285
	Total (Top Ten)	**426,710**
	Total (Selected Taxa)	**22,463**
	Grand Total of Animals Collected	**470,106**
Sarasota Bay	*Lagodon rhomboides*	22,581
	Eucinostomus spp.	18,033
	Anchoa mitchilli	13,920
	Lucania parva	5,505
	Eucinostomus gula	1,272
	Farfantepenaeus duorarum	**1,219**
	Orthopristis chrysoptera	1,083
	Menidia spp.	889
	Microgobius gulosus	629
	Harengula jaguana	622
	Total (Top Ten)	**65,753**
	Total (Selected Taxa)	**3,364**
	Grand Total of Animals Collected	**69,819**

Bay	Scientific Name	Number
Charlotte Harbor	*Anchoa mitchilli*	146,077
	Eucinostomus spp.	50,787
	Lagodon rhomboides	31,802
	Harengula jaguana	22,447
	Menidia spp.	7,876
	Lucania parva	7,734
	Eucinostomus gula	7,194
	Eucinostomus harengulus	5,330
	Microgobius gulosus	3,106
	Bairdiella chrysoura	2,911
	Total (Top Ten)	**285,264**
	Total (Selected Taxa)	**11,627**
	Grand Total of Animals Collected	**319,476**
Northeast Florida	*Anchoa mitchilli*	41,691
	Litopenaeus setiferus	**27,300**
	Anchoa hepsetus	22,712
	Micropogonias undulatus	**16,293**
	Menidia menidia	14,084
	Menidia spp.	12,046
	Anchoa lyolepis	9,088
	Dorosoma petenense	6,113
	Mugil cephalus	**5,394**
	Fundulus heteroclitus	5,284
	Total (Top Ten)	**160,005**
	Total (Selected Taxa)	**62,464**
	Grand Total of Animals Collected	**194,795**

Bay	Scientific Name		Number
Northern Indian River Lagoon	*Anchoa mitchilli*		104,549
	Harengula jaguana		31,642
	Anchoa lyolepis		30,432
	Eucinostomus spp.		10,798
	Opisthonema oglinum		9,226
	Lagodon rhomboides		8,852
	Bairdiella chrysoura		7,893
	Diapterus auratus		6,872
	Mugil curema		**6,256**
	Ariopsis felis		3,194
		Total (Top Ten)	**219,714**
		Total (Selected Taxa)	**23,085**
		Grand Total of Animals Collected	**264,315**
Southern Indian River Lagoon	*Anchoa mitchilli*		9,345
	Diapterus auratus		7,587
	Lagodon rhomboides		5,875
	Eucinostomus spp.		4,440
	***Brevoortia* spp.**		**2,321**
	Opisthonema oglinum		1,994
	Harengula humeralis		1,705
	Eucinostomus gula		1,685
	Mugil curema		**1,516**
	Menidia spp.		1,437
		Total (Top Ten)	**37,905**
		Total (Selected Taxa)	**10,360**
		Grand Total of Animals Collected	**54,470**

Table 4: Number of recreational or commercially important species (Selected Taxa) collected in FIM program stratified-random sampling, 2025.

Species	SR	CB	AP	CK	TB	SB	CH	JX	IR	TQ
Albula spp.	.	.	.	.	.	.	1	3	9	60
Archosargus probatocephalus	.	.	65	83	832	348	936	107	769	600
Argopecten irradians	.	.	1	.	5	.	.	.	.	.
Brevoortia spp.	.	.	37,577	2,069	2,647	5	417	2,320	1,751	2,321
Calamus arctifrons	.	.	.	1	.	.	.	.	.	4
Calamus penna	.	.	.	.	3	1	33	.	1	.
Calamus spp.	.	.	1	.	.	2	9	.	1	.
Callinectes sapidus	6	4	1,832	841	1,026	165	991	1,297	267	254
Caranx crysos	.	.	7	.	5	.	.	.	2	26
Caranx hippos	.	1	44	71	98	11	31	72	147	138
Carcharhinus isodon	.	.	2	.	.	.	.	.	.	.
Carcharhinus leucas	.	.	1	.	.	.	3	.	11	3
Carcharhinus limbatus	.	.	.	.	2	.	.	.	.	.
Centropomus ensiferus	.	.	.	.	.	.	.	.	.	2
Centropomus parallelus	.	.	.	.	.	.	.	.	.	42
Centropomus pectinatus	.	.	.	.	.	.	.	.	1	.
Centropomus undecimalis	.	.	.	86	913	301	991	2	601	938
Centropristis philadelphica	.	.	.	.	.	.	.	20	.	.
Centropristis striata	.	.	21	9	23	.	1	2	.	.
Cynoscion arenarius	.	.	1,713	421	364	.	174	.	.	.
Cynoscion complex	.	.	.	.	.	.	.	646	31	1
Cynoscion nebulosus	.	2	756	198	982	136	439	114	677	24
Cynoscion nothus	.	.	6	.	.	.	.	4	.	.
Diplectrum formosum	.	.	6	6	16	.	3	.	.	1
Elops saurus	.	1	1,037	896	4,177	47	291	100	396	537
Epinephelus itajara	.	.	.	.	.	.	1	.	.	1
Epinephelus morio	.	.	.	.	.	.	1	.	.	.
Farfantepenaeus aztecus	.	1	80	.	.	.	.	400	63	2
Farfantepenaeus duorarum	.	7	175	19	1,756	1,219	2,471	7	39	.

Species	SR	CB	AP	CK	TB	SB	CH	JX	IR	TQ
Farfantepenaeus spp.	.	.	1,009	103	.	.	.	1,439	1,185	566
Ginglymostoma cirratum	.	.	.	.	.	.	.	.	.	1
Haemulon aurolineatum	.	.	.	.	.	.	.	.	.	13
Haemulon parra	.	.	.	.	.	.	.	.	28	133
Haemulon plumierii	.	.	.	46	45	25	69	.	14	4
Haemulon sciurus	.	.	.	.	.	.	.	.	.	5
Lachnolaimus maximus	.	.	.	.	.	.	.	.	.	5
Leiostomus xanthurus	67	90	14,649	15,371	5,595	381	218	5,154	3,171	266
Litopenaeus setiferus	.	.	9,399	5,721	.	.	.	27,300	805	20
Lobotes surinamensis	.	.	.	.	.	.	.	1	1	1
Lutjanus analis	.	.	.	.	.	.	4	2	24	149
Lutjanus apodus	.	.	.	.	.	.	.	.	.	3
Lutjanus cyanopterus	.	.	.	.	.	.	.	.	.	2
Lutjanus griseus	.	17	17	40	148	186	333	55	143	109
Lutjanus jocu	.	.	.	.	.	.	1	.	1	.
Lutjanus synagris	.	.	23	7	15	1	98	9	3	70
Megalops atlanticus	.	.	.	1	.	.	4	.	10	6
Menippe spp.	.	.	171	36	36	.	108	9	.	1
Menticirrhus americanus	.	.	190	585	237	.	273	284	165	3
Menticirrhus littoralis	.	.	11	.	39	.	1	2	.	.
Menticirrhus saxatilis	2	.	26	24	22	3	13	2	.	.
Micropogonias undulatus	.	21	2,783	494	9	.	1	16,293	2,269	528
Mugil cephalus	31	33	7,063	4,256	887	64	229	5,394	3,194	1,433
Mugil curema	.	11	477	278	507	49	76	637	6,256	1,516
Mugil rubrioculus	.	.	.	.	.	.	.	.	37	12
Mugil trichodon	.	.	.	143	718	258	1,970	.	2	.
Mycteroperca microlepis	.	.	17	.	23	13	35	.	.	.
Negaprion brevirostris	.	.	.	.	.	.	12	1	.	1
Ocyurus chrysurus	.	.	.	.	.	.	.	.	2	1
Panulirus argus	.	.	.	.	.	.	.	.	1	1
Paralichthys albigutta	1	2	427	129	213	40	105	42	31	14

Species	SR	CB	AP	CK	TB	SB	CH	JX	IR	TQ
Paralichthys dentatus	.	.	.	.	.	.	.	3	.	.
Paralichthys lethostigma	.	.	90	1	.	.	.	267	1	1
Paralichthys squamilentus	.	.	4	.	.	.	.	1	.	.
Pogonias cromis	.	.	95	419	52	9	8	137	241	47
Pomatomus saltatrix	.	.	40	35	.	.	.	2	1	7
Pterois spp.	.	.	.	.	.	.	.	.	.	1
Rachycentron canadum	.	.	.	.	2	.	1	.	.	.
Sciaenops ocellatus	7	27	867	758	919	62	1,091	220	635	28
Scomberomorus maculatus	.	.	3	1	7	.	1	3	3	9
Scomberomorus regalis	.	.	.	.	.	.	.	.	.	5
Sphyraena barracuda	.	.	7	1	29	24	52	1	33	343
Sphyrna tiburo	.	.	1	7	51	.	27	3	1	5
Trachinotus carolinus	1	.	24	4	4	3	15	37	5	15
Trachinotus falcatus	.	.	19	73	56	11	89	72	57	82
Total	**115**	**217**	**80,736**	**33,233**	**22,463**	**3,364**	**11,627**	**62,464**	**23,085**	**10,360**

Field laboratories are labeled as follows: SR (Santa Rosa Sound), CB (Choctawhatchee Bay), AP (Apalachicola Bay), CK (Cedar Key), TB (Tampa Bay), SB (Sarasota Bay), CH (Charlotte Harbor), JX (Northeast Florida), IR (Northern Indian River Lagoon), and TQ (Southern Indian River Lagoon).

Table 5: Selected taxa among the 10 most abundant taxa in FIM program stratified-random estuaries, 2025.

Estuary	Selected taxa among the 10 most abundant taxa:
Santa Rosa Sound	*Leiostomus xanthurus*, *Mugil cephalus*, *Sciaenops ocellatus*, *Callinectes sapidus*
Choctawhatchee Bay	*Leiostomus xanthurus*, *Mugil cephalus*, *Sciaenops ocellatus*, *Micropogonias undulatus*, *Lutjanus griseus*, *Mugil curema*
Apalachicola Bay	*Brevoortia* spp., *Leiostomus xanthurus*, *Litopenaeus setiferus*, *Mugil cephalus*
Cedar Key	*Leiostomus xanthurus*, *Litopenaeus setiferus*, *Mugil cephalus*
Tampa Bay	*Leiostomus xanthurus*
Sarasota Bay	*Farfantepenaeus duorarum*
Charlotte Harbor	–
Northeast Florida	*Litopenaeus setiferus*, *Micropogonias undulatus*, *Mugil cephalus*
Northern Indian River Lagoon	*Mugil curema*
Southern Indian River Lagoon	*Brevoortia* spp., *Mugil curema*

Part I

Fisheries-Independent Monitoring: Core Sampling

1 Introduction

The Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute's (FWRI) Fisheries-Independent Monitoring (FIM) program is a long-term program designed to monitor the relative abundance of fishery resources in Florida's major estuarine, coastal, and offshore habitats. The program was developed to: 1) address the critical need for effective assessment techniques for an array of species and sizes of fishes and selected invertebrates; 2) provide timely information for use in management plans; and 3) monitor trends in the relative abundance of taxa in a variety of estuarine and marine systems throughout Florida.

Proper management of Florida's marine fisheries resources requires information from a number of sources. Traditional methods of monitoring changes in fish stocks have used catch-per-unit-effort (CPUE) data derived directly from commercial and recreational fisheries. Analysis of these fisheries-dependent data can provide some information on the status of fish stocks; however, there are inherent problems in using data from these sources. Changes in vessel types, fleet size, fishing gear, or methods of operation can make fisheries-dependent data difficult to interpret (Ulltang 1977). Additionally, closed seasons, changes in size or bag limits, and fluctuations in market values can further bias catch data and subsequent analyses. Fisheries-independent sampling, which targets juvenile and sub-adult fishes that have not been subjected to fishing pressure, can provide less biased estimates of trends in fish stocks than fisheries-dependent sampling (Myers and Cadigan 1993). Changes in juvenile abundance within a season can be attributed to natural mortality, immigration, emigration, or recruitment. Shifts in juvenile abundance can also be used to forecast changes in the adult stock, allowing necessary modifications to harvest regulations to be implemented before the fish have fully recruited to the fishery (Goodyear 1985). The FIM program was established to provide this type of timely information for use in management plans.

The Fish and Wildlife Research Institute initiated the FIM program in 1985 with funding provided by a Federal Sport Fish Restoration (SFR) grant. In 1988, additional funding became available from special appropriations. The FIM program is also supported, in part, by funds from the sale of Florida saltwater fishing licenses. Fisheries-Independent Monitoring program sampling began in Tampa Bay and Charlotte Harbor during 1989, in Northern Indian River Lagoon (IRL) during 1990, in Cedar Key during 1996, in Southern IRL during 1997, in Apalachicola Bay during 1998, in Northeast Florida during 2001, and in Fort Walton during 2021 (Figure 1.1). Sampling was also conducted in Santa Rosa Sound/Choctawhatchee Bay between 1992-1997 and 2017-2019; in Florida Bay between 1993-1997; and in Florida Keys National Marine Sanctuary between 1998-2004 . A 2013 increase in Florida saltwater fishing licenses (i.e., Snook Stamp funding) allowed the FIM program to enhance current research efforts in several bay systems (Tampa Bay, Charlotte Harbor, Northern IRL, and Southern IRL). In 2016, these enhancements became a permanent part of the sampling design in each of the systems.

Florida's coastline extends from temperate to subtropical regions and includes habitats such as seagrass beds, salt marshes, and mangroves. These habitats provide critical nursery areas for many fish and invertebrate species. It is estimated that more than 70% of the recreationally-important

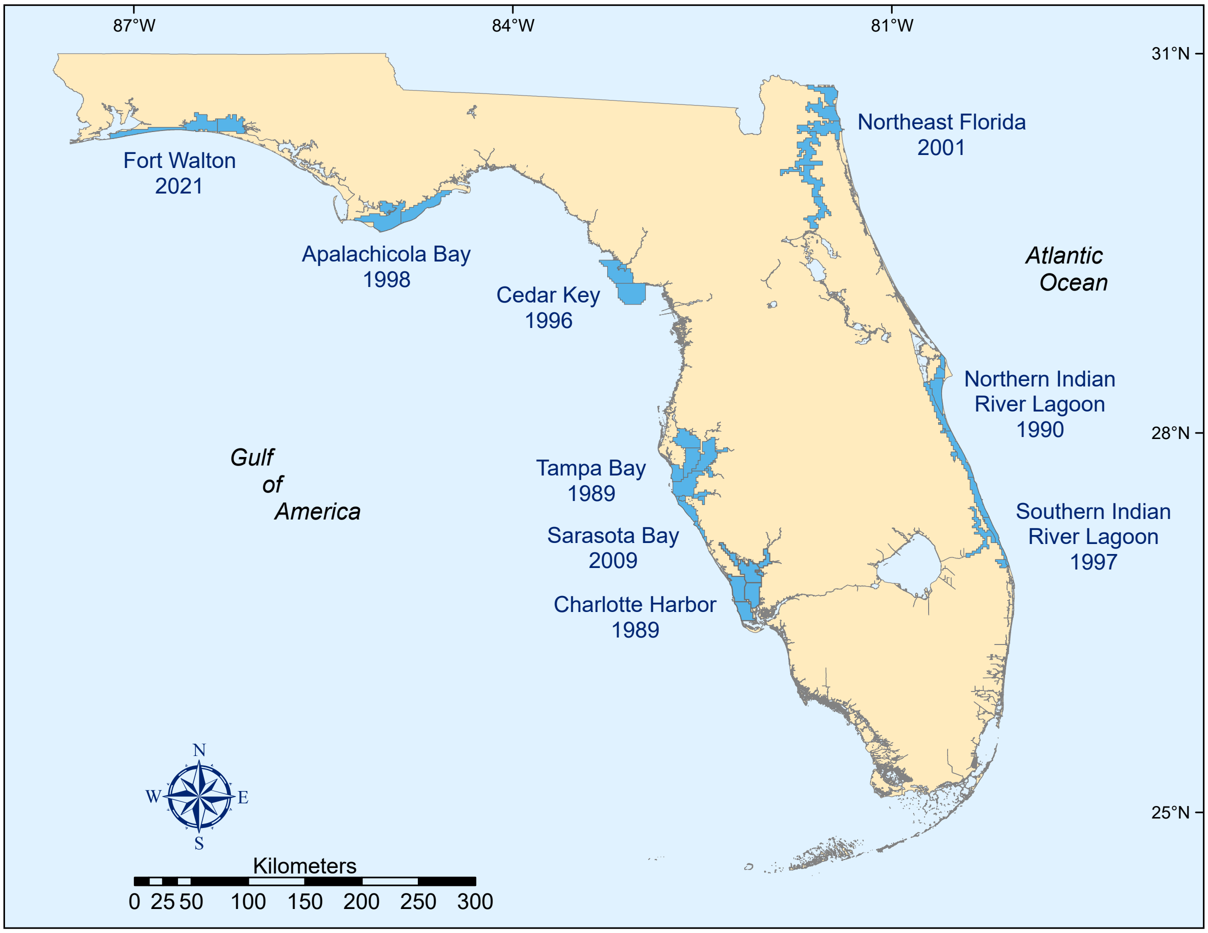

Figure 1.1: Locations of Fisheries-Independent Monitoring program field laboratories. Years indicate initiation of long-term sampling. Fort Walton includes Santa Rosa Sound and Choctawhatchee Bay.

species and more than 90% of the commercially-important species in the Gulf of America (formerly Gulf of Mexico; hereafter "Gulf") are estuarine-dependent during at least one stage of their life histories (Lindall and Saloman 1977). The FIM program data are summarized and analyzed for all fish and selected invertebrate species collected, yielding information on the relative abundance, recruitment, habitat use, and distribution of hundreds of estuarine and marine species. This approach provides a unique source of information on economically valuable species as well as on many poorly understood non-game species that may influence fisheries or may be important ecological indicators. This type of multi-species, multi-habitat, long-term monitoring program is extremely valuable for documenting ecosystem changes, evaluating the effects of natural and anthropogenic disturbances, and making management decisions (Coull 1985; Wolfe et al. 1987).

Although the FIM program has always used a suite of gears (e.g., seines, trawls, trammel nets) capable of capturing a broad range of fish species and sizes from a variety of habitats, initial program efforts focused primarily on collecting young-of-the-year (YOY) fishes that could be used to develop recruitment indices. The program expanded its efforts to monitor larger-sized fishes in Tampa Bay by developing 183-m haul seines (fixed stations sampled between 1993 and 1995; year-round stratified-random sampling [SRS] implemented in 1996), 183-m purse seines (implemented in 1997; discontinued in 2004), and by developing a visual sampling program for reef fishes in the Florida Keys (implemented in 1998; transferred from FIM program in 2004). The 183-m haul seine was implemented as part of the SRS component of the program in Charlotte Harbor during 1996, in Northern and Southern IRL and Cedar Key during 1997, in Apalachicola Bay during 1998, and in Northeast Florida during 2001. The purse seine was implemented for SRS in Charlotte Harbor and Tampa Bay in 1998 and was used on a trial basis in Apalachicola Bay during 2000 and 2001, but was no longer used in any sampling area after 2004. The FIM program initiated a visual survey in the Florida Keys in 1998 to obtain important fisheries data in this unique area of Florida. In 2004, the oversight and implementation of these ongoing surveys were assigned to other FWRI work groups and are therefore no longer included in the FIM program annual summaries after 2004. The FIM program also implemented a seasonal directed sampling program for Striped Mullet (*Mugil cephalus*) in Tampa Bay and Charlotte Harbor in 1993. Directed sampling for the Striped Mullet program used a 366-m trammel net. After the 2008-2009 sampling season the seasonal directed sampling program was discontinued in both areas and transitioned into a year-round monthly sampling survey completed every five years but was discontinued in 2020. In 1993, the FIM program implemented a seasonal directed sampling program in Tampa Bay for Red Drum (*Sciaenops ocellatus*) and further initiated a seasonal directed sampling program for Red Drum in Northern IRL during 1995. The Red Drum sampling program used a 547-m trammel net. Directed Red Drum sampling was discontinued in 1999 for Northern IRL and in 2018 for Tampa Bay.

The entire suite of gears and methods used by the FIM program captures fishes at various stages of development, from initial recruitment into the estuary through harvestable sizes, thereby providing a continuous gauge of a particular stock's relative abundance, age and size composition, and reproductive potential. This chapter summarizes FIM program SRS data collected during 2025. Results from the sampling efforts in each estuary are presented separately. This chapter also summarizes results from fish health monitoring of samples collected by the FIM program. Profiles of several species that are of particular interest, because of their recreational or commercial value in Florida, are also presented, providing critical information for these species while also describing some of the ways the FIM program data are used to assess the status of important Florida fisheries.

2 Methods

The FIM program uses a stratified-random sampling design in all study areas. Each study area was divided into sampling zones based upon geographic and logistical criteria, and each zone was further subdivided into 1-nm^2 grids that were randomly selected for sampling. Sampling grids were stratified by habitat and depth, thereby identifying the gear types that could be used in those areas. A single sample was collected at each randomly selected site. In most cases, the number of monthly samples collected in each zone with each gear was proportional to the number of grids in the zone that could be sampled with a particular gear.

The FIM program uses a multi-gear approach to collect data on various life history stages of fishes and selected invertebrates from a wide variety of habitats (Table 2.1). A 21.3-m center bag seine targeted YOY and juvenile fishes in shallow water (≤1.8 m); a 6.1-m otter trawl targeted YOY, juvenile, and adult fish in deep water (1.0–7.6 m); a 183-m haul seine targeted sub-adult and adult fish along shorelines in water depths ≤2.5 m. Several different techniques were used, depending upon habitat, to stratify the samples collected with the various gears. The 21.3-m center bag seine was used in Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, and the Northern IRL. In 2016, 21.3-m seine sampling was also initiated in the Southern IRL system within the Loxahatchee and St. Lucie Rivers, and in tidal creeks in Charlotte Harbor. Two deployment techniques were used. The 21.3-m bay seine technique was used in all estuaries except Santa Rosa Sound, Choctawhatchee Bay, Northeast Florida, and the Southern IRL to sample shallow areas, and was pre-stratified by the presence or absence of bottom vegetation (except in the Cedar Key area) or the presence of a shoreline. The 21.3-m river seine technique was used in all estuaries except Santa Rosa Sound, Choctawhatchee Bay, and Sarasota Bay to sample the shorelines of creeks and rivers. River seine deployments in Tampa Bay and Charlotte Harbor's rivers were pre-stratified by the presence or absence of overhanging shoreline vegetation. River seine deployments in the northern IRL, Cedar Key, Apalachicola Bay, Northeast Florida, the Southern IRL, and Charlotte Harbor's tidal creeks were not pre-stratified by habitat type. Samples collected with 183-m haul seines in Tampa Bay and Charlotte Harbor were pre-stratified by the presence or absence of overhanging shoreline vegetation. Samples collected with 183-m haul seines in Santa Rosa Sound, Choctawhatchee Bay, Sarasota Bay, and the northern and southern portions of IRL were post-stratified by the presence or absence of overhanging shoreline vegetation. Samples collected with this gear were not stratified by habitat type in Apalachicola Bay, Cedar Key, and Northeast Florida. All sampling was conducted during daytime hours (one hour after sunrise to one hour before sunset). Additional sampling details are described in the FIM program's Procedure Manual (FWC-FWRI 2023).

Table 2.1: Description of sampling gears used in 2025.

Gear	Deployment	Mesh size (mm)	Area sampled (m^2)	Description of use
21.3-m Seine (center bag)	Bay	3.2	140	used in near-shore and shoreline areas ≤ 1.5 m
	River	3.2	68	used along river shorelines ≤ 1.8 m
183-m Haul Seine (center bag)	Boat	38.1	4,120	used along shorelines and exposed sandbars ≤ 2.5 m
6.1-m Otter Trawl	Straight Tow	38.1 (3.2-mm liner)	1,130-2,259	used in areas from 1.8 m to 7.6 m deep
	Arc Tow	38.1 (3.2-mm liner)	1,130-2,259	used in areas from 1.0 m to 1.7 m deep

A more detailed description of each gear can be found in the FIM program's Procedure Manual

The sample work-up technique was similar for all samples, regardless of gear type or sampling regime. Environmental data consisting of water chemistry, habitat characteristics, and physical parameters, such as current and tidal conditions, were recorded for each sample. All fish and selected invertebrate species captured were identified to the lowest practical taxonomic level, counted, and a random sample of at least 10 individuals were measured (standard length for teleosts, precaudal length for sharks, disc width for rays, carapace width for crabs, and post-orbital head length for shrimp). A detailed explanation of the standard sample work-up for data collection is described in the FIM program's Procedure Manual (FWC-FWRI 2023).

Certain taxa were not identified to species because of the possibility of hybridization (e.g., *Brevoortia* spp., *Menidia* spp.) (Dahlberg 1970; Middaugh et al. 1986), or because they were morphologically or meristically indistinguishable at small juvenile sizes (e.g., *Eucinostomus* spp. <40 mm SL) (Matheson Jr. 1983). Beginning in 2017 specimens of the genus *Albula* were tested for genetic identification; however, due to the lag between sampling and testing, all specimens will be referred to as *Albula* spp. in this report. In Northern and Southern IRL and Northeast Florida sections, species accounts of *Cynoscion regalis* (Weakfish) and *Cynoscion arenarius* (Sand Seatrout) will be referred to collectively as *Cynoscion* complex. These two species mix and hybridize along the Atlantic coast of Florida and identification can only be determined with certainty by genetic testing (Tringali et al. 2004). Animals were released except for representative samples of each taxon (for laboratory confirmation of field identifications) and samples required for specific research projects. The taxonomic nomenclature in this report follows the American Fisheries Society's Common and Scientific Names of Fishes (Page et al. 2023). Starting in 2003, shrimp belonging to the genus *Farfantepenaeus* collected in Apalachicola Bay, Cedar Key, Indian River Lagoon and Northeast Florida were left at the genus level if the postorbital head length is less than 15mm due to the difficulty in separating the species at small sizes. A detailed explanation of the standard sample work-up for data collection is described in the FIM program's Procedure Manual (FWC-FWRI 2023). Data for this report were summarized separately for each estuarine system and for each gear type. Data were also summarized separately for all taxa and for taxa of recreational or commercial importance ('Selected Taxa'; Table 2.2). Abundance estimates were calculated for 21.3-m seines and 6.1-m trawls as the number of animals/100 m^2 of area sampled. Catch-per-unit-effort (CPUE) was calculated for 183-m haul seine samples as the number of animals/set. The appendices for each study area describe the catch by month, gear, stratum, and zone.

Table 2.2: Animals designated as Selected Taxa by the Fisheries Independent Monitoring program because of their commercial or recreational importance.

Scientific Name	Common Name
Acanthocybium solandri	Wahoo
Albula goreensis	Senegalese Bonefish
Albula sp. cf. vulpes	bonefishes
Albula spp.	bonefishes
Albula vulpes	Bonefish
Alectis ciliaris	African Pompano
Alopias vulpinus	Common Thresher Shark
Alphestes afer	Mutton Hamlet
Apsilus dentatus	Black Snapper
Archosargus probatocephalus	Sheepshead
Argopecten gibbus	Atlantic Calico Scallop
Argopecten irradians	Bay Scallop
Balistes capriscus	Gray Triggerfish
Brevoortia spp.	Menhadens
Calamus arctifrons	Grass Porgy
Calamus bajonado	Jolthead Porgy
Calamus calamus	Saucereye Porgy
Calamus leucosteus	Whitebone Porgy
Calamus nodosus	Knobbed Porgy
Calamus penna	Sheepshead Porgy
Calamus proridens	Littlehead Porgy
Calamus spp.	porgies
Callinectes sapidus	Blue Crab
Caranx crysos	Blue Runner
Caranx hippos	Crevalle Jack
Carcharhinus acronotus	Blacknose Shark

Scientific Name	Common Name
Carcharhinus brevipinna	Spinner Shark
Carcharhinus falciformis	Silky Shark
Carcharhinus isodon	Finetooth Shark
Carcharhinus leucas	Bull Shark
Carcharhinus limbatus	Blacktip Shark
Carcharhinus longimanus	Oceanic Whitetip Shark
Carcharhinus obscurus	Dusky Shark
Carcharhinus plumbeus	Sandbar Shark
Caulolatilus chrysops	Goldface Tilefish
Caulolatilus cyanops	Blackline Tilefish
Caulolatilus intermedius	Anchor Tilefish
Caulolatilus microps	Blueline Tilefish
Centropomus ensiferus	Swordspine Snook
Centropomus mexicanus	Largescale Fat Snook
Centropomus parallelus	Smallscale Fat Snook
Centropomus pectinatus	Tarpon Snook
Centropomus undecimalis	Common Snook
Centropristis ocyurus	Bank Sea Bass
Centropristis philadelphica	Rock Sea Bass
Centropristis striata	Black Sea Bass
Cephalopholis cruentata	Graysby
Cephalopholis fulva	Coney
Cephalopholis furcifer	Creole-fish
Coryphaena equiselis	Pompano Dolphinfish
Coryphaena hippurus	Dolphinfish
Cynoscion arenarius	Sand Seatrout
Cynoscion complex	C. regalis x C. arenarius
Cynoscion nebulosus	Spotted Seatrout
Cynoscion nothus	Silver Seatrout
Cynoscion regalis	Atlantic Weakfish
Dermatolepis inermis	Marbled Grouper

Scientific Name	Common Name
Diplectrum formosum	Sand Perch
Elops saurus	Ladyfish
Elops smithi	Malacho
Epinephelus adscensionis	Rock Hind
Epinephelus guttatus	Red Hind
Epinephelus itajara	Goliath Grouper
Epinephelus morio	Red Grouper
Epinephelus striatus	Nassau Grouper
Etelis oculatus	Queen Snapper
Euthynnus alletteratus	Little Tunny
Farfantepenaeus aztecus	Brown Shrimp
Farfantepenaeus brasiliensis	Caribbean Brown Shrimp
Farfantepenaeus duorarum	Pink Shrimp
Farfantepenaeus spp.	Commercial Shrimps
Galeocerdo cuvier	Tiger Shark
Ginglymostoma cirratum	Nurse Shark
Haemulon album	Margate
Haemulon aurolineatum	Tomtate
Haemulon flavolineatum	French Grunt
Haemulon macrostoma	Spanish Grunt
Haemulon melanurum	Cottonwick
Haemulon parra	Sailors Choice
Haemulon plumierii	White Grunt
Haemulon sciurus	Bluestriped Grunt
Hyporthodus drummondhayi	Speckled Hind
Hyporthodus flavolimbatus	Yellowedge Grouper
Hyporthodus mystacinus	Misty Grouper
Hyporthodus nigritus	Warsaw Grouper
Hyporthodus niveatus	Snowy Grouper
Istiophorus platypterus	Sailfish
Isurus oxyrinchus	Shortfin Mako

Scientific Name	Common Name
Katsuwonus pelamis	Skipjack Tuna
Lachnolaimus maximus	Hogfish
Lamna nasus	Porbeagle
Leiostomus xanthurus	Spot
Litopenaeus setiferus	White Shrimp
Lobotes surinamensis	Atlantic Tripletail
Lopholatilus chamaeleonticeps	Tilefish
Lutjanus analis	Mutton Snapper
Lutjanus apodus	Schoolmaster
Lutjanus buccanella	Blackfin Snapper
Lutjanus campechanus	Red Snapper
Lutjanus cyanopterus	Cubera Snapper
Lutjanus griseus	Gray Snapper
Lutjanus jocu	Dog Snapper
Lutjanus mahogoni	Mahogany Snapper
Lutjanus synagris	Lane Snapper
Lutjanus vivanus	Silk Snapper
Malacanthus plumieri	Sand Tilefish
Megalops atlanticus	Tarpon
Menippe spp.	Stone Crab
Menticirrhus americanus	Southern Kingfish
Menticirrhus littoralis	Gulf Kingfish
Menticirrhus saxatilis	Northern Kingfish
Micropogonias undulatus	Atlantic Croaker
Mugil cephalus	Striped Mullet
Mugil curema	White Mullet
Mugil liza	Liza
Mugil rubrioculus	Redeye Mullet
Mugil trichodon	Fantail Mullet
Mulloidichthys martinicus	Yellow Goatfish
Mullus auratus	Red Goatfish

Scientific Name	Common Name
Mustelus spp.	hound sharks
Mycteroperca bonaci	Black Grouper
Mycteroperca interstitialis	Yellowmouth Grouper
Mycteroperca microlepis	Gag
Mycteroperca phenax	Scamp
Mycteroperca tigris	Tiger Grouper
Mycteroperca venenosa	Yellowfin Grouper
Negaprion brevirostris	Lemon Shark
Ocyurus chrysurus	Yellowtail Snapper
Pagrus pagrus	Red Porgy
Panulirus argus	Spiny Lobster
Paralichthys albigutta	Gulf Flounder
Paralichthys dentatus	Summer Flounder
Paralichthys lethostigma	Southern Flounder
Paralichthys oblongus	Fourspot Flounder
Paralichthys squamilentus	Broad Flounder
Pogonias cromis	Black Drum
Pomatomus saltatrix	Bluefish
Prionace glauca	Blue Shark
Pristipomoides aquilonaris	Wenchman
Pseudupeneus maculatus	Spotted Goatfish
Pterois spp.	Lionfishes
Rachycentron canadum	Cobia
Rhizoprionodon terraenovae	Atlantic Sharpnose Shark
Rhomboplites aurorubens	Vermilion Snapper
Sciaenops ocellatus	Red Drum
Scomberomorus cavalla	King Mackerel
Scomberomorus maculatus	Spanish Mackerel
Scomberomorus regalis	Cero
Seriola dumerili	Greater Amberjack
Seriola fasciata	Lesser Amberjack

Scientific Name	Common Name
Seriola rivoliana	Almaco Jack
Seriola zonata	Banded Rudderfish
Sphyraena barracuda	Great Barracuda
Sphyrna tiburo	Bonnethead
Thunnus albacares	Yellowfin Tuna
Thunnus atlanticus	Blackfin Tuna
Thunnus obesus	Bigeye Tuna
Thunnus thynnus	Bluefin Tuna
Trachinotus carolinus	Florida Pompano
Trachinotus falcatus	Permit
Trachinotus goodei	Palometa
Upeneus parvus	Dwarf Goatfish

3 Study Areas

The FIM program conducted sampling in the following estuarine areas: Fort Walton including Santa Rosa Sound and Choctawhatchee Bay, Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the Indian River Lagoon (Figure 1.1). Sampling was conducted over a wide range of habitats encompassing different bottom types, shoreline types, and offshore areas. In addition to sampling in major estuaries, tidally-influenced portions of rivers that flow into Tampa Bay (Alafia, Braden, Little Manatee, and Manatee Rivers), Charlotte Harbor (Peace and Myakka rivers, Alligator Creek), the Indian River Lagoon (Turkey Creek, St. Sebastian, Loxahatchee, and St. Lucie rivers), the Cedar Key area (Suwannee River), Apalachicola Bay (Apalachicola River), and Northeast Florida (St. Marys, Nassau, and St. Johns rivers) were also sampled. The Tampa Bay, Charlotte Harbor, and Northern IRL study areas were described in the FIM Program 1994 Annual Data Summary Report (FDEP-FMRI 1995). The Cedar Key study area was described in the FIM Program 1996 Annual Data Summary Report (FDEP-FMRI 1997); the Southern IRL study area was described in the FIM Program 1997 Annual Data Summary Report (FDEP-FMRI 1998); the Apalachicola Bay study area and updates to the Southern IRL study area were described in the FIM Program 1998 Annual Data Summary Report (FDEP-FMRI 1999); the Northeast Florida study area was described in the FIM Program 2001 Annual Data Summary Report (FDEP-FMRI 2002); and expansion of 21.3-m seines in the Southern IRL study area is described later in this report (Section 4.10).

4 Data Summary by Estuary

4.1 Santa Rosa Sound

Santa Rosa Sound is a 109-km^2 lagoon connecting Pensacola Bay to the west and Choctawhatchee Bay to the east (Northwest Florida Water Management District 2017a). The lagoon has no tidal tributaries for direct freshwater input but is connected to the Gulf by a deep pass west of Santa Rosa Island. Shoreline vegetation consists primarily of the marsh grasses *Spartina alterniflora* and *Panicum hemitomon* (Miller et al. 2001). Bottom substrate is mostly sand (Miller et al. 2001) and bottom vegetation consists primarily of seagrasses such as *Halodule wrightii* and *Thalassia testudinum* (Bradley and Houser 2009). Seagrass beds covered nearly 25% of the lagoon in 1960, but by 1992 less than half remained because of wastewater discharge, dredging, and beach modifications (Handley et al. 2007). By 2010, seagrass coverage declined by an additional 5% (Yarbro and Carlson 2016).

The Santa Rosa Sound sampling universe consists of a single bay zone (Zone A; Figure 4.1). Monthly stratified-random sampling (SRS) occurred in Santa Rosa Sound from June to December using 183-m haul seines. All methods were the same as those described in Chapter 2. Below is a summary of fisheries-independent monitoring effort and catch in Santa Rosa Sound during 2025.

Stratified-Random Sampling

A total of 955 animals, which included 19 taxa of fishes and one taxa of selected invertebrates, were collected from eight Santa Rosa Sound SRS samples in 2025 (Table 4.1, Table A.1, Table A.2, Table A.3). *Lagodon rhomboides* (n=787) was the most numerous taxon collected, representing 82.4% of the total catch. *Leiostomus xanthurus* (n=67) and *Mugil cephalus* (n=31) were the next most abundant taxa collected, accounting for an additional 10.3% of the total catch. A total of seven selected taxa (n=115 animals) composed 12.0% of the total catch. *Leiostomus xanthurus* (n=67) was the most abundant selected taxon, representing 7.0% of the total catch. *Mugil cephalus* (n=31), *Sciaenops ocellatus* (n=7), *Callinectes sapidus* (n=6), and *Menticirrhus saxatilis* (n=2) were the next most abundant selected taxa, comprising 4.8% of the total catch. Collections in 2025 included zero species new to the Santa Rosa FIM collection.

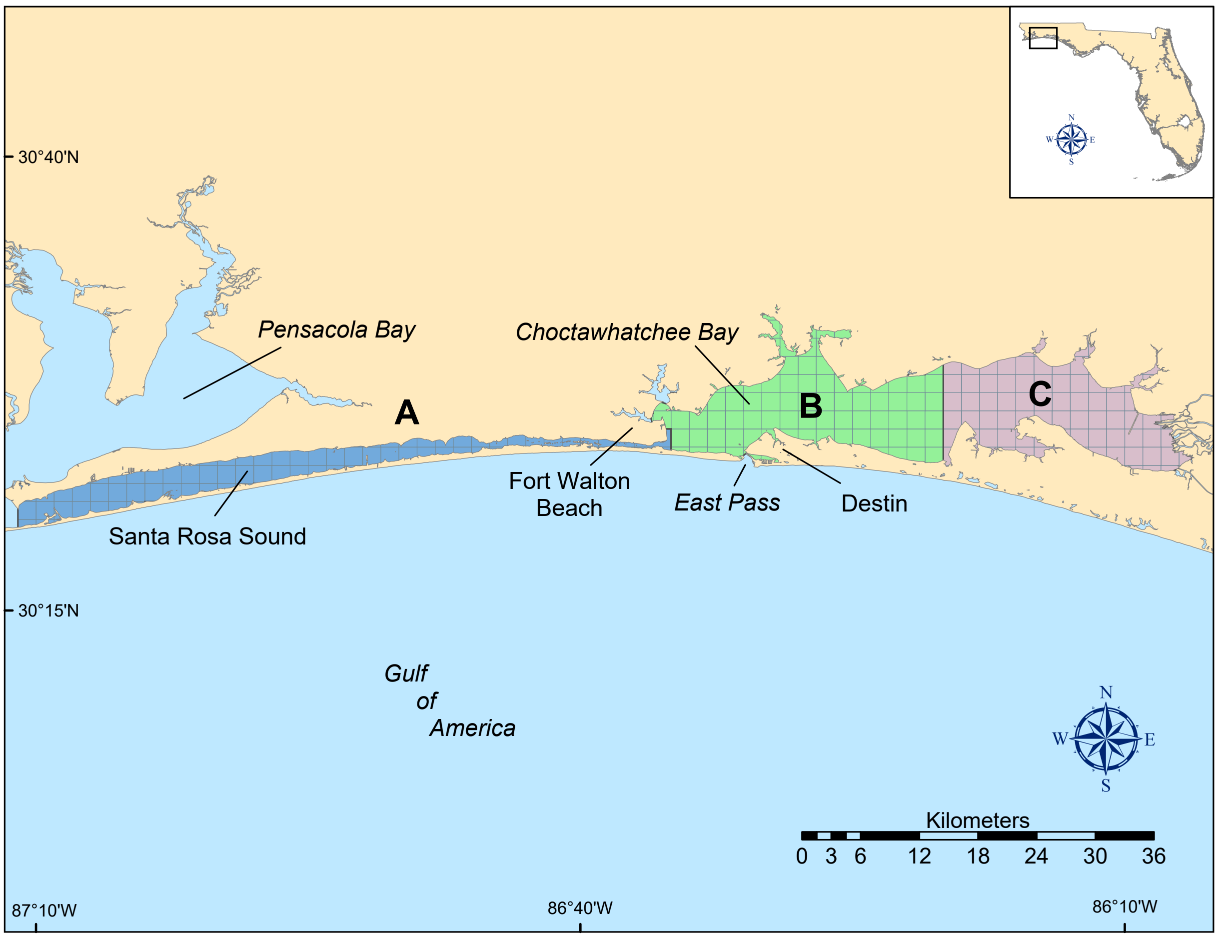

Figure 4.1: Map of Fort Walton sampling area, including Santa Rosa Sound. Zones are labeled A-C. Santa Rosa Sound consists only of Zone A.

Table 4.1: Summary of catch and effort data for Santa Rosa Sound stratified-random sampling, 2025.

Zone	183-m haul seine		Total	
	Hauls	Animals	Hauls	Animals
A	8	955	8	955
Total	**8**	**955**	**8**	**955**

Bay Sampling

183-m Haul Seine

A total of 955 animals were collected in eight 183-m haul seines, representing 100.0% of the overall SRS catch (Table 4.1). *Lagodon rhomboides* (n = 787) and *Leiostomus xanthurus* (n = 67) were the most abundant taxa, accounting for 89.4% of the haul seine catch (Table 4.2). The taxa most frequently caught in 183-m haul seines were *Lagodon rhomboides* (100.0% occurrence), *Leiostomus xanthurus* (100.0% occurrence), and *Mugil cephalus* (87.5% occurrence).

A total of 115 animals from seven selected taxa were collected, representing 12.0% of the entire 183-m haul seine catch (Table 4.3). *Leiostomus xanthurus* (n=67) was the most abundant selected taxon, accounting for 58.3% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Leiostomus xanthurus* (100.0% occurrence), *Mugil cephalus* (87.5% occurrence), *Sciaenops ocellatus* (50.0% occurrence), and *Callinectes sapidus* (50.0% occurrence).

Table 4.2: Catch statistics for 10 dominant taxa collected in eight 183-m haul seine samples during Santa Rosa Sound stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	787	82.4	100.0	98.38	18.22	52.40	185	108	0.86	53	173
Leiostomus xanthurus	67	7.0	100.0	8.38	3.09	104.47	26	110	3.19	60	160
Mugil cephalus	31	3.2	87.5	3.88	1.43	104.54	13	245	15.84	91	359
Fundulus similis	16	1.7	37.5	2.00	1.38	194.57	11	106	1.56	97	115
Fundulus grandis	8	0.8	25.0	1.00	0.87	244.95	7	99	2.42	90	110
Sciaenops ocellatus	7	0.7	50.0	0.88	0.40	128.68	3	361	53.90	162	495
Callinectes sapidus	6	0.6	50.0	0.75	0.37	138.01	3	103	22.62	35	165
Eucinostomus harengulus	6	0.6	37.5	0.75	0.49	185.16	4	99	6.29	76	113
Hypanus sabinus	5	0.5	25.0	0.62	0.42	190.04	3	317	18.60	243	341
Ariopsis felis	4	0.4	37.5	0.50	0.27	151.19	2	302	28.20	236	352
Subtotal	937	97.9	.	.	.	.	.	.	.	35	495
Total	**955**	**100.0**	**.**	**119.38**	**21.03**	**49.82**	**234**	**.**	**.**	**35**	**495**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.3: Catch statistics for selected taxa collected in eight 183-m haul seine samples during Santa Rosa Sound stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	67	7.0	100.0	8.38	3.09	104.47	26	110	3.19	60	160
Mugil cephalus	31	3.2	87.5	3.88	1.43	104.54	13	245	15.84	91	359
Sciaenops ocellatus	7	0.7	50.0	0.88	0.40	128.68	3	361	53.90	162	495
Callinectes sapidus	6	0.6	50.0	0.75	0.37	138.01	3	103	22.62	35	165
Menticirrhus saxatilis	2	0.2	25.0	0.25	0.16	185.16	1	147	13.00	134	160
Paralichthys albigutta	1	0.1	12.5	0.12	0.12	282.84	1	77	.	77	77
Trachinotus carolinus	1	0.1	12.5	0.12	0.12	282.84	1	143	.	143	143
Total	**115**	**12.0**	**.**	**14.38**	**4.50**	**88.62**	**43**	**.**	**.**	**35**	**495**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.2 Choctawhatchee Bay

Choctawhatchee Bay is a 334-km^2 estuary located in the central Florida Panhandle that is connected to the Gulf by a shallow man-made channel, East Pass, near the city of Destin (Handley et al. 2007; Northwest Florida Water Management District 2017b). Tidal influence is minimal and tidal ranges are small, from 0.15 to 0.5 meters (Huguenard et al. 2016). Major habitat types in Choctawhatchee Bay include tidal marshes, seagrass beds, bayous, and oyster beds (Northwest Florida Water Management District 2017b). Shoreline vegetation consists mostly of the marsh grasses *Juncus roemerianus*, *Spartina alterniflora*, and *Scirpus* spp. (Northwest Florida Water Management District 2017b). Choctawhatchee Bay is moderately deep with depths ranging from 3 to 13 meters and bottom substrate that is mostly sand, mud, and shell (Handley et al. 2007; Northwest Florida Water Management District 2017b). Bottom vegetation is predominantly *Halodule wrightii* with patches of *Ruppia maritima* and *Thalassia testudinum* (Handley et al. 2007; Northwest Florida Water Management District 2017b). Choctawhatchee Bay seagrass beds covered 17.2 km^2 in 1992 but had declined by 55% by 2007 (Yarbro and Carlson 2016). Seagrass losses observed in Choctawhatchee Bay are a result of urbanization, especially the construction of seawalls, which reduces the size of intertidal areas and impedes seagrass growth (Handley et al. 2007).

Choctawhatchee Bay is highly stratified, and its salinity is driven primarily by freshwater inflow from the Choctawhatchee River (Brown and Hemming 2004; Northwest Florida Water Management District 2017b). Major habitat types in the Choctawhatchee River include shoreline snags, tributary valley lakes, spring runs, and tidal marshes. The river is bordered by hardwood swamps in its upper reaches and stands of *Spartina cynosuroides* in its lower reaches (Northwest Florida Water Management District 2017b).

The Choctawhatchee Bay sampling universe consists of two bay zones (B and C; Figure 4.2). Monthly stratified-random sampling (SRS) occurred from June to December in bay zones B and C using 183-m haul seines. All methods were the same as those described in Chapter 2. Below is a summary of fisheries-independent monitoring effort and catch in Choctawhatchee Bay during 2025.

Stratified-Random Sampling

A total of 2,169 animals, which included 28 taxa of fishes and three taxa of selected invertebrates, were collected from 10 Choctawhatchee Bay SRS samples in 2025 (Table 4.4, Table A.4, Table A.5, Table A.6). *Lagodon rhomboides* (n=1,605) was the most numerous taxon collected, representing 74.0% of the total catch. *Bairdiella chrysoura* (n=158) and *Orthopristis chrysoptera* (n=130) were the next most abundant taxa collected, accounting for an additional 13.3% of the total catch. A total of 13 selected taxa (n=217 animals) composed 10.0% of the total catch. *Leiostomus xanthurus* (n=90) was the most abundant selected taxon, representing 4.1% of the total catch. *Mugil cephalus* (n=33), *Sciaenops ocellatus* (n=27), *Micropogonias undulatus* (n=21), and *Lutjanus griseus* (n=17) were the next most abundant selected taxa, comprising 4.5% of the total catch. Collections in 2025 included zero species new to the Choctawhatchee Bay FIM collection.

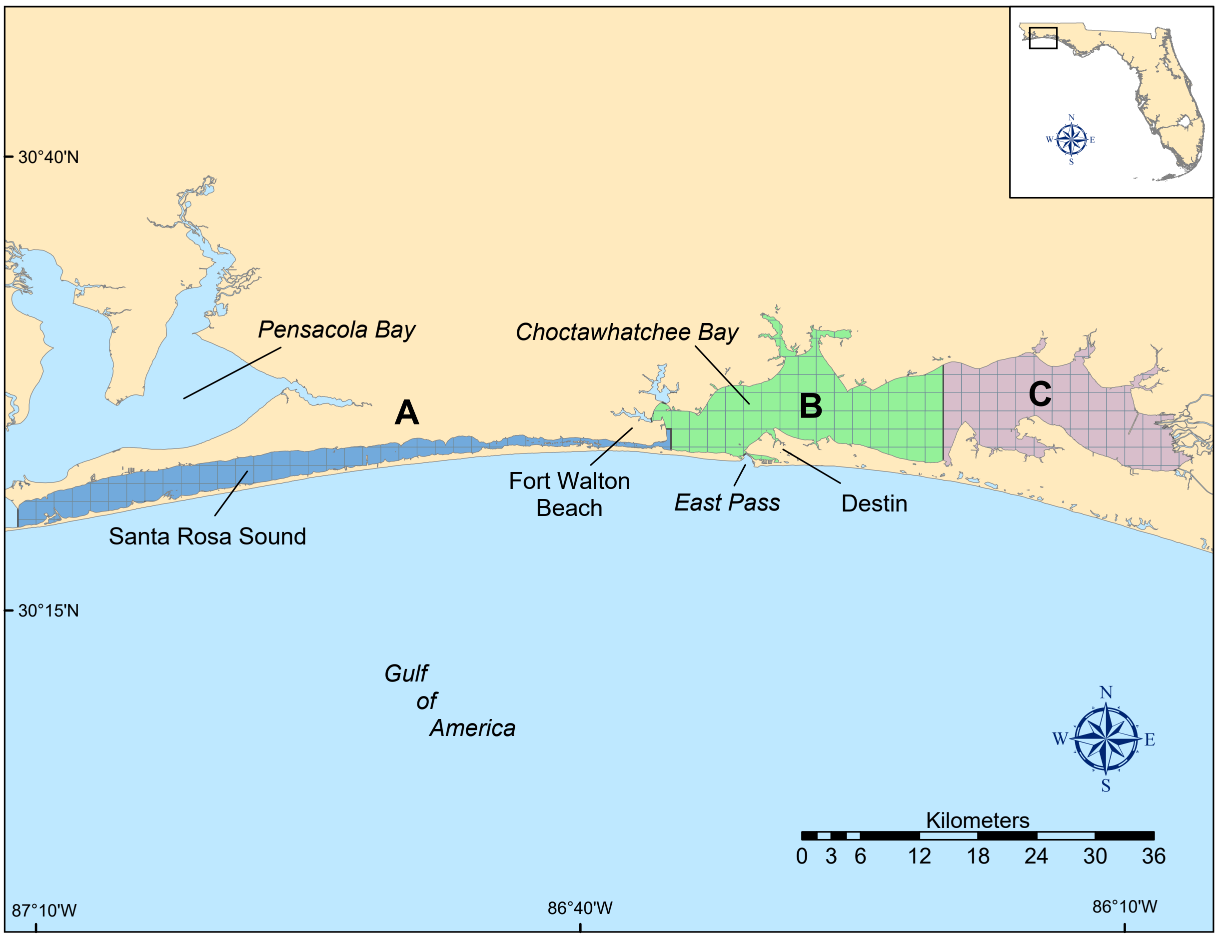

Figure 4.2: Map of Fort Walton sampling area, including Choctawhatchee Bay. Zones are labeled A-C. Choctawhatchee Bay comprises zones B and C.

Table 4.4: Summary of catch and effort data for Choctawhatchee Bay stratified-random sampling, 2025.

Zone	183-m haul seine		Total	
	Hauls	Animals	Hauls	Animals
B	6	1,443	6	1,443
C	4	726	4	726
Total	**10**	**2,169**	**10**	**2,169**

Bay Sampling

183-m Haul Seine

A total of 2,169 animals were collected in 10 183-m haul seines, representing 100.0% of the overall SRS catch (Table 4.4). *Lagodon rhomboides* (n = 1,605) and *Bairdiella chrysoura* (n = 158) were the most abundant taxa, accounting for 81.3% of the haul seine catch (Table 4.5). The taxa most frequently caught in 183-m haul seines were *Lagodon rhomboides* (100.0% occurrence), *Leiostomus xanthurus* (80.0% occurrence), and *Mugil cephalus* (80.0% occurrence).

A total of 217 animals from 13 selected taxa were collected, representing 10.0% of the entire 183-m haul seine catch (Table 4.6). *Leiostomus xanthurus* (n=90) was the most abundant selected taxon, accounting for 41.5% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m bay seines were *Leiostomus xanthurus* (80.0% occurrence), *Mugil cephalus* (80.0% occurrence), and *Sciaenops ocellatus* (70.0% occurrence).

Table 4.5: Catch statistics for 10 dominant taxa collected in 10 183-m haul seine samples during Choctawhatchee Bay stratified-random sampling, 2025.

	Number			**Density Estimate (animals/set)**				**Standard Length (mm)**			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	1,605	74.0	100	145.91	38.12	86.66	391	117	0.83	37	197
Bairdiella chrysoura	158	7.3	30	15.80	14.51	290.36	146	70	1.25	38	127
Orthopristis chrysoptera	130	6.0	70	13.00	7.63	185.57	78	91	1.36	63	177
Leiostomus xanthurus	90	4.1	80	9.00	2.84	99.93	23	110	2.88	58	236
Mugil cephalus	33	1.5	80	3.30	0.94	90.40	7	254	12.69	98	355
Sciaenops ocellatus	27	1.2	70	2.70	0.79	92.47	6	339	31.65	141	699
Eucinostomus harengulus	26	1.2	50	2.60	1.42	172.20	14	101	2.22	80	115
Micropogonias undulatus	21	1.0	40	2.10	1.41	212.31	14	127	3.35	97	155
Lutjanus griseus	17	0.8	40	1.70	0.98	181.94	8	164	6.17	111	224
Mugil curema	11	0.5	50	1.10	0.59	168.45	6	191	19.18	99	261
Subtotal	2,118	97.6	.	.	.	.	.	.	.	37	699
Total	**2,169**	**100.0**	**.**	**216.90**	**52.80**	**76.97**	**486**	**.**	**.**	**16**	**699**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.6: Catch statistics for selected taxa collected in 10 183-m haul seine samples during Choctawhatchee Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	90	4.1	80	9.0	2.84	99.93	23	110	2.88	58	236
Mugil cephalus	33	1.5	80	3.3	0.94	90.40	7	254	12.69	98	355
Sciaenops ocellatus	27	1.2	70	2.7	0.79	92.47	6	339	31.65	141	699
Micropogonias undulatus	21	1.0	40	2.1	1.41	212.31	14	127	3.35	97	155
Lutjanus griseus	17	0.8	40	1.7	0.98	181.94	8	164	6.17	111	224
Mugil curema	11	0.5	50	1.1	0.59	168.45	6	191	19.18	99	261
Farfantepenaeus duorarum	7	0.3	10	0.7	0.70	316.23	7	18	0.68	16	21
Callinectes sapidus	4	0.2	10	0.4	0.40	316.23	4	72	7.34	61	92
Cynoscion nebulosus	2	0.1	20	0.2	0.13	210.82	1	57	5.00	52	62
Paralichthys albigutta	2	0.1	10	0.2	0.20	316.23	2	161	4.00	157	165
Caranx hippos	1	<0.1	10	0.1	0.10	316.23	1	65	.	65	65
Elops saurus	1	<0.1	10	0.1	0.10	316.23	1	227	.	227	227
Farfantepenaeus aztecus	1	<0.1	10	0.1	0.10	316.23	1	23	.	23	23
Total	**217**	**10.0**	**.**	**21.7**	**4.67**	**68.11**	**43**	**.**	**.**	**16**	**699**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.3 Apalachicola Bay

Apalachicola Bay is a shallow, semi-enclosed estuary, located on the northwestern coast of Florida. The estuary, bounded by a barrier island complex (St. Vincent Island, Little St. George Island, St. George Island, and Dog Island), is connected to the Gulf through four passes (Indian Pass, West Pass, Sikes Cut, and East Pass). East of Dog Island, St. George Sound is open to the Gulf (Figure 4.3). Freshwater inflow to Apalachicola Bay primarily comes from the Apalachicola River and to a lesser extent the Carrabelle River (Livingston 1983). Shoreline vegetation consists largely of marsh grasses and bottom substrates are typically characterized as sand or mud with oyster beds scattered throughout the bay (Ingle and Dawson 1953). Less than 7% of the substrate is covered by seagrass (Continental Shelf Associates, Inc. 1985a).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Apalachicola Bay since 1998. The area sampled was divided into two geographically defined bay zones (A and B) and one riverine zone (C; Figure 4.3). Stratified-random sampling (SRS) was conducted in Zones A and B monthly using 21.3-m bay seines and 183-m haul seines and quarterly using 6.1-m bay otter trawls. SRS was conducted in Zone C monthly with 21.3-m river seines and bimonthly with 6.1-m river otter trawls. All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in Apalachicola Bay.

Stratified-Random Sampling

A total of 206,372 animals, which included 169 taxa of fishes and 18 taxa of selected invertebrates, were collected from 594 Apalachicola Bay SRS samples in 2025 (Table 4.7, Table A.7, Table A.8, Table A.9). *Anchoa mitchilli* (n=41,927) was the most numerous taxon collected, representing 20.3% of the total catch. *Brevoortia* spp. (n=37,577) and *Lagodon rhomboides* (n=28,289) were the next most abundant taxa collected, accounting for an additional 31.9% of the total catch. A total of 41 selected taxa (n=80,736 animals) composed 39.1% of the total catch. *Brevoortia* spp. (n=37,577) was the most abundant selected taxon, representing 18.2% of the total catch. *Leiostomus xanthurus* (n=14,649) and *Litopenaeus setiferus* (n=9,399) were the next most abundant selected taxa, comprising 11.7% of the total catch. Collections in 2025 included two species new to the Apalachicola Bay FIM collection: *Abudefduf saxatilis* and *Chalinops pauciradiatus*.

Figure 4.3: Map of Apalachicola Bay sampling area. Zones are labeled A-C. Zones A and B are bay zones, while zone C is a riverine zone.

Table 4.7: Summary of catch and effort data for Apalachicola Bay stratified-random sampling, 2025.

Zone	21.3-m bay seine		21.3-m river seine		183-m haul seine		6.1-m otter trawl		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
A	120	69,640	.	.	99	18,488	24	14,500	243	102,628
B	120	25,315	.	.	99	33,856	24	2,005	243	61,176
C	.	.	84	18,972	.	.	24	23,596	108	42,568
Total	**240**	**94,955**	**84**	**18,972**	**198**	**52,344**	**72**	**40,101**	**594**	**206,372**

Bay Sampling

21.3-m Bay Seine

A total of 94,955 animals were collected in 240 21.3-m bay seines, representing 46.0% of the overall SRS catch (Table 4.7). *Brevoortia* spp. (n=27,387) and *Lagodon rhomboides* (n=15,627) were the most abundant taxa, accounting for 45.3% of the bay seine catch (Table 4.8). The taxa most frequently caught in 21.3-m bay seines were *Lagodon rhomboides* (62.9% occurrence), *Leiostomus xanthurus* (45.0% occurrence), and *Eucinostomus* spp. (37.5% occurrence).

A total of 50,909 animals from 29 selected taxa were collected, representing 53.6% of the entire 21.3-m bay seine catch (Table 4.9). *Brevoortia* spp. (n=27,387) was the most abundant selected taxon, accounting for 53.8% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m bay seines were *Leiostomus xanthurus* (45.0% occurrence), *Farfantepenaeus* spp. (40.8% occurrence), and *Callinectes sapidus* (40.4% occurrence).

Table 4.8: Catch statistics for 10 dominant taxa collected in 240 21.3-m bay seine samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	27,387	28.8	13.8	80.84	57.17	1,100.28	13,668.57	29	0.03	19	45
Lagodon rhomboides	15,627	16.5	62.9	45.01	9.49	332.05	1,520.00	32	0.13	10	177
Leiostomus xanthurus	10,878	11.5	45.0	31.84	5.57	273.24	672.86	25	0.09	10	192
Lucania parva	7,338	7.7	15.8	21.75	7.38	526.83	1,193.57	25	0.05	16	40
Anchoa mitchilli	4,868	5.1	26.7	14.43	3.62	389.02	529.29	32	0.13	18	73
Orthopristis chrysoptera	4,414	4.6	23.3	13.08	4.75	563.61	826.43	30	0.16	11	103
Mugil cephalus	4,248	4.5	17.1	12.54	4.71	584.26	700.00	26	0.20	14	334
Litopenaeus setiferus	3,902	4.1	19.6	11.56	4.04	542.16	601.43	8	0.05	2	23
Eucinostomus spp.	3,196	3.4	37.5	9.51	1.85	302.11	215.71	25	0.12	9	39
Bairdiella chrysoura	2,465	2.6	17.1	7.19	1.84	401.36	225.71	41	0.36	11	153
Subtotal	84,323	88.8	.	.	.	.	.	.	.	2	334
Total	**94,955**	**100.0**	**.**	**282.60**	**62.37**	**341.92**	**14,167.14**	**.**	**.**	**2**	**461**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.9: Catch statistics for selected taxa collected in 240 21.3-m bay seine samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	27,387	28.8	13.8	80.84	57.17	1,100.28	13,668.57	29	0.03	19	45
Leiostomus xanthurus	10,878	11.5	45.0	31.84	5.57	273.24	672.86	25	0.09	10	192
Mugil cephalus	4,248	4.5	17.1	12.54	4.71	584.26	700.00	26	0.20	14	334
Litopenaeus setiferus	3,902	4.1	19.6	11.56	4.04	542.16	601.43	8	0.05	2	23
Micropogonias undulatus	1,096	1.2	15.4	3.22	1.49	723.07	339.29	26	0.39	11	179
Farfantepenaeus spp.	921	1.0	40.8	2.73	0.53	300.05	75.71	8	0.09	2	15
Callinectes sapidus	898	0.9	40.4	2.66	0.66	384.19	127.86	18	0.71	4	170
Cynoscion arenarius	649	0.7	12.5	1.92	0.55	445.09	77.14	26	0.38	13	63
Sciaenops ocellatus	233	0.2	17.9	0.69	0.21	484.43	37.14	64	3.80	13	391
Cynoscion nebulosus	190	0.2	18.8	0.57	0.11	310.66	16.43	43	2.04	15	207
Mugil curema	149	0.2	4.6	0.44	0.40	1,383.98	95.00	29	0.99	21	110
Paralichthys albigutta	115	0.1	17.9	0.34	0.07	295.72	6.43	46	4.44	11	291
Menticirrhus americanus	111	0.1	9.6	0.33	0.10	475.86	14.29	33	1.84	12	108
Menticirrhus saxatilis	23	<0.1	3.3	0.07	0.04	806.57	7.86	27	3.70	13	81
Farfantepenaeus duorarum	22	<0.1	5.4	0.07	0.02	478.51	2.14	16	0.22	15	18
Paralichthys lethostigma	22	<0.1	3.8	0.07	0.03	712.61	5.71	64	17.92	10	288
Archosargus probatocephalus	10	<0.1	2.1	0.03	0.02	872.45	3.57	81	40.17	18	394
Lutjanus synagris	10	<0.1	2.5	0.03	0.01	721.23	2.14	35	3.50	20	56
Farfantepenaeus aztecus	8	<0.1	2.1	0.02	0.01	719.13	1.43	16	0.50	15	19
Lutjanus griseus	8	<0.1	3.3	0.02	0.01	539.64	0.71	36	7.79	12	68

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Trachinotus falcatus	8	<0.1	1.2	0.02	0.02	1,192.02	4.29	46	3.47	28	57
Elops saurus	5	<0.1	2.1	0.01	0.01	687.00	0.71	142	46.63	37	248
Centropristis striata	4	<0.1	1.2	0.01	0.01	945.37	1.43	134	30.51	43	173
Paralichthys squamilentus	3	<0.1	0.8	0.01	0.01	1,152.77	1.43	47	19.46	16	83
Trachinotus carolinus	3	<0.1	0.4	0.01	0.01	1,549.19	2.14	52	1.53	49	54
Caranx hippos	2	<0.1	0.4	0.01	0.01	1,549.19	1.43	32	3.00	29	35
Menippe spp.	2	<0.1	0.8	0.01	<0.01	1,093.15	0.71	37	29.00	8	66
Menticirrhus littoralis	1	<0.1	0.4	<0.01	<0.01	1,549.19	0.71	42	.	42	42
Pomatomus saltatrix	1	<0.1	0.4	<0.01	<0.01	1,549.19	0.71	118	.	118	118
Total	**50,909**	**53.6**	**.**	**151.51**	**60.54**	**618.97**	**14,160.00**	**.**	**.**	**2**	**394**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 52,344 animals were collected in 198 183-m haul seines, representing 25.4% of the overall SRS catch (Table 4.7). *Harengula jaguana* (n=17,379) was the most abundant taxon, accounting for 33.2% of the 183-m haul seine catch (Table 4.10). The taxa most frequently caught in 183-m haul seines were *Mugil cephalus* (79.8% occurrence), *Lagodon rhomboides* (73.2% occurrence), and *Hypanus sabinus* (66.2% occurrence).

A total of 15,470 animals from 38 selected taxa were collected, representing 29.6% of the entire 183-m haul seine catch (Table 4.11). *Brevoortia* spp. (n=6,565) and *Mugil cephalus* (n=2,808) were the most abundant selected taxa, accounting for 60.6% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Mugil cephalus* (79.8% occurrence), *Sciaenops ocellatus* (59.6% occurrence), and *Leiostomus xanthurus* (52.5% occurrence).

Table 4.10: Catch statistics for 10 dominant taxa collected in 198 183-m haul seine samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Harengula jaguana	17,379	33.2	7.1	87.33	60.89	983.58	9,226	109	0.07	77	142
Lagodon rhomboides	11,720	22.4	73.2	58.02	6.83	167.27	631	107	0.28	24	228
Brevoortia spp.	6,565	12.5	9.1	32.99	27.15	1,161.07	5,280	103	0.10	60	213
Bairdiella chrysoura	3,665	7.0	24.7	18.51	11.56	878.71	1,981	140	0.20	47	170
Mugil cephalus	2,808	5.4	79.8	14.18	2.61	258.53	349	239	1.60	57	431
Leiostomus xanthurus	1,601	3.1	52.5	8.09	1.35	235.22	145	134	0.89	41	205
Orthopristis chrysoptera	1,419	2.7	30.8	7.17	2.91	571.59	497	143	1.03	43	209
Elops saurus	1,032	2.0	26.3	5.21	4.23	1,141.54	837	297	0.93	128	370
Micropogonias undulatus	974	1.9	23.2	4.92	1.25	358.27	199	146	0.89	88	244
Hypanus sabinus	916	1.7	66.2	4.63	0.62	189.49	79	216	1.33	95	415
Subtotal	48,079	91.9	.	.	.	.	.	.	.	24	431
Total	**52,344**	**100.0**	**.**	**264.36**	**96.42**	**513.22**	**17,449**	**.**	**.**	**8**	**908**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.11: Catch statistics for selected taxa collected in 198 183-m haul seine samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	6,565	12.5	9.1	32.99	27.15	1,161.07	5,280	103	0.10	60	213
Mugil cephalus	2,808	5.4	79.8	14.18	2.61	258.53	349	239	1.60	57	431
Leiostomus xanthurus	1,601	3.1	52.5	8.09	1.35	235.22	145	134	0.89	41	205
Elops saurus	1,032	2.0	26.3	5.21	4.23	1,141.54	837	297	0.93	128	370
Micropogonias undulatus	974	1.9	23.2	4.92	1.25	358.27	199	146	0.89	88	244
Sciaenops ocellatus	632	1.2	59.6	3.19	0.40	175.57	30	324	5.05	64	811
Cynoscion nebulosus	556	1.1	38.9	2.81	0.91	458.24	169	248	4.44	52	505
Mugil curema	328	0.6	29.3	1.66	0.35	293.74	33	157	2.81	92	287
Paralichthys albigutta	276	0.5	44.9	1.39	0.24	240.68	37	142	2.92	54	325
Callinectes sapidus	164	0.3	31.3	0.83	0.12	203.22	9	111	3.43	31	199
Pogonias cromis	95	0.2	16.2	0.48	0.14	397.74	19	239	10.92	103	794
Farfantepenaeus duorarum	60	0.1	7.6	0.30	0.12	560.25	17	18	0.51	15	33
Litopenaeus setiferus	58	0.1	7.1	0.29	0.13	644.89	24	22	0.54	13	31
Archosargus probatocephalus	49	0.1	14.6	0.25	0.05	292.00	5	299	9.79	134	426
Caranx hippos	42	0.1	6.1	0.21	0.09	618.50	13	117	3.80	74	153
Pomatomus saltatrix	39	0.1	8.1	0.20	0.06	462.26	9	137	6.60	97	227
Menticirrhus americanus	32	0.1	8.6	0.16	0.05	396.34	5	143	5.29	104	212
Farfantepenaeus aztecus	27	0.1	1.5	0.14	0.09	942.37	15	19	0.39	16	25
Trachinotus carolinus	21	<0.1	2.5	0.11	0.05	694.13	7	84	1.83	74	113
Mycteroperca microlepis	17	<0.1	2.5	0.09	0.05	836.19	8	194	6.17	120	221

Species	Number No.	%	% Occur	Density Estimate (animals/set) Mean	Stderr	CV	Max	Standard Length (mm) Mean	Stderr	Min	Max
Paralichthys lethostigma	12	<0.1	5.1	0.06	0.02	459.42	2	256	22.02	117	357
Trachinotus falcatus	11	<0.1	3.5	0.06	0.03	633.34	4	104	9.35	76	187
Farfantepenaeus spp.	10	<0.1	2.0	0.05	0.03	908.72	6	12	0.62	8	14
Menticirrhus littoralis	10	<0.1	1.5	0.05	0.03	863.81	5	129	6.28	97	164
Centropristis striata	8	<0.1	1.5	0.04	0.03	960.62	5	159	13.06	91	205
Cynoscion arenarius	8	<0.1	2.5	0.04	0.02	652.13	2	155	7.92	129	187
Caranx crysos	7	<0.1	1.0	0.04	0.03	1,221.74	6	122	6.66	95	144
Lutjanus griseus	7	<0.1	2.0	0.04	0.02	774.05	3	82	7.79	51	102
Sphyraena barracuda	7	<0.1	2.0	0.04	0.02	872.70	4	263	20.35	190	348
Menticirrhus saxatilis	3	<0.1	1.5	0.02	0.01	808.27	1	94	26.50	67	120
Scomberomorus maculatus	3	<0.1	1.0	0.02	0.01	1,046.68	2	341	5.78	333	352
Carcharhinus isodon	2	<0.1	0.5	0.01	0.01	1,407.12	2	372	1.50	370	373
Argopecten irradians	1	<0.1	0.5	0.01	0.01	1,407.12	1	37	.	37	37
Carcharhinus leucas	1	<0.1	0.5	0.01	0.01	1,407.12	1	578	.	578	578
Lutjanus synagris	1	<0.1	0.5	0.01	0.01	1,407.12	1	109	.	109	109
Menippe spp.	1	<0.1	0.5	0.01	0.01	1,407.12	1	85	.	85	85
Paralichthys squamilentus	1	<0.1	0.5	0.01	0.01	1,407.12	1	77	.	77	77
Sphyrna tiburo	1	<0.1	0.5	0.01	0.01	1,407.12	1	460	.	460	460
Total	**15,470**	**29.6**	**.**	**78.13**	**33.30**	**599.66**	**6,532**	**.**	**.**	**8**	**811**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m Bay Otter Trawl

A total of 16,505 animals were collected in 48 6.1-m bay otter trawls, representing 8.0% of the overall SRS catch (Table 4.7). *Anchoa mitchilli* (n=6,610), *Litopenaeus setiferus* (n=4,745), *Cynoscion arenarius* (n=928), and *Etropus crossotus* (n=555) were the most abundant taxa, accounting for 77.8% of the 6.1-m bay otter trawl catch (Table 4.12). The taxa most frequently caught in 6.1-m bay otter trawls were *Etropus crossotus* (93.8% occurrence), *Micropogonias undulatus* (62.5% occurrence), and *Symphurus plagiusa* (60.4% occurrence).

A total of 7,257 animals from 19 selected taxa were collected, representing 44.0% of the entire 6.1-m bay otter trawl catch (Table 4.13). *Litopenaeus setiferus* (n=4,745), *Cynoscion arenarius* (n=928), and *Micropogonias undulatus* (n=502) were the most abundant selected taxa, accounting for 85.1% of the selected taxa collected by this gear. The selected taxa most frequently caught in 6.1-m bay otter trawls were *Micropogonias undulatus* (62.5% occurrence), *Leiostomus xanthurus* (52.1% occurrence), and *Callinectes sapidus* (50.0% occurrence).

Table 4.12: Catch statistics for 10 dominant taxa collected in 48 6.1-m bay otter trawl samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	6,610	40.0	54.2	8.57	3.55	296.33	139.29	44	0.13	18	75
Litopenaeus setiferus	4,745	28.7	35.4	6.00	5.13	610.13	261.61	12	0.07	5	35
Cynoscion arenarius	928	5.6	43.8	1.18	0.80	480.72	40.60	40	0.89	9	223
Etropus crossotus	555	3.4	93.8	0.75	0.11	105.21	3.04	73	0.78	16	125
Micropogonias undulatus	502	3.0	62.5	0.69	0.23	227.62	7.83	51	1.63	9	164
Leiostomus xanthurus	416	2.5	52.1	0.56	0.35	429.40	16.51	29	1.64	11	140
Ariopsis felis	334	2.0	58.3	0.47	0.17	252.13	6.60	81	2.21	47	288
Lagodon rhomboides	290	1.8	41.7	0.39	0.15	260.79	6.55	86	0.98	16	150
Orthopristis chrysoptera	258	1.6	45.8	0.33	0.09	188.61	3.08	98	1.84	17	173
Symphurus plagiusa	248	1.5	60.4	0.33	0.21	442.67	10.28	55	2.08	23	140
Subtotal	14,886	90.1	.	.	.	.	.	.	.	5	288
Total	**16,505**	**100.0**	**.**	**22.57**	**10.26**	**314.89**	**476.51**	**.**	**.**	**2**	**447**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.13: Catch statistics for selected taxa collected in 48 6.1-m bay otter trawl samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Litopenaeus setiferus	4,745	28.7	35.4	6.00	5.13	610.13	261.61	12	0.07	5	35
Cynoscion arenarius	928	5.6	43.8	1.18	0.80	480.72	40.60	40	0.89	9	223
Micropogonias undulatus	502	3.0	62.5	0.69	0.23	227.62	7.83	51	1.63	9	164
Leiostomus xanthurus	416	2.5	52.1	0.56	0.35	429.40	16.51	29	1.64	11	140
Callinectes sapidus	203	1.2	50.0	0.27	0.15	386.32	7.20	42	2.93	8	171
Menippe spp.	168	1.0	20.8	0.23	0.10	305.31	3.79	15	0.65	3	34
Farfantepenaeus duorarum	88	0.5	45.8	0.12	0.03	177.76	0.84	21	0.52	15	36
Farfantepenaeus aztecus	45	0.3	14.6	0.06	0.03	298.73	0.88	23	0.77	17	38
Menticirrhus americanus	44	0.3	25.0	0.06	0.04	397.83	1.69	65	5.65	13	171
Paralichthys albigutta	36	0.2	29.2	0.05	0.02	225.31	0.58	131	6.94	78	287
Farfantepenaeus spp.	35	0.2	22.9	0.05	0.03	422.57	1.42	11	0.34	6	14
Lutjanus synagris	12	0.1	12.5	0.02	0.01	377.14	0.40	82	10.73	15	125
Centropristis striata	9	0.1	10.4	0.01	0.01	406.45	0.32	83	6.55	46	110
Cynoscion nothus	6	<0.1	6.2	0.01	<0.01	391.51	0.13	80	5.64	62	90
Diplectrum formosum	6	<0.1	4.2	0.01	0.01	593.61	0.34	106	9.03	83	141
Paralichthys lethostigma	6	<0.1	6.2	0.01	0.01	479.19	0.26	174	20.55	132	245
Cynoscion nebulosus	4	<0.1	6.2	0.01	<0.01	411.74	0.12	130	18.33	85	172
Brevoortia spp.	3	<0.1	4.2	<0.01	<0.01	511.98	0.13	50	14.74	22	72
Calamus spp.	1	<0.1	2.1	<0.01	<0.01	692.82	0.06	23	.	23	23
Total	**7,257**	**44.0**	**.**	**9.79**	**6.56**	**464.00**	**316.28**	**.**	**.**	**3**	**287**

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

River Sampling

21.3-m River Seine

A total of 18,972 animals were collected in 84 21.3-m river seines, representing 9.2% of the overall SRS catch (Table 4.7). *Anchoa mitchilli* (n=8,694) was the most abundant taxon collected, accounting for 45.8% of the 21.3-m river seine catch (Table 4.14). *Brevoortia* spp. (n=3,614) and *Leiostomus xanthurus* (n=1,350) were the next most abundant taxa, accounting for an additional 26.2% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Lucania parva* (61.9% occurrence), *Callinectes sapidus* (53.6% occurrence), and *Micropterus salmoides* (45.2% occurrence).

A total of 5,563 animals from 14 selected taxa were collected, representing 29.3% of the entire 21.3-m river seine catch (Table 4.15). *Brevoortia* spp. (n=3,614), and *Leiostomus xanthurus* (n=1,350) were the most abundant selected taxa, accounting for 89.2% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines were *Callinectes sapidus* (53.6% occurrence), *Brevoortia* spp. (20.2% occurrence), and *Litopenaeus setiferus* (17.9% occurrence).

Table 4.14: Catch statistics for 10 dominant taxa collected in 84 21.3-m river seine samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	8,694	45.8	25.0	146.96	78.49	498.17	6,141.18	26	0.04	18	47
Brevoortia spp.	3,614	19.0	20.2	63.27	37.46	542.71	2,952.94	25	0.03	20	39
Leiostomus xanthurus	1,350	7.1	10.7	23.63	11.52	446.89	670.59	23	0.10	14	43
Alburnops petersoni	829	4.4	44.0	14.51	3.67	232.07	207.35	35	0.28	17	58
Lucania parva	746	3.9	61.9	13.06	3.79	266.12	225.00	24	0.16	12	41
Lagodon rhomboides	641	3.4	35.7	11.22	5.12	417.89	405.88	22	0.34	13	82
Callinectes sapidus	438	2.3	53.6	7.58	2.24	273.06	132.35	19	0.80	4	98
Menidia spp.	380	2.0	31.0	6.57	2.02	282.68	108.82	38	0.51	22	94
Micropterus salmoides	286	1.5	45.2	4.95	2.19	408.17	180.88	50	3.34	15	298
Dorosoma petenense	243	1.3	6.0	4.25	3.76	810.96	314.71	24	0.20	18	31
Subtotal	17,221	90.7	.	.	.	.	.	.	.	4	298
Total	**18,972**	**100.0**	**.**	**332.14**	**93.91**	**259.14**	**6,310.29**	**.**	**.**	**3**	**509**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.15: Catch statistics for selected taxa collected in 84 21.3-m river seine samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	3,614	19.0	20.2	63.27	37.46	542.71	2,952.94	25	0.03	20	39
Leiostomus xanthurus	1,350	7.1	10.7	23.63	11.52	446.89	670.59	23	0.10	14	43
Callinectes sapidus	438	2.3	53.6	7.58	2.24	273.06	132.35	19	0.80	4	98
Litopenaeus setiferus	73	0.4	17.9	1.28	0.56	400.12	38.24	6	0.23	3	14
Farfantepenaeus spp.	40	0.2	14.3	0.70	0.23	301.38	10.29	7	0.46	4	14
Micropogonias undulatus	17	0.1	4.8	0.30	0.21	631.48	16.18	16	1.47	11	37
Paralichthys lethostigma	12	0.1	9.5	0.21	0.08	346.06	4.41	74	14.75	25	175
Mugil cephalus	7	<0.1	2.4	0.12	0.11	794.86	8.82	27	0.94	24	30
Cynoscion arenarius	4	<0.1	3.6	0.07	0.04	555.59	2.94	25	4.85	13	36
Archosargus probatocephalus	2	<0.1	2.4	0.04	0.02	644.16	1.47	120	97.50	23	218
Cynoscion nebulosus	2	<0.1	2.4	0.04	0.02	644.16	1.47	40	13.50	27	54
Farfantepenaeus duorarum	2	<0.1	2.4	0.04	0.02	644.16	1.47	15	0.00	15	15
Lutjanus griseus	1	<0.1	1.2	0.02	0.02	916.52	1.47	53	.	53	53
Sciaenops ocellatus	1	<0.1	1.2	0.02	0.02	916.52	1.47	298	.	298	298
Total	**5,563**	**29.3**	**.**	**97.39**	**46.02**	**433.08**	**3,629.41**	**.**	**.**	**3**	**298**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m River Otter Trawl

A total of 23,596 animals were collected in 24 6.1-m river otter trawls, representing 11.4% of the overall SRS catch (Table 4.7). *Anchoa mitchilli* (n=21,755) was the most abundant taxon collected, accounting for 92.2% of the 6.1-m river otter trawl catch (Table 4.16). The taxa most frequently caught in 6.1-m river otter trawls were *Callinectes sapidus* (79.2% occurrence), *Anchoa mitchilli* (66.7% occurrence), and *Trinectes maculatus* (62.5% occurrence).

A total of 1,537 animals from 14 selected taxa were collected, representing 6.5% of the entire 6.1-m river otter trawl catch (Table 4.17). *Litopenaeus setiferus* (n=621), *Leiostomus xanthurus* (n=404), and *Micropogonias undulatus* (n=194) were the most abundant selected taxa, accounting for 79.3% of the selected taxa collected by this gear. The selected taxa most frequently caught in the 6.1-m river otter trawls were *Callinectes sapidus* (79.2% occurrence), *Paralichthys lethostigma* (54.2% occurrence), and *Cynoscion arenarius* (50.0% occurrence).

Table 4.16: Catch statistics for 10 dominant taxa collected in 24 6.1-m river otter trawl samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	21,755	92.2	66.7	95.52	39.52	218.93	808.52	33	0.06	15	60
Litopenaeus setiferus	621	2.6	33.3	2.95	1.51	261.79	30.91	14	0.17	3	21
Leiostomus xanthurus	404	1.7	41.7	2.25	1.95	423.56	46.95	26	0.99	11	162
Micropogonias undulatus	194	0.8	29.2	1.00	0.41	205.09	6.75	29	2.86	9	195
Callinectes sapidus	129	0.5	79.2	0.67	0.23	170.23	4.95	32	4.11	5	186
Cynoscion arenarius	124	0.5	50.0	0.63	0.30	238.79	5.89	61	4.16	20	198
Eucinostomus spp.	55	0.2	25.0	0.28	0.16	280.54	3.68	28	1.11	13	39
Trinectes maculatus	46	0.2	62.5	0.25	0.06	119.66	0.90	39	2.75	9	61
Paralichthys lethostigma	38	0.2	54.2	0.21	0.09	218.63	2.16	83	11.58	18	263
Eucinostomus harengulus	29	0.1	25.0	0.15	0.08	257.09	1.35	49	1.56	40	78
Subtotal	23,395	99.0	.	.	.	.	.	.	.	3	263
Total	**23,596**	**100.0**	**.**	**121.23**	**47.41**	**191.60**	**875.98**	**.**	**.**	**3**	**784**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.17: Catch statistics for selected taxa collected in 24 6.1-m river otter trawl samples during Apalachicola Bay stratified-random sampling, 2025.

	Number			**Density Estimate (animals/100m^2)**				**Standard Length (mm)**			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Litopenaeus setiferus	621	2.6	33.3	2.95	1.51	261.79	30.91	14	0.17	3	21
Leiostomus xanthurus	404	1.7	41.7	2.25	1.95	423.56	46.95	26	0.99	11	162
Micropogonias undulatus	194	0.8	29.2	1.00	0.41	205.09	6.75	29	2.86	9	195
Callinectes sapidus	129	0.5	79.2	0.67	0.23	170.23	4.95	32	4.11	5	186
Cynoscion arenarius	124	0.5	50.0	0.63	0.30	238.79	5.89	61	4.16	20	198
Paralichthys lethostigma	38	0.2	54.2	0.21	0.09	218.63	2.16	83	11.58	18	263
Brevoortia spp.	8	<0.1	12.5	0.04	0.03	306.22	0.54	26	0.73	23	29
Archosargus probatocephalus	4	<0.1	16.7	0.02	0.01	228.73	0.13	209	67.77	109	407
Cynoscion nebulosus	4	<0.1	12.5	0.02	0.01	286.50	0.25	176	38.50	105	283
Farfantepenaeus duorarum	3	<0.1	8.3	0.02	0.01	358.74	0.25	17	1.45	15	20
Farfantepenaeus spp.	3	<0.1	8.3	0.02	0.01	358.74	0.25	9	2.03	6	13
Menticirrhus americanus	3	<0.1	8.3	0.02	0.01	354.03	0.25	24	6.96	11	35
Lutjanus griseus	1	<0.1	4.2	0.01	0.01	489.90	0.12	90	.	90	90
Sciaenops ocellatus	1	<0.1	4.2	0.01	0.01	489.90	0.12	26	.	26	26
Total	**1,537**	**6.5**	**.**	**8.19**	**3.36**	**201.22**	**65.37**	**.**	**.**	**3**	**407**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.4 Cedar Key

Cedar Key is in the Suwannee River estuary, an open system located along the Gulf Coast of Florida within the area known as the Big Bend. Freshwater inflow into the estuary comes primarily from the Suwannee River with additional input from many fringing marsh tidal creeks (Lindberg et al. 1992). The shoreline consists largely of marsh grasses, oyster bars, and mud flats. Seagrass meadows primarily occur in the southern portions of the estuary (Tuckey and Dehaven 2006).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling in the Cedar Key area since 1996. The area sampled was divided into two geographically-defined bay zones (B and C) and one riverine zone (F; Figure 4.4). Stratified-random sampling (SRS) was conducted in Zones B and C monthly using 21.3-m bay seines and 183-m haul seines and quarterly using 6.1-m bay otter trawls. Tidal creeks in Zone B were sampled using 21.3-m river seines. Monthly SRS was conducted in Zone F with 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in the Methods section of this report. This section summarizes data collected by the FIM program during 2025 in the Cedar Key area.

Stratified-Random Sampling

A total of 91,499 animals, which included 125 taxa of fishes and seven taxa of selected invertebrates, were collected from 652 Cedar Key SRS samples in 2025 (Table 4.18, Table A.10, Table A.11, Table A.12). *Anchoa mitchilli* (n=24,206) was the most numerous taxon collected, representing 26.5% of the total catch. *Leiostomus xanthurus* (n=15,371) and *Membras martinica* (n=6,880) were the next most abundant taxa collected, accounting for an additional 24.3% of the total catch. A total of 36 Selected Taxa (n=33,233 animals) composed 36.3% of the total catch. *Leiostomus xanthurus* (n=15,371) was the most abundant selected taxon, representing 16.8% of the total catch. *Litopenaeus setiferus* (n=5,721), *Mugil cephalus* (n=4,256), *Brevoortia* spp. (n=2,069), and *Elops saurus* (n=896) were the next most abundant Selected Taxa, comprising 14.1% of the total catch. Collections in 2025 included zero species new to the CK FIM collection.

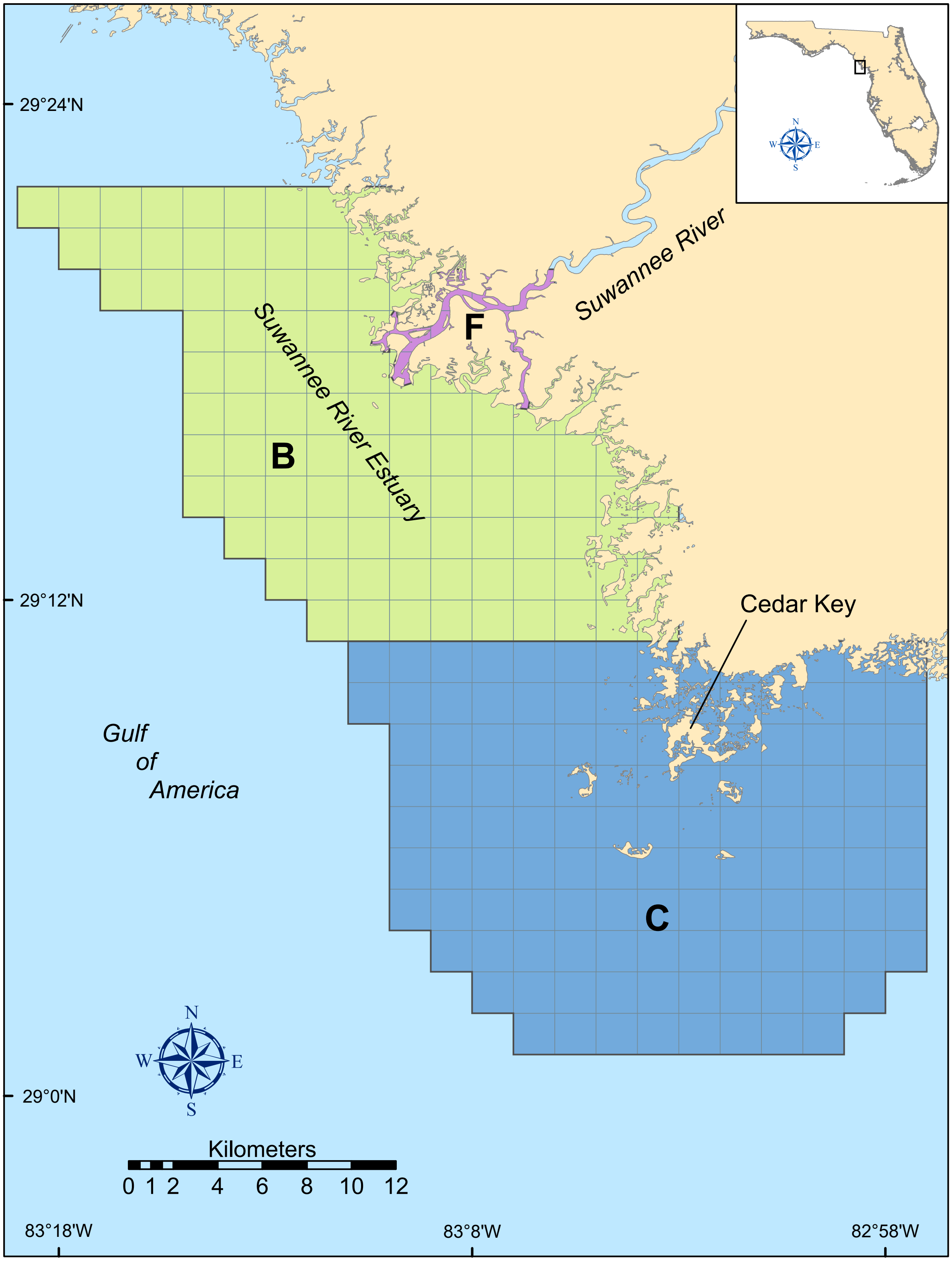

Figure 4.4: Map of Cedar Key sampling area. Zones are labeled B, C, and F.

Table 4.18: Summary of catch and effort data for Cedar Key stratified-random sampling, 2025.

Zone	21.3-m bay seine		21.3-m river seine		183-m haul seine		6.1-m otter trawl		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
B	120	18,230	108	22,056	96	17,318	20	861	344	58,465
C	132	17,159	.	.	96	7,981	20	500	248	25,640
F	.	.	60	7,394	.	.	.	.	60	7,394
Total	**252**	**35,389**	**168**	**29,450**	**192**	**25,299**	**40**	**1,361**	**652**	**91,499**

Bay Sampling

21.3-m Bay Seine

A total of 35,389 animals were collected in 252 21.3-m bay seines, representing 38.7% of the overall SRS catch (Table 4.18). *Anchoa mitchilli* (n = 10,577) and *Leiostomus xanthurus* (n = 8,698) were the most abundant taxa, accounting for 54.5% of the bay seine catch (Table 4.19). The taxa most frequently caught in 21.3-m bay seines were *Anchoa mitchilli* (48.8% occurrence), *Leiostomus xanthurus* (42.9% occurrence), and *Lagodon rhomboides* (32.5% occurrence).

A total of 11,642 animals from 29 Selected Taxa were collected, representing 32.9% of the entire 21.3-m bay seine catch (Table 4.20). *Leiostomus xanthurus* (n=8,698) was the most abundant selected taxon, accounting for 74.7% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m bay seines were *Leiostomus xanthurus* (42.9% occurrence), *Callinectes sapidus* (30.2% occurrence), and *Menticirrhus americanus* (23.0% occurrence).

Table 4.19: Catch statistics for 10 dominant taxa collected in 252 21.3-m bay seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	10,577	29.9	48.8	29.86	6.77	360.85	807.86	34	0.10	16	87
Leiostomus xanthurus	8,698	24.6	42.9	24.56	7.97	516.14	1,230.00	27	0.13	12	172
Membras martinica	4,621	13.1	21.4	13.10	5.04	611.42	1,118.57	45	0.21	22	116
Anchoa hepsetus	2,163	6.1	19.4	6.13	3.90	1,011.05	885.00	44	0.35	24	117
Lagodon rhomboides	1,693	4.8	32.5	4.80	1.81	598.12	322.14	40	0.53	12	168
Eucinostomus spp.	1,189	3.4	23.0	3.37	1.39	655.23	323.57	27	0.19	12	43
Menidia spp.	1,173	3.3	23.0	3.32	1.33	634.53	260.71	53	0.37	26	100
Brevoortia spp.	923	2.6	8.7	2.62	1.43	864.87	310.71	29	0.28	14	95
Menticirrhus americanus	463	1.3	23.0	1.30	0.28	346.02	43.57	38	1.12	13	236
Eucinostomus gula	345	1.0	15.1	0.98	0.38	615.33	87.14	55	0.46	41	79
Subtotal	31,845	90.1	.	.	.	.	.	.	.	12	236
Total	**35,389**	**100.0**	**.**	**100.31**	**13.31**	**210.63**	**1,235.71**	**.**	**.**	**3**	**588**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.20: Catch statistics for Selected Taxa collected in 252 21.3-m bay seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	8,698	24.6	42.9	24.56	7.97	516.14	1,230.00	27	0.13	12	172
Brevoortia spp.	923	2.6	8.7	2.62	1.43	864.87	310.71	29	0.28	14	95
Menticirrhus americanus	463	1.3	23.0	1.30	0.28	346.02	43.57	38	1.12	13	236
Mugil cephalus	263	0.7	9.9	0.75	0.30	647.06	56.43	31	2.01	19	280
Cynoscion arenarius	235	0.7	18.3	0.67	0.16	379.15	23.57	28	0.75	13	93
Litopenaeus setiferus	230	0.6	9.9	0.65	0.26	621.80	47.14	14	0.40	4	39
Callinectes sapidus	223	0.6	30.2	0.63	0.14	346.48	27.86	33	2.26	6	177
Micropogonias undulatus	213	0.6	7.5	0.60	0.26	679.55	53.57	27	1.18	14	163
Sciaenops ocellatus	93	0.3	11.9	0.26	0.08	479.10	15.71	83	8.62	14	385
Farfantepenaeus spp.	78	0.2	12.3	0.22	0.07	495.27	13.57	8	0.29	3	14
Haemulon plumierii	45	0.1	1.6	0.13	0.09	1,161.06	22.14	47	1.40	26	71
Mugil trichodon	31	0.1	2.8	0.09	0.05	887.51	9.29	53	4.73	18	124
Paralichthys albigutta	31	0.1	7.1	0.09	0.02	426.79	2.86	58	12.03	17	344
Menticirrhus saxatilis	23	0.1	4.4	0.07	0.02	557.14	3.57	33	3.91	11	90
Pogonias cromis	22	0.1	4.8	0.06	0.02	541.43	2.86	145	17.35	68	411
Cynoscion nebulosus	21	0.1	6.3	0.06	0.02	423.42	2.14	38	4.55	20	90
Trachinotus falcatus	13	<0.1	3.2	0.04	0.02	716.89	3.57	51	6.57	24	92
Menippe spp.	7	<0.1	1.2	0.02	0.01	1,176.46	3.57	10	1.56	7	18
Centropristis striata	5	<0.1	0.8	0.01	0.01	1,142.62	2.14	87	9.72	63	109
Lutjanus griseus	5	<0.1	2.0	0.01	0.01	704.25	0.71	53	9.10	26	81

Species	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Lutjanus synagris	4	<0.1	0.4	0.01	0.01	1,587.45	2.86	40	0.41	39	41
Farfantepenaeus duorarum	3	<0.1	1.2	0.01	<0.01	912.86	0.71	19	1.15	17	21
Mugil curema	3	<0.1	0.4	0.01	0.01	1,587.45	2.14	114	4.04	107	121
Archosargus probatocephalus	2	<0.1	0.8	0.01	<0.01	1,120.26	0.71	242	24.00	218	266
Elops saurus	2	<0.1	0.8	0.01	<0.01	1,120.26	0.71	232	5.00	227	237
Pomatomus saltatrix	2	<0.1	0.8	0.01	<0.01	1,120.26	0.71	116	0.50	116	117
Trachinotus carolinus	2	<0.1	0.4	0.01	0.01	1,587.45	1.43	42	10.50	32	53
Caranx hippos	1	<0.1	0.4	<0.01	<0.01	1,587.45	0.71	37	.	37	37
Paralichthys lethostigma	1	<0.1	0.4	<0.01	<0.01	1,587.45	0.71	19	.	19	19
Total	**11,642**	**32.9**	**.**	**33.00**	**8.40**	**403.95**	**1,234.29**	**.**	**.**	**3**	**411**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 25,299 animals were collected in 192 183-m haul seines, representing 27.6% of the overall SRS catch (Table 4.18). *Litopenaeus setiferus* (n = 5,139) was the most abundant taxon, accounting for 20.3% of the 183-m haul seine catch (Table 4.21. The taxa most frequently caught in 183-m haul seines were *Mugil cephalus* (78.1% occurrence), *Hypanus sabinus* (77.6% occurrence), and *Elops saurus* (53.1% occurrence).

A total of 14,159 animals from 30 Selected Taxa were collected, representing 56.0% of the entire 183-m haul seine catch (Table 4.22). *Litopenaeus setiferus* (n=5,139) and *Mugil cephalus* (n=3,231) were the most abundant Selected Taxa, accounting for 59.1% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 183-m haul seines were *Mugil cephalus* (78.1% occurrence), *Elops saurus* (53.1% occurrence), and *Leiostomus xanthurus* (50.0% occurrence).

Table 4.21: Catch statistics for 10 dominant taxa collected in 192 183-m haul seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Litopenaeus setiferus	5,139	20.3	17.2	26.77	24.19	1,252.51	4,642	25	0.05	14	53
Mugil cephalus	3,231	12.8	78.1	16.83	3.83	315.13	653	193	1.12	22	441
Bairdiella chrysoura	2,857	11.3	44.3	14.88	5.15	479.69	768	141	0.31	42	254
Lagodon rhomboides	2,068	8.2	49.5	10.44	2.19	295.03	320	98	0.44	28	158
Leiostomus xanthurus	1,774	7.0	50.0	9.24	1.45	216.98	132	123	0.60	24	215
Harengula jaguana	1,579	6.2	28.6	8.22	3.69	621.27	542	108	0.40	67	202
Hypanus sabinus	1,446	5.7	77.6	7.53	1.15	211.66	167	212	1.02	91	360
Ariopsis felis	1,097	4.3	46.4	5.71	1.22	294.91	160	241	1.43	75	355
Elops saurus	890	3.5	53.1	4.64	0.80	238.33	86	264	1.24	123	483
Brevoortia spp.	764	3.0	16.7	3.98	1.46	507.65	166	117	0.79	73	288
Subtotal	20,845	82.3	.	.	.	.	.	.	.	14	483
Total	**25,299**	**100.0**	**.**	**131.77**	**26.31**	**276.72**	**4,712**	**.**	**.**	**14**	**1,116**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.22: Catch statistics for Selected Taxa collected in 192 183-m haul seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Litopenaeus setiferus	5,139	20.3	17.2	26.77	24.19	1,252.51	4,642	25	0.05	14	53
Mugil cephalus	3,231	12.8	78.1	16.83	3.83	315.13	653	193	1.12	22	441
Leiostomus xanthurus	1,774	7.0	50.0	9.24	1.45	216.98	132	123	0.60	24	215
Elops saurus	890	3.5	53.1	4.64	0.80	238.33	86	264	1.24	123	483
Brevoortia spp.	764	3.0	16.7	3.98	1.46	507.65	166	117	0.79	73	288
Pogonias cromis	397	1.6	34.4	2.07	0.53	356.94	75	482	12.19	89	825
Sciaenops ocellatus	391	1.5	34.4	2.04	0.61	414.95	100	222	5.44	98	683
Mugil curema	275	1.1	12.5	1.43	1.12	1,086.22	215	209	2.12	108	258
Micropogonias undulatus	251	1.0	22.9	1.31	0.28	301.38	33	165	1.63	101	245
Callinectes sapidus	205	0.8	32.8	1.07	0.21	278.44	27	101	2.88	29	189
Cynoscion nebulosus	156	0.6	30.2	0.81	0.14	245.39	14	242	5.31	115	455
Menticirrhus americanus	105	0.4	24.5	0.55	0.08	211.52	6	195	4.89	100	303
Mugil trichodon	98	0.4	14.1	0.51	0.15	411.35	20	148	3.14	92	261
Paralichthys albigutta	89	0.4	25.5	0.46	0.07	213.88	7	157	6.96	64	325
Centropomus undecimalis	83	0.3	14.1	0.43	0.11	363.31	14	602	17.08	242	873
Archosargus probatocephalus	80	0.3	17.2	0.42	0.10	332.53	13	232	7.56	118	405
Caranx hippos	70	0.3	11.5	0.36	0.16	618.27	29	170	5.98	86	275
Trachinotus falcatus	60	0.2	6.8	0.31	0.17	748.59	31	106	7.90	57	395
Pomatomus saltatrix	33	0.1	7.8	0.17	0.05	411.04	6	141	3.82	106	197
Cynoscion arenarius	30	0.1	8.9	0.16	0.05	456.82	8	197	5.60	119	242

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Lutjanus griseus	16	0.1	3.6	0.08	0.05	750.29	8	135	8.93	94	224
Sphyrna tiburo	7	<0.1	3.1	0.04	0.02	586.90	2	620	65.38	339	835
Farfantepenaeus duorarum	5	<0.1	0.5	0.03	0.03	1,385.64	5	22	2.38	17	28
Menippe spp.	3	<0.1	1.0	0.02	0.01	1,030.63	2	70	19.31	32	95
Trachinotus carolinus	2	<0.1	1.0	0.01	0.01	977.23	1	86	9.50	76	95
Centropristis striata	1	<0.1	0.5	0.01	0.01	1,385.64	1	124	.	124	124
Megalops atlanticus	1	<0.1	0.5	0.01	0.01	1,385.64	1	242	.	242	242
Menticirrhus saxatilis	1	<0.1	0.5	0.01	0.01	1,385.64	1	239	.	239	239
Scomberomorus maculatus	1	<0.1	0.5	0.01	0.01	1,385.64	1	237	.	237	237
Sphyraena barracuda	1	<0.1	0.5	0.01	0.01	1,385.64	1	213	.	213	213
Total	**14,159**	**56.0**	**.**	**73.74**	**24.64**	**462.93**	**4,674**	**.**	**.**	**14**	**873**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m Bay Otter Trawl

A total of 1,361 animals were collected in 40 6.1-m bay otter trawls, representing 1.5% of the overall SRS catch (Table 4.18). *Anchoa mitchilli* (n = 274), *Etropus crossotus* (n = 177), *Leiostomus xanthurus* (n = 166), and *Bairdiella chrysoura* (n = 121) were the most abundant taxa, accounting for 54.2% of the 6.1-m bay otter trawl catch (Table 4.23). The taxa most frequently caught in 6.1-m bay otter trawls were *Etropus crossotus* (82.5% occurrence), *Prionotus scitulus* (47.5% occurrence), and *Hypanus sabinus* (32.5% occurrence).

A total of 353 animals from 16 Selected Taxa were collected, representing 25.9% of the entire 6.1-m bay otter trawl catch (Table 4.24). *Leiostomus xanthurus* (n=166), *Litopenaeus setiferus* (n=62), and *Callinectes sapidus* (n=26) were the most abundant Selected Taxa, accounting for 72.0% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 6.1-m bay otter trawls were *Leiostomus xanthurus* (27.5% occurrence), *Menippe* spp. (25.0% occurrence), *Callinectes sapidus* (15.0% occurrence), *Farfantepenaeus duorarum* (15.0% occurrence), and *Menticirrhus americanus* (15.0% occurrence).

Table 4.23: Catch statistics for 10 dominant taxa collected in 40 6.1-m bay otter trawl samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	274	20.1	17.5	0.44	0.20	292.25	6.00	61	0.81	30	78
Etropus crossotus	177	13.0	82.5	0.30	0.05	97.33	1.04	81	1.61	31	124
Leiostomus xanthurus	166	12.2	27.5	0.29	0.19	416.38	7.46	17	0.91	10	120
Bairdiella chrysoura	121	8.9	25.0	0.21	0.12	367.95	4.20	111	1.29	17	159
Litopenaeus setiferus	62	4.6	12.5	0.10	0.07	459.02	2.82	39	0.55	22	44
Hypanus sabinus	53	3.9	32.5	0.09	0.03	226.46	1.14	219	4.77	146	339
Lagodon rhomboides	50	3.7	30.0	0.08	0.03	216.78	0.64	95	2.91	51	129
Prionotus scitulus	46	3.4	47.5	0.08	0.02	153.78	0.50	101	5.23	35	165
Orthopristis chrysoptera	45	3.3	15.0	0.08	0.04	365.04	1.70	118	4.00	76	165
Eucinostomus gula	45	3.3	30.0	0.07	0.03	232.15	0.90	86	1.92	62	120
Subtotal	1,039	76.4	.	.	.	.	.	.	.	10	339
Total	**1,361**	**100.0**	**.**	**2.30**	**0.49**	**135.49**	**13.06**	**.**	**.**	**4**	**495**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.24: Catch statistics for Selected Taxa collected in 192 183-m haul seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	166	12.2	27.5	0.29	0.19	416.38	7.46	17	0.91	10	120
Litopenaeus setiferus	62	4.6	12.5	0.10	0.07	459.02	2.82	39	0.55	22	44
Callinectes sapidus	26	1.9	15.0	0.04	0.02	366.34	0.86	70	7.71	27	158
Menippe spp.	26	1.9	25.0	0.04	0.02	283.15	0.74	16	1.96	4	35
Micropogonias undulatus	14	1.0	10.0	0.02	0.01	360.14	0.43	94	8.11	34	136
Cynoscion arenarius	13	1.0	7.5	0.02	0.02	503.09	0.71	161	8.03	113	213
Farfantepenaeus duorarum	11	0.8	15.0	0.02	0.01	292.83	0.25	23	1.29	17	29
Menticirrhus americanus	10	0.7	15.0	0.02	0.01	340.41	0.36	129	21.33	24	224
Diplectrum formosum	6	0.4	7.5	0.01	0.01	431.18	0.26	135	10.37	96	170
Farfantepenaeus spp.	4	0.3	7.5	0.01	<0.01	377.33	0.13	13	1.25	9	14
Paralichthys albigutta	4	0.3	10.0	0.01	<0.01	304.08	0.07	148	12.31	127	172
Lutjanus synagris	3	0.2	7.5	0.01	<0.01	355.77	0.07	57	24.63	17	102
Sciaenops ocellatus	3	0.2	2.5	0.01	0.01	632.46	0.21	29	4.04	21	34
Centropristis striata	3	0.2	5.0	<0.01	<0.01	469.79	0.13	118	11.36	100	139
Calamus arctifrons	1	0.1	2.5	<0.01	<0.01	632.46	0.06	100	.	100	100
Haemulon plumierii	1	0.1	2.5	<0.01	<0.01	632.46	0.07	66	.	66	66
Total	**353**	**25.9**	**.**	**0.60**	**0.23**	**241.16**	**8.02**	**.**	**.**	**4**	**224**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

River Sampling

Tidal Creeks

21.3-m River Seine

A total of 22,056 animals were collected in 108 21.3-m river seines in tidal creeks, representing 24.1% of the overall SRS catch (Table 4.18). *Anchoa mitchilli* (n = 10,489) was the most abundant taxon collected, accounting for 47.6% of the 21.3-m river seine catch in tidal creeks (Table 4.25). *Leiostomus xanthurus* (n=4,238) and *Membras martinica* (n=2,045) were the next most abundant taxa, accounting for an additional 28.5% of the 21.3-m river seine catch in tidal creeks. The taxa most frequently caught in 21.3-m river seines in tidal creeks were *Anchoa mitchilli* (61.1% occurrence), *Menidia* spp. (53.7% occurrence), and *Leiostomus xanthurus* (49.1% occurrence).

A total of 6,166 animals from 17 Selected Taxa were collected, representing 28.0% of the entire 21.3-m river seine catch in tidal creeks (Table 4.26). *Leiostomus xanthurus* (n=4,238), and *Mugil cephalus* (n=750) were the most abundant Selected Taxa, accounting for 80.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m river seines in tidal creeks were *Leiostomus xanthurus* (49.1% occurrence), *Callinectes sapidus* (43.5% occurrence), and *Sciaenops ocellatus* (26.9% occurrence).

Table 4.25: Catch statistics for 10 dominant taxa collected in 108 21.3-m river seine samples in tidal creeks during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	10,489	47.6	61.1	142.82	32.64	237.50	1,795.59	28	0.07	15	72
Leiostomus xanthurus	4,238	19.2	49.1	57.71	15.48	278.85	1,047.06	29	0.13	10	105
Membras martinica	2,045	9.3	15.7	27.85	13.60	507.39	1,351.47	33	0.13	18	52
Eucinostomus spp.	797	3.6	42.6	10.85	2.63	252.00	189.71	28	0.24	13	43
Lagodon rhomboides	767	3.5	39.8	10.44	3.91	389.44	358.82	29	0.43	12	90
Mugil cephalus	750	3.4	24.1	10.21	3.43	348.84	254.41	28	0.49	18	137
Menidia spp.	613	2.8	53.7	8.35	1.77	220.47	105.88	50	0.58	25	88
Fundulus grandis	381	1.7	29.6	5.19	1.54	309.03	95.59	58	0.96	15	110
Brevoortia spp.	378	1.7	11.1	5.15	2.80	565.81	223.53	26	0.12	18	36
Fundulus xenicus	268	1.2	14.8	3.65	2.50	713.29	266.18	30	0.23	17	36
Subtotal	20,726	94.0	.	.	.	.	.	.	.	10	137
Total	**22,056**	**100.0**	**.**	**300.33**	**40.14**	**138.89**	**2,092.65**	**.**	**.**	**3**	**528**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.26: Catch statistics for Selected Taxa collected in 108 21.3-m river seine samples in tidal creeks during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	4,238	19.2	49.1	57.71	15.48	278.85	1,047.06	29	0.13	10	105
Mugil cephalus	750	3.4	24.1	10.21	3.43	348.84	254.41	28	0.49	18	137
Brevoortia spp.	378	1.7	11.1	5.15	2.80	565.81	223.53	26	0.12	18	36
Litopenaeus setiferus	235	1.1	22.2	3.20	1.31	424.61	114.71	12	0.29	5	28
Callinectes sapidus	189	0.9	43.5	2.57	0.54	216.24	42.65	29	2.25	7	150
Sciaenops ocellatus	150	0.7	26.9	2.04	0.78	394.34	58.82	48	5.46	11	458
Cynoscion arenarius	142	0.6	17.6	1.93	0.74	400.25	67.65	30	0.75	15	63
Farfantepenaeus spp.	18	0.1	9.3	0.25	0.09	362.24	5.88	7	0.68	3	14
Micropogonias undulatus	16	0.1	3.7	0.22	0.14	670.66	13.24	41	2.73	22	53
Cynoscion nebulosus	14	0.1	8.3	0.19	0.07	381.62	4.41	40	5.14	14	74
Mugil trichodon	11	<0.1	2.8	0.15	0.11	782.00	11.76	17	0.76	13	21
Lutjanus griseus	9	<0.1	5.6	0.12	0.05	437.92	2.94	100	8.21	66	140
Menticirrhus americanus	7	<0.1	4.6	0.10	0.04	484.38	2.94	44	7.67	19	79
Elops saurus	4	<0.1	1.9	0.05	0.04	819.28	4.41	190	14.45	162	229
Centropomus undecimalis	2	<0.1	1.9	0.03	0.02	731.40	1.47	230	135.00	95	365
Paralichthys albigutta	2	<0.1	1.9	0.03	0.02	731.40	1.47	38	21.50	17	60
Archosargus probatocephalus	1	<0.1	0.9	0.01	0.01	1,039.23	1.47	310	.	310	310
Total	**6,166**	**28.0**	**.**	**83.96**	**18.05**	**223.45**	**1,114.71**	**.**	**.**	**3**	**458**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Lower Suwannee River

21.3-m River Seine

A total of 7,394 animals were collected in 60 21.3-m river seines conducted in the Lower Suwannee River (LSR), representing 8.1% of the overall SRS catch (Table 4.18). *Anchoa mitchilli* (n=2,866) was the most abundant taxon collected, accounting for 38.8% of the 21.3-m river seine catch in the LSR (Table 4.27). *Eucinostomus* spp. (n=1,501) and *Leiostomus xanthurus* (n=495) were the next most abundant taxa, accounting for an additional 27.0% of the 21.3-m river seine catch in the LSR. The taxa most frequently caught in 21.3-m river seines in the LSR were *Callinectes sapidus* (51.7% occurrence), *Eucinostomus* spp. (50.0% occurrence), and *Lagodon rhomboides* (46.7% occurrence).

A total of 913 animals from 13 Selected Taxa were collected, representing 12.3% of the entire 21.3-m river seine catch in the LSR (Table 4.28). *Leiostomus xanthurus* (n=495) and *Callinectes sapidus* (n=198) were the most abundant Selected Taxa, accounting for 75.9% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m river seines in the LSR were *Callinectes sapidus* (51.7% occurrence), *Leiostomus xanthurus* (30.0% occurrence), and *Lutjanus griseus* (13.3% occurrence).

Table 4.27: Catch statistics for 10 dominant taxa collected in 60 21.3-m river seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	2,866	38.8	20.0	70.25	45.86	505.65	2,597.06	26	0.06	16	41
Eucinostomus spp.	1,501	20.3	50.0	36.79	12.98	273.25	533.82	30	0.17	10	39
Leiostomus xanthurus	495	6.7	30.0	12.13	4.92	313.80	214.71	25	0.44	15	79
Menidia spp.	464	6.3	38.3	11.37	4.54	309.05	223.53	53	0.78	13	92
Gambusia holbrooki	432	5.8	31.7	10.59	4.75	347.28	217.65	29	0.26	16	41
Lagodon rhomboides	238	3.2	46.7	5.83	1.83	242.74	77.94	30	1.10	15	93
Eucinostomus harengulus	236	3.2	30.0	5.78	4.43	593.44	266.18	55	0.53	40	73
Membras martinica	214	2.9	6.7	5.25	4.00	590.91	226.47	45	1.17	18	86
Callinectes sapidus	198	2.7	51.7	4.85	0.91	145.52	30.88	24	1.62	8	151
Sciaenops ocellatus	121	1.6	11.7	2.97	1.53	398.84	72.06	33	1.65	15	143
Subtotal	6,765	91.5	.	.	.	.	.	.	.	8	151
Total	**7,394**	**100.0**	**.**	**181.23**	**48.99**	**209.39**	**2,627.94**	**.**	**.**	**6**	**443**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.28: Catch statistics for Selected Taxa collected in 60 21.3-m river seine samples during Cedar Key stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	495	6.7	30.0	12.13	4.92	313.80	214.71	25	0.44	15	79
Callinectes sapidus	198	2.7	51.7	4.85	0.91	145.52	30.88	24	1.62	8	151
Sciaenops ocellatus	121	1.6	11.7	2.97	1.53	398.84	72.06	33	1.65	15	143
Litopenaeus setiferus	55	0.7	8.3	1.35	0.91	524.64	51.47	10	0.25	6	14
Mugil cephalus	12	0.2	3.3	0.29	0.21	550.81	10.29	58	0.70	54	62
Lutjanus griseus	10	0.1	13.3	0.25	0.09	274.33	2.94	68	11.36	23	145
Cynoscion nebulosus	7	0.1	6.7	0.17	0.09	420.26	4.41	83	12.37	48	133
Brevoortia spp.	4	0.1	1.7	0.10	0.10	774.60	5.88	40	2.80	33	45
Farfantepenaeus spp.	3	<0.1	1.7	0.07	0.07	774.60	4.41	10	1.53	8	13
Mugil trichodon	3	<0.1	5.0	0.07	0.04	439.57	1.47	15	2.08	11	18
Paralichthys albigutta	3	<0.1	5.0	0.07	0.04	439.57	1.47	140	31.52	91	199
Centropomus undecimalis	1	<0.1	1.7	0.02	0.02	774.60	1.47	46	.	46	46
Cynoscion arenarius	1	<0.1	1.7	0.02	0.02	774.60	1.47	12	.	12	12
Total	**913**	**12.3**	**.**	**22.38**	**5.29**	**183.28**	**214.71**	**.**	**.**	**6**	**199**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.5 Tampa Bay

Tampa Bay is a drowned river estuary located on the central Gulf coast of Florida. The bay is connected to the Gulf through two main channels and several smaller passes and channels. Freshwater inflow comes from over 100 tributaries, although more than 80% enters from four main rivers: Hillsborough, Alafia, Manatee, and Little Manatee (Schmidt and Luther 2002). Shoreline vegetation consists largely of mangroves and marsh grasses, and bottom substrates are typically characterized as sand, mud, oysters, or a combination thereof (Flannery 1989). Submerged seagrass meadows are the dominant vegetative cover in Tampa Bay and are widely distributed throughout the bay (Haddad 1989).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Tampa Bay since 1989. The area sampled was divided into five geographically-defined bay zones (A–E) and four riverine zones (K–N; Figure 4.5). The riverine zones were defined as the Alafia (K), Little Manatee (L), Manatee (M), and Braden (N) rivers. Stratified-random sampling (SRS) was conducted in Zones A–E monthly using 21.3-m bay seines and 183-m haul seines and quarterly using 6.1-m bay otter trawls. SRS was conducted in Zones K–N in all months except March, May, and July with 21.3-m river seines and bimonthly with 6.1-m river otter trawls. All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in Tampa Bay.

Stratified-Random Sampling

A total of 470,106 animals, which included 152 taxa of fishes and eight taxa of selected invertebrates, were collected from 1,116 Tampa Bay SRS samples in 2025 (Table 4.29, Table A.13, Table A.14, Table A.15). *Anchoa mitchilli* (n=278,338) was the most numerous taxon collected, representing 59.2% of the total catch. *Lagodon rhomboides* (n=45,888) and *Eucinostomus* spp. (n=30,065) were the next most abundant taxa collected, accounting for an additional 16.2% of the total catch. A total of 37 selected taxa (n=22,463 animals) composed 4.8% of the total catch. *Leiostomus xanthurus* (n=5,595) was the most abundant selected taxon, representing 1.2% of the total catch. *Elops saurus* (n=4,177), *Brevoortia* spp. (n=2,647), *Farfantepenaeus duorarum* (n=1,756), and *Callinectes sapidus* (n=1,026) were the next most abundant selected taxa, comprising 2.0% of the total catch. Collections in 2025 included one species new to the TB FIM collection: *Corvula batabana*.

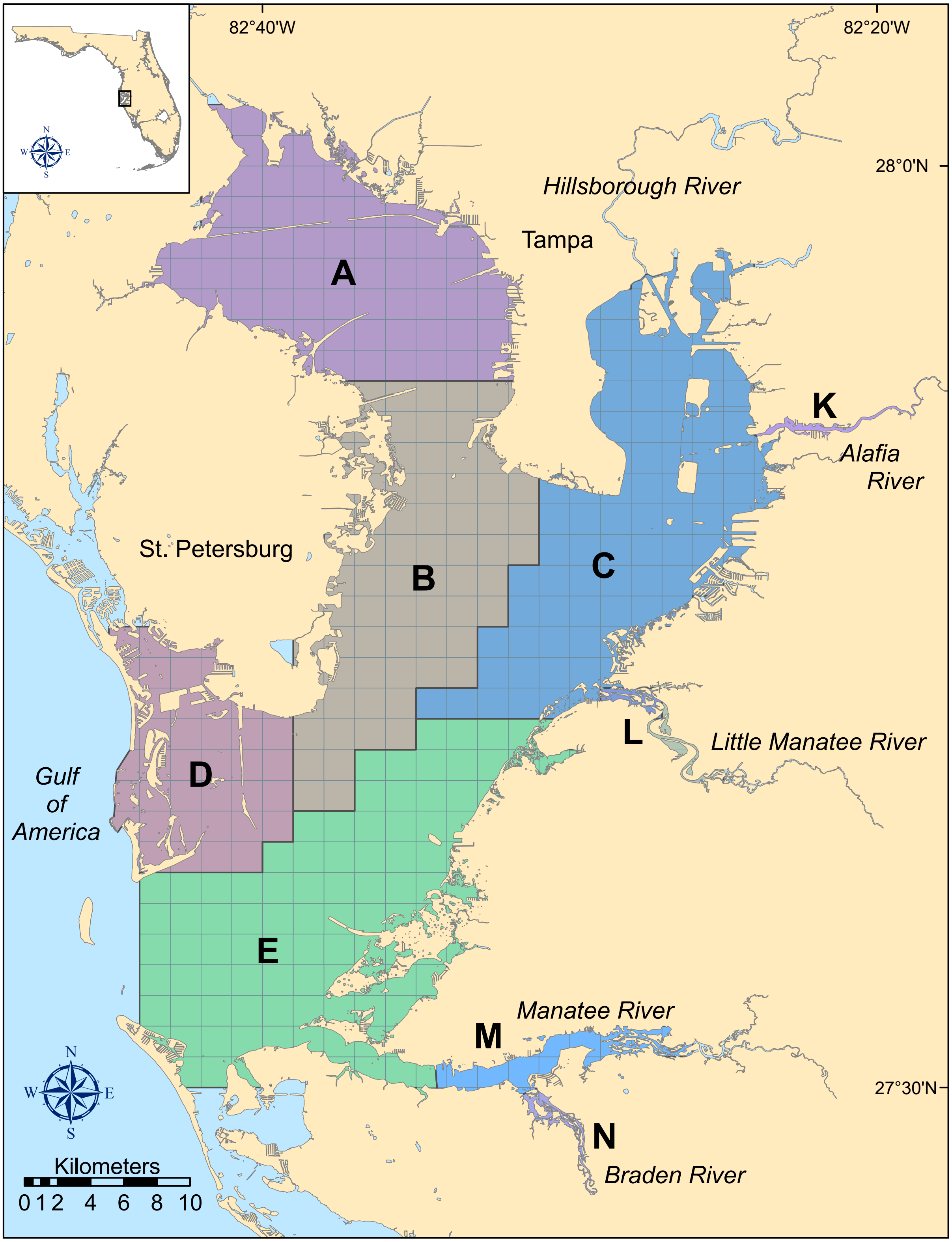

Figure 4.5: Map of Tampa Bay sampling area. Zones are labeled A-E (bay zones) and K-N (riverine zones).

Table 4.29: Summary of catch and effort data for Tampa Bay stratified-random sampling, 2025.

Zone	21.3-m bay seine		21.3-m river seine		183-m haul seine		6.1-m otter trawl		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
A	84	23,213	.	.	48	8,871	12	667	144	32,751
B	72	13,463	.	.	48	14,243	12	362	132	28,068
C	108	21,135	.	.	48	18,034	16	1,108	172	40,277
D	60	35,114	.	.	36	11,409	8	1,119	104	47,642
E	84	18,062	.	.	60	13,363	12	674	156	32,099
K	.	.	117	167,438	.	.	12	3,889	129	171,327
L	.	.	81	18,139	.	.	36	1,662	117	19,801
M	.	.	72	52,145	.	.	24	1,257	96	53,402
N	.	.	54	43,956	.	.	12	783	66	44,739
Total	**408**	**110,987**	**324**	**281,678**	**240**	**65,920**	**144**	**11,521**	**1,116**	**470,106**

Bay Sampling

21.3-m Bay Seine

A total of 110,987 animals were collected in 408 21.3-m bay seines, representing 23.6% of the overall SRS catch (Table 4.29). *Anchoa mitchilli* (n=33,347) and *Lagodon rhomboides* (n=18,835) were the most abundant taxa, accounting for 47.0% of the bay seine catch (Table 4.30). The taxa most frequently caught in 21.3-m bay seines were *Eucinostomus* spp. (53.9% occurrence), *Lagodon rhomboides* (50.5% occurrence), and *Eucinostomus gula* (49.8% occurrence).

A total of 7,345 animals from 27 selected taxa were collected, representing 6.6% of the entire 21.3-m bay seine catch (Table 4.31). *Leiostomus xanthurus* (n=3,252) was the most abundant selected taxon, accounting for 44.3% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m bay seines were *Farfantepenaeus duorarum* (27.0% occurrence), *Cynoscion nebulosus* (20.8% occurrence), and *Callinectes sapidus* (16.9% occurrence).

Table 4.30: Catch statistics for 10 dominant taxa collected in 408 21.3-m bay seine samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	33,347	30.0	13.7	57.95	19.93	697.19	6,217.14	34	0.05	18	62
Lagodon rhomboides	18,835	17.0	50.5	32.03	6.12	391.72	1,402.86	37	0.12	11	144
Eucinostomus spp.	17,740	16.0	53.9	31.06	4.36	283.84	928.57	26	0.05	11	39
Menidia spp.	8,931	8.0	15.4	15.64	10.51	1,357.37	4,205.71	46	0.07	16	84
Lucania parva	5,337	4.8	16.9	9.34	2.99	645.36	646.43	25	0.06	12	42
Eucinostomus gula	4,380	3.9	49.8	7.65	1.12	295.31	271.43	61	0.22	40	145
Leiostomus xanthurus	3,252	2.9	9.8	5.68	2.11	750.30	657.14	30	0.19	12	139
Harengula jaguana	2,850	2.6	10.8	4.99	2.30	931.71	818.57	61	0.25	22	123
Anchoa cubana	2,561	2.3	2.0	4.47	3.51	1,585.80	1,417.14	55	0.13	29	68
Bairdiella chrysoura	1,412	1.3	15.4	2.45	0.55	458.25	121.43	47	0.71	9	153
Subtotal	98,645	88.8	.	.	.	.	.	.	.	9	153
Total	**110,987**	**100.0**	**.**	**194.30**	**27.30**	**283.83**	**6,515.00**	**.**	**.**	**3**	**755**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.31: Catch statistics for selected taxa collected in 408 21.3-m bay seine samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	3,252	2.9	9.8	5.68	2.11	750.30	657.14	30	0.19	12	139
Farfantepenaeus duorarum	1,388	1.3	27.0	2.43	0.89	739.95	346.43	8	0.07	3	20
Brevoortia spp.	1,059	1.0	0.5	1.85	1.85	2,016.08	755.00	36	0.17	25	72
Cynoscion nebulosus	388	0.3	20.8	0.67	0.15	447.51	48.57	39	1.74	15	335
Mugil cephalus	384	0.3	4.4	0.67	0.37	1,111.54	126.43	26	0.58	15	170
Sciaenops ocellatus	351	0.3	9.6	0.61	0.24	781.19	69.29	55	2.56	14	444
Callinectes sapidus	142	0.1	16.9	0.25	0.05	394.32	12.14	56	3.97	8	184
Menticirrhus americanus	137	0.1	3.7	0.24	0.12	1,042.08	43.57	29	1.61	13	218
Paralichthys albigutta	60	0.1	8.3	0.11	0.02	453.69	5.00	56	5.16	15	195
Haemulon plumierii	31	<0.1	1.5	0.05	0.03	1,028.70	7.14	41	2.23	19	70
Mugil trichodon	30	<0.1	2.2	0.05	0.04	1,367.99	14.29	31	6.71	14	189
Lutjanus griseus	26	<0.1	3.2	0.05	0.02	697.21	4.29	88	9.65	19	179
Archosargus probatocephalus	25	<0.1	4.2	0.04	0.01	623.83	4.29	100	14.52	15	268
Menticirrhus saxatilis	20	<0.1	3.4	0.04	0.01	598.40	2.14	24	2.05	12	47
Elops saurus	12	<0.1	1.2	0.02	0.01	1,138.64	4.29	229	13.47	131	284
Trachinotus falcatus	12	<0.1	1.0	0.02	0.01	1,301.60	5.00	50	5.99	23	98
Caranx hippos	5	<0.1	0.7	0.01	0.01	1,337.75	2.14	60	24.69	31	158
Centropomus undecimalis	5	<0.1	1.0	0.01	<0.01	1,065.45	1.43	233	67.16	32	392
Lutjanus synagris	5	<0.1	1.2	0.01	<0.01	898.88	0.71	34	4.55	27	52
Cynoscion arenarius	4	<0.1	0.7	0.01	<0.01	1,234.40	1.43	24	2.60	21	32

Species	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Menippe spp.	2	<0.1	0.5	<0.01	<0.01	1,426.53	0.71	32	22.00	10	54
Mugil curema	2	<0.1	0.5	<0.01	<0.01	1,426.53	0.71	48	21.50	26	69
Argopecten irradians	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	26	.	26	26
Centropristis striata	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	55	.	55	55
Mycteroperca microlepis	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	259	.	259	259
Pogonias cromis	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	111	.	111	111
Sphyraena barracuda	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	309	.	309	309
Total	**7,345**	**6.6**	**.**	**12.86**	**3.07**	**481.54**	**795.71**	**.**	**.**	**3**	**444**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 65,920 animals were collected in 240 183-m haul seines, representing 14.0% of the overall SRS catch (Table 4.29). *Lagodon rhomboides* (n=23,588) was the most abundant taxon, accounting for 35.8% of the 183-m haul seine catch (Table 4.32). The taxa most frequently caught in 183-m haul seines were *Lagodon rhomboides* (67.5% occurrence), *Eucinostomus gula* (65.4% occurrence), and *Elops saurus* (48.3% occurrence).

A total of 9,588 animals from 37 selected taxa were collected, representing 14.5% of the entire 183-m haul seine catch (Table 4.33). *Elops saurus* (n=4,075) and *Leiostomus xanthurus* (n=682) were the most abundant selected taxa, accounting for 49.6% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Elops saurus* (48.3% occurrence), *Archosargus probatocephalus* (44.2% occurrence), and *Callinectes sapidus* (36.2% occurrence).

Table 4.32: Catch statistics for 10 dominant taxa collected in 240 183-m haul seine samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	23,588	35.8	67.5	97.88	13.23	209.80	1,919	108	0.17	30	212
Eucinostomus gula	11,701	17.8	65.4	48.75	9.92	315.06	1,455	106	0.16	47	160
Opisthonema oglinum	6,289	9.5	27.1	26.20	13.10	774.59	2,880	141	0.13	76	177
Harengula jaguana	6,024	9.1	33.8	25.10	9.94	613.38	2,238	108	0.13	79	186
Elops saurus	4,075	6.2	48.3	16.91	6.05	555.26	1,316	267	0.47	131	460
Ariopsis felis	1,979	3.0	42.5	8.25	1.37	257.25	141	272	1.00	102	527
Bairdiella chrysoura	1,797	2.7	23.8	7.46	2.17	452.27	320	132	0.38	50	178
Strongylura notata	756	1.1	34.6	3.15	1.46	715.84	344	355	0.97	235	443
Orthopristis chrysoptera	709	1.1	23.8	2.95	0.63	331.22	64	130	1.32	44	225
Leiostomus xanthurus	682	1.0	22.9	2.84	0.73	400.58	95	128	1.26	43	211
Subtotal	57,600	87.3	.	.	.	.	.	.	.	30	527
Total	**65,920**	**100.0**	**.**	**274.67**	**30.48**	**171.89**	**3,899**	**.**	**.**	**16**	**890**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.33: Catch statistics for selected taxa collected in 240 183-m haul seine samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Elops saurus	4,075	6.2	48.3	16.91	6.05	555.26	1,316	267	0.47	131	460
Leiostomus xanthurus	682	1.0	22.9	2.84	0.73	400.58	95	128	1.26	43	211
Mugil trichodon	682	1.0	22.5	2.84	1.13	618.56	194	189	1.27	102	291
Archosargus probatocephalus	695	1.1	44.2	2.83	0.64	352.88	130	171	2.54	44	387
Centropomus undecimalis	666	1.0	35.8	2.76	0.47	262.23	55	430	4.64	130	890
Mugil curema	500	0.8	17.5	2.08	1.35	1,006.40	321	250	1.74	100	333
Mugil cephalus	382	0.6	33.8	1.59	0.44	429.90	94	272	3.68	100	462
Sciaenops ocellatus	352	0.5	35.0	1.47	0.28	298.40	51	252	7.47	99	870
Callinectes sapidus	338	0.5	36.2	1.41	0.26	286.61	40	104	1.94	35	202
Cynoscion nebulosus	263	0.4	24.6	1.09	0.31	446.57	47	270	4.67	50	475
Brevoortia spp.	243	0.4	6.7	1.01	0.49	749.48	100	102	1.51	75	188
Paralichthys albigutta	115	0.2	21.2	0.48	0.09	288.24	15	166	6.67	65	412
Lutjanus griseus	100	0.2	9.6	0.42	0.17	634.47	36	159	3.43	88	255
Caranx hippos	91	0.1	8.3	0.38	0.14	587.13	24	193	5.56	84	382
Menticirrhus americanus	54	0.1	4.6	0.22	0.12	801.80	25	223	4.46	152	272
Sphyrna tiburo	51	0.1	10.0	0.21	0.06	471.73	13	556	14.84	280	725
Pogonias cromis	47	0.1	10.0	0.20	0.05	401.56	8	212	13.15	120	496
Trachinotus falcatus	44	0.1	2.9	0.18	0.11	924.06	24	126	3.35	54	168
Menticirrhus littoralis	39	0.1	2.1	0.16	0.11	1,065.63	24	214	6.78	150	292
Cynoscion arenarius	29	<0.1	1.7	0.12	0.09	1,167.31	21	172	2.21	156	196

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Sphyraena barracuda	28	<0.1	5.0	0.12	0.04	491.96	4	272	8.73	200	339
Centropristis striata	22	<0.1	0.8	0.09	0.09	1,480.16	21	113	3.70	92	173
Mycteroperca microlepis	22	<0.1	2.5	0.09	0.06	1,032.24	14	202	11.90	118	421
Haemulon plumierii	14	<0.1	2.5	0.06	0.03	761.69	5	98	8.77	59	194
Farfantepenaeus duorarum	8	<0.1	2.1	0.03	0.02	769.72	3	21	1.50	16	28
Lutjanus synagris	8	<0.1	1.2	0.03	0.03	1,192.02	6	92	2.86	76	102
Micropogonias undulatus	7	<0.1	2.1	0.03	0.01	793.32	3	173	6.65	152	193
Scomberomorus maculatus	7	<0.1	2.9	0.03	0.01	578.14	1	368	30.96	237	513
Caranx crysos	5	<0.1	1.2	0.02	0.01	1,024.88	3	181	7.28	157	202
Trachinotus carolinus	4	<0.1	1.2	0.02	0.01	945.37	2	278	23.86	216	325
Argopecten irradians	3	<0.1	0.8	0.01	0.01	1,152.77	2	31	7.88	22	47
Calamus penna	3	<0.1	0.4	0.01	0.01	1,549.19	3	154	2.60	149	158
Diplectrum formosum	3	<0.1	1.2	0.01	0.01	890.68	1	132	4.93	124	141
Carcharhinus limbatus	2	<0.1	0.8	0.01	0.01	1,093.15	1	404	16.50	387	420
Rachycentron canadum	2	<0.1	0.8	0.01	0.01	1,093.15	1	418	182.50	235	600
Menippe spp.	1	<0.1	0.4	<0.01	<0.01	1,549.19	1	28	.	28	28
Menticirrhus saxatilis	1	<0.1	0.4	<0.01	<0.01	1,549.19	1	122	.	122	122
Total	**9,588**	**14.5**	**.**	**39.95**	**7.00**	**271.30**	**1,389**	**.**	**.**	**16**	**890**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m Bay Otter Trawl

A total of 3,930 animals were collected in 60 6.1-m bay otter trawls, representing 0.8% of the overall SRS catch (Table 4.29). *Eucinostomus gula* (n=734), *Lagodon rhomboides* (n=732), *Prionotus scitulus* (n=349), and *Anchoa mitchilli* (n=321) were the most abundant taxa, accounting for 54.4% of the 6.1-m bay otter trawl catch (Table 4.34). The taxa most frequently caught in 6.1-m bay otter trawls were *Prionotus scitulus* (66.7% occurrence), *Farfantepenaeus duorarum* (48.3% occurrence), and *Eucinostomus gula* (45.0% occurrence).

A total of 556 animals from 15 selected taxa were collected, representing 14.1% of the entire 6.1-m bay otter trawl catch (Table 4.35). *Cynoscion arenarius* (n=184), *Callinectes sapidus* (n=159), and *Farfantepenaeus duorarum* (n=99) were the most abundant selected taxa, accounting for 79.5% of the selected taxa collected by this gear. The selected taxa most frequently caught in 6.1-m bay otter trawls were *Farfantepenaeus duorarum* (48.3% occurrence), *Callinectes sapidus* (33.3% occurrence), and *Paralichthys albigutta* (30.0% occurrence).

Table 4.34: Catch statistics for 10 dominant taxa collected in 60 6.1-m bay otter trawl samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Eucinostomus gula	734	18.7	45.0	0.83	0.26	245.10	12.48	80	0.35	40	115
Lagodon rhomboides	732	18.6	38.3	0.80	0.30	301.49	14.27	80	1.18	13	145
Prionotus scitulus	349	8.9	66.7	0.39	0.08	152.51	2.70	107	1.56	20	171
Anchoa mitchilli	321	8.2	10.0	0.37	0.22	469.10	12.78	34	0.71	20	65
Orthopristis chrysoptera	221	5.6	31.7	0.24	0.15	472.30	8.61	50	2.90	16	205
Cynoscion arenarius	184	4.7	13.3	0.21	0.12	450.42	6.41	30	2.72	10	194
Portunus spp.	161	4.1	33.3	0.19	0.08	311.64	3.98	43	0.67	15	59
Callinectes sapidus	159	4.0	33.3	0.18	0.05	233.36	2.27	77	2.61	12	168
Symphurus plagiusa	106	2.7	30.0	0.12	0.04	293.54	1.96	111	2.37	34	159
Farfantepenaeus duorarum	99	2.5	48.3	0.11	0.03	223.19	1.75	20	1.01	5	43
Subtotal	3,066	78.0	.	.	.	.	.	.	.	5	205
Total	**3,930**	**100.0**	**.**	**4.48**	**0.65**	**111.88**	**18.82**	**.**	**.**	**5**	**436**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.35: Catch statistics for selected taxa collected in 60 6.1-m bay otter trawl samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Cynoscion arenarius	184	4.7	13.3	0.21	0.12	450.42	6.41	30	2.72	10	194
Callinectes sapidus	159	4.0	33.3	0.18	0.05	233.36	2.27	77	2.61	12	168
Farfantepenaeus duorarum	99	2.5	48.3	0.11	0.03	223.19	1.75	20	1.01	5	43
Menippe spp.	33	0.8	21.7	0.04	0.01	228.87	0.43	33	4.25	5	97
Paralichthys albigutta	31	0.8	30.0	0.04	0.01	227.37	0.47	162	11.80	50	286
Menticirrhus americanus	16	0.4	8.3	0.02	0.01	495.44	0.64	55	19.54	9	230
Diplectrum formosum	13	0.3	11.7	0.01	0.01	358.36	0.34	120	5.64	74	151
Leiostomus xanthurus	10	0.3	8.3	0.01	0.01	391.02	0.28	115	9.31	65	154
Cynoscion nebulosus	4	0.1	6.7	<0.01	<0.01	377.58	0.07	87	35.14	21	155
Micropogonias undulatus	2	0.1	1.7	<0.01	<0.01	774.60	0.13	34	0.50	34	35
Archosargus probatocephalus	1	<0.1	1.7	<0.01	<0.01	774.60	0.07	76	.	76	76
Argopecten irradians	1	<0.1	1.7	<0.01	<0.01	774.60	0.07	40	.	40	40
Lutjanus griseus	1	<0.1	1.7	<0.01	<0.01	774.60	0.07	65	.	65	65
Lutjanus synagris	1	<0.1	1.7	<0.01	<0.01	774.60	0.07	91	.	91	91
Menticirrhus saxatilis	1	<0.1	1.7	<0.01	<0.01	774.60	0.07	28	.	28	28
Total	**556**	**14.1**	**.**	**0.63**	**0.15**	**181.23**	**7.02**	**.**	**.**	**5**	**286**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

River Sampling

21.3-m River Seine

A total of 281,678 animals were collected in 324 21.3-m river seines, representing 59.9% of the overall SRS catch (Table 4.29). *Anchoa mitchilli* (n=239,750) was the most abundant taxon collected, accounting for 85.1% of the 21.3-m river seine catch (Table 4.36). *Eucinostomus* spp. (n=12,029) and *Menidia* spp. (n=10,515) were the next most abundant taxa, accounting for an additional 8.0% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Eucinostomus* spp. (79.9% occurrence), *Menidia* spp. (66.7% occurrence), and *Eucinostomus harengulus* (64.2% occurrence).

A total of 4,427 animals from 18 selected taxa were collected, representing 1.6% of the entire 21.3-m river seine catch (Table 4.37). *Leiostomus xanthurus* (n=1,638), and *Brevoortia* spp. (n=1,345) were the most abundant selected taxa, accounting for 67.4% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines were *Centropomus undecimalis* (26.9% occurrence), *Farfantepenaeus duorarum* (24.1% occurrence), and *Sciaenops ocellatus* (21.3% occurrence).

Table 4.36: Catch statistics for 10 dominant taxa collected in 324 21.3-m river seine samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	239,750	85.1	47.2	1,078.21	407.85	684.03	96,376.47	30	0.01	15	54
Eucinostomus spp.	12,029	4.3	79.9	54.10	6.63	221.51	1,370.59	28	0.06	9	40
Menidia spp.	10,515	3.7	66.7	47.58	6.85	259.46	1,160.29	38	0.09	13	82
Eucinostomus gula	4,418	1.6	38.9	19.99	5.01	452.13	966.18	57	0.17	40	151
Eucinostomus harengulus	2,829	1.0	64.2	12.84	1.90	266.11	413.24	55	0.19	40	99
Lagodon rhomboides	2,673	0.9	41.0	12.13	4.23	627.17	1,014.71	24	0.26	12	117
Leiostomus xanthurus	1,638	0.6	8.0	7.43	3.46	837.68	977.94	27	0.24	12	117
Brevoortia spp.	1,345	0.5	4.6	6.10	4.02	1,185.83	1,088.24	29	0.22	17	60
Microgobius gulosus	708	0.3	44.1	3.21	0.43	242.70	92.65	26	0.23	10	48
Eugerres plumieri	712	0.3	39.5	3.20	0.46	261.29	69.12	55	1.53	10	212
Subtotal	276,617	98.3	.	.	.	.	.	.	.	9	212
Total	**281,678**	**100.0**	**.**	**1,278.49**	**416.20**	**585.98**	**97,622.06**	**.**	**.**	**2**	**680**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.37: Catch statistics for selected taxa collected in 324 21.3-m river seine samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Leiostomus xanthurus	1,638	0.6	8.0	7.43	3.46	837.68	977.94	27	0.24	12	117
Brevoortia spp.	1,345	0.5	4.6	6.10	4.02	1,185.83	1,088.24	29	0.22	17	60
Cynoscion nebulosus	312	0.1	9.3	1.42	1.16	1,477.49	376.47	33	0.95	11	158
Centropomus undecimalis	239	0.1	26.9	1.06	0.30	508.59	94.12	131	7.68	21	680
Sciaenops ocellatus	215	0.1	21.3	0.98	0.17	316.45	27.94	60	6.74	12	635
Farfantepenaeus duorarum	185	0.1	24.1	0.84	0.11	239.37	14.71	6	0.19	2	16
Callinectes sapidus	124	<0.1	18.2	0.56	0.09	290.24	11.76	34	3.16	7	167
Mugil cephalus	121	<0.1	5.2	0.55	0.28	919.62	79.41	61	5.91	21	382
Cynoscion arenarius	96	<0.1	7.1	0.44	0.14	595.49	29.41	37	1.76	12	80
Elops saurus	85	<0.1	6.8	0.39	0.15	710.02	39.71	68	4.77	15	254
Archosargus probatocephalus	33	<0.1	8.3	0.15	0.03	353.10	4.41	136	13.56	55	362
Lutjanus griseus	11	<0.1	2.5	0.05	0.02	707.32	4.41	119	12.79	36	196
Menticirrhus americanus	7	<0.1	1.2	0.03	0.02	1,118.12	5.88	29	7.64	16	73
Mugil trichodon	6	<0.1	1.2	0.03	0.01	944.86	2.94	39	7.55	17	68
Mugil curema	5	<0.1	1.2	0.02	0.01	948.67	2.94	36	8.62	23	69
Paralichthys albigutta	3	<0.1	0.6	0.01	0.01	1,339.98	2.94	143	61.00	21	205
Caranx hippos	1	<0.1	0.3	<0.01	<0.01	1,800.00	1.47	37	.	37	37
Pogonias cromis	1	<0.1	0.3	<0.01	<0.01	1,800.00	1.47	82	.	82	82
Total	**4,427**	**1.6**	**.**	**20.09**	**5.48**	**490.94**	**1,097.06**	**.**	**.**	**2**	**680**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m River Otter Trawl

A total of 7,591 animals were collected in 84 6.1-m river otter trawls, representing 1.6% of the overall SRS catch (Table 4.29). *Anchoa mitchilli* (n=4,920) was the most abundant taxon collected, accounting for 64.8% of the 6.1-m river otter trawl catch (Table 4.38). The taxa most frequently caught in 6.1-m river otter trawls were *Callinectes sapidus* (69.0% occurrence), *Eucinostomus harengulus* (35.7% occurrence), and *Ariopsis felis* (33.3% occurrence).

A total of 547 animals from 15 selected taxa were collected, representing 7.2% of the entire 6.1-m river otter trawl catch (Table 4.39). *Callinectes sapidus* (n=263), *Archosargus probatocephalus* (n=78), and *Farfantepenaeus duorarum* (n=76) were the most abundant selected taxa, accounting for 76.2% of the selected taxa collected by this gear. The selected taxa most frequently caught in the 6.1-m river otter trawls were *Callinectes sapidus* (69.0% occurrence), *Archosargus probatocephalus* (29.8% occurrence), and *Farfantepenaeus duorarum* (25.0% occurrence).

Table 4.38: Catch statistics for 10 dominant taxa collected in 84 6.1-m river otter trawl samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	4,920	64.8	28.6	8.15	5.08	575.26	415.54	27	0.08	16	54
Eucinostomus gula	519	6.8	32.1	0.86	0.31	326.93	22.13	81	0.55	40	129
Ariopsis felis	268	3.5	33.3	0.43	0.29	622.89	24.28	155	3.17	23	356
Callinectes sapidus	263	3.5	69.0	0.43	0.06	132.53	2.97	109	2.76	8	192
Eucinostomus spp.	225	3.0	23.8	0.38	0.10	241.85	4.45	25	0.46	11	39
Eugerres plumieri	200	2.6	14.3	0.34	0.19	530.44	15.52	78	1.77	27	148
Anchoa hepsetus	198	2.6	2.4	0.31	0.28	821.48	23.75	29	0.21	25	47
Trinectes maculatus	183	2.4	32.1	0.31	0.11	313.84	7.15	40	1.27	8	75
Microgobius gulosus	155	2.0	22.6	0.26	0.10	340.07	6.00	17	0.49	10	41
Eucinostomus harengulus	132	1.7	35.7	0.22	0.05	220.45	3.10	74	1.78	40	122
Subtotal	7,063	92.9	.	.	.	.	.	.	.	8	356
Total	**7,591**	**100.0**	**.**	**12.67**	**5.55**	**401.68**	**452.91**	**.**	**.**	**3**	**409**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.39: Catch statistics for selected taxa collected in 84 6.1-m river otter trawl samples during Tampa Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Callinectes sapidus	263	3.5	69.0	0.43	0.06	132.53	2.97	109	2.76	8	192
Archosargus probatocephalus	78	1.0	29.8	0.13	0.04	266.47	1.89	95	2.13	56	160
Farfantepenaeus duorarum	76	1.0	25.0	0.12	0.04	265.57	2.02	10	0.50	3	27
Cynoscion arenarius	51	0.7	15.5	0.09	0.04	390.22	2.19	37	3.19	12	105
Menticirrhus americanus	23	0.3	15.5	0.04	0.01	303.21	0.84	64	15.87	11	242
Cynoscion nebulosus	15	0.2	14.3	0.03	0.01	294.64	0.51	61	16.23	14	195
Leiostomus xanthurus	13	0.2	3.6	0.02	0.02	719.76	1.35	99	2.42	88	112
Lutjanus griseus	10	0.1	9.5	0.02	0.01	331.04	0.27	94	6.45	65	128
Elops saurus	5	0.1	2.4	0.01	0.01	657.22	0.40	167	53.22	37	273
Paralichthys albigutta	4	0.1	4.8	0.01	<0.01	450.55	0.15	206	21.56	164	248
Pogonias cromis	3	<0.1	3.6	0.01	<0.01	523.54	0.17	218	24.36	171	252
Centropomus undecimalis	3	<0.1	2.4	<0.01	<0.01	679.83	0.27	126	12.14	106	148
Caranx hippos	1	<0.1	1.2	<0.01	<0.01	916.52	0.13	50	.	50	50
Lutjanus synagris	1	<0.1	1.2	<0.01	<0.01	916.52	0.15	105	.	105	105
Sciaenops ocellatus	1	<0.1	1.2	<0.01	<0.01	916.52	0.13	115	.	115	115
Total	**547**	**7.2**	**.**	**0.90**	**0.11**	**110.83**	**4.59**	**.**	**.**	**3**	**273**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.6 Sarasota Bay

Sarasota Bay, located on the southwest coast of Florida, is a coastal lagoon that extends from Anna Maria Sound south to Venice Inlet. The bay comprises five embayments (Palma Sola, Sarasota, Little Sarasota, Roberts, and Blackburn Bays), which were formed behind a barrier island complex. This system is connected to the Gulf through six inlets: Anna Maria Sound, Longboat Pass, New Pass, Big Sarasota Pass, Venice Inlet, and Midnight Pass. Freshwater inflow enters the estuary through a series of creeks, bayous, and unnamed drainage ditches (Roat and McKeon 2010). Shoreline vegetation consists largely of mangroves and marsh grasses, and bottom substrates are typically characterized as sand, mud, oysters, or a combination thereof (Flannery 1989). Seagrass meadows are the dominant, submerged vegetative cover in Sarasota Bay and are widely distributed throughout the estuary (Haddad 1989).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Sarasota Bay since 2009. The area sampled was divided into zones representing the five embayments designated by the Sarasota Bay Estuary Program (Zone A - Palma Sola Bay, Zone B - Sarasota Bay proper, Zone C - Roberts Bay, Zone D - Little Sarasota Bay, and Zone E - Blackburn Bay; Figure 4.6). Bi-monthly stratified-random sampling (SRS) was conducted in Zones A-E using 21.3-m bay seines and 183-m haul seines. All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in Sarasota Bay.

Stratified-Random Sampling

A total of 69,819 animals, which included 87 taxa of fishes and four taxa of selected invertebrates, were collected from 156 Sarasota Bay SRS samples in 2025 (Table 4.40, Table A.16, Table A.17, Table A.18). *Lagodon rhomboides* (n=22,581) was the most numerous taxon collected, representing 32.3% of the total catch. *Eucinostomus* spp. (n=18,033) and *Anchoa mitchilli* (n=13,920) were the next most abundant taxa collected, accounting for an additional 45.8% of the total catch. A total of 25 Selected Taxa (n=3,364 animals) composed 4.8% of the total catch. *Farfantepenaeus duorarum* (n=1,219) was the most abundant selected taxon, representing 1.7% of the total catch. *Leiostomus xanthurus* (n=381), *Archosargus probatocephalus* (n=348), *Centropomus undecimalis* (n=301), and *Mugil trichodon* (n=258) were the next most abundant Selected Taxa, comprising 1.8% of the total catch. Collections in 2025 included zero species new to the Sarasota Bay FIM collection.

Figure 4.6: Map of Sarasota Bay sampling area. Zones are labeled A-E.

Table 4.40: Summary of catch and effort data for Sarasota Bay stratified-random sampling, 2025.

Zone	21.3-m bay seine		183-m haul seine		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals
A	18	4,848	6	2,177	24	7,025
B	36	21,862	12	3,526	48	25,388
C	24	15,486	6	1,221	30	16,707
D	18	10,458	6	1,515	24	11,973
E	24	8,348	6	378	30	8,726
Total	**120**	**61,002**	**36**	**8,817**	**156**	**69,819**

Bay Sampling

21.3-m Bay Seine

A total of 61,002 animals were collected in 120 21.3-m bay seines, representing 87.4% of the overall SRS catch (Table 4.40). *Eucinostomus* spp. (n=18,033) and *Lagodon rhomboides* (n=16,119) were the most abundant taxa, accounting for 56.0% of the bay seine catch (Table 4.41). The taxa most frequently caught in 21.3-m bay seines were *Eucinostomus* spp. (74.2% occurrence), *Lagodon rhomboides* (72.5% occurrence), and *Farfantepenaeus duorarum* (62.5% occurrence).

A total of 2,113 animals from 20 Selected Taxa were collected, representing 3.5% of the entire 21.3-m bay seine catch (Table 4.42). *Farfantepenaeus duorarum* (n=1,215) was the most abundant selected taxon, accounting for 57.5% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 21.3-m bay seines were *Eucinostomus* spp. (74.2% occurrence), *Lagodon rhomboides* (72.5% occurrence), and *Farfantepenaeus duorarum* (62.5% occurrence).

Table 4.41: Catch statistics for 10 dominant taxa collected in 120 21.3-m bay seine samples during Sarasota Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Eucinostomus spp.	18,033	29.6	74.2	106.45	18.83	194.58	1,333.57	26	0.05	12	39
Lagodon rhomboides	16,119	26.4	72.5	95.95	23.31	266.11	1,569.29	33	0.10	14	192
Anchoa mitchilli	13,919	22.8	11.7	82.17	64.56	864.31	7,748.57	31	0.03	19	59
Lucania parva	5,505	9.0	29.2	32.50	9.53	322.46	782.14	26	0.05	12	38
Farfantepenaeus duorarum	1,215	2.0	62.5	7.23	2.16	327.44	233.57	9	0.08	3	21
Eucinostomus gula	1,112	1.8	58.3	6.62	1.05	173.78	72.86	53	0.30	40	84
Menidia spp.	889	1.5	18.3	5.29	2.04	423.08	153.57	45	0.23	21	82
Orthopristis chrysoptera	843	1.4	20.0	5.02	2.60	567.84	272.86	37	0.52	15	107
Microgobius gulosus	629	1.0	38.3	3.74	1.37	400.48	112.14	30	0.24	17	53
Harengula jaguana	601	1.0	15.8	3.58	1.97	601.72	229.29	47	0.47	24	123
Subtotal	58,865	96.5	.	.	.	.	.	.	.	3	192
Total	**61,002**	**100.0**	**.**	**363.11**	**74.62**	**225.11**	**8,192.14**	**.**	**.**	**3**	**396**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.42: Catch statistics for Selected Taxa collected in 120 21.3-m bay seine samples during Sarasota Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Farfantepenaeus duorarum	1,215	2.0	62.5	7.23	2.16	327.44	233.57	9	0.08	3	21
Leiostomus xanthurus	358	0.6	12.5	2.13	1.04	534.96	100.00	33	0.66	20	85
Mugil trichodon	195	0.3	1.7	1.16	1.13	1,067.49	135.71	50	1.52	28	251
Cynoscion nebulosus	90	0.1	20.0	0.54	0.14	279.39	7.14	43	2.11	22	152
Lutjanus griseus	84	0.1	15.0	0.50	0.19	424.59	15.00	51	5.09	14	211
Callinectes sapidus	75	0.1	20.8	0.45	0.12	300.63	8.57	48	4.21	9	143
Haemulon plumierii	25	<0.1	1.7	0.15	0.14	1,052.17	17.14	42	1.67	16	64
Paralichthys albigutta	20	<0.1	11.7	0.12	0.04	350.75	3.57	50	4.13	18	86
Sciaenops ocellatus	17	<0.1	3.3	0.10	0.07	756.26	7.86	48	12.83	17	234
Archosargus probatocephalus	14	<0.1	6.7	0.08	0.03	462.62	3.57	96	22.47	28	298
Mugil cephalus	4	<0.1	2.5	0.02	0.01	666.11	1.43	185	94.51	21	365
Sphyraena barracuda	4	<0.1	3.3	0.02	0.01	540.77	0.71	121	48.33	40	241
Menticirrhus saxatilis	3	<0.1	1.7	0.02	0.01	813.75	1.43	26	3.06	22	32
Calamus spp.	2	<0.1	1.7	0.01	0.01	771.34	0.71	29	10.00	19	39
Centropomus undecimalis	2	<0.1	1.7	0.01	0.01	771.34	0.71	252	133.50	118	385
Brevoortia spp.	1	<0.1	0.8	0.01	0.01	1,095.45	0.71	23	.	23	23
Calamus penna	1	<0.1	0.8	0.01	0.01	1,095.45	0.71	45	.	45	45
Lutjanus synagris	1	<0.1	0.8	0.01	0.01	1,095.45	0.71	38	.	38	38
Mycteroperca microlepis	1	<0.1	0.8	0.01	0.01	1,095.45	0.71	127	.	127	127
Pogonias cromis	1	<0.1	0.8	0.01	0.01	1,095.45	0.71	194	.	194	194

Species	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Total	**2,113**	**3.5**	**.**	**12.58**	**2.68**	**233.64**	**242.14**	**.**	**.**	**3**	**385**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 8,817 animals were collected in 36 183-m haul seines, representing 12.6% of the overall SRS catch (Table 4.40). *Lagodon rhomboides* (n=6,462) was the most abundant taxon, accounting for 73.3% of the 183-m haul seine catch (Table 4.43). The taxa most frequently caught in 183-m haul seines were *Archosargus probatocephalus* (88.9% occurrence), *Lagodon rhomboides* (80.6% occurrence), and *Centropomus undecimalis* (72.2% occurrence).

A total of 1,251 animals from 20 Selected Taxa were collected, representing 14.2% of the entire 183-m haul seine catch (Table 4.44). *Archosargus probatocephalus* (n=334) and *Centropomus undecimalis* (n=299) were the most abundant Selected Taxa, accounting for 50.6% of the Selected Taxa collected by this gear. The Selected Taxa most frequently caught in 183-m haul seines were *Archosargus probatocephalus* (88.9% occurrence), *Centropomus undecimalis* (72.2% occurrence), and *Callinectes sapidus* (47.2% occurrence).

Table 4.43: Catch statistics for 10 dominant taxa collected in 36 183-m haul seine samples during Sarasota Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	6,462	73.3	80.6	179.50	42.72	142.79	816	112	0.42	57	199
Archosargus probatocephalus	334	3.8	88.9	8.56	1.58	115.52	35	218	3.20	78	374
Centropomus undecimalis	299	3.4	72.2	8.08	2.03	152.77	47	406	6.27	145	829
Orthopristis chrysoptera	240	2.7	44.4	6.67	2.51	225.98	60	109	1.48	78	230
Ariopsis felis	171	1.9	61.1	4.75	1.38	173.78	34	282	3.13	172	380
Eucinostomus gula	160	1.8	38.9	4.44	1.94	262.09	54	83	1.43	53	190
Strongylura notata	156	1.8	55.6	4.33	1.32	182.29	37	352	2.25	232	414
Lutjanus griseus	102	1.2	41.7	2.83	0.92	194.51	24	162	3.37	90	251
Callinectes sapidus	90	1.0	47.2	2.50	0.80	190.88	22	102	3.29	37	196
Diapterus auratus	71	0.8	25.0	1.97	0.70	214.26	15	200	4.79	99	298
Subtotal	8,085	91.7	.	.	.	.	.	.	.	37	829
Total	**8,817**	**100.0**	**.**	**244.92**	**47.52**	**116.42**	**952**	**.**	**.**	**9**	**966**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.44: Catch statistics for Selected Taxa collected in 36 183-m haul seine samples during Sarasota Bay stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Archosargus probatocephalus	334	3.8	88.9	8.56	1.58	115.52	35	218	3.20	78	374
Centropomus undecimalis	299	3.4	72.2	8.08	2.03	152.77	47	406	6.27	145	829
Lutjanus griseus	102	1.2	41.7	2.83	0.92	194.51	24	162	3.37	90	251
Callinectes sapidus	90	1.0	47.2	2.50	0.80	190.88	22	102	3.29	37	196
Mugil trichodon	63	0.7	36.1	1.75	0.63	215.71	17	195	5.03	135	321
Mugil cephalus	60	0.7	44.4	1.67	0.61	220.80	19	292	7.74	108	414
Mugil curema	49	0.6	27.8	1.36	0.59	259.99	17	180	6.41	109	264
Elops saurus	47	0.5	30.6	1.31	0.46	210.22	12	272	6.12	185	405
Cynoscion nebulosus	46	0.5	41.7	1.28	0.40	187.65	11	227	14.95	79	446
Sciaenops ocellatus	45	0.5	33.3	1.25	0.47	225.77	14	461	18.05	108	705
Leiostomus xanthurus	23	0.3	5.6	0.64	0.50	466.05	17	114	2.80	93	142
Paralichthys albigutta	20	0.2	36.1	0.56	0.14	151.79	3	210	20.27	63	325
Sphyraena barracuda	20	0.2	27.8	0.56	0.22	237.41	7	265	16.61	120	452
Mycteroperca microlepis	12	0.1	16.7	0.33	0.15	268.33	4	216	13.96	123	321
Caranx hippos	11	0.1	16.7	0.31	0.12	245.15	3	186	26.96	86	356
Trachinotus falcatus	11	0.1	8.3	0.31	0.23	448.18	8	159	36.67	56	372
Pogonias cromis	8	0.1	8.3	0.22	0.15	404.09	5	292	27.11	177	350
Brevoortia spp.	4	<0.1	2.8	0.11	0.11	600.00	4	90	1.89	85	93
Farfantepenaeus duorarum	4	<0.1	5.6	0.11	0.09	470.26	3	12	1.04	9	14
Trachinotus carolinus	3	<0.1	2.8	0.08	0.08	600.00	3	352	4.41	345	360

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Total	**1,251**	**14.2**	**.**	**34.75**	**4.23**	**73.11**	**104**	**.**	**.**	**9**	**829**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.7 Charlotte Harbor

Charlotte Harbor is a drowned river estuary located on the southwestern coast of Florida (Charlotte Harbor National Estuary program 2000). The bay is connected to the Gulf by passes at Boca Grande, San Carlos, and several smaller inlets. Freshwater inflow principally comes from the Peace, Caloosahatchee, and Myakka rivers. Shoreline vegetation consists largely of fringing mangroves, and seagrasses are the dominant bottom vegetation in shallow waters.

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Charlotte Harbor since 1989. The area sampled was divided into four geographically-defined bay zones (A–D) and three riverine zones (K, M, and P; Figure 4.7). Stratified-random sampling (SRS) was conducted in Zones A–D monthly using 21.3-m bay seines and 183-m haul seines and quarterly using 6.1-m bay otter trawls. SRS was conducted in Zones M and P in every month except March, May, and July with 21.3-m river seines and quarterly with 6.1-m river otter trawls. SRS was conducted in every month except March, May, and July in Zone K with 21.3-m river seines (starting in 2016). Beginning in 2016, tidal creeks in Zones A, B, and C were sampled monthly using 21.3-m river seines. All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in Charlotte Harbor.

Stratified-Random Sampling

A total of 319,476 animals, which included 139 taxa of fishes and 10 taxa of selected invertebrates, were collected from 1,122 Charlotte Harbor SRS samples in 2025 (Table 4.45, Table A.19, Table A.20, Table A.21). *Anchoa mitchilli* (n=146,077) was the most numerous taxon collected, representing 45.7% of the total catch. *Eucinostomus* spp. (n=50,787) and *Lagodon rhomboides* (n=31,802) were the next most abundant taxa collected, accounting for an additional 25.9% of the total catch. A total of 43 selected taxa (n=11,627 animals) composed 3.6% of the total catch. *Farfantepenaeus duorarum* (n=2,471) was the most abundant selected taxon, representing 0.8% of the total catch. *Mugil trichodon* (n=1,970), *Sciaenops ocellatus* (n=1,091), *Callinectes sapidus* (n=991), and *Centropomus undecimalis* (n=991) were the next most abundant selected taxa, comprising 1.6% of the total catch. Collections in 2025 included zero species new to the Charlotte Harbor FIM collection.

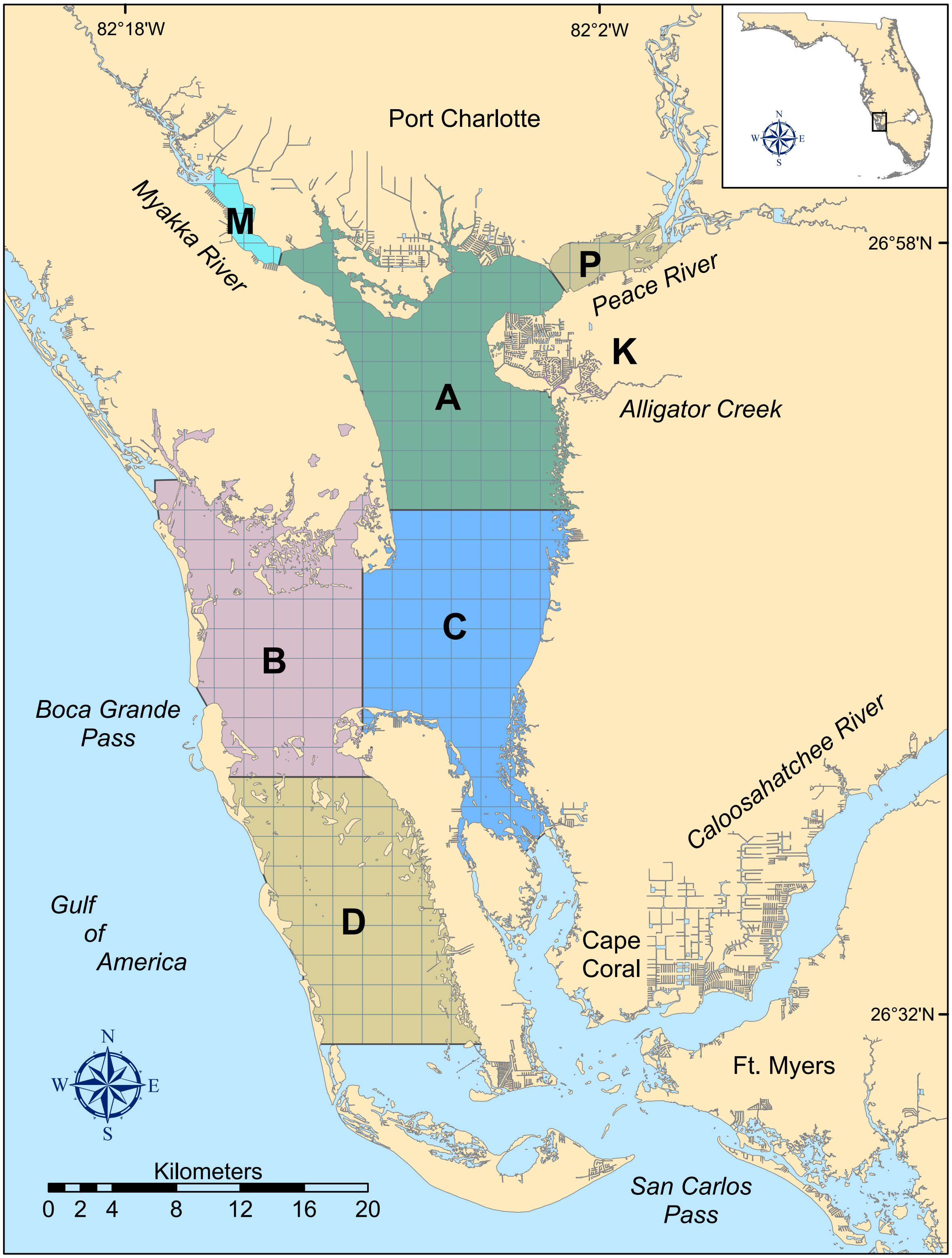

Figure 4.7: Map of Charlotte Harbor sampling area. Zones are labeled A–D (bay zones) and K, M, and P (riverine zones).

Table 4.45: Summary of catch and effort data for Charlotte Harbor stratified-random sampling, 2025.

Zone	21.3-m bay seine		21.3-m river seine		183-m haul seine		6.1-m otter trawl		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
A	120	37,167	90	15,261	60	1,697	28	1,736	298	55,861
B	96	20,851	90	38,244	48	10,467	24	3,354	258	72,916
C	96	21,419	90	29,570	48	3,579	24	2,292	258	56,860
D	96	37,725	.	.	48	13,469	20	1,843	164	53,037
K	.	.	36	9,717	.	.	.	.	36	9,717
M	.	.	36	16,590	.	.	18	46,119	54	62,709
P	.	.	36	6,708	.	.	18	1,668	54	8,376
Total	**408**	**117,162**	**378**	**116,090**	**204**	**29,212**	**132**	**57,012**	**1,122**	**319,476**

Bay Sampling

21.3-m Bay Seine

A total of 117,162 animals were collected in 408 21.3-m bay seines, representing 36.7% of the overall SRS catch (Table 4.45). *Anchoa mitchilli* (n=33,464) and *Eucinostomus* spp. (n=24,810) were the most abundant taxa, accounting for 49.7% of the bay seine catch (Table 4.46). The taxa most frequently caught in 21.3-m bay seines were *Eucinostomus* spp. (72.1% occurrence), *Eucinostomus gula* (47.8% occurrence), and *Lagodon rhomboides* (44.6% occurrence).

A total of 3,185 animals from 29 selected taxa were collected, representing 2.7% of the entire 21.3-m bay seine catch (Table 4.47). *Farfantepenaeus duorarum* (n=1,806) was the most abundant selected taxon, accounting for 56.7% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m bay seines were *Farfantepenaeus duorarum* (41.2% occurrence), *Cynoscion nebulosus* (19.4% occurrence), and *Callinectes sapidus* (18.9% occurrence).

Table 4.46: Catch statistics for 10 dominant taxa collected in 408 21.3-m bay seine samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	33,464	28.6	12.3	58.30	39.76	1,380.91	15,908.57	45	0.04	15	69
Eucinostomus spp.	24,810	21.2	72.1	43.33	3.92	183.01	508.57	27	0.04	10	54
Harengula jaguana	21,541	18.4	3.4	37.62	31.95	1,717.75	12,960.00	36	0.06	29	84
Lagodon rhomboides	9,447	8.1	44.6	16.54	3.14	383.06	740.00	41	0.17	12	162
Lucania parva	5,489	4.7	20.6	9.61	1.86	390.36	344.29	26	0.05	12	38
Eucinostomus gula	4,259	3.6	47.8	7.42	0.79	215.99	163.57	53	0.15	40	98
Menidia spp.	3,044	2.6	11.8	5.33	2.48	941.80	905.00	40	0.17	13	78
Bairdiella chrysoura	2,370	2.0	22.1	4.14	1.02	495.97	252.86	51	0.40	11	123
Microgobius gulosus	2,137	1.8	42.6	3.73	0.58	312.00	140.71	28	0.13	11	47
Farfantepenaeus duorarum	1,806	1.5	41.2	3.15	0.61	390.65	184.29	7	0.07	3	23
Subtotal	108,367	92.5	.	.	.	.	.	.	.	3	162
Total	**117,162**	**100.0**	**.**	**205.12**	**51.95**	**511.59**	**16,070.71**	**.**	**.**	**3**	**650**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.47: Catch statistics for selected taxa collected in 408 21.3-m bay seine samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Farfantepenaeus duorarum	1,806	1.5	41.2	3.15	0.61	390.65	184.29	7	0.07	3	23
Sciaenops ocellatus	370	0.3	10.0	0.65	0.22	684.80	55.00	27	1.73	10	512
Cynoscion nebulosus	338	0.3	19.4	0.59	0.09	320.99	19.29	37	0.81	14	102
Mugil trichodon	148	0.1	2.9	0.26	0.16	1,258.66	57.14	21	1.58	10	198
Callinectes sapidus	141	0.1	18.9	0.25	0.04	298.21	7.86	48	3.77	6	170
Lutjanus griseus	79	0.1	9.8	0.14	0.03	407.75	6.43	61	4.70	13	231
Archosargus probatocephalus	71	0.1	9.8	0.12	0.02	380.71	5.00	83	8.11	15	294
Haemulon plumierii	39	<0.1	4.2	0.07	0.02	709.63	7.86	54	2.93	20	128
Brevoortia spp.	37	<0.1	0.7	0.06	0.04	1,340.70	14.29	45	3.63	23	82
Centropomus undecimalis	25	<0.1	2.7	0.04	0.02	739.07	5.00	278	34.62	42	650
Mugil cephalus	20	<0.1	2.5	0.04	0.02	985.69	6.43	80	23.20	16	319
Cynoscion arenarius	17	<0.1	1.0	0.03	0.02	1,226.49	6.43	21	1.13	12	31
Leiostomus xanthurus	16	<0.1	1.2	0.03	0.02	1,181.49	5.00	42	3.75	19	66
Menticirrhus americanus	14	<0.1	2.0	0.02	0.01	974.62	4.29	26	1.35	17	34
Trachinotus falcatus	12	<0.1	1.2	0.02	0.01	1,138.64	4.29	45	6.88	24	97
Calamus spp.	9	<0.1	1.7	0.02	0.01	803.99	1.43	23	1.76	18	29
Menticirrhus saxatilis	7	<0.1	1.0	0.01	0.01	1,255.35	2.86	23	3.69	14	43
Paralichthys albigutta	7	<0.1	1.5	0.01	0.01	860.93	1.43	87	22.13	22	172
Lutjanus synagris	5	<0.1	1.2	0.01	<0.01	898.88	0.71	64	10.36	26	83
Mugil curema	5	<0.1	0.7	0.01	0.01	1,337.75	2.14	72	22.19	38	151

Species	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Mycteroperca microlepis	4	<0.1	0.5	0.01	0.01	1,595.69	2.14	146	19.90	112	203
Sphyraena barracuda	4	<0.1	0.7	0.01	<0.01	1,234.40	1.43	65	16.71	38	114
Menippe spp.	3	<0.1	0.5	0.01	<0.01	1,504.06	1.43	25	10.14	7	42
Calamus penna	2	<0.1	0.5	<0.01	<0.01	1,426.53	0.71	42	7.00	35	49
Caranx hippos	2	<0.1	0.5	<0.01	<0.01	1,426.53	0.71	30	0.00	30	30
Albula spp.	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	59	.	59	59
Elops saurus	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	102	.	102	102
Lutjanus analis	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	123	.	123	123
Rachycentron canadum	1	<0.1	0.2	<0.01	<0.01	2,019.90	0.71	42	.	42	42
Total	**3,185**	**2.7**	**.**	**5.58**	**0.73**	**263.66**	**185.00**	**.**	**.**	**3**	**650**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 29,212 animals were collected in 204 183-m haul seines, representing 9.1% of the overall SRS catch (Table 4.45). *Lagodon rhomboides* (n=20,196) was the most abundant taxon, accounting for 69.1% of the 183-m haul seine catch (Table 4.48). The taxa most frequently caught in 183-m haul seines were *Lagodon rhomboides* (52.9% occurrence), *Archosargus probatocephalus* (51.0% occurrence), and *Centropomus undecimalis* (50.5% occurrence).

A total of 3,463 animals from 35 selected taxa were collected, representing 11.9% of the entire 183-m haul seine catch (Table 4.49). *Archosargus probatocephalus* (n=801) and *Centropomus undecimalis* (n=694) were the most abundant selected taxa, accounting for 43.2% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Archosargus probatocephalus* (51.0% occurrence), *Centropomus undecimalis* (50.5% occurrence), and *Callinectes sapidus* (33.3% occurrence).

Table 4.48: Catch statistics for 10 dominant taxa collected in 204 183-m haul seine samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	20,196	69.1	52.9	98.04	19.92	291.69	3,166	96	0.16	20	213
Eucinostomus gula	1,051	3.6	33.8	5.15	1.39	384.55	171	81	0.33	42	136
Archosargus probatocephalus	801	2.7	51.0	3.93	0.60	217.18	75	182	2.79	53	408
Centropomus undecimalis	694	2.4	50.5	3.40	0.44	186.26	34	422	4.32	141	854
Ariopsis felis	612	2.1	36.3	3.00	0.47	223.64	42	270	1.62	150	382
Opisthonema oglinum	582	2.0	9.8	2.85	1.67	836.23	316	138	0.75	81	168
Strongylura notata	487	1.7	49.0	2.39	0.45	266.63	59	342	1.31	139	434
Orthopristis chrysoptera	453	1.6	18.6	2.22	0.54	348.35	72	109	1.13	55	234
Eucinostomus harengulus	391	1.3	22.1	1.92	0.55	407.67	59	94	0.44	71	123
Callinectes sapidus	315	1.1	33.3	1.54	0.27	249.65	31	114	1.84	31	205
Subtotal	25,582	87.6	.	.	.	.	.	.	.	20	854
Total	**29,212**	**100.0**	**.**	**143.20**	**21.76**	**217.03**	**3,288**	**.**	**.**	**16**	**1,133**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.49: Catch statistics for selected taxa collected in 204 183-m haul seine samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Archosargus probatocephalus	801	2.7	51.0	3.93	0.60	217.18	75	182	2.79	53	408
Centropomus undecimalis	694	2.4	50.5	3.40	0.44	186.26	34	422	4.32	141	854
Callinectes sapidus	315	1.1	33.3	1.54	0.27	249.65	31	114	1.84	31	205
Elops saurus	274	0.9	21.1	1.34	0.52	549.45	86	273	2.51	205	430
Mugil trichodon	234	0.8	26.5	1.15	0.28	348.80	48	191	2.92	95	310
Lutjanus griseus	201	0.7	24.0	0.99	0.20	286.97	21	169	3.05	79	245
Mugil cephalus	193	0.7	24.0	0.95	0.18	266.08	14	277	5.28	105	420
Sciaenops ocellatus	139	0.5	24.0	0.68	0.14	286.63	16	442	7.39	146	678
Trachinotus falcatus	76	0.3	3.9	0.37	0.17	660.10	22	237	8.32	99	362
Paralichthys albigutta	74	0.3	18.6	0.36	0.08	316.25	13	214	7.05	89	352
Mugil curema	71	0.2	7.4	0.35	0.14	564.04	21	207	5.30	122	282
Brevoortia spp.	56	0.2	1.0	0.27	0.27	1,402.89	55	230	4.17	75	273
Cynoscion nebulosus	50	0.2	13.2	0.25	0.06	326.18	6	307	11.87	111	446
Sphyraena barracuda	46	0.2	8.8	0.23	0.07	424.08	7	321	8.84	198	450
Calamus penna	31	0.1	2.9	0.15	0.07	697.85	10	93	5.02	62	160
Lutjanus synagris	31	0.1	2.9	0.15	0.08	792.33	14	95	4.64	47	220
Mycteroperca microlepis	29	0.1	6.4	0.14	0.05	470.67	6	219	10.88	132	463
Caranx hippos	28	0.1	10.8	0.14	0.03	324.04	3	265	21.87	147	550
Sphyrna tiburo	27	0.1	4.9	0.13	0.07	778.34	14	487	31.13	320	866
Haemulon plumierii	23	0.1	2.9	0.11	0.06	705.42	8	83	3.20	56	136

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Trachinotus carolinus	15	0.1	2.5	0.07	0.04	820.55	6	350	6.97	303	395
Negaprion brevirostris	12	<0.1	2.0	0.06	0.04	918.77	7	765	33.06	625	946
Leiostomus xanthurus	9	<0.1	2.0	0.04	0.02	789.10	4	89	3.51	78	108
Pogonias cromis	8	<0.1	2.0	0.04	0.02	833.46	4	388	33.40	239	506
Farfantepenaeus duorarum	7	<0.1	3.4	0.03	0.01	531.80	1	21	1.82	16	28
Carcharhinus leucas	3	<0.1	1.5	0.01	0.01	820.55	1	725	103.98	518	843
Lutjanus analis	3	<0.1	1.5	0.01	0.01	820.55	1	151	23.95	105	185
Menippe spp.	3	<0.1	0.5	0.01	0.01	1,428.29	3	64	14.50	40	90
Menticirrhus americanus	3	<0.1	1.5	0.01	0.01	820.55	1	258	24.73	209	286
Cynoscion arenarius	2	<0.1	1.0	0.01	0.01	1,007.46	1	282	3.50	278	285
Epinephelus itajara	1	<0.1	0.5	<0.01	<0.01	1,428.29	1	186	.	186	186
Lutjanus jocu	1	<0.1	0.5	<0.01	<0.01	1,428.29	1	121	.	121	121
Megalops atlanticus	1	<0.1	0.5	<0.01	<0.01	1,428.29	1	600	.	600	600
Menticirrhus littoralis	1	<0.1	0.5	<0.01	<0.01	1,428.29	1	243	.	243	243
Scomberomorus maculatus	1	<0.1	0.5	<0.01	<0.01	1,428.29	1	195	.	195	195
Total	**3,463**	**11.9**	**.**	**16.98**	**1.31**	**110.44**	**106**	**.**	**.**	**16**	**946**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m Bay Otter Trawl

A total of 9,225 animals were collected in 96 6.1-m bay otter trawls, representing 2.9% of the overall SRS catch (Table 4.45). *Orthopristis chrysoptera* (n=1,638), *Anchoa mitchilli* (n=1,462), *Lagodon rhomboides* (n=1,339), and *Eucinostomus gula* (n=757) were the most abundant taxa, accounting for 56.3% of the 6.1-m bay otter trawl catch (Table 4.50). The taxa most frequently caught in 6.1-m bay otter trawls were *Prionotus scitulus* (60.4% occurrence), *Portunus* spp. (52.1% occurrence), and *Lagodon rhomboides* (45.8% occurrence).

A total of 714 animals from 15 selected taxa were collected, representing 7.7% of the entire 6.1-m bay otter trawl catch (Table 4.51). *Menticirrhus americanus* (n=184), *Callinectes sapidus* (n=152), and *Farfantepenaeus duorarum* (n=129) were the most abundant selected taxa, accounting for 65.1% of the selected taxa collected by this gear. The selected taxa most frequently caught in 6.1-m bay otter trawls were *Farfantepenaeus duorarum* (42.7% occurrence), *Menippe* spp. (27.1% occurrence), and *Callinectes sapidus* (26.0% occurrence).

Table 4.50: Catch statistics for 10 dominant taxa collected in 96 6.1-m bay otter trawl samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			**Density Estimate (animals/100m²)**				**Standard Length (mm)**			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Orthopristis chrysoptera	1,638	17.8	38.5	1.17	0.43	358.59	30.02	61	0.93	11	148
Anchoa mitchilli	1,462	15.8	16.7	1.03	0.78	740.76	74.34	28	0.27	18	68
Lagodon rhomboides	1,339	14.5	45.8	0.95	0.29	301.15	19.97	79	0.66	10	120
Eucinostomus gula	757	8.2	34.4	0.53	0.19	350.65	10.12	71	0.45	42	125
Eucinostomus spp.	707	7.7	35.4	0.49	0.24	487.15	22.61	23	0.25	10	39
Portunus spp.	435	4.7	52.1	0.33	0.09	266.39	7.06	39	0.55	12	72
Prionotus scitulus	325	3.5	60.4	0.23	0.04	174.56	3.17	90	1.71	22	163
Trinectes maculatus	255	2.8	27.1	0.18	0.07	376.47	4.92	67	0.76	41	122
Bairdiella chrysoura	204	2.2	15.6	0.14	0.07	474.91	4.72	94	2.62	14	162
Menticirrhus americanus	184	2.0	8.3	0.13	0.06	471.10	4.05	64	4.22	9	206
Subtotal	7,306	79.2	.	.	.	.	.	.	.	9	206
Total	**9,225**	**100.0**	**.**	**6.54**	**1.12**	**167.00**	**75.28**	**.**	**.**	**3**	**501**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.51: Catch statistics for selected taxa collected in 96 6.1-m bay otter trawl samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Menticirrhus americanus	184	2.0	8.3	0.13	0.06	471.10	4.05	64	4.22	9	206
Callinectes sapidus	152	1.6	26.0	0.11	0.04	337.32	2.36	89	2.81	13	160
Farfantepenaeus duorarum	129	1.4	42.7	0.09	0.02	173.86	0.74	15	0.55	4	39
Menippe spp.	102	1.1	27.1	0.07	0.02	241.52	0.81	27	2.10	4	106
Lutjanus synagris	62	0.7	24.0	0.04	0.01	254.10	0.67	94	3.40	18	146
Cynoscion arenarius	39	0.4	7.3	0.03	0.02	642.62	1.62	108	7.67	27	171
Paralichthys albigutta	22	0.2	14.6	0.02	<0.01	279.07	0.20	184	10.38	97	278
Haemulon plumierii	7	0.1	2.1	<0.01	<0.01	849.95	0.40	51	15.70	31	145
Cynoscion nebulosus	4	<0.1	2.1	<0.01	<0.01	772.15	0.20	112	55.51	20	252
Diplectrum formosum	3	<0.1	3.1	<0.01	<0.01	559.70	0.07	115	28.34	68	166
Lutjanus griseus	3	<0.1	3.1	<0.01	<0.01	559.70	0.07	122	27.02	68	151
Menticirrhus saxatilis	3	<0.1	3.1	<0.01	<0.01	559.70	0.07	167	60.14	66	274
Mycteroperca microlepis	2	<0.1	2.1	<0.01	<0.01	689.16	0.07	166	19.50	147	186
Centropristis striata	1	<0.1	1.0	<0.01	<0.01	979.80	0.07	174	.	174	174
Epinephelus morio	1	<0.1	1.0	<0.01	<0.01	979.80	0.07	107	.	107	107
Total	**714**	**7.7**	**.**	**0.50**	**0.09**	**176.91**	**6.07**	**.**	**.**	**4**	**278**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

River Sampling

Tidal Creeks

21.3-m River Seine

A total of 83,075 animals were collected in 270 21.3-m river seines in tidal creeks, representing 26.0% of the overall SRS catch (Table 4.45). *Anchoa mitchilli* (n=46,401) was the most abundant taxon collected, accounting for 55.9% of the 21.3-m river seine catch in tidal creeks (Table 4.52). *Eucinostomus* spp. (n=18,639) and *Menidia* spp. (n=3,160) were the next most abundant taxa, accounting for an additional 26.2% of the 21.3-m river seine catch in tidal creeks. The taxa most frequently caught in 21.3-m river seines in tidal creeks were *Eucinostomus* spp. (73.0% occurrence), *Eucinostomus harengulus* (58.5% occurrence), and *Microgobius gulosus* (47.8% occurrence).

A total of 3,014 animals from 18 selected taxa were collected, representing 3.6% of the entire 21.3-m river seine catch in tidal creeks (Table 4.53). *Mugil trichodon* (n=1,563) and *Sciaenops ocellatus* (n=359) were the most abundant selected taxa, accounting for 63.8% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines in tidal creeks were *Farfantepenaeus duorarum* (29.6% occurrence), *Centropomus undecimalis* (25.2% occurrence), and *Sciaenops ocellatus* (21.1% occurrence).

Table 4.52: Catch statistics for 10 dominant taxa collected in 270 21.3-m river seine samples in tidal creeks during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	46,401	55.9	28.5	250.87	54.96	361.32	7,058.82	30	0.03	14	58
Eucinostomus spp.	18,639	22.4	73.0	100.40	14.08	231.72	2,482.35	28	0.05	8	39
Menidia spp.	3,160	3.8	37.0	17.28	7.24	687.53	1,889.71	36	0.24	13	76
Lucania parva	2,224	2.7	20.0	12.16	5.21	702.30	1,167.65	25	0.09	10	38
Eucinostomus harengulus	2,205	2.7	58.5	12.05	1.38	188.37	141.18	54	0.23	40	99
Mugil trichodon	1,563	1.9	3.3	8.54	8.00	1,535.58	2,150.00	20	0.19	14	163
Poecilia latipinna	1,416	1.7	4.4	7.74	5.54	1,172.72	1,422.06	35	0.13	23	50
Eucinostomus gula	1,073	1.3	20.0	5.87	1.25	348.96	164.71	51	0.23	40	76
Eugerres plumieri	819	1.0	33.7	4.44	0.83	308.75	117.65	54	1.51	12	227
Microgobius gulosus	802	1.0	47.8	4.37	0.78	293.16	125.00	24	0.23	9	79
Subtotal	78,302	94.4	.	.	.	.	.	.	.	8	227
Total	**83,075**	**100.0**	**.**	**452.48**	**63.68**	**231.25**	**7,144.12**	**.**	**.**	**2**	**706**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.53: Catch statistics for selected taxa collected in 270 21.3-m river seine samples in tidal creeks during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Mugil trichodon	1,563	1.9	3.3	8.51	7.97	1,538.43	2,150.00	20	0.19	14	163
Sciaenops ocellatus	359	0.4	21.1	1.96	0.41	348.37	58.82	41	2.81	14	706
Farfantepenaeus duorarum	323	0.4	29.6	1.75	0.29	273.64	48.53	8	0.19	2	21
Centropomus undecimalis	221	0.3	25.2	1.20	0.24	323.67	44.12	224	7.88	18	462
Leiostomus xanthurus	192	0.2	3.3	1.05	0.91	1,426.22	244.12	19	0.48	14	56
Brevoortia spp.	146	0.2	1.9	0.80	0.58	1,205.00	145.59	23	0.20	19	31
Callinectes sapidus	70	0.1	14.4	0.38	0.09	370.97	17.65	36	5.01	8	171
Archosargus probatocephalus	51	0.1	11.1	0.28	0.05	324.99	5.88	154	10.79	26	347
Lutjanus griseus	28	<0.1	4.8	0.15	0.05	509.49	7.35	96	11.07	28	201
Cynoscion nebulosus	19	<0.1	4.1	0.10	0.04	691.32	10.29	40	6.11	19	137
Elops saurus	14	<0.1	3.3	0.08	0.03	636.21	5.88	137	28.81	20	304
Mugil cephalus	9	<0.1	3.0	0.05	0.02	598.32	2.94	225	42.89	25	444
Cynoscion arenarius	6	<0.1	1.9	0.03	0.02	769.54	2.94	26	2.51	18	34
Menticirrhus americanus	5	<0.1	1.1	0.03	0.02	982.64	2.94	27	4.35	14	38
Megalops atlanticus	3	<0.1	1.1	0.02	0.01	945.15	1.47	253	34.17	200	317
Paralichthys albigutta	2	<0.1	0.7	0.01	0.01	1,159.73	1.47	60	9.00	51	69
Sphyraena barracuda	2	<0.1	0.7	0.01	0.01	1,159.73	1.47	266	15.00	251	281
Trachinotus falcatus	1	<0.1	0.4	0.01	0.01	1,643.17	1.47	30	.	30	30
Total	**3,014**	**3.6**	**.**	**16.42**	**8.06**	**806.70**	**2,151.47**	**.**	**.**	**2**	**706**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Rivers

21.3-m River Seine

A total of 33,015 animals were collected in 108 21.3-m river seines, representing 10.3% of the overall SRS catch (Table 4.45). *Anchoa mitchilli* (n=18,145) was the most abundant taxon collected, accounting for 55.0% of the 21.3-m river seine catch (Table 4.54). *Eucinostomus* spp. (n=6,561) and *Anchoa hepsetus* (n=2,716) were the next most abundant taxa, accounting for an additional 28.1% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Eucinostomus* spp. (79.6% occurrence), *Eucinostomus harengulus* (69.4% occurrence), and *Menidia* spp. (62.0% occurrence).

A total of 814 animals from 15 selected taxa were collected, representing 2.5% of the entire 21.3-m river seine catch (Table 4.55). *Sciaenops ocellatus* (n=223), and *Brevoortia* spp. (n=178) were the most abundant selected taxa, accounting for 49.3% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines were *Farfantepenaeus duorarum* (33.3% occurrence), *Sciaenops ocellatus* (24.1% occurrence), and *Callinectes sapidus* (22.2% occurrence).

Table 4.54: Catch statistics for 10 dominant taxa collected in 108 21.3-m river seine samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	18,145	55.0	35.2	244.81	90.83	387.39	5,882.35	30	0.05	14	59
Eucinostomus spp.	6,561	19.9	79.6	88.52	15.44	182.12	948.53	26	0.09	9	39
Anchoa hepsetus	2,716	8.2	3.7	36.64	36.26	1,033.19	3,952.94	45	0.12	28	56
Menidia spp.	1,672	5.1	62.0	22.77	7.22	329.77	501.47	36	0.20	14	62
Eucinostomus harengulus	1,375	4.2	69.4	18.72	5.25	291.65	497.06	65	0.44	40	102
Opisthonema oglinum	292	0.9	0.9	3.94	3.15	834.83	329.41	30	0.28	24	60
Eugerres plumieri	289	0.9	26.9	3.94	1.71	451.40	167.65	36	2.11	11	213
Sciaenops ocellatus	223	0.7	24.1	3.01	1.33	460.52	123.53	45	1.29	15	241
Brevoortia spp.	178	0.5	4.6	2.40	1.53	665.02	152.94	23	0.33	15	57
Callinectes sapidus	146	0.4	22.2	1.99	0.59	306.30	36.76	24	1.90	6	168
Subtotal	31,597	95.8	.	.	.	.	.	.	.	6	241
Total	**33,015**	**100.0**	**.**	**449.55**	**115.51**	**267.03**	**7,902.94**	**.**	**.**	**3**	**474**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.55: Catch statistics for selected taxa collected in 108 21.3-m river seine samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Sciaenops ocellatus	223	0.7	24.1	3.01	1.33	460.52	123.53	45	1.29	15	241
Brevoortia spp.	178	0.5	4.6	2.40	1.53	665.02	152.94	23	0.33	15	57
Callinectes sapidus	146	0.4	22.2	1.99	0.59	306.30	36.76	24	1.90	6	168
Farfantepenaeus duorarum	92	0.3	33.3	1.25	0.23	187.73	11.76	7	0.25	3	14
Centropomus undecimalis	51	0.2	15.7	0.69	0.22	325.57	13.24	175	14.70	31	446
Menticirrhus americanus	27	0.1	4.6	0.37	0.23	663.32	23.53	38	2.40	20	62
Mugil trichodon	25	0.1	3.7	0.34	0.24	734.38	25.00	62	4.33	16	98
Lutjanus griseus	22	0.1	12.0	0.30	0.09	313.07	5.88	103	13.08	24	195
Cynoscion nebulosus	15	<0.1	4.6	0.20	0.12	626.12	11.76	38	4.88	16	73
Archosargus probatocephalus	13	<0.1	8.3	0.18	0.06	371.84	4.41	107	10.68	54	166
Cynoscion arenarius	9	<0.1	4.6	0.12	0.06	495.59	4.41	23	1.16	19	29
Mugil cephalus	7	<0.1	5.6	0.10	0.04	436.04	2.94	139	45.49	20	349
Menticirrhus saxatilis	3	<0.1	0.9	0.04	0.04	1,039.23	4.41	58	0.33	57	58
Elops saurus	2	<0.1	0.9	0.03	0.03	1,039.23	2.94	129	7.00	122	136
Leiostomus xanthurus	1	<0.1	0.9	0.01	0.01	1,039.23	1.47	94	.	94	94
Total	**814**	**2.5**	**.**	**11.08**	**2.22**	**208.01**	**167.65**	**.**	**.**	**3**	**446**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m River Otter Trawls

A total of 47,787 animals were collected in 36 6.1-m river otter trawls, representing 15.0% of the overall SRS catch (Table 4.45). *Anchoa mitchilli* (n=46,605) was the most abundant taxon collected, accounting for 97.5% of the 6.1-m river otter trawl catch (Table 4.56). The taxa most frequently caught in 6.1-m river otter trawls were *Callinectes sapidus* (77.8% occurrence), *Anchoa mitchilli* (50.0% occurrence), and *Farfantepenaeus duorarum* (50.0% occurrence).

A total of 437 animals from seven selected taxa were collected, representing 0.9% of the entire 6.1-m river otter trawl catch (Table 4.57). *Callinectes sapidus* (n=167), *Farfantepenaeus duorarum* (n=114), and *Cynoscion arenarius* (n=101) were the most abundant selected taxa, accounting for 87.4% of the selected taxa collected by this gear. The selected taxa most frequently caught in the 6.1-m river otter trawls were *Callinectes sapidus* (77.8% occurrence) and *Farfantepenaeus duorarum* (50.0% occurrence).

Table 4.56: Catch statistics for 10 dominant taxa collected in 36 6.1-m river otter trawl samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			**Density Estimate (animals/100m^2)**				**Standard Length (mm)**			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	46,605	97.5	50.0	175.29	157.52	539.18	5,681.60	22	0.02	17	57
Trinectes maculatus	364	0.8	47.2	1.36	0.62	273.76	19.70	46	0.60	24	96
Callinectes sapidus	167	0.3	77.8	0.63	0.14	136.78	3.24	93	3.58	15	192
Farfantepenaeus duorarum	114	0.2	50.0	0.43	0.11	156.03	2.97	15	0.62	4	32
Cynoscion arenarius	101	0.2	30.6	0.38	0.12	192.01	2.83	43	2.04	15	115
Bairdiella chrysoura	95	0.2	16.7	0.35	0.24	405.96	8.23	50	2.61	14	125
Eucinostomus spp.	70	0.1	25.0	0.26	0.17	396.83	6.07	30	0.55	14	39
Ariopsis felis	58	0.1	27.8	0.22	0.12	342.46	4.32	97	10.21	50	294
Menticirrhus americanus	40	0.1	33.3	0.15	0.05	204.61	1.21	58	5.95	14	215
Eucinostomus harengulus	23	0.0	19.4	0.09	0.04	268.59	1.08	54	2.77	41	92
Subtotal	47,637	99.5	.	.	.	.	.	.	.	4	294
Total	**47,787**	**100.0**	**.**	**179.72**	**157.41**	**525.53**	**5,682.54**	**.**	**.**	**4**	**898**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.57: Catch statistics for selected taxa collected in 36 6.1-m river otter trawl samples during Charlotte Harbor stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Callinectes sapidus	167	0.3	77.8	0.63	0.14	136.78	3.24	93	3.58	15	192
Farfantepenaeus duorarum	114	0.2	50.0	0.43	0.11	156.03	2.97	15	0.62	4	32
Cynoscion arenarius	101	0.2	30.6	0.38	0.12	192.01	2.83	43	2.04	15	115
Menticirrhus americanus	40	0.1	33.3	0.15	0.05	204.61	1.21	58	5.95	14	215
Cynoscion nebulosus	13	<0.1	11.1	0.05	0.03	392.48	1.08	62	11.31	29	152
Caranx hippos	1	<0.1	2.8	<0.01	<0.01	600.00	0.12	93	.	93	93
Micropogonias undulatus	1	<0.1	2.8	<0.01	<0.01	600.00	0.17	29	.	29	29
Total	**437**	**0.9**	**.**	**1.64**	**0.28**	**102.27**	**6.07**	**.**	**.**	**4**	**215**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.8 Northeast Florida

Northeast Florida encompasses three coastal plain estuaries, each defined by their respective lower river basins (St. Marys River, Nassau River, and St. Johns River) and interconnected via the Intracoastal Waterway (ICW; Figure 4.8). Shoreline vegetation in the lower St. Marys and Nassau rivers is characterized by an expansive saltmarsh system, while the lower St. Johns River is characterized by marshes, hardwood forests, and hardwood swamps (St. Johns River Water Management District 1993, 2000). Bottom substrates are typically characterized as mud, sand, and occasional oysters (Solomon et al. 2006). Bottom vegetation is only present in the oligohaline reaches of the St. Johns River upriver of downtown Jacksonville (Burns et al. 1997).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in Northeast Florida since 2001. The area sampled was divided into six geographically-defined riverine zones (A–F; Figure 4.8). Monthly stratified-random sampling (SRS) was conducted in Zones A–D using 21.3-m river seines, 183-m haul seines, and 6.1-m river otter trawls. Monthly SRS was conducted in Zones E and F with only 21.3-m river seines and 6.1-m river otter trawls. All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in Northeast Florida.

Stratified-Random Sampling

A total of 194,795 animals, which included 157 taxa of fishes and 18 taxa of selected invertebrates, were collected from 1,356 Northeast Florida SRS samples in 2025 (Table 4.58, Table A.22, Table A.23, Table A.24). *Anchoa mitchilli* (n=41,691) was the most numerous taxon collected, representing 21.4% of the total catch. *Litopenaeus setiferus* (n=27,300) and *Anchoa hepsetus* (n=22,712) were the next most abundant taxa collected, accounting for an additional 25.7% of the total catch. A total of 41 selected taxa (n=62,464 animals) composed 32.1% of the total catch. *Litopenaeus setiferus* (n=27,300) was the most abundant selected taxon, representing 14.0% of the total catch. *Micropogonias undulatus* (n=16,293), *Mugil cephalus* (n=5,394), *Leiostomus xanthurus* (n=5,154), and *Brevoortia* spp. (n=2,320) were the next most abundant selected taxa, comprising 15.0% of the total catch. Collections in 2025 included one species new to the Northeast Florida FIM collection: *Arenaeus cribrarius*.

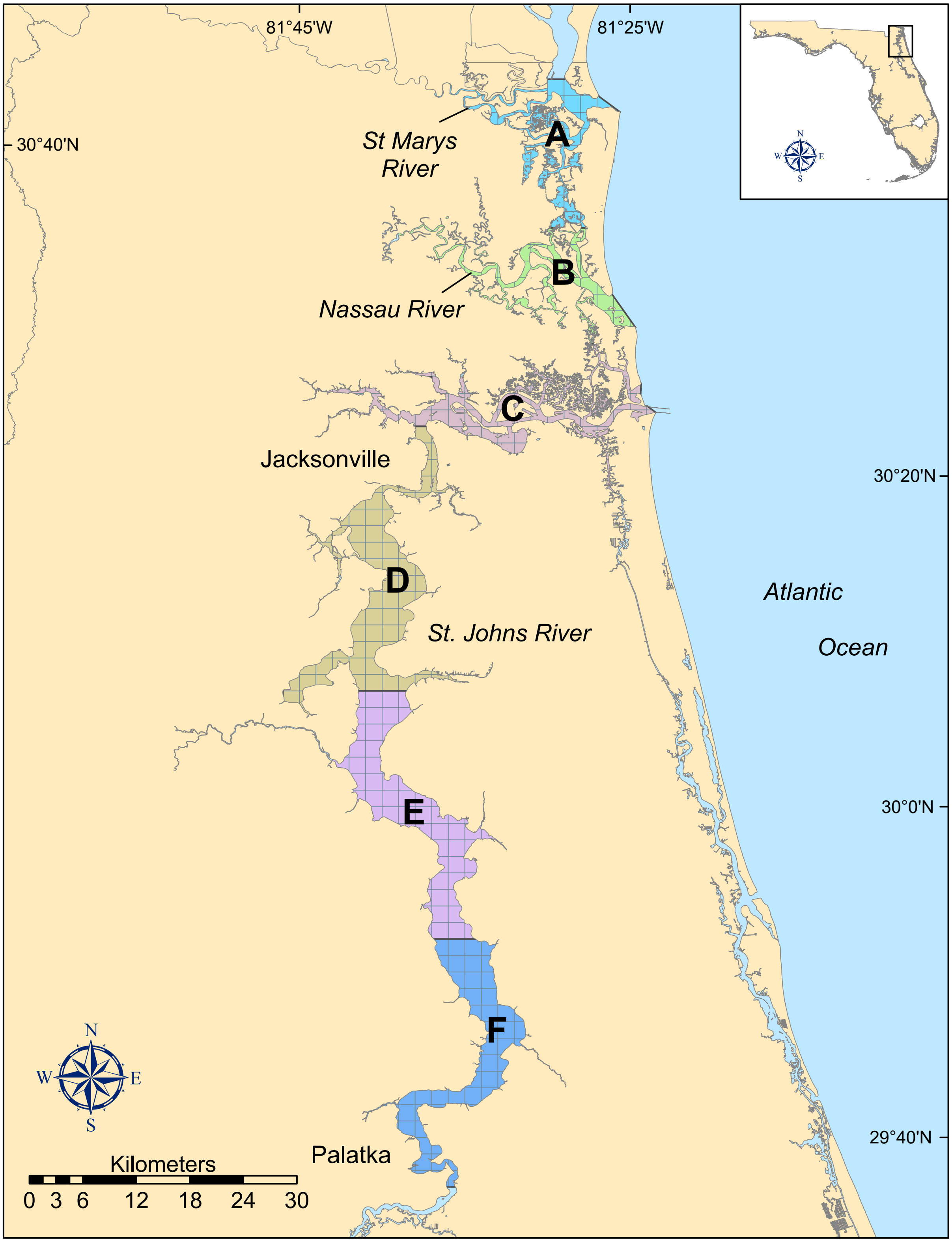

Figure 4.8: Map of Northeast Florida sampling area. Zones are labeled A–F.

Table 4.58: Summary of catch and effort data for Northeast Florida stratified-random sampling, 2025.

Zone	21.3-m river seine		183-m haul seine		6.1-m otter trawl		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
A	84	42,400	36	942	84	6,273	204	49,615
B	84	24,217	36	826	84	12,214	204	37,257
C	108	21,997	60	1,606	108	5,561	276	29,164
D	108	9,494	60	1,506	120	9,737	288	20,737
E	96	14,339	.	.	96	7,377	192	21,716
F	96	25,363	.	.	96	10,943	192	36,306
Total	**576**	**137,810**	**192**	**4,880**	**588**	**52,105**	**1,356**	**194,795**

21.3-m River Seine

A total of 137,810 animals were collected in 576 21.3-m river seines, representing 70.7% of the overall SRS catch (Table 4.58). *Anchoa mitchilli* (n=33,454) was the most abundant taxon collected, accounting for 24.3% of the 21.3-m river seine catch (Table 4.59). *Anchoa hepsetus* (n=21,283) and *Menidia menidia* (n=14,084) were the next most abundant taxa, accounting for an additional 25.7% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Menidia* spp. (38.2% occurrence), *Anchoa mitchilli* (35.6% occurrence), and *Menidia menidia* (30.0% occurrence).

A total of 26,813 animals from 31 selected taxa were collected, representing 19.5% of the entire 21.3-m river seine catch (Table 4.60). *Litopenaeus setiferus* (n=13,902), and *Mugil cephalus* (n=4,504) were the most abundant selected taxa, accounting for 68.6% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines were *Litopenaeus setiferus* (28.3% occurrence), *Leiostomus xanthurus* (27.8% occurrence), and *Mugil cephalus* (24.1% occurrence).

Table 4.59: Catch statistics for 10 dominant taxa collected in 576 21.3-m river seine samples during Northeast Florida stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	33,454	24.3	35.6	84.68	23.99	682.83	8,635.29	29	0.04	12	78
Anchoa hepsetus	21,283	15.4	13.5	54.06	33.76	1,502.72	18,823.53	35	0.05	21	90
Menidia menidia	14,084	10.2	30.0	35.77	7.63	513.58	3,529.41	42	0.11	17	81
Litopenaeus setiferus	13,902	10.1	28.3	35.49	7.03	475.24	2,054.41	13	0.03	3	27
Menidia spp.	12,045	8.7	38.2	30.65	4.81	377.00	1,780.88	35	0.07	10	66
Anchoa lyolepis	8,955	6.5	1.4	22.82	22.39	2,356.24	12,917.65	34	0.01	28	43
Dorosoma petenense	6,037	4.4	5.0	15.41	9.58	1,491.18	5,247.06	39	0.12	21	90
Fundulus heteroclitus	5,284	3.8	15.5	13.49	8.57	1,525.22	4,894.12	37	0.14	15	90
Mugil cephalus	4,504	3.3	24.1	11.50	4.10	856.51	2,044.12	31	0.40	18	407
Leiostomus xanthurus	4,400	3.2	27.8	11.23	1.87	399.49	522.06	31	0.25	11	117
Subtotal	123,948	89.9	.	.	.	.	.	.	.	3	407
Total	**137,810**	**100.0**	**.**	**351.84**	**64.14**	**437.48**	**32,202.94**	**.**	**.**	**3**	**1,192**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.60: Catch statistics for selected taxa collected in 576 21.3-m river seine samples during Northeast Florida stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Litopenaeus setiferus	13,902	10.1	28.3	35.49	7.03	475.24	2,054.41	13	0.03	3	27
Mugil cephalus	4,504	3.3	24.1	11.50	4.10	856.51	2,044.12	31	0.40	18	407
Leiostomus xanthurus	4,400	3.2	27.8	11.23	1.87	399.49	522.06	31	0.25	11	117
Micropogonias undulatus	1,196	0.9	20.1	3.05	1.05	821.39	554.41	24	0.47	10	116
Brevoortia spp.	1,193	0.9	7.3	3.05	1.54	1,214.71	813.24	55	0.49	16	129
Farfantepenaeus spp.	515	0.4	15.1	1.31	0.29	527.30	92.65	9	0.13	3	14
Mugil curema	284	0.2	8.5	0.73	0.40	1,329.39	226.47	43	1.73	20	174
Callinectes sapidus	201	0.1	17.4	0.51	0.07	330.94	23.53	41	2.84	7	167
Sciaenops ocellatus	85	0.1	6.4	0.22	0.05	575.32	16.18	86	14.44	13	625
Cynoscion nebulosus	65	<0.1	6.6	0.17	0.04	529.97	14.71	47	3.88	13	152
Menticirrhus americanus	59	<0.1	3.5	0.15	0.05	843.22	25.00	42	2.40	12	105
Elops saurus	57	<0.1	4.2	0.15	0.04	681.29	16.18	66	7.74	21	263
Caranx hippos	52	<0.1	2.1	0.13	0.10	1,765.86	55.88	31	2.14	20	107
Lutjanus griseus	52	<0.1	1.6	0.13	0.10	1,726.76	54.41	17	1.22	11	47
Paralichthys lethostigma	51	<0.1	6.4	0.13	0.03	472.14	7.35	104	14.24	12	323
Farfantepenaeus aztecus	45	<0.1	2.8	0.11	0.04	926.85	20.59	17	0.23	15	20
Trachinotus falcatus	44	<0.1	1.9	0.11	0.05	1,065.11	19.12	21	1.55	9	72
Trachinotus carolinus	37	<0.1	0.9	0.09	0.06	1,569.73	33.82	22	2.29	11	94
Archosargus probatocephalus	23	<0.1	2.6	0.06	0.02	874.30	10.29	158	22.58	17	464
Paralichthys albigutta	16	<0.1	2.1	0.04	0.02	895.20	7.35	54	10.82	12	136

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Pogonias cromis	8	<0.1	1.0	0.02	0.01	1,119.01	4.41	136	23.00	50	212
Cynoscion complex	7	<0.1	0.9	0.02	0.01	1,133.71	2.94	55	11.47	25	104
Lutjanus synagris	6	<0.1	0.9	0.02	0.01	1,127.92	2.94	37	4.10	23	48
Lutjanus analis	2	<0.1	0.3	0.01	<0.01	1,695.58	1.47	18	0.50	18	19
Menticirrhus littoralis	2	<0.1	0.3	0.01	<0.01	1,695.58	1.47	49	7.00	42	56
Menticirrhus saxatilis	2	<0.1	0.2	0.01	0.01	2,400.00	2.94	30	1.50	29	32
Albula spp.	1	<0.1	0.2	<0.01	<0.01	2,400.00	1.47	58	.	58	58
Menippe spp.	1	<0.1	0.2	<0.01	<0.01	2,400.00	1.47	20	.	20	20
Paralichthys squamilentus	1	<0.1	0.2	<0.01	<0.01	2,400.00	1.47	73	.	73	73
Pomatomus saltatrix	1	<0.1	0.2	<0.01	<0.01	2,400.00	1.47	50	.	50	50
Sphyraena barracuda	1	<0.1	0.2	<0.01	<0.01	2,400.00	1.47	76	.	76	76
Total	**26,813**	**19.5**	**.**	**68.46**	**8.99**	**315.14**	**2,316.18**	**.**	**.**	**3**	**625**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 4,880 animals were collected in 192 183-m haul seines, representing 2.5% of the overall SRS catch (Table 4.58). *Brevoortia* spp. (n=1,103) was the most abundant taxon, accounting for 22.6% of the 183-m haul seine catch (Table 4.61). The taxa most frequently caught in 183-m haul seines were *Mugil cephalus* (59.4% occurrence), *Mugil curema* (32.8% occurrence), and *Hypanus sabinus* (28.6% occurrence).

A total of 3,571 animals from 26 selected taxa were collected, representing 73.2% of the entire 183-m haul seine catch (Table 4.62). *Brevoortia* spp. (n=1,103) and *Mugil cephalus* (n=890) were the most abundant selected taxa, accounting for 55.8% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Mugil cephalus* (59.4% occurrence), *Mugil curema* (32.8% occurrence), and *Leiostomus xanthurus* (27.1% occurrence).

Table 4.61: Catch statistics for 10 dominant taxa collected in 192 183-m haul seine samples during Northeast Florida stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	1,103	22.6	10.9	5.74	2.80	676.34	473	102	0.61	63	247
Mugil cephalus	890	18.2	59.4	4.64	0.73	219.45	82	196	2.05	73	374
Litopenaeus setiferus	403	8.3	17.7	2.10	0.78	513.65	121	19	0.17	10	28
Mugil curema	353	7.2	32.8	1.84	0.44	332.27	68	139	2.05	80	300
Bairdiella chrysoura	279	5.7	10.4	1.45	0.51	486.80	78	124	1.01	93	174
Leiostomus xanthurus	224	4.6	27.1	1.17	0.28	335.64	34	110	2.12	54	187
Pogonias cromis	127	2.6	7.8	0.66	0.40	845.29	75	202	3.68	75	315
Sciaenops ocellatus	125	2.6	21.4	0.65	0.18	384.94	24	338	12.51	57	620
Hypanus sabinus	124	2.5	28.6	0.65	0.10	217.80	9	221	3.67	109	340
Lagodon rhomboides	112	2.3	18.2	0.58	0.16	372.26	24	102	1.85	68	164
Subtotal	3,740	76.6	.	.	.	.	.	.	.	10	620
Total	**4,880**	**100.0**	**.**	**25.42**	**3.39**	**184.72**	**484**	**.**	**.**	**10**	**1,200**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.62: Catch statistics for selected taxa collected in 192 183-m haul seine samples during Northeast Florida stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	1,103	22.6	10.9	5.74	2.80	676.34	473	102	0.61	63	247
Mugil cephalus	890	18.2	59.4	4.64	0.73	219.45	82	196	2.05	73	374
Litopenaeus setiferus	403	8.3	17.7	2.10	0.78	513.65	121	19	0.17	10	28
Mugil curema	353	7.2	32.8	1.84	0.44	332.27	68	139	2.05	80	300
Leiostomus xanthurus	224	4.6	27.1	1.17	0.28	335.64	34	110	2.12	54	187
Pogonias cromis	127	2.6	7.8	0.66	0.40	845.29	75	202	3.68	75	315
Sciaenops ocellatus	125	2.6	21.4	0.65	0.18	384.94	24	338	12.51	57	620
Micropogonias undulatus	108	2.2	10.4	0.56	0.21	508.60	33	123	3.41	66	215
Archosargus probatocephalus	42	0.9	13.5	0.22	0.05	322.08	6	255	10.26	108	385
Callinectes sapidus	36	0.7	12.5	0.19	0.04	325.74	5	115	7.25	31	176
Cynoscion nebulosus	34	0.7	8.9	0.18	0.06	432.39	8	203	13.61	50	411
Trachinotus falcatus	28	0.6	4.2	0.15	0.06	607.51	8	108	8.11	45	178
Paralichthys lethostigma	26	0.5	8.9	0.14	0.04	379.64	4	190	16.15	47	376
Elops saurus	24	0.5	6.2	0.12	0.05	552.20	8	248	7.60	184	374
Caranx hippos	19	0.4	7.8	0.10	0.03	380.78	3	164	15.37	74	352
Paralichthys albigutta	9	0.2	4.7	0.05	0.02	452.10	1	111	17.06	47	185
Menticirrhus americanus	5	0.1	1.6	0.03	0.02	916.06	3	200	12.88	156	236
Farfantepenaeus aztecus	3	0.1	1.0	0.02	0.01	1,030.63	2	17	1.20	15	19
Scomberomorus maculatus	3	0.1	1.0	0.02	0.01	1,030.63	2	206	38.16	162	282
Sphyrna tiburo	3	0.1	1.6	0.02	0.01	795.80	1	616	156.19	323	856

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Cynoscion complex	1	<0.1	0.5	0.01	0.01	1,385.64	1	202	.	202	202
Farfantepenaeus spp.	1	<0.1	0.5	0.01	0.01	1,385.64	1	14	.	14	14
Lobotes surinamensis	1	<0.1	0.5	0.01	0.01	1,385.64	1	424	.	424	424
Lutjanus griseus	1	<0.1	0.5	0.01	0.01	1,385.64	1	265	.	265	265
Negaprion brevirostris	1	<0.1	0.5	0.01	0.01	1,385.64	1	715	.	715	715
Pomatomus saltatrix	1	<0.1	0.5	0.01	0.01	1,385.64	1	135	.	135	135
Total	**3,571**	**73.2**	**.**	**18.60**	**3.22**	**239.72**	**478**	**.**	**.**	**10**	**856**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

6.1-m River Otter Trawl

A total of 52,105 animals were collected in 588 6.1-m river otter trawls, representing 26.7% of the overall SRS catch (Table 4.58). *Micropogonias undulatus* (n=14,989) was the most abundant taxon collected, accounting for 28.8% of the 6.1-m river otter trawl catch (Table 4.63). The taxa most frequently caught in 6.1-m river otter trawls were *Micropogonias undulatus* (66.2% occurrence), *Litopenaeus setiferus* (55.4% occurrence), and *Callinectes sapidus* (49.3% occurrence).

A total of 32,080 animals from 27 selected taxa were collected, representing 61.6% of the entire 6.1-m river otter trawl catch (Table 4.64). *Micropogonias undulatus* (n=14,989), *Litopenaeus setiferus* (n=12,995), and *Callinectes sapidus* (n=1,060) were the most abundant selected taxa, accounting for 90.5% of the selected taxa collected by this gear. The selected taxa most frequently caught in the 6.1-m river otter trawls were *Micropogonias undulatus* (66.2% occurrence), *Litopenaeus setiferus* (55.4% occurrence), and *Callinectes sapidus* (49.3% occurrence).

Table 4.63: Catch statistics for 10 dominant taxa collected in 588 6.1-m river otter trawl samples during Northeast Florida stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Micropogonias undulatus	14,989	28.8	66.2	3.39	0.42	300.72	117.92	42	0.18	6	186
Litopenaeus setiferus	12,995	24.9	55.4	3.02	0.45	362.36	157.25	18	0.05	3	38
Anchoa mitchilli	8,237	15.8	45.1	1.93	0.35	433.46	118.19	36	0.15	11	74
Stellifer lanceolatus	3,098	5.9	7.7	0.72	0.50	1,668.78	288.86	50	0.28	9	125
Trinectes maculatus	1,461	2.8	36.1	0.34	0.06	418.73	19.97	52	0.41	11	136
Anchoa hepsetus	1,429	2.7	6.5	0.33	0.13	944.37	43.30	34	0.31	14	116
Callinectes sapidus	1,060	2.0	49.3	0.25	0.02	217.85	7.02	88	1.57	10	205
Farfantepenaeus spp.	923	1.8	23.3	0.21	0.07	763.01	36.70	10	0.08	3	14
Rimapenaeus spp.	703	1.3	9.0	0.17	0.04	648.91	16.86	5	0.06	2	10
Cynoscion complex	638	1.2	27.4	0.15	0.02	292.49	4.54	55	1.45	10	260
Subtotal	45,533	87.2	.	.	.	.	.	.	.	2	260
Total	**52,105**	**100.0**	**.**	**12.12**	**0.97**	**194.69**	**366.43**	**.**	**.**	**2**	**955**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.64: Catch statistics for selected taxa collected in 588 6.1-m river otter trawl samples during Northeast Florida stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Micropogonias undulatus	14,989	28.8	66.2	3.39	0.42	300.72	117.92	42	0.18	6	186
Litopenaeus setiferus	12,995	24.9	55.4	3.02	0.45	362.36	157.25	18	0.05	3	38
Callinectes sapidus	1,060	2.0	49.3	0.25	0.02	217.85	7.02	88	1.57	10	205
Farfantepenaeus spp.	923	1.8	23.3	0.21	0.07	763.01	36.70	10	0.08	3	14
Cynoscion complex	638	1.2	27.4	0.15	0.02	292.49	4.54	55	1.45	10	260
Leiostomus xanthurus	530	1.0	21.9	0.12	0.02	403.50	6.15	62	1.77	10	178
Farfantepenaeus aztecus	352	0.7	9.5	0.08	0.02	603.52	6.61	19	0.19	15	31
Menticirrhus americanus	220	0.4	10.7	0.05	0.01	498.27	3.88	47	2.32	13	305
Paralichthys lethostigma	190	0.4	23.8	0.04	<0.01	215.19	0.84	162	5.12	12	355
Archosargus probatocephalus	42	0.1	3.7	0.01	<0.01	620.20	0.90	155	10.49	61	399
Brevoortia spp.	24	<0.1	1.5	0.01	<0.01	1,327.98	1.86	71	12.17	22	230
Centropristis philadelphica	20	<0.1	2.6	<0.01	<0.01	678.49	0.40	107	6.86	29	176
Elops saurus	19	<0.1	1.9	<0.01	<0.01	1,262.13	1.35	47	8.74	26	203
Paralichthys albigutta	17	<0.1	2.2	<0.01	<0.01	736.32	0.40	110	11.48	8	156
Cynoscion nebulosus	15	<0.1	1.9	<0.01	<0.01	769.89	0.30	81	15.64	10	190
Sciaenops ocellatus	10	<0.1	0.9	<0.01	<0.01	1,136.58	0.40	54	6.47	20	85
Menippe spp.	8	<0.1	0.9	<0.01	<0.01	1,235.35	0.45	39	12.43	9	95
Farfantepenaeus duorarum	7	<0.1	1.2	<0.01	<0.01	916.25	0.17	19	1.11	15	23
Cynoscion nothus	4	<0.1	0.7	<0.01	<0.01	1,214.36	0.17	62	7.82	49	81
Lutjanus synagris	3	<0.1	0.5	<0.01	<0.01	1,399.40	0.15	57	20.04	25	94

Species	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Paralichthys dentatus	3	<0.1	0.5	<0.01	<0.01	1,398.98	0.13	138	30.90	76	172
Albula spp.	2	<0.1	0.3	<0.01	<0.01	1,723.76	0.17	52	8.50	44	61
Centropomus undecimalis	2	<0.1	0.2	<0.01	<0.01	2,424.87	0.25	126	5.50	120	131
Centropristis striata	2	<0.1	0.2	<0.01	<0.01	2,424.87	0.27	138	2.50	135	140
Lutjanus griseus	2	<0.1	0.3	<0.01	<0.01	1,713.18	0.13	40	2.50	38	43
Pogonias cromis	2	<0.1	0.3	<0.01	<0.01	1,734.48	0.17	170	18.00	152	188
Caranx hippos	1	<0.1	0.2	<0.01	<0.01	2,424.87	0.13	97	.	97	97
Total	**32,080**	**61.6**	**.**	**7.41**	**0.65**	**212.33**	**161.15**	**.**	**.**	**3**	**399**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.9 Northern Indian River Lagoon

The sampling area identified as the Northern Indian River Lagoon (IRL) system is a narrow estuary located along the eastern central coast of Florida, which extends from the northern terminus of the Indian River Lagoon proper south to Vero Beach. The Northern IRL is connected to the Atlantic Ocean by one permanent inlet (Sebastian Inlet) and one intermittently open conduit via a set of locks located west of Port Canaveral. Freshwater inflow primarily comes from the St. Sebastian River and from numerous creeks located mainly along the western shoreline (Paperno and Brodie 2004). Shoreline vegetation consists largely of fringing mangrove, Brazilian pepper, and marsh grasses. Bottom substrates are typically characterized as sand or mud mixed with shell hash and occasional oysters. Seagrasses, primarily *Halodule wrightii*, have historically been the dominant vegetative cover in the northern IRL (Steward et al. 2006). However, recent losses of seagrass habitat and the subsequent replacement by the attached macroalgae *Caulerpa* have been observed (Brewton and Lapointe 2023; Adams et al. 2024).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in the Northern IRL since 1990. The area sampled was divided into six geographically-defined bay zones (C–E and H) and one riverine zone that includes Turkey Creek and St. Sebastian River (F; Figure 4.9). Monthly stratified-random sampling (SRS) was conducted in Zones C, D, and H using 21.3-m bay and 183-m haul seines. Monthly SRS was conducted in Zone E with only 183-m haul seines. Zone F was sampled in every month except March, May, and July with 21.3-m river seines. All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in the northern IRL.

Stratified-Random Sampling

A total of 264,315 animals, which included 154 taxa of fishes and 13 taxa of selected invertebrates, were collected from 654 Northern Indian River Lagoon SRS samples in 2025 (Table 4.65, Table A.25, Table A.26, Table A.27). *Anchoa mitchilli* (n=104,549) was the most numerous taxon collected, representing 39.6% of the total catch. *Harengula jaguana* (n=31,642) and *Anchoa lyolepis* (n=30,432) were the next most abundant taxa collected, accounting for an additional 23.5% of the total catch. A total of 45 selected taxa (n=23,085 animals) composed 8.7% of the total catch. *Mugil curema* (n=6,256) was the most abundant selected taxon, representing 2.4% of the total catch. *Mugil cephalus* (n=3,194), *Leiostomus xanthurus* (n=3,171), *Micropogonias undulatus* (n=2,269), and *Brevoortia* spp. (n=1,751) were the next most abundant selected taxa, comprising 3.9% of the total catch. Collections in 2025 included two species new to the Northern Indian River Lagoon FIM collection: *Halichoeres bivittatus* and *Halichoeres poeyi*.

Figure 4.9: Map of Northern Indian River Lagoon sampling area. Zones are labeled C–E and H (bay zones) and F (riverine zone).

Table 4.65: Summary of catch and effort data for Northern Indian River Lagoon stratified-random sampling, 2025.

Zone	21.3-m bay seine		21.3-m river seine		183-m haul seine		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals	Hauls	Animals
C	120	70,499	.	.	48	11,704	168	82,203
D	96	16,602	.	.	72	4,247	168	20,849
E	.	.	.	.	48	7,439	48	7,439
F	.	.	90	73,861	.	.	90	73,861
H	120	63,379	.	.	60	16,584	180	79,963
Total	**336**	**150,480**	**90**	**73,861**	**228**	**39,974**	**654**	**264,315**

Bay Sampling

21.3-m Bay Seine

A total of 150,480 animals were collected in 336 21.3-m bay seines, representing 56.9% of the overall SRS catch (Table 4.65). *Anchoa mitchilli* (n=87,548) and *Anchoa lyolepis* (n=17,056) were the most abundant taxa, accounting for 69.5% of the bay seine catch (Table 4.66). The taxa most frequently caught in 21.3-m bay seines were *Anchoa mitchilli* (41.4% occurrence), *Eucinostomus* spp. (38.1% occurrence), and *Bairdiella chrysoura* (22.0% occurrence).

A total of 8,733 animals from 33 selected taxa were collected, representing 5.8% of the entire 21.3-m bay seine catch (Table 4.67). *Mugil cephalus* (n=1,898) was the most abundant selected taxon, accounting for 21.7% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m bay seines were *Farfantepenaeus* spp. (26.5% occurrence), *Cynoscion nebulosus* (22.6% occurrence), and *Archosargus probatocephalus* (13.4% occurrence).

Table 4.66: Catch statistics for 10 dominant taxa collected in 336 21.3-m bay seine samples during Northern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	87,548	58.2	41.4	181.79	56.70	578.49	15,360.00	42	0.03	9	68
Anchoa lyolepis	17,056	11.3	1.8	36.04	35.64	1,817.80	12,045.71	38	0.02	28	62
Harengula jaguana	7,884	5.2	5.4	16.61	14.18	1,571.24	4,800.00	30	0.08	20	98
Eucinostomus spp.	6,504	4.3	38.1	13.79	2.84	377.57	593.57	27	0.09	12	39
Bairdiella chrysoura	6,849	4.6	22.0	13.67	5.93	821.18	1,988.57	58	0.36	9	118
Lucania parva	2,892	1.9	15.8	6.15	2.02	603.57	365.00	27	0.11	15	46
Menidia spp.	2,660	1.8	19.0	5.59	1.42	469.52	306.43	43	0.20	16	96
Mugil cephalus	1,898	1.3	11.6	4.03	2.29	1,041.37	727.86	27	0.44	17	387
Micropogonias undulatus	1,783	1.2	8.0	3.79	3.00	1,448.57	995.71	32	0.18	13	152
Leiostomus xanthurus	1,578	1.0	9.5	3.35	2.35	1,283.32	779.29	34	0.25	12	78
Subtotal	136,652	90.8	.	.	.	.	.	.	.	9	387
Total	**150,480**	**100.0**	**.**	**319.90**	**90.67**	**519.54**	**24,177.86**	**.**	**.**	**2**	**747**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.67: Catch statistics for selected taxa collected in 336 21.3-m bay seine samples during Northern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Mugil cephalus	1,898	1.3	11.6	4.03	2.29	1,041.37	727.86	27	0.44	17	387
Micropogonias undulatus	1,783	1.2	8.0	3.79	3.00	1,448.57	995.71	32	0.18	13	152
Leiostomus xanthurus	1,578	1.0	9.5	3.35	2.35	1,283.32	779.29	34	0.25	12	78
Farfantepenaeus spp.	1,084	0.7	26.5	2.30	0.82	651.73	245.00	9	0.09	2	14
Litopenaeus setiferus	781	0.5	4.8	1.66	1.40	1,551.22	469.29	5	0.07	3	27
Cynoscion nebulosus	465	0.3	22.6	0.99	0.18	329.12	25.71	38	0.83	12	197
Brevoortia spp.	341	0.2	5.7	0.72	0.38	963.58	120.71	31	0.49	19	64
Sciaenops ocellatus	231	0.2	9.8	0.49	0.19	706.45	37.14	46	4.95	12	544
Archosargus probatocephalus	209	0.1	13.4	0.44	0.12	484.85	29.29	45	2.68	11	296
Callinectes sapidus	77	0.1	10.4	0.16	0.04	420.68	7.86	46	5.65	6	158
Menticirrhus americanus	44	<0.1	5.1	0.09	0.04	735.98	11.43	33	3.81	14	177
Mugil curema	44	<0.1	6.0	0.09	0.03	553.88	7.14	85	7.75	16	215
Lutjanus griseus	38	<0.1	4.2	0.08	0.04	847.42	10.71	115	15.85	20	315
Haemulon parra	26	<0.1	0.9	0.06	0.05	1,562.92	15.71	28	1.40	17	38
Farfantepenaeus aztecus	17	<0.1	2.7	0.04	0.01	733.51	3.57	16	0.36	15	19
Farfantepenaeus duorarum	17	<0.1	3.3	0.04	0.01	592.84	2.14	17	0.45	15	20
Cynoscion complex	14	<0.1	1.8	0.03	0.01	921.78	4.29	36	2.03	21	46
Centropomus undecimalis	13	<0.1	2.4	0.03	0.01	726.90	2.14	239	23.06	31	356
Haemulon plumierii	13	<0.1	0.6	0.03	0.02	1,387.17	6.43	41	2.73	29	57
Trachinotus falcatus	12	<0.1	2.1	0.03	0.01	886.38	3.57	46	8.56	15	108

Species	Number No.	%	% Occur	Density Estimate (animals/100m^2) Mean	Stderr	CV	Max	Standard Length (mm) Mean	Stderr	Min	Max
Elops saurus	7	<0.1	1.5	0.01	0.01	940.24	2.14	192	27.01	69	263
Paralichthys albigutta	7	<0.1	1.5	0.01	0.01	940.24	2.14	68	13.72	40	137
Caranx hippos	6	<0.1	0.9	0.01	0.01	1,294.21	2.86	53	20.45	30	155
Pogonias cromis	6	<0.1	1.5	0.01	0.01	859.57	1.43	419	70.00	263	747
Sphyraena barracuda	6	<0.1	0.9	0.01	0.01	1,140.41	2.14	90	24.47	28	172
Lutjanus analis	3	<0.1	0.6	0.01	<0.01	1,364.63	1.43	44	11.55	24	64
Lutjanus synagris	3	<0.1	0.6	0.01	<0.01	1,364.63	1.43	39	0.58	38	40
Albula spp.	2	<0.1	0.6	<0.01	<0.01	1,294.21	0.71	42	10.00	32	52
Carcharhinus leucas	2	<0.1	0.6	<0.01	<0.01	1,294.21	0.71	652	12.50	639	664
Mugil rubrioculus	2	<0.1	0.6	<0.01	<0.01	1,294.21	0.71	90	11.50	78	101
Mugil trichodon	2	<0.1	0.3	<0.01	<0.01	1,833.03	1.43	26	0.50	26	27
Calamus spp.	1	<0.1	0.3	<0.01	<0.01	1,833.03	0.71	15	.	15	15
Ocyurus chrysurus	1	<0.1	0.3	<0.01	<0.01	1,833.03	0.71	46	.	46	46
Total	**8,733**	**5.8**	**.**	**18.57**	**6.44**	**636.33**	**1,937.86**	**.**	**.**	**2**	**747**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

183-m Haul Seine

A total of 39,974 animals were collected in 228 183-m haul seines, representing 15.1% of the overall SRS catch (Table 4.65). *Lagodon rhomboides* (n=8,299) was the most abundant taxon, accounting for 20.8% of the 183-m haul seine catch (Table 4.68). The taxa most frequently caught in 183-m haul seines were *Mugil curema* (68.9% occurrence), *Ariopsis felis* (61.8% occurrence), and *Mugil cephalus* (57.0% occurrence).

A total of 11,977 animals from 40 selected taxa were collected, representing 30.0% of the entire 183-m haul seine catch (Table 4.69). *Mugil curema* (n=6,196) and *Leiostomus xanthurus* (n=1,429) were the most abundant selected taxa, accounting for 63.7% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Mugil curema* (68.9% occurrence), *Mugil cephalus* (57.0% occurrence), and *Archosargus probatocephalus* (47.8% occurrence).

Table 4.68: Catch statistics for 10 dominant taxa collected in 228 183-m haul seine samples during Northern Indian River Lagoon stratified-random sampling, 2025.

	Number			**Density Estimate (animals/set)**				**Standard Length (mm)**			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	8,299	20.8	39.5	34.87	7.31	323.59	821	107	0.23	50	238
Mugil curema	6,196	15.5	68.9	27.18	10.78	598.75	2,256	146	0.41	75	295
Diapterus auratus	4,469	11.2	43.0	19.52	4.80	372.28	670	117	0.39	50	254
Ariopsis felis	2,880	7.2	61.8	12.52	2.50	302.40	469	241	0.74	56	387
Eucinostomus gula	2,011	5.0	26.8	8.82	2.97	508.25	456	85	0.18	48	137
Leiostomus xanthurus	1,429	3.6	21.5	6.27	1.83	440.80	261	128	0.82	63	224
Diapterus rhombeus	1,386	3.5	4.4	6.08	5.61	1,394.42	1,279	71	0.16	51	102
Eucinostomus harengulus	1,384	3.5	33.3	6.07	1.48	367.21	217	99	0.30	46	195
Orthopristis chrysoptera	1,113	2.8	16.7	4.88	2.52	780.72	544	127	0.71	45	241
Mugil cephalus	1,066	2.7	57.0	4.68	0.85	274.39	104	240	1.65	79	423
Subtotal	30,233	75.8	.	.	.	.	.	.	.	45	423
Total	**39,974**	**100.0**	**.**	**175.32**	**21.25**	**183.01**	**2,961**	**.**	**.**	**11**	**1,056**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.69: Catch statistics for selected taxa collected in 228 183-m haul seine samples during Northern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Mugil curema	6,196	15.5	68.9	27.18	10.78	598.75	2,256	146	0.41	75	295
Leiostomus xanthurus	1,429	3.6	21.5	6.27	1.83	440.80	261	128	0.82	63	224
Mugil cephalus	1,066	2.7	57.0	4.68	0.85	274.39	104	240	1.65	79	423
Archosargus probatocephalus	531	1.3	47.8	2.24	0.33	225.03	40	166	3.27	45	389
Elops saurus	387	1.0	32.9	1.70	0.26	227.88	26	261	3.30	109	465
Brevoortia spp.	358	0.9	11.0	1.57	0.65	623.46	121	148	2.04	77	271
Centropomus undecimalis	302	0.8	31.6	1.32	0.25	286.45	42	482	9.84	66	880
Sciaenops ocellatus	302	0.8	44.3	1.32	0.18	200.81	27	388	9.51	84	812
Pogonias cromis	235	0.6	18.0	1.03	0.28	407.52	37	436	7.05	104	888
Cynoscion nebulosus	203	0.5	20.2	0.89	0.23	389.95	34	226	5.74	75	602
Micropogonias undulatus	173	0.4	9.6	0.76	0.32	645.27	51	137	1.36	107	260
Callinectes sapidus	156	0.4	19.7	0.68	0.14	300.45	16	109	2.96	30	183
Caranx hippos	141	0.4	20.6	0.62	0.12	281.47	13	236	8.51	88	465
Menticirrhus americanus	121	0.3	11.0	0.53	0.20	559.42	38	175	2.75	119	275
Lutjanus griseus	93	0.2	9.6	0.41	0.13	486.27	18	170	4.08	88	284
Farfantepenaeus aztecus	45	0.1	4.4	0.20	0.08	645.21	15	23	0.94	16	37
Trachinotus falcatus	45	0.1	7.5	0.20	0.07	546.52	11	100	8.01	43	203
Mugil rubrioculus	35	0.1	3.5	0.15	0.09	922.91	20	126	3.35	89	189
Paralichthys albigutta	24	0.1	7.9	0.11	0.03	364.81	2	144	11.44	62	273
Sphyraena barracuda	23	0.1	5.3	0.10	0.04	576.15	7	289	24.11	95	722

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Farfantepenaeus duorarum	22	0.1	5.3	0.10	0.03	475.95	4	23	1.34	15	33
Lutjanus analis	21	0.1	3.1	0.09	0.04	731.58	8	131	7.65	88	231
Cynoscion complex	17	<0.1	2.2	0.07	0.05	940.94	10	204	11.55	110	338
Megalops atlanticus	10	<0.1	3.5	0.04	0.02	557.28	2	688	51.27	509	1,056
Carcharhinus leucas	9	<0.1	1.8	0.04	0.02	930.80	5	698	46.54	558	937
Litopenaeus setiferus	9	<0.1	1.3	0.04	0.02	899.92	4	21	1.99	15	30
Trachinotus carolinus	5	<0.1	1.8	0.02	0.01	794.46	2	206	46.73	92	311
Scomberomorus maculatus	3	<0.1	0.4	0.01	0.01	1,509.97	3	185	8.08	175	201
Albula spp.	2	<0.1	0.4	0.01	0.01	1,509.97	2	232	27.50	205	260
Caranx crysos	2	<0.1	0.4	0.01	0.01	1,509.97	2	161	9.00	152	170
Farfantepenaeus spp.	2	<0.1	0.4	0.01	0.01	1,509.97	2	13	2.00	11	15
Haemulon parra	2	<0.1	0.9	0.01	0.01	1,065.35	1	136	30.50	106	167
Calamus penna	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	124	.	124	124
Haemulon plumierii	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	73	.	73	73
Lobotes surinamensis	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	114	.	114	114
Ocyurus chrysurus	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	98	.	98	98
Panulirus argus	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	64	.	64	64
Paralichthys lethostigma	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	404	.	404	404
Pomatomus saltatrix	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	443	.	443	443
Sphyrna tiburo	1	<0.1	0.4	<0.01	<0.01	1,509.97	1	716	.	716	716
Total	**11,977**	**30.0**	**.**	**52.53**	**11.61**	**333.63**	**2,382**	**.**	**.**	**11**	**1,056**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

River Sampling

21.3-m River Seine

A total of 73,861 animals were collected in 90 21.3-m river seines, representing 27.9% of the overall SRS catch (Table 4.65). *Harengula jaguana* (n=23,520) was the most abundant taxon collected, accounting for 31.8% of the 21.3-m river seine catch (Table 4.70). *Anchoa mitchilli* (n=17,001) and *Anchoa lyolepis* (n=13,376) were the next most abundant taxa, accounting for an additional 41.1% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Eucinostomus* spp. (83.3% occurrence), *Diapterus auratus* (70.0% occurrence), and *Eucinostomus harengulus* (64.4% occurrence).

A total of 2,375 animals from 19 selected taxa were collected, representing 3.2% of the entire 21.3-m river seine catch (Table 4.71). *Brevoortia* spp. (n=1,052), and *Micropogonias undulatus* (n=313) were the most abundant selected taxa, accounting for 57.5% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines were *Centropomus undecimalis* (53.3% occurrence), *Farfantepenaeus* spp. (27.8% occurrence), and *Callinectes sapidus* (21.1% occurrence).

Table 4.70: Catch statistics for 10 dominant taxa collected in 90 21.3-m river seine samples during Northern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Harengula jaguana	23,520	31.8	3.3	375.96	335.75	856.57	30,823.53	34	0.04	16	65
Anchoa mitchilli	17,001	23.0	36.7	268.83	100.28	359.72	7,200.00	30	0.05	16	60
Anchoa lyolepis	13,376	18.1	1.1	218.56	218.56	948.68	19,670.59	37	0.01	33	39
Opisthonema oglinum	8,015	10.9	4.4	125.39	97.56	754.34	8,941.18	38	0.08	20	52
Eucinostomus spp.	4,294	5.8	83.3	69.39	24.82	341.22	2,179.41	25	0.11	11	42
Diapterus auratus	2,157	2.9	70.0	32.37	13.02	398.22	1,176.47	39	0.34	15	131
Brevoortia spp.	1,052	1.4	11.1	16.64	11.17	647.75	935.29	24	0.08	18	45
Gambusia holbrooki	693	0.9	17.8	11.32	6.02	504.69	485.29	27	0.21	9	40
Eucinostomus harengulus	637	0.9	64.4	10.29	1.90	176.14	126.47	52	0.37	40	97
Eugerres plumieri	635	0.9	48.9	9.73	2.46	247.91	173.53	37	1.29	12	214
Subtotal	71,380	96.6	.	.	.	.	.	.	.	9	214
Total	**73,861**	**100.0**	**.**	**1,206.88**	**821.22**	**645.53**	**73,742.65**	**.**	**.**	**3**	**527**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.71: Catch statistics for selected taxa collected in 90 21.3-m river seine samples during Northern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Brevoortia spp.	1,052	1.4	11.1	16.64	11.17	647.75	935.29	24	0.08	18	45
Micropogonias undulatus	313	0.4	10.0	5.11	3.27	605.84	217.65	21	0.30	13	47
Centropomus undecimalis	286	0.4	53.3	4.21	1.04	247.04	63.24	52	3.13	17	384
Mugil cephalus	230	0.3	8.9	3.76	2.80	706.89	238.24	30	1.51	18	291
Leiostomus xanthurus	164	0.2	10.0	2.68	1.41	499.36	105.88	22	0.46	11	47
Sciaenops ocellatus	102	0.1	6.7	1.67	1.23	700.81	108.82	37	0.93	16	65
Farfantepenaeus spp.	99	0.1	27.8	1.62	0.62	363.14	47.06	5	0.24	3	12
Callinectes sapidus	34	<0.1	21.1	0.56	0.18	308.84	13.24	48	7.40	8	171
Archosargus probatocephalus	29	<0.1	18.9	0.47	0.12	245.42	5.88	105	12.66	22	299
Mugil curema	16	<0.1	6.7	0.26	0.12	418.04	5.88	90	13.33	19	192
Litopenaeus setiferus	15	<0.1	8.9	0.25	0.10	404.75	7.35	9	1.06	3	15
Lutjanus griseus	12	<0.1	12.2	0.20	0.06	279.95	2.94	105	17.53	19	192
Cynoscion nebulosus	9	<0.1	4.4	0.15	0.08	541.53	5.88	26	4.01	17	56
Albula spp.	5	<0.1	1.1	0.08	0.08	948.68	7.35	34	1.20	30	36
Sphyraena barracuda	4	<0.1	3.3	0.07	0.04	575.48	2.94	81	28.13	40	164
Elops saurus	2	<0.1	2.2	0.03	0.02	667.04	1.47	84	44.50	40	129
Centropomus pectinatus	1	<0.1	1.1	0.02	0.02	948.68	1.47	52	.	52	52
Farfantepenaeus aztecus	1	<0.1	1.1	0.02	0.02	948.68	1.47	15	.	15	15
Lutjanus jocu	1	<0.1	1.1	0.02	0.02	948.68	1.47	17	.	17	17
Total	**2,375**	**3.2**	**.**	**38.81**	**17.22**	**420.99**	**1,458.82**	**.**	**.**	**3**	**384**

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

4.10 Southern Indian River Lagoon

Along the eastern central coast of Florida, the sampling area identified as the Southern Indian River Lagoon (IRL) system is a narrow estuary that extends from Vero Beach south to the Jupiter Inlet. The southern IRL is connected to the Atlantic Ocean by three inlets (Ft. Pierce, St. Lucie, and Jupiter). Freshwater inflow comes primarily from the St. Lucie and Loxahatchee rivers. In addition, there is freshwater input from numerous creeks and canals along the western shoreline. Shoreline vegetation consists largely of fringing mangrove, Brazilian Pepper, and marsh grasses. Bottom substrates are typically characterized as sand or mud mixed with shell hash and oysters. Seagrasses, primarily *Halodule wrightii*, are the dominant vegetative cover in the southern IRL (Sime 2005).

The Fisheries-Independent Monitoring (FIM) program has conducted intensive sampling of fish and selected invertebrates in the Southern IRL using 183-m haul seines since 1997. Monthly stratified-random sampling (SRS) has been focused in two geographically-defined bay zones (I and J) and one riverine zone (T; Figure 4.10). Beginning in 2016, in an effort to expand the collection of juvenile fish data in the region, monthly sampling with 21.3-m seines was initiated in the St. Lucie and Loxahatchee Rivers (Zones L and T; Figure 4.10). As a result, the 21.3-m seine sampling universe in Zone T was expanded to include the upstream and backwater areas of the St. Lucie River that were not previously accessible with the 183-m haul seines.

Loxahatchee River (Zone L; Figure 4.10) was also added to the 21.3-m seine sampling universe in 2016. The Loxahatchee River covers an ecosystem of approximately 673 km^2 in Martin and Palm Beach counties and is one of only two river systems in Florida designated as a "Wild and Scenic River." The Loxahatchee River includes the North Fork, Northwest Fork, and the Southwest Fork, all of which drain into the Atlantic Ocean through Jupiter Inlet at the terminus of the Southern Indian River Lagoon. Shoreline slopes can be steep along much of the sampling area with many shorelines closer to urbanization characterized by man-made habitats including seawalls, rip-rap, and docks. Much of the sampling area is brackish with shoreline vegetation consisting of a mixture of salt-tolerant overhanging trees and shrubs while upstream habitats include freshwater marsh vegetation (swamp lily, lily pads, leather fern, etc.). Upriver and backwater areas typically have a mud/detritus substrate while the mainstem and areas closer to the Indian River Lagoon are comprised of mainly sand/shell hash due to stronger water flow. Submerged aquatic vegetation is minimal, but can include tapegrass (*Vallisneria* spp.) in low salinity habitats and shoal grass (*Halodule* spp.) in higher salinity habitats closer to the mouth of the river.

All methods were the same as those described in Chapter 2. This section summarizes data collected by the FIM program during 2025 in Southern Indian River Lagoon.

Stratified-Random Sampling

A total of 54,470 animals, which included 163 taxa of fishes and 13 taxa of selected invertebrates, were collected from 351 Southern Indian River Lagoon SRS samples in 2025 (Table 4.72, Table A.28, Table A.29, Table A.30). *Anchoa mitchilli* (n=9,345) was the most numerous taxon collected, representing 17.2% of the total catch. *Diapterus auratus* (n=7,587) and *Lagodon rhomboides* (n=5,875) were the next most abundant taxa collected, accounting for an additional 24.7% of the total catch. A total of 54 selected taxa (n=10,360 animals) comprised 19.0% of the total catch. *Brevoortia* spp. (n=2,321) was the most abundant selected taxon, representing 4.3% of the total

Figure 4.10: Map of Southern Indian River Lagoon sampling area, separated into four geographic zones: I, J, L, and T.

catch. *Mugil curema* (n=1,516), *Mugil cephalus* (n=1,433), *Centropomus undecimalis* (n=938), and *Archosargus probatocephalus* (n=600) were the next most abundant selected taxa, comprising 8.2% of the total catch. Collections in 2025 included one species new to the southern Indian River Lagoon FIM collection: *Urobatis jamaicensis*.

Table 4.72: Summary of catch and effort data for Southern Indian River Lagoon stratified-random sampling, 2025.

Zone	21.3-m river seine		183-m haul seine		Total	
	Hauls	Animals	Hauls	Animals	Hauls	Animals
I	.	.	48	16,231	48	16,231
J	.	.	48	8,977	48	8,977
L	45	6,651	.	.	45	6,651
T	162	21,141	48	1,470	210	22,611
Total	**207**	**27,792**	**144**	**26,678**	**351**	**54,470**

Bay Sampling

183-m Haul Seine

A total of 26,678 animals were collected in 144 183-m haul seines, representing 49.0% of the overall SRS catch (Table 4.72). *Diapterus auratus* (n=6,816) was the most abundant taxon, accounting for 25.5% of the 183-m haul seine catch (Table 4.73). The taxa most frequently caught in 183-m haul seines were *Diapterus auratus* (69.4% occurrence), *Ariopsis felis* (58.3% occurrence), and *Archosargus probatocephalus* (56.2% occurrence).

A total of 5,078 animals from 49 selected taxa were collected, representing 19.0% of the entire 183-m haul seine catch (Table 4.74). *Mugil curema* (n=1,484) and *Elops saurus* (n=529) were the most abundant selected taxa, accounting for 39.6% of the selected taxa collected by this gear. The selected taxa most frequently caught in 183-m haul seines were *Archosargus probatocephalus* (56.2% occurrence), *Mugil curema* (55.6% occurrence), and *Centropomus undecimalis* (50.7% occurrence).

Table 4.73: Catch statistics for 10 dominant taxa collected in 144 183-m haul seine samples during Southern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Diapterus auratus	6,816	25.5	69.4	47.01	9.94	254.59	863	147	0.33	63	279
Lagodon rhomboides	5,763	21.6	32.6	35.57	12.41	444.08	1,734	105	0.32	62	225
Mugil curema	1,484	5.6	55.6	10.31	2.12	246.38	194	195	1.03	85	297
Eucinostomus gula	1,407	5.3	30.6	9.77	4.27	524.65	461	84	0.21	55	120
Archosargus rhomboidalis	1,385	5.2	27.1	9.36	4.72	613.74	676	119	0.86	62	263
Ariopsis felis	1,129	4.2	58.3	7.84	1.85	283.42	206	223	1.32	127	389
Harengula jaguana	1,024	3.8	12.5	7.11	4.32	728.61	510	106	0.23	74	141
Opisthonema oglinum	1,019	3.8	3.5	7.08	6.93	1,175.27	998	94	0.43	65	152
Elops saurus	529	2.0	27.8	3.67	2.15	701.95	295	276	2.56	136	571
Archosargus probatocephalus	552	2.1	56.2	3.66	0.71	238.16	77	197	3.67	51	390
Subtotal	21,108	79.1	.	.	.	.	.	.	.	51	571
Total	**26,678**	**100.0**	**.**	**185.26**	**29.15**	**188.83**	**2,766**	**.**	**.**	**24**	**940**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.74: Catch statistics for selected taxa collected in 144 183-m haul seine samples during Southern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/set)				Standard Length (mm)			
Species	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Mugil curema	1,484	5.6	55.6	10.31	2.12	246.38	194	195	1.03	85	297
Elops saurus	529	2.0	27.8	3.67	2.15	701.95	295	276	2.56	136	571
Archosargus probatocephalus	552	2.1	56.2	3.66	0.71	238.16	77	197	3.67	51	390
Centropomus undecimalis	430	1.6	50.7	2.99	0.59	237.43	45	398	6.64	146	906
Mugil cephalus	400	1.5	47.2	2.78	0.51	220.38	35	240	2.90	109	415
Sphyraena barracuda	326	1.2	43.1	2.26	0.38	199.12	24	298	5.21	102	930
Micropogonias undulatus	203	0.8	19.4	1.41	0.48	412.72	49	217	4.59	104	355
Lutjanus analis	149	0.6	24.3	1.03	0.23	267.90	17	158	3.09	92	260
Caranx hippos	133	0.5	31.9	0.92	0.25	326.97	33	192	7.07	83	694
Haemulon parra	133	0.5	6.2	0.92	0.65	839.65	89	124	2.34	80	209
Leiostomus xanthurus	133	0.5	11.1	0.92	0.57	745.20	81	115	3.33	81	263
Lutjanus griseus	96	0.4	14.6	0.67	0.21	372.53	17	158	4.35	87	245
Callinectes sapidus	94	0.4	30.6	0.65	0.14	249.93	14	114	4.14	40	181
Lutjanus synagris	67	0.3	11.1	0.47	0.19	497.38	20	108	1.83	87	145
Trachinotus falcatus	62	0.2	9.7	0.43	0.19	520.18	21	150	4.93	45	244
Pogonias cromis	47	0.2	10.4	0.33	0.15	555.25	20	231	6.81	180	390
Albula spp.	44	0.2	7.6	0.31	0.12	476.04	11	225	10.47	155	406
Caranx crysos	26	0.1	4.9	0.18	0.11	701.34	14	183	7.49	116	321
Cynoscion nebulosus	24	0.1	6.9	0.17	0.07	491.61	8	276	21.99	117	511
Brevoortia spp.	22	0.1	4.2	0.15	0.08	611.08	8	157	8.09	109	211

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Trachinotus carolinus	15	0.1	4.2	0.10	0.06	639.41	7	318	10.62	240	387
Paralichthys albigutta	14	0.1	6.9	0.10	0.03	409.25	3	206	18.44	102	350
Haemulon aurolineatum	13	<0.1	1.4	0.09	0.06	848.09	7	118	5.47	95	146
Scomberomorus maculatus	9	<0.1	2.8	0.06	0.04	738.17	5	238	26.85	145	412
Pomatomus saltatrix	7	<0.1	3.5	0.05	0.02	561.65	2	467	47.89	278	605
Megalops atlanticus	6	<0.1	1.4	0.04	0.03	891.92	4	684	29.93	615	810
Sciaenops ocellatus	6	<0.1	2.8	0.04	0.02	626.68	2	214	38.92	127	357
Haemulon sciurus	5	<0.1	2.1	0.03	0.02	792.44	3	86	1.92	80	90
Lachnolaimus maximus	5	<0.1	2.1	0.03	0.02	792.44	3	99	13.23	71	147
Scomberomorus regalis	5	<0.1	0.7	0.03	0.03	1,200.00	5	265	3.89	258	280
Sphyrna tiburo	5	<0.1	1.4	0.03	0.03	987.92	4	469	88.43	360	820
Calamus arctifrons	4	<0.1	0.7	0.03	0.03	1,200.00	4	70	3.04	65	79
Haemulon plumierii	4	<0.1	1.4	0.03	0.02	946.69	3	91	3.30	84	100
Mugil rubrioculus	4	<0.1	2.1	0.03	0.02	730.55	2	136	1.89	131	140
Carcharhinus leucas	3	<0.1	2.1	0.02	0.01	687.96	1	638	41.68	584	720
Lutjanus apodus	3	<0.1	1.4	0.02	0.02	891.92	2	218	3.38	211	222
Menticirrhus americanus	3	<0.1	2.1	0.02	0.01	687.96	1	170	36.31	128	242
Centropomus parallelus	2	<0.1	1.4	0.01	0.01	845.56	1	238	28.50	209	266
Cynoscion complex	1	<0.1	0.7	0.01	0.01	1,200.00	1	260	.	260	260
Diplectrum formosum	1	<0.1	0.7	0.01	0.01	1,200.00	1	140	.	140	140
Epinephelus itajara	1	<0.1	0.7	0.01	0.01	1,200.00	1	169	.	169	169
Ginglymostoma cirratum	1	<0.1	0.7	0.01	0.01	1,200.00	1	590	.	590	590
Litopenaeus setiferus	1	<0.1	0.7	0.01	0.01	1,200.00	1	24	.	24	24

Species	Number			Density Estimate (animals/set)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Lobotes surinamensis	1	<0.1	0.7	0.01	0.01	1,200.00	1	542	.	542	542
Menippe spp.	1	<0.1	0.7	0.01	0.01	1,200.00	1	94	.	94	94
Negaprion brevirostris	1	<0.1	0.7	0.01	0.01	1,200.00	1	660	.	660	660
Ocyurus chrysurus	1	<0.1	0.7	0.01	0.01	1,200.00	1	98	.	98	98
Panulirus argus	1	<0.1	0.7	0.01	0.01	1,200.00	1	40	.	40	40
Pterois spp.	1	<0.1	0.7	0.01	0.01	1,200.00	1	138	.	138	138
Total	**5,078**	**19.0**	**.**	**35.26**	**3.86**	**131.24**	**335**	**.**	**.**	**24**	**930**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

River Sampling

21.3-m River Seine

A total of 27,792 animals were collected in 207 21.3-m river seines, representing 51.0% of the overall SRS catch (Table 4.72). *Anchoa mitchilli* (n=9,345) was the most abundant taxon collected, accounting for 33.6% of the 21.3-m river seine catch (Table 4.75). *Eucinostomus* spp. (n=4,440) and *Brevoortia* spp. (n=2,299) were the next most abundant taxa, accounting for an additional 24.2% of the 21.3-m river seine catch. The taxa most frequently caught in 21.3-m river seines were *Eucinostomus* spp. (77.3% occurrence), *Eucinostomus harengulus* (55.6% occurrence), and *Farfantepenaeus* spp. (47.3% occurrence).

A total of 5,282 animals from 24 selected taxa were collected, representing 19.0% of the entire 21.3-m river seine catch (Table 4.76). *Brevoortia* spp. (n=2,299), and *Mugil cephalus* (n=1,033) were the most abundant selected taxa, accounting for 63.1% of the selected taxa collected by this gear. The selected taxa most frequently caught in 21.3-m river seines were *Farfantepenaeus* spp. (47.3% occurrence), *Centropomus undecimalis* (45.4% occurrence), and *Callinectes sapidus* (30.0% occurrence).

Table 4.75: Catch statistics for 10 dominant taxa collected in 207 21.3-m river seine samples during Southern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Anchoa mitchilli	9,345	33.6	23.7	65.44	29.00	642.23	5,505.88	36	0.07	15	60
Eucinostomus spp.	4,440	16.0	77.3	30.95	5.79	271.74	676.47	26	0.12	8	39
Brevoortia spp.	2,299	8.3	11.1	16.18	6.71	599.54	1,005.88	32	0.29	17	67
Harengula humeralis	1,705	6.1	1.0	12.11	12.08	1,434.52	2,500.00	31	0.05	22	34
Menidia spp.	1,437	5.2	38.6	10.21	2.31	326.10	272.06	34	0.25	13	59
Mugil cephalus	1,033	3.7	12.1	7.34	5.32	1,042.08	1,029.41	32	0.82	17	346
Opisthonema oglinum	975	3.5	1.4	6.93	5.45	1,132.26	1,070.59	35	0.10	25	41
Eucinostomus harengulus	874	3.1	55.6	6.18	0.97	225.38	123.53	53	0.35	40	108
Diapterus auratus	771	2.8	34.8	5.37	2.27	612.41	467.65	44	0.64	16	158
Farfantepenaeus spp.	566	2.0	47.3	4.02	0.57	204.02	50.00	6	0.11	2	15
Subtotal	23,445	84.3	.	.	.	.	.	.	.	2	346
Total	**27,792**	**100.0**	**.**	**197.44**	**45.43**	**331.03**	**6,563.24**	**.**	**.**	**2**	**932**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 4.76: Catch statistics for selected taxa collected in 207 21.3-m river seine samples during Southern Indian River Lagoon stratified-random sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Brevoortia spp.	2,299	8.3	11.1	16.18	6.71	599.54	1,005.88	32	0.29	17	67
Mugil cephalus	1,033	3.7	12.1	7.34	5.32	1,042.08	1,029.41	32	0.82	17	346
Farfantepenaeus spp.	566	2.0	47.3	4.02	0.57	204.02	50.00	6	0.11	2	15
Centropomus undecimalis	508	1.8	45.4	3.25	0.63	293.94	107.35	61	3.41	12	561
Micropogonias undulatus	325	1.2	16.9	2.30	0.84	526.28	117.65	25	0.74	12	168
Callinectes sapidus	160	0.6	30.0	1.13	0.19	237.85	22.06	20	1.54	5	122
Leiostomus xanthurus	133	0.5	2.9	0.94	0.81	1,239.89	167.65	34	0.46	14	68
Archosargus probatocephalus	48	0.2	10.6	0.34	0.12	485.30	20.59	79	14.97	13	346
Centropomus parallelus	40	0.1	2.9	0.28	0.24	1,191.63	48.53	84	8.47	41	292
Mugil curema	32	0.1	7.7	0.23	0.07	461.95	10.29	88	8.91	17	191
Sciaenops ocellatus	22	0.1	4.3	0.16	0.07	660.99	13.24	23	1.78	10	48
Trachinotus falcatus	20	0.1	2.9	0.14	0.06	578.63	5.88	19	2.07	10	41
Litopenaeus setiferus	19	0.1	4.3	0.13	0.05	564.25	5.88	9	0.73	5	16
Sphyraena barracuda	17	0.1	5.8	0.12	0.04	461.60	4.41	108	19.14	27	264
Albula spp.	16	0.1	1.4	0.11	0.09	1,184.79	19.12	57	1.17	50	66
Lutjanus griseus	13	<0.1	5.8	0.09	0.03	417.82	2.94	80	18.90	15	194
Elops saurus	8	<0.1	3.4	0.06	0.02	561.21	2.94	46	7.17	25	81
Mugil rubrioculus	8	<0.1	0.5	0.06	0.06	1,438.75	11.76	55	1.07	50	58
Caranx hippos	5	<0.1	1.9	0.04	0.02	756.55	2.94	75	20.13	25	114
Lutjanus synagris	3	<0.1	1.4	0.02	0.01	826.62	1.47	31	10.91	16	52

Species	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
	No.	%	% Occur	Mean	Stderr	CV	Max	Mean	Stderr	Min	Max
Centropomus ensiferus	2	<0.1	0.5	0.01	0.01	1,438.75	2.94	31	3.00	28	34
Farfantepenaeus aztecus	2	<0.1	1.0	0.01	0.01	1,014.88	1.47	16	0.00	16	16
Lutjanus cyanopterus	2	<0.1	1.0	0.01	0.01	1,014.88	1.47	17	2.00	15	19
Paralichthys lethostigma	1	<0.1	0.5	0.01	0.01	1,438.75	1.47	452	.	452	452
Total	**5,282**	**19.0**	**.**	**37.52**	**9.94**	**381.20**	**1,204.41**	**.**	**.**	**2**	**561**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

5 Species Profiles

5.1 Introduction

An important use of Fisheries-Independent Monitoring (FIM) program data is to track the relative abundance of fish stocks and provide information for species management plans, including information on the abundance of juvenile fish. Juvenile indices of abundance (IOAs) measure the relative abundance of newly-recruited or young-of-the-year (YOY) fish and may be used to describe recruitment processes and forecast population trends. Similarly, adult IOAs measure the relative abundance of larger, older fish and may be used to describe the sexually mature portion of a population and also help forecast future population trends. When combined, these two pieces of information can provide a comprehensive picture of the relative condition of a fish population within an estuarine system. This section provides profiles of target species that are routinely collected in FIM program sampling and are of recreational or commercial importance in Florida: *Centropomus undecimalis* (Common Snook), *Sciaenops ocellatus* (Red Drum), *Cynoscion nebulosus* (Spotted Seatrout), *Archosargus probatocephalus* (Sheepshead), *Lagodon rhomboides* (Pinfish), *Mugil cephalus* (Striped Mullet), and *Callinectes sapidus* (Blue Crab).

Similar analyses were used to develop recruitment indices for each species examined. Data from stratified-random sampling (SRS) were used to create IOAs for YOY, age-1, and adults of target species. Study areas (i.e., estuarine systems) included in the analyses were selected based upon adequate sample sizes of the target species and years of available data, and separate IOAs were calculated for each study area. The specific time periods and sizes of specimens included in the analyses varied among species based upon their individual patterns of recruitment and growth. In general, for each species, only months of peak abundance were included in the analyses. Prior to IOA analyses, length-frequency histograms were examined to determine the size at which the target species fully recruited to the sampling gears.

The annual IOAs representing either juvenile recruitment (YOY and age-1 IOAs) or the sub-adult and adult portion of the population (Adult IOAs) were computed using generalized linear models. The FIM program's SRS design generates count data, the distribution of which is bounded by zero. Often, the frequency distribution of these counts is highly non-normal; therefore, a Poisson or negative binomial distribution was used as appropriate to create IOAs. This report represents a data summary and not an in-depth analysis of factors affecting abundance, therefore, year is the only factor retained in the model runs for the FIM Annual Report Species Profiles. All IOAs were completed in R version 4.6.0 (R Core Team 2022) using the `MASS` (version 7.3.65, Venables and Ripley (2002)) and `stats` (version 4.6.0, R Core Team (2022)) packages.

Relative abundance was calculated as the median annual number of fish per set. Median values were determined from the least-squares adjusted means by multiplying the standard error by a random normal deviate (m=0, s=1) and adding it to the least-squares mean. These data were then back-transformed (e^x). The process was repeated 500 times for each year to create a sampling distribution of back-transformed values. Summary statistics (median, 25^{th}, and 75^{th} percentiles) were then calculated from this distribution of values to give an unbiased estimate of abundance and its associated error, and plotted to view annual trends in IOAs (Sokal and Rohlf 1969). The median value of this distribution was used to represent the mean index of abundance, while the 25th and 75th percentiles were used as estimates of the standard error of the mean. A weighted least squares regression was used to determine the strength and direction of IOA trends, where a non-significant slope was indicative of a generally stable trend. Weights were assigned as the inverse of the standard error associated with a particular mean estimate. Changes in abundance from the previous year were calculated based on overlapping 95% confidence intervals (i.e., two standard errors above and below each abundance estimate). If confidence intervals overlapped, the two years were deemed to be similar to each other. Note that the error bars shown in all indices of abundance represent one standard error above and below the abundance estimate, and thus are not equivalent to the 95% confidence intervals used to determine annual changes in abundance.

5.2 Common Snook, *Centropomus undecimalis*

Common Snook, *Centropomus undecimalis*, are found in estuaries, adjacent rivers, and in nearshore waters of the tropical and subtropical western Atlantic and Gulf (Gilmore et al. 1983; Rivas 1986; Winner et al. 2010). In Florida, Common Snook populations from the Atlantic and Gulf coasts have been genetically identified as separate stocks and are managed separately (Taylor et al. 1993; Tringali and Bert 1996). This species supports an important recreational fishery in Florida and is one of the most popular game fish in state waters. There has been no legal commercial harvest of Common Snook in Florida since the State Legislature declared it a game fish in 1957 and prohibited its sale. Fishing effort targeting Common Snook has increased consistently since the early 1980s on both coasts, but more so on Florida's Gulf coast (Munyandorero et al. 2020). While the overall harvest of Common Snook has declined since the mid-1990s, the numbers of fish caught and released has remained consistently high since the early 1980s (Munyandorero et al. 2020). Recent estimates of transitional spawning potential ratios were near the 40% objective on the Atlantic coast and far exceeded the objective (~60%) on the Gulf coast, therefore both stocks are currently meeting agency management objectives. In response to cold weather induced fish kills that occurred statewide during January 2010, the FWC issued executive orders that prohibited the harvest of Common Snook through August 31, 2010, and subsequent executive orders extended the closure through August 31, 2011 ("Temporary modification of regulations for Red Drum and Snook in Southwest Florida" 2010). At the June 2011 Florida Fish and Wildlife Conservation Commission Meeting, Commissioners concluded that the Atlantic coast stock was less severely impacted by cold weather than the Gulf coast stock. Based on this information, the Commissioners ruled to reopen Common Snook harvest on September 1, 2011, in Atlantic waters, but Gulf coast waters remained closed through August 31, 2013. Following a red tide event that persisted in the Gulf for 16 months in southwest Florida (2017-2019), that area of the fishery was closed in August 2018 and remained closed through May 2022.

Histological evidence shows that Common Snook are protandric hermaphrodites; they begin life as males and some become females after maturation (Taylor et al. 2000). Males typically become sexually mature at ~200 mm standard length (SL) and females at ~680 mm SL. The spawning season for Common Snook extends at least six months; April through September on the Gulf coast and April through October on the Atlantic coast (Taylor et al. 1998).

In 2014, FIM dedicated two years to develop an age-1 Common Snook sampling program in Tampa Bay, Charlotte Harbor, and the northern and southern portions of the Indian River Lagoon (IRL). This effort was funded by Snook Stamp money. In January 2016, the Common Snook age-1 monitoring program officially began, and those data are now used in the Snook stock assessment. Starting in 2024, these age-1 data have been incorporated into the FIM Annual Report's Common Snook indices of abundance (IOAs) as described below.

To monitor year-class strength and to improve the ability to predict future adult Common Snook abundances, the FIM program developed relative IOAs of young-of-the-year (YOY; ≤99 mm SL) and age-1 (100-300 mm SL) Common Snook in selected Florida estuaries. Prior to 2024, the IOAs for YOY included abundance data for Common Snook ≤50 mm SL and no age-1 IOAs were calculated. Abundance data for YOY and age-1 Common Snook collected in stratified-random 21.3-m seine samples were examined to assess recruitment into three Florida estuaries: Tampa Bay and Charlotte Harbor on the Gulf coast and the northern and southern portions of the IRL on the Atlantic coast. Although months of peak juvenile recruitment for Common Snook vary among eastuaries (August through November in Tampa Bay, August through February in Charlotte Harbor, July through February in the northern portion of the IRL, and August through February in the southern portion of the IRL), a consistent recruitment window of August-February was used for all YOY and age-1 IOAs. Data collected from August through December of each year were combined with data from January and February of the following year to create a biological year. The IOAs for 2025, therefore, only included data from August through December 2025. Only data from this gear and these primary time periods were used in developing IOAs for YOY and age-1 Common Snook.

The FIM program also monitored the relative abundances of large juvenile and adult Common Snook in Florida estuaries within the range of this species. Individuals between 200 mm and 609 mm SL were included in the IOA since they are typically reproductively mature males and serve as a "pre-recruitment" indicator for the fishery. The upper limit of 609 mm SL used in this IOA corresponds to the lower regulatory minimum size of 711 mm total length (TL). Data from stratified-random 183-m haul seines were used to develop IOAs for reproductively mature Common Snook within Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northern IRL, and Southern IRL. These IOAs were derived by including all Common Snook between 200 – 609 mm SL collected between January and December from 1996 – 2025. Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year (≤99 mm SL) and age-1 (100-300 mm SL) Common Snook collected in 21.3-m seines and of pre-fishery subadult and adult Common Snook (200-609 mm SL) collected in 183-m haul seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates). Note different scales for estimates from 21.3-m and 183-m seines.

Cedar Key

In the Cedar Key estuary, Common Snook catches were zero or near-zero between 1997 and 2016 (Figure 5.1). These low levels of abundance in Cedar Key waters are consistent with the historical range of this temperature-sensitive species in Florida (Taylor et al. 1993; Winner et al. 2010). However, recent effects of climate change (i.e., increasing water temperatures, more temperate winters) have resulted in an obvious range extension for Common Snook on Florida's Gulf coast (Purtlebaugh et al. 2020). Pre-fishery subadult and adult (200-609 mm SL) Common Snook abundance from Cedar Key in 2025 did not differ significantly from the previous year.

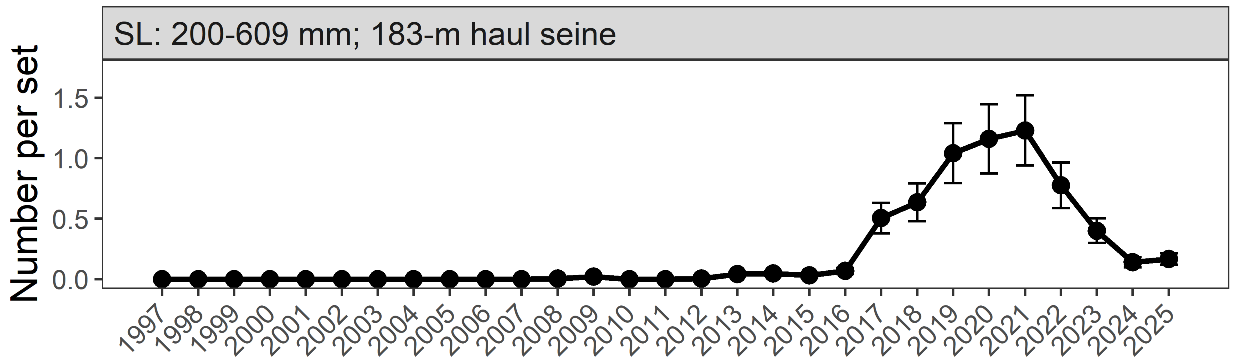

Figure 5.1: Relative abundance (±1 SE) of subadult/adult (200-609 mm SL) Common Snook collected between 1997 and 2025 during Cedar Key stratified-random sampling.

Tampa Bay

Annual IOAs of YOY (≤99 mm SL) Common Snook in river habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.2). Relative abundance of YOY Common Snook in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of age-1 (100-300 mm SL) Common Snook in river habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.2). Relative abundance of age-1 Common Snook in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of pre-fishery subadult and adult (200-609 mm SL) Common Snook in Tampa Bay did not show a significant trend since 1996 (Figure 5.2). Relative abundance of pre-fishery subadult and adult Common Snook in 2025 did not differ significantly from the previous year.

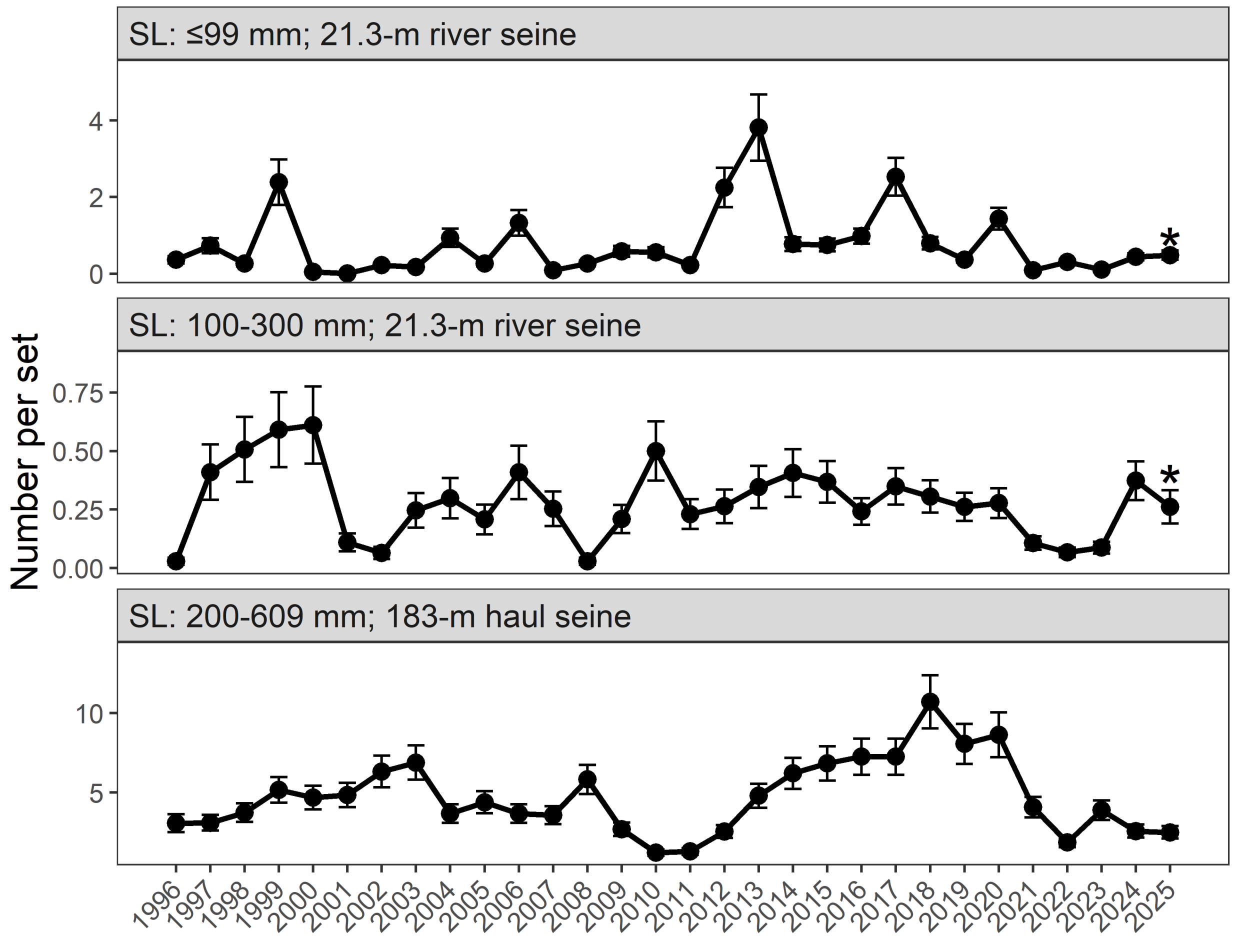

Figure 5.2: Relative abundance (±1 SE) of young-of-the-year (≤99 mm SL), age-1 (100-300 mm SL), and subadult/adult (200-609 mm SL) Common Snook collected between 1996 and 2025 during Tampa Bay stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Sarasota Bay

Annual IOAs of pre-fishery subadult and adult (200-609 mm SL) Common Snook in Sarasota Bay did not show a significant trend since 2010 (Figure 5.3). Relative abundance of pre-fishery subadult and adult Common Snook in 2025 did not differ significantly from the previous year.

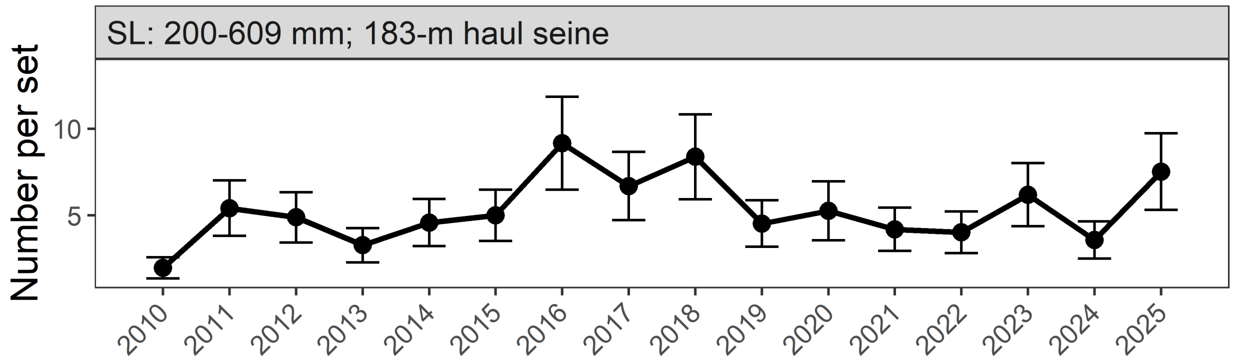

Figure 5.3: Relative abundance (±1 SE) of subadult/adult (200-609 mm SL) Common Snook collected between 2010 and 2025 during Sarasota Bay bimonthly stratified-random sampling.

Charlotte Harbor

Annual IOAs of YOY (≤99 mm SL) Common Snook in river habitats of Charlotte Harbor did not show a significant trend since 2016 (Figure 5.4). Relative abundance of YOY Common Snook in river habitats in 2025 decreased from the previous year.

Annual IOAs of age-1 (100-300 mm SL) Common Snook in river habitats of Charlotte Harbor did not show a significant trend since 2016 (Figure 5.4). Relative abundance of age-1 Common Snook in 2025 did not differ significantly from the previous year.

Annual IOAs of pre-fishery subadult and adult (200-609 mm SL) Common Snook in Charlotte Harbor did not show a significant trend since 1996 (Figure 5.4). Relative abundance of pre-fishery subadult and adult Common Snook in 2025 did not differ significantly from the previous year.

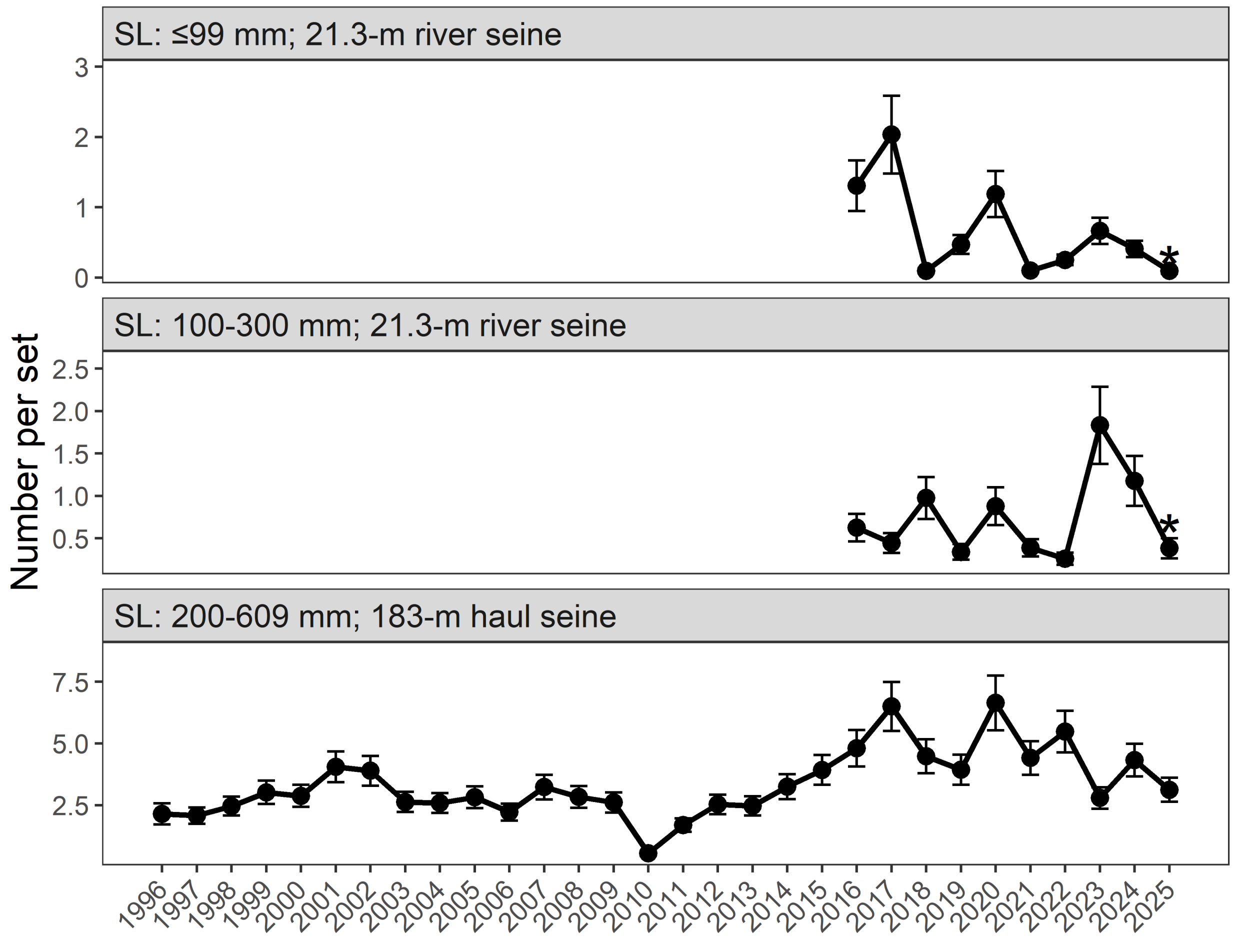

Figure 5.4: Relative abundance (±1 SE) of young-of-the-year (≤99 mm SL), age-1 (100-300 mm SL), and subadult/adult (200-609 mm SL) Common Snook collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that dedicated juvenile snook sampling in previously underrepresented habitats (i.e., tidal creeks and tributaries) began in 2016. These changes are reflected in the IOA time series where we report IOAs beginning in 2016. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Northern Indian River Lagoon

Annual IOAs of YOY (≤99 mm SL) Common Snook in river habitats of Northern Indian River Lagoon did not show a significant trend since 1999 (Figure 5.5). Relative abundance of YOY Common Snook in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of age-1 (100-300 mm SL) Common Snook in river habitats of Northern Indian River Lagoon have generally decreased since 1999 (Figure 5.5). Relative abundance of age-1 Common Snook in 2025 did not differ significantly from the previous year.

Annual IOAs of pre-fishery subadult and adult (200-609 mm SL) Common Snook in Northern Indian River Lagoon have generally decreased since 1997 (Figure 5.5). Relative abundance of pre-fishery subadult and adult Common Snook in 2025 decreased from the previous year.

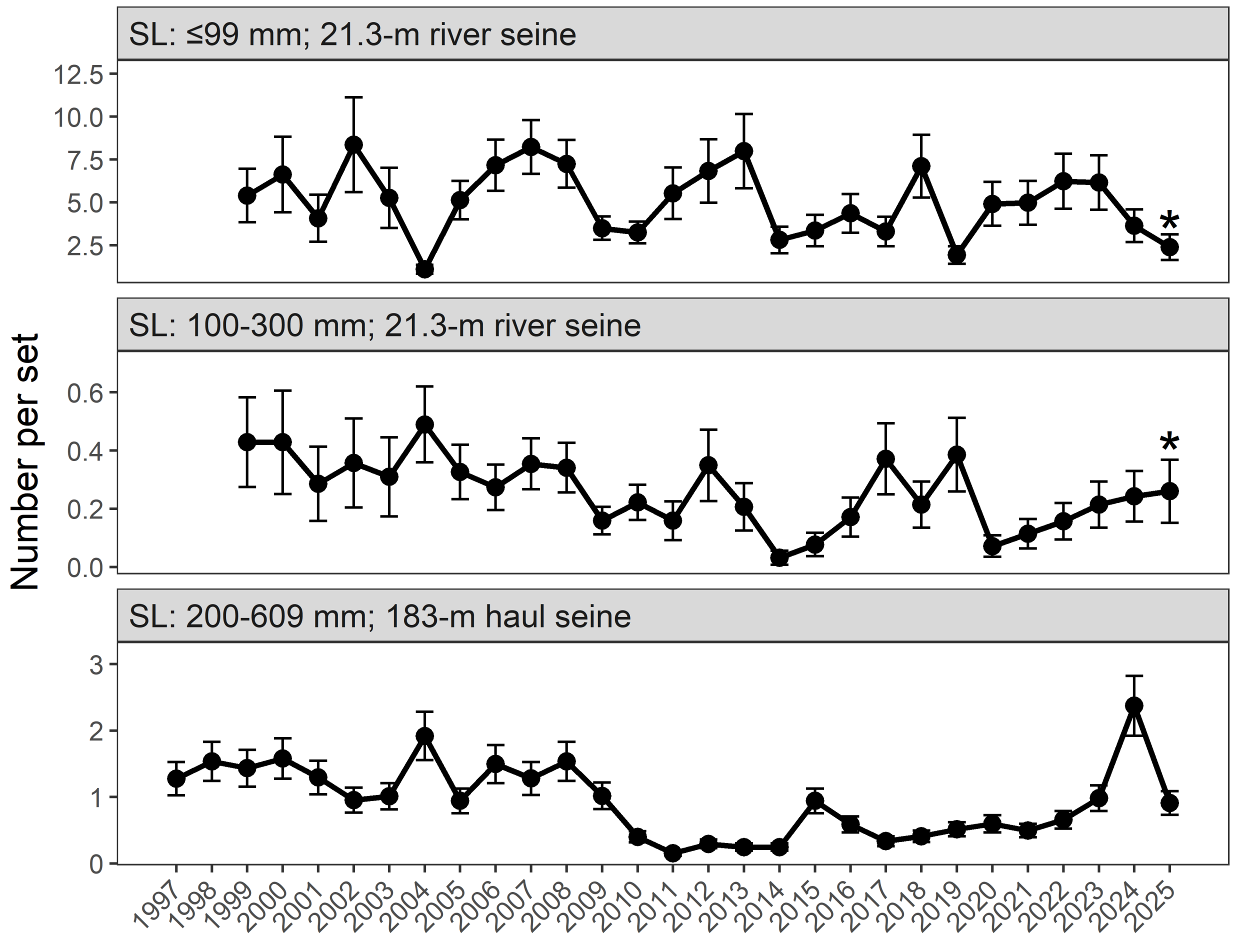

Figure 5.5: Relative abundance (±1 SE) of young-of-the-year (≤99 mm SL), age-1 (100-300 mm SL), and subadult/adult (200-609 mm SL) Common Snook collected between 1997 and 2025 during Northern Indian River Lagoon stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Annual IOAs of YOY (≤99 mm SL) Common Snook in river habitats of Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.6). Relative abundance of YOY Common Snook in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of age-1 (100-300 mm SL) Common Snook in river habitats of Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.6). Relative abundance of age-1 Common Snook in 2025 did not differ significantly from the previous year.

Annual IOAs of pre-fishery subadult and adult (200-609 mm SL) Common Snook in Southern Indian River Lagoon have generally decreased since 1997 (Figure 5.6). Relative abundance of pre-fishery subadult and adult Common Snook in 2025 increased from the previous year.

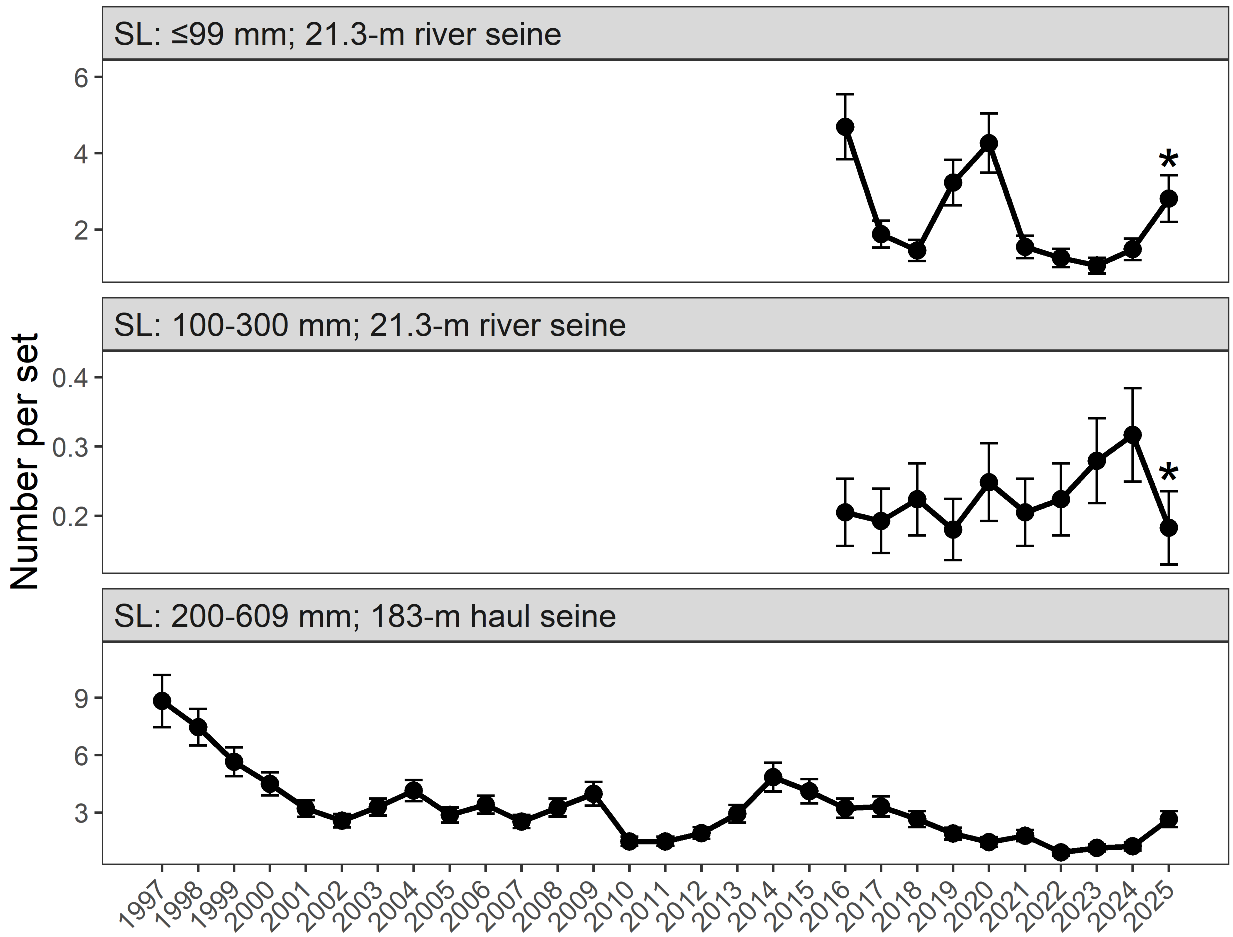

Figure 5.6: Relative abundance (±1 SE) of young-of-the-year (≤99 mm SL), age-1 (100-300 mm SL), and subadult/adult (200-609 mm SL) Common Snook collected between 1997 and 2025 during Southern Indian River Lagoon stratified-random sampling. Note that dedicated juvenile snook sampling in previously underrepresented habitats (i.e., tidal creeks and tributaries) began in 2016. These changes are reflected in the IOA time series where we report IOAs beginning in 2016. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared.*

Length-Frequency Diagrams

The following figure shows length-frequency diagrams of Common Snook collected in 183-m haul seines. All lengths are standard length (SL). Note different scales and years of collection for each estuary. Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on larger juvenile and adult Common Snook in Florida estuaries (Figure 5.7). Common Snook length-frequency distributions generally followed a unimodal distribution with modes varying across estuaries.

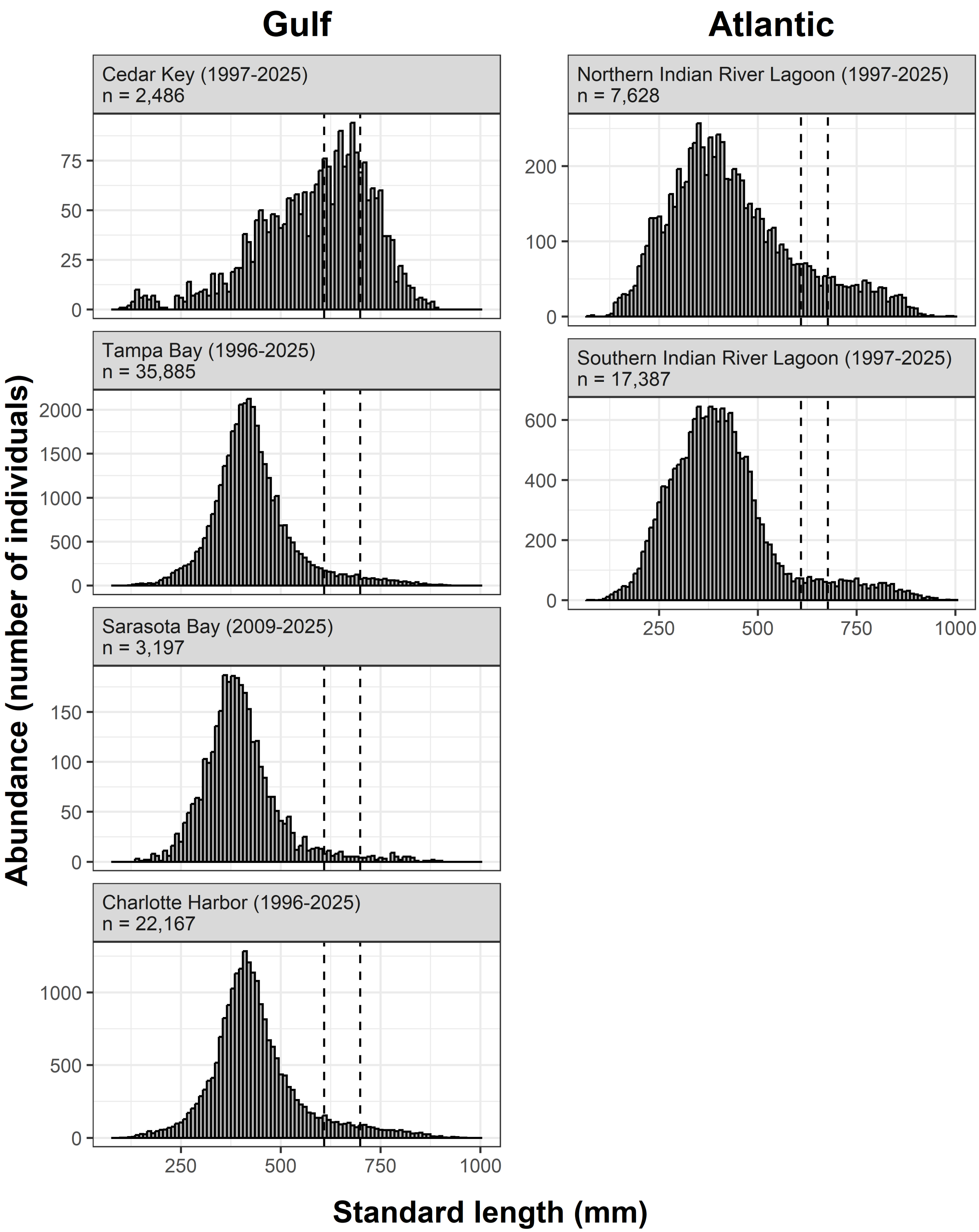

Figure 5.7: Length-frequency diagrams of Common Snook collected in 183-m haul seines. Vertical dashed lines indicate the lower and upper recreational size limits for Common Snook in each estuary.

5.3 Red Drum, *Sciaenops ocellatus*

The Red Drum, *Sciaenops ocellatus*, is an estuarine-dependent species inhabiting coastal waters from Massachusetts to northern Mexico (Yokel 1966; Reagan 1985). This species supports important recreational fisheries throughout the U.S. South Atlantic and Gulf coasts. In Florida, dramatic stock reductions in the mid-1980s resulted in a 1986 moratorium on commercial and recreational Red Drum fisheries. In 1989, the fishery was reopened with strict size and bag limits, as well as a no-sale provision that effectively eliminated the commercial Red Drum fishery in Florida. Since that time, Red Drum stocks have recovered significantly. In the 2020 stock assessment, model predictions for age-specific indices of Red Drum indicated that populations in Florida exceeded the Florida Fish and Wildlife Conservation Commission's (FWC) management target of at least a 40% escapement rate (geometric mean of 2017-2019) in three (NW, SW, NE) of the four statewide assessment regions (Addis 2020). In these three regions, Red Drum are not considered overfished nor undergoing overfishing. The SE region of Florida exceeded the escapement rate management target (55%) in 2019, the terminal year of the assessment, but did not meet the escapement rate management target over the three-year time period analyzed. Current escapement rates for 2017-2019 were 48% in the NW, 72% in the SW, 61% in the NE, and 35% in the SE region (Addis 2020). In addition, continued improvement of escapement rates within the northeast management region of the state led to an increase of the daily bag limit from one to two fish in early 2012 and a renewed interest in opening coastal Red Drum to harvest in the Gulf. However, bag limits within the southern and northwest management areas of the state are at one fish per person per day. Bag limits within the southern management areas of the state have remained at one fish per person per day since 1989.

Following a red tide event that persisted for 16 months in southwest Florida (2017-2019) the Red Drum fishery was closed in state waters of Pasco County south to Gordon Pass (Collier County) through Executive Order (EO), ("Temporary modification of regulations for Red Drum and Snook in Southwest Florida" 2018) in August 2018. This EO was subsequently modified in 2019 to include Spotted Seatrout ("Temporary modification of regulations for Spotted Seatrout in Southwest Florida" 2019), and extended through additional EOs ("Temporary modification of regulations for Red Drum, Snook, and Spotted Seatrout in Southwest Florida" 2019, 2020) through May 2021. Based on indicators and stakeholder feedback suggesting that fisheries in the Tampa Bay area had improved since the prolonged 2017-2019 red tide bloom, the Redfish fishery was reopened from Pinellas County south to State Road 64 in Manatee County in October 2021 ("Temporary modification of regulations for Red Drum, Snook, and Spotted Seatrout in the Tampa Bay Area" 2021). The Red Drum fishery remained closed south of State Road 64 (Manatee County) south through Gordon Pass through August 2022 ("Temporary modification of regulations for Red Drum, Snook, and Spotted Seatrout in a portion of Southwest Florida" 2021; "Temporary modification of regulations for Red Drum, Snook, and Spotted Seatrout in Southwest Florida" 2022).

In September 2022, the FWC adopted a more holistic management approach for Red Drum focused on smaller management regions, in which management decisions are informed by six management metrics: escapement, relative abundance, habitat, harmful algal blooms, fishing effort, and stakeholder feedback. The management plan established nine smaller regions evaluated yearly for potential changes in Red Drum regulations. The IOAs described here are the "relative abundance" metric used by the FWC in their annual reviews for Red Drum management. Currently, the Indian River Lagoon is the only management region in which Red Drum are closed for recreational harvest.

In Florida, adult Red Drum spawn from mid-August through late November (Yokel 1966). Spawning occurs primarily near bay mouths, inlets, or over nearshore continental shelf waters (Mercer 1984; Murphy and Taylor 1990), and in some locations inside estuaries (Murphy and Taylor 1990; Johnson and Funicelli 1991). In Florida estuaries, recruitment of juveniles begins in September and continues through February, with peaks occurring in October and November (Reagan 1985; Peters and McMichael 1987; Daniel 1988). Settlement of young-of-the-year (YOY) Red Drum typically occurs in the middle to upper reaches of estuaries, away from ocean inlets or passes, and can be strongly influenced by the availability of low to moderate salinity habitats (Bacheler et al. 2008). On both coasts, large juvenile Red Drum enter the fishery at approximately 15-18 months of age, and are fully recruited at the beginning of their third year (age-2, Chagaris et al. 2015). The legal recreational slot limit (457-686 mm total length (TL); 18-27 inches TL) includes predominantly age-1 and age-2 fish. Red Drum greater than 700 mm standard length (SL) are uncommon in the Fisheries-Independent Monitoring (FIM) program samples from west Florida estuaries, but are occasionally collected on the east coast in the Indian River Lagoon (IRL), (FWC-FWRI 2015).

In an effort to monitor year-class strength and to improve the ability to predict future adult Red Drum abundances, relative indices of abundance (IOAs) were developed to estimate YOY Red Drum recruitment into selected Florida estuaries. Abundance data for YOY Red Drum (≤40 mm SL) that were collected in stratified-random 21.3-m seine samples were examined to assess recruitment in eight Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the Indian River Lagoon (IRL). Young-of-the-year Red Drum recruited to habitats sampled with 21.3-m seines primarily from September through February. Data collected from September through December of each year were combined with data from January through February of the following year to create a biological year of data. The IOAs for 2025, therefore, only included data from September through December 2025. Separate analyses for river and bay sets were conducted when possible to examine differences in recruitment between the two habitats. Annual IOAs were also developed for legal-size Red Drum that fall within the permitted recreational harvest size range (457-686 mm TL, 374-565 mm SL, Murphy and Taylor (1990)) in each estuary, including the southern portion of the IRL. These IOAs included all legal-size Red Drum collected in stratified-random 183-m haul seines during each calendar year (January-December). Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year Red Drum (≤40 mm SL) collected in 21.3-m seines and of legal-sized Red Drum (374-565 mm SL) collected in 183-m haul seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates). Note different scales for estimates from 21.3-m and 183-m seines.

Apalachicola Bay

Annual IOAs of YOY (≤40 mm SL) Red Drum in bay habitats of Apalachicola Bay did not show a significant trend since 1998 (Figure 5.8). Relative abundance of YOY Red Drum in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Apalachicola Bay have generally increased since 1998 (Figure 5.8). Relative abundance of legal-sized Red Drum in 2025 did not differ significantly from the previous year.

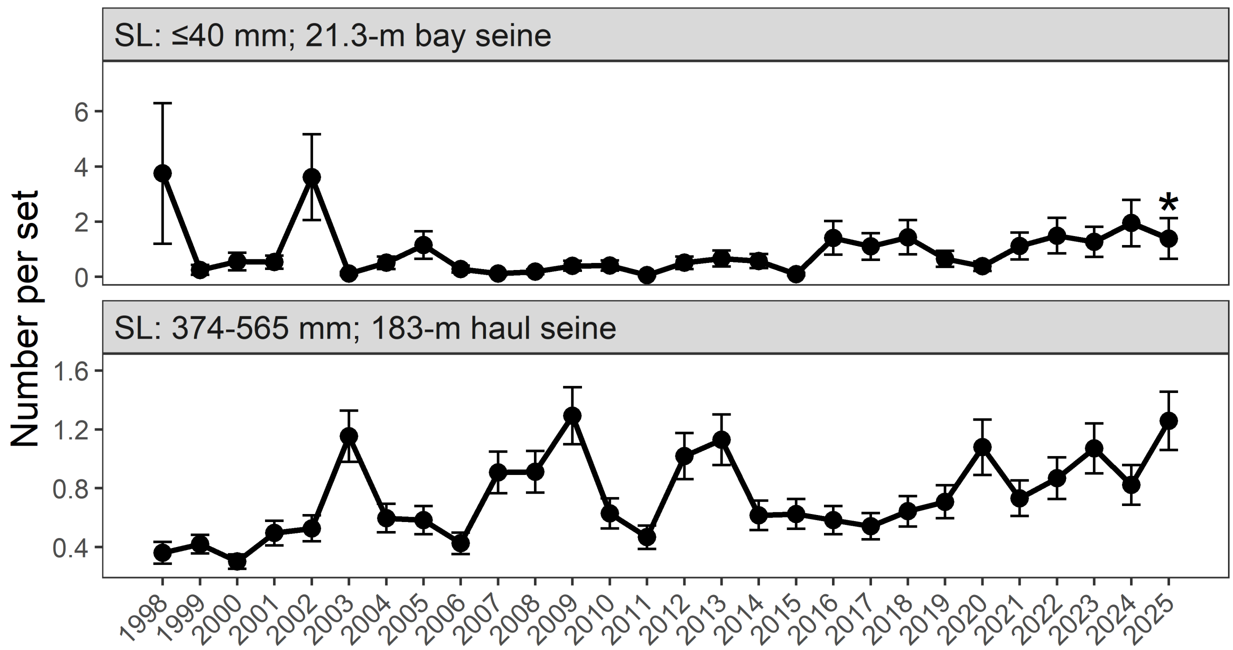

Figure 5.8: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 1998 and 2025 during Apalachicola Bay stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Cedar Key

Annual IOAs of YOY (≤40 mm SL) Red Drum in river habitats of Cedar Key did not show a significant trend since 1996 (Figure 5.9). Relative abundance of YOY Red Drum in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Red Drum in bay habitats of Cedar Key have generally increased since 1996 (Figure 5.9). Relative abundance of YOY Red Drum in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Cedar Key have generally decreased since 1997 (Figure 5.9). Relative abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

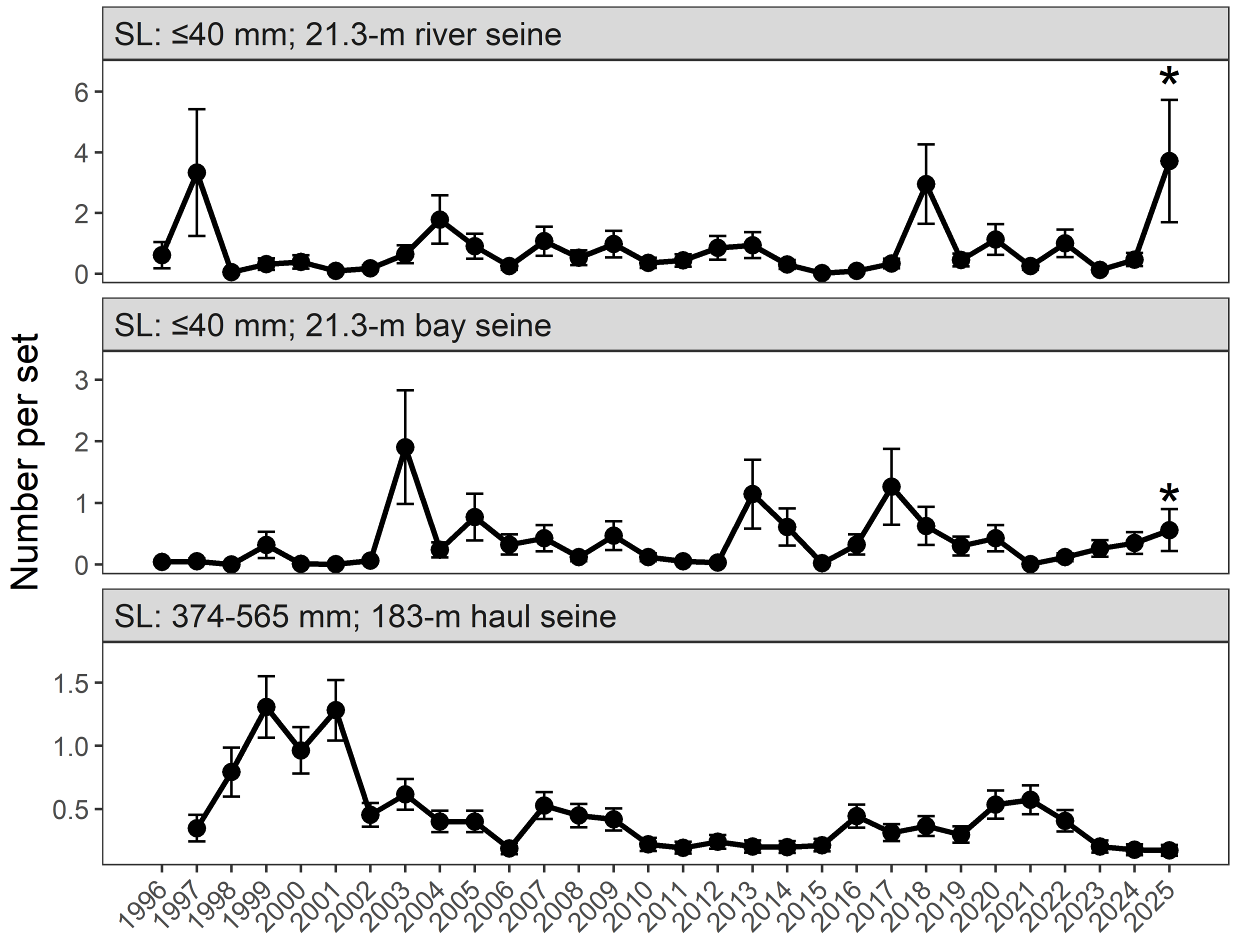

Figure 5.9: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 1996 and 2025 during Cedar Key stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Tampa Bay

Annual IOAs of YOY (≤40 mm SL) Red Drum in river habitats of Tampa Bay have generally decreased since 1996 (Figure 5.10). Relative abundance of YOY Red Drum in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Red Drum in bay habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.10). Relative abundance of YOY Red Drum in bay habitats in 2025 decreased from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Tampa Bay did not show a significant trend since 1996 (Figure 5.10). Relative Abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

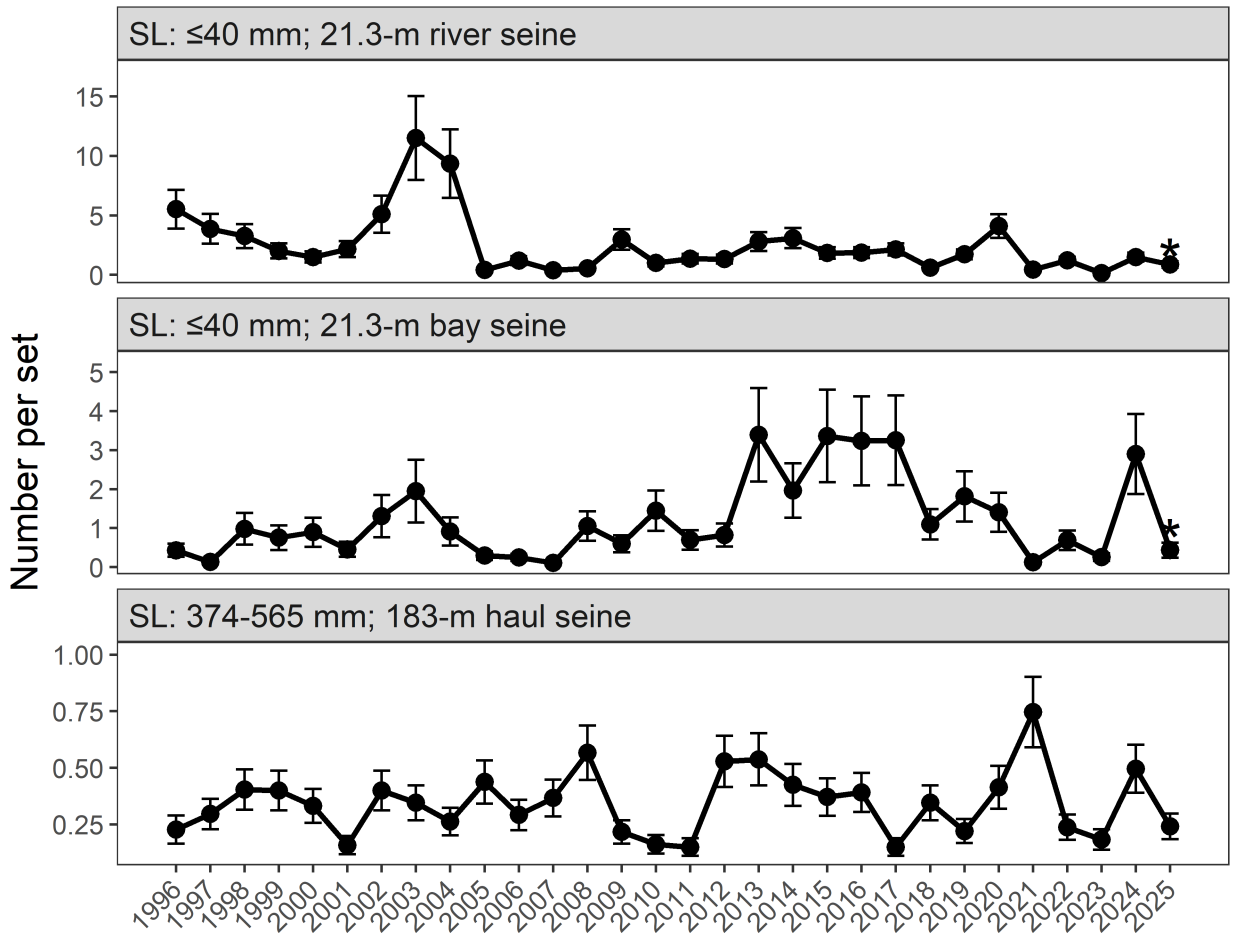

Figure 5.10: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 1996 and 2025 during Tampa Bay stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Sarasota Bay

Annual IOAs of YOY (≤40 mm SL) Red Drum in bay habitats of Sarasota Bay did not show a significant trend since 2009 (Figure 5.11). Relative abundance of YOY Red Drum in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Sarasota Bay did not show a significant trend since 2010 (Figure 5.11). Relative abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

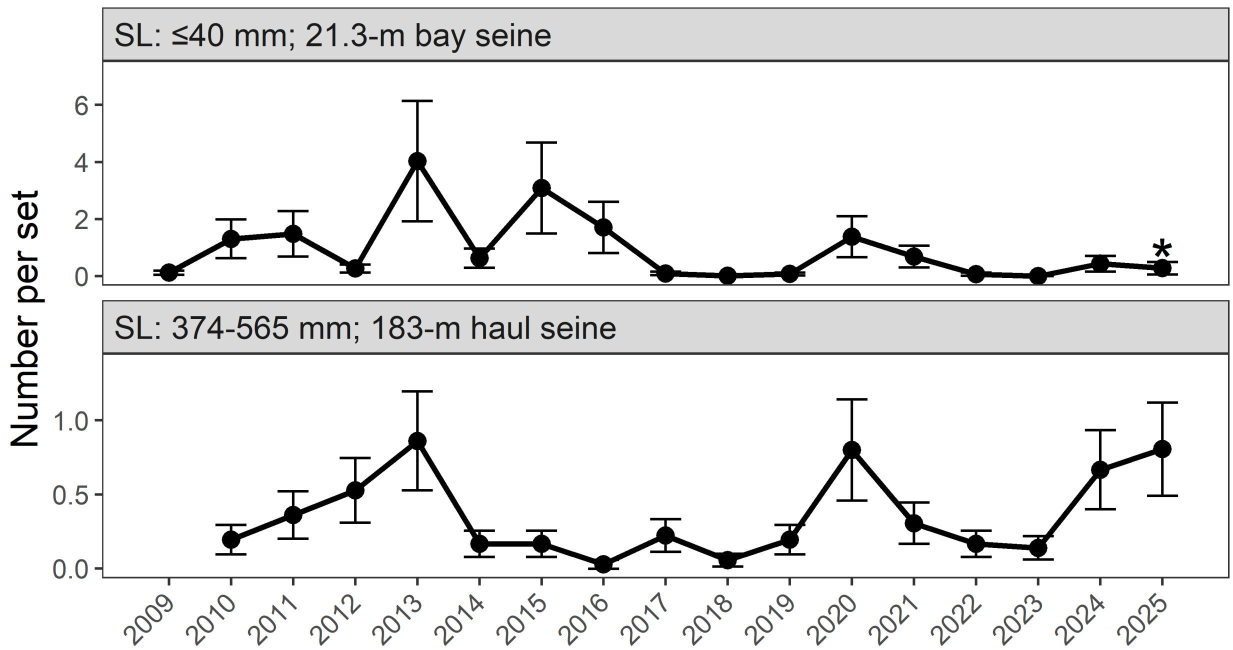

Figure 5.11: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 2009 and 2025 during Sarasota Bay bimonthly stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

__Charlotte Harbor__

Annual IOAs of YOY (≤40 mm SL) Red Drum in river habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.12). Relative abundance of YOY Red Drum in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Red Drum in bay habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.12). Relative abundance of YOY Red Drum in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Charlotte Harbor have generally increased since 1996 (Figure 5.12). Relative abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

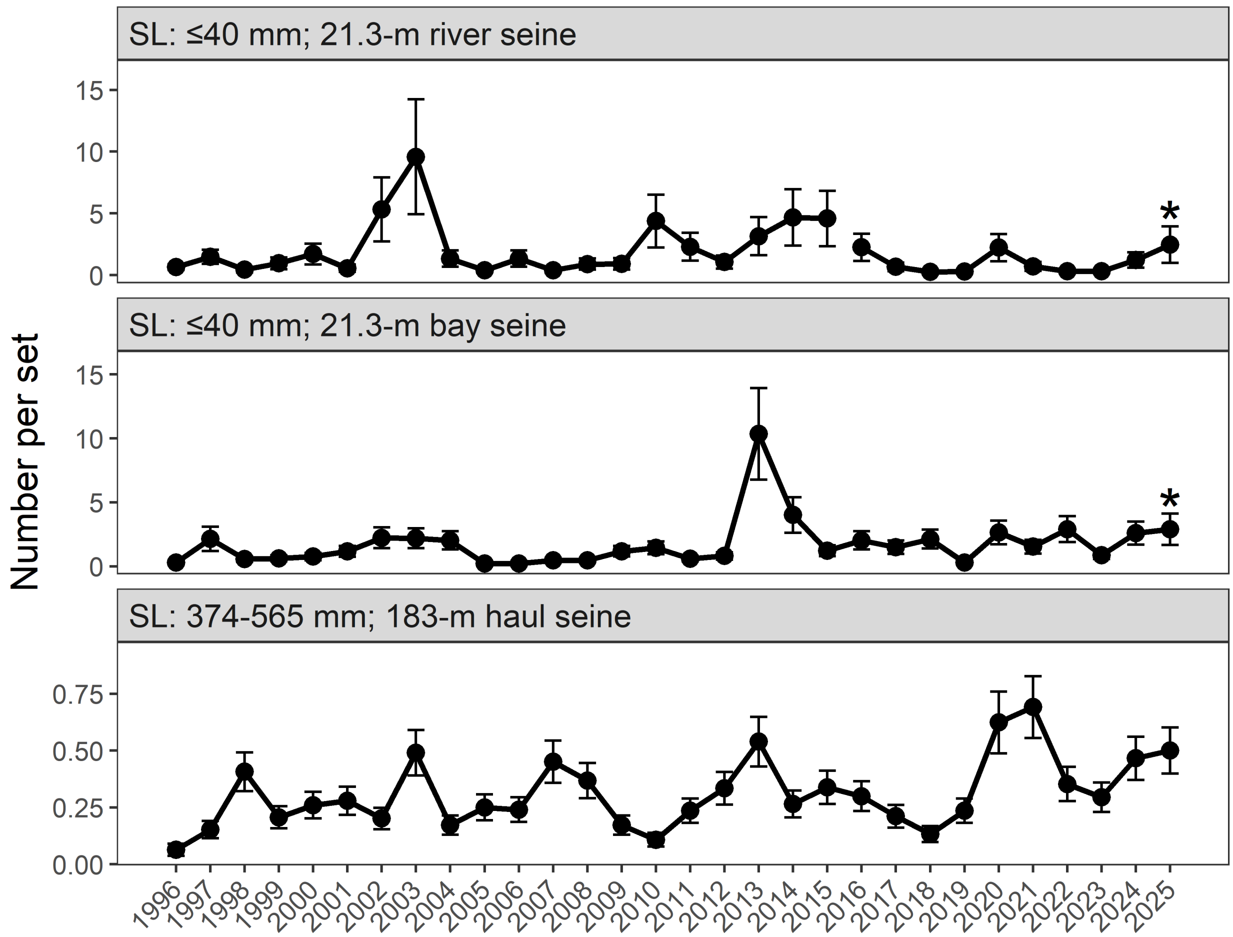

Figure 5.12: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Northeast Florida

Annual IOAs of YOY (≤40 mm SL) Red Drum in river habitats of Northeast Florida did not show a significant trend since 2001 (Figure 5.13). Relative abundance of YOY Red Drum in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Northeast Florida did not show a significant trend since 2001 (Figure 5.13). Relative abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

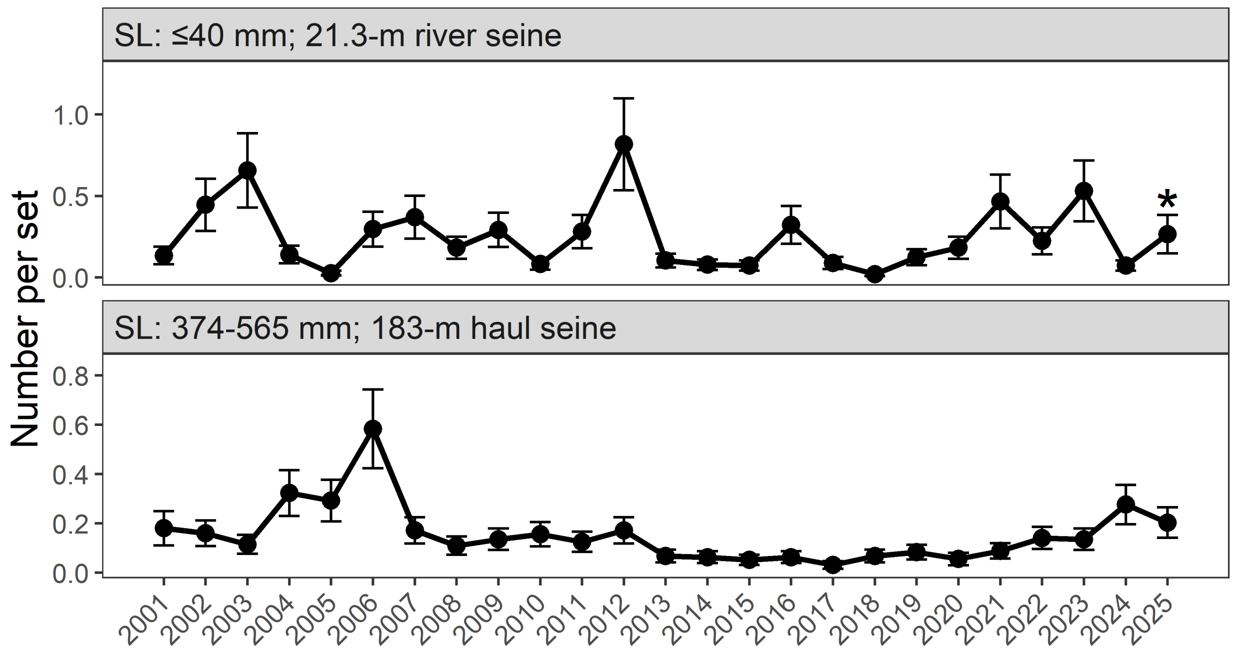

Figure 5.13: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 2001 and 2025 during Northeast Florida stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Annual IOAs of YOY (≤40 mm SL) Red Drum in river habitats of Northern Indian River Lagoon did not show a significant trend since 1999 (Figure 5.14). Relative abundance of YOY Red Drum in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Red Drum in bay habitats of Northern Indian River Lagoon have generally increased since 1996 (Figure 5.14). Relative abundance of YOY Red Drum in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Northern Indian River Lagoon did not show a significant trend since 1997 (Figure 5.14). Relative abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

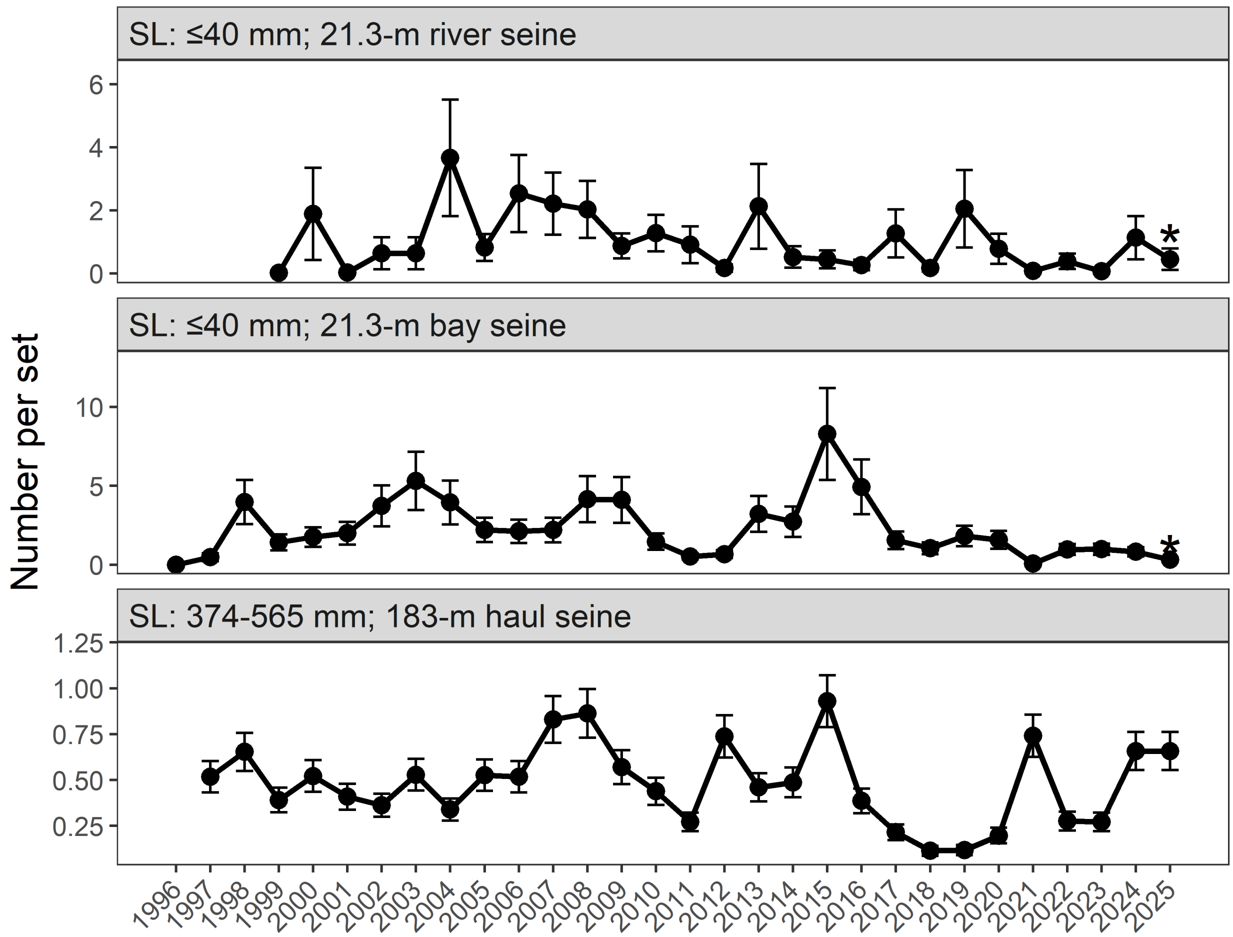

Figure 5.14: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 1996 and 2025 during Northern Indian River Lagoon stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Southern Indian River Lagoon

Annual IOAs of YOY (≤40 mm SL) Red Drum in river habitats of Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.15). Relative abundance of YOY Red Drum in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of legal-sized (374-565 mm SL) Red Drum in Southern Indian River Lagoon have generally decreased since 1997 (Figure 5.15). Relative abundance of subadult Red Drum in 2025 did not differ significantly from the previous year.

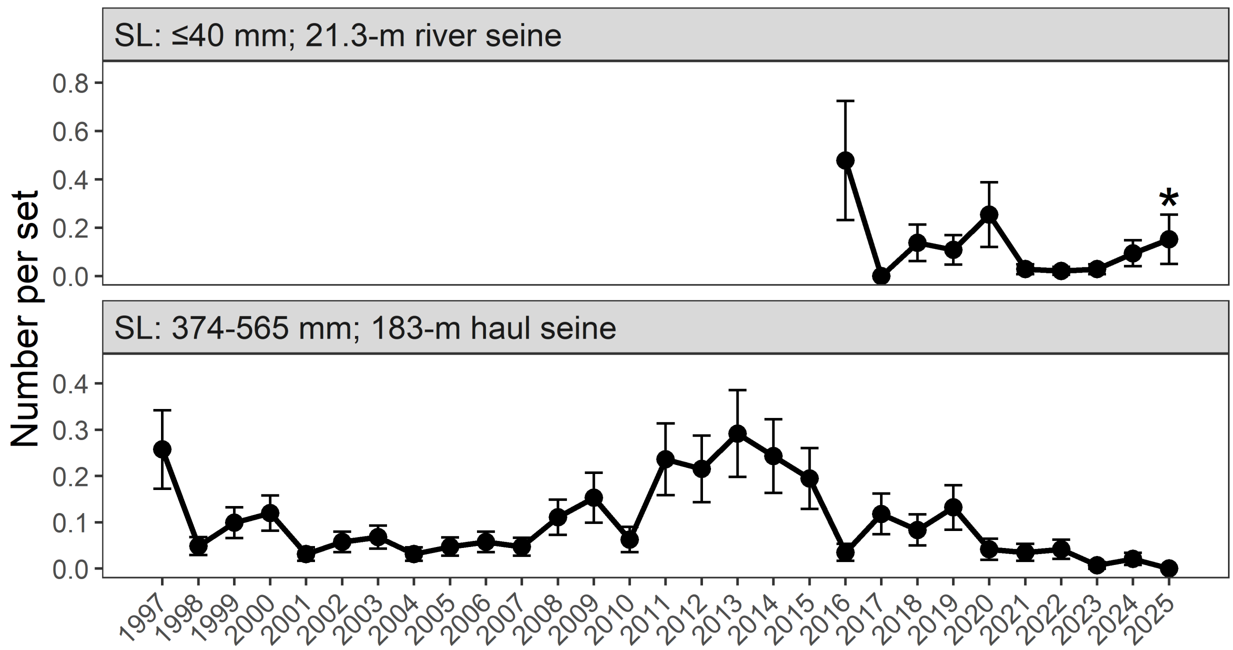

Figure 5.15: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal (374-565 mm SL) Red Drum collected between 1997 and 2025 during Southern Indian River Lagoon stratified-random sampling. Note that river sampling began in 2016 to include previously underrepresented habitats (i.e., tidal creeks and tributaries). **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-February of 2026 were unavailable at the time the report was prepared*.

Length-Frequency Diagrams

The following figure shows length-frequency diagrams of Red Drum collected in 183-m haul seines. All lengths are standard length (SL). Note different scales and years of collection for each estuary. Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on larger juvenile and adult Red Drum in Florida estuaries (Figure 5.16). Red Drum length-frequency distributions generally followed a polymodal distribution across estuaries. In addition, the length-frequency in all estuaries declined sharply after the upper slot limit. Large Red Drum (age-4 and older) at these sizes are becoming sexually mature, and will leave the estuaries to move to coastal areas to join schools of other reproductively mature individuals, with the exception of a portion of the population in the northern IRL that resides and spawns within the estuary (Johnson and Funicelli 1991; Reyier et al. 2011).

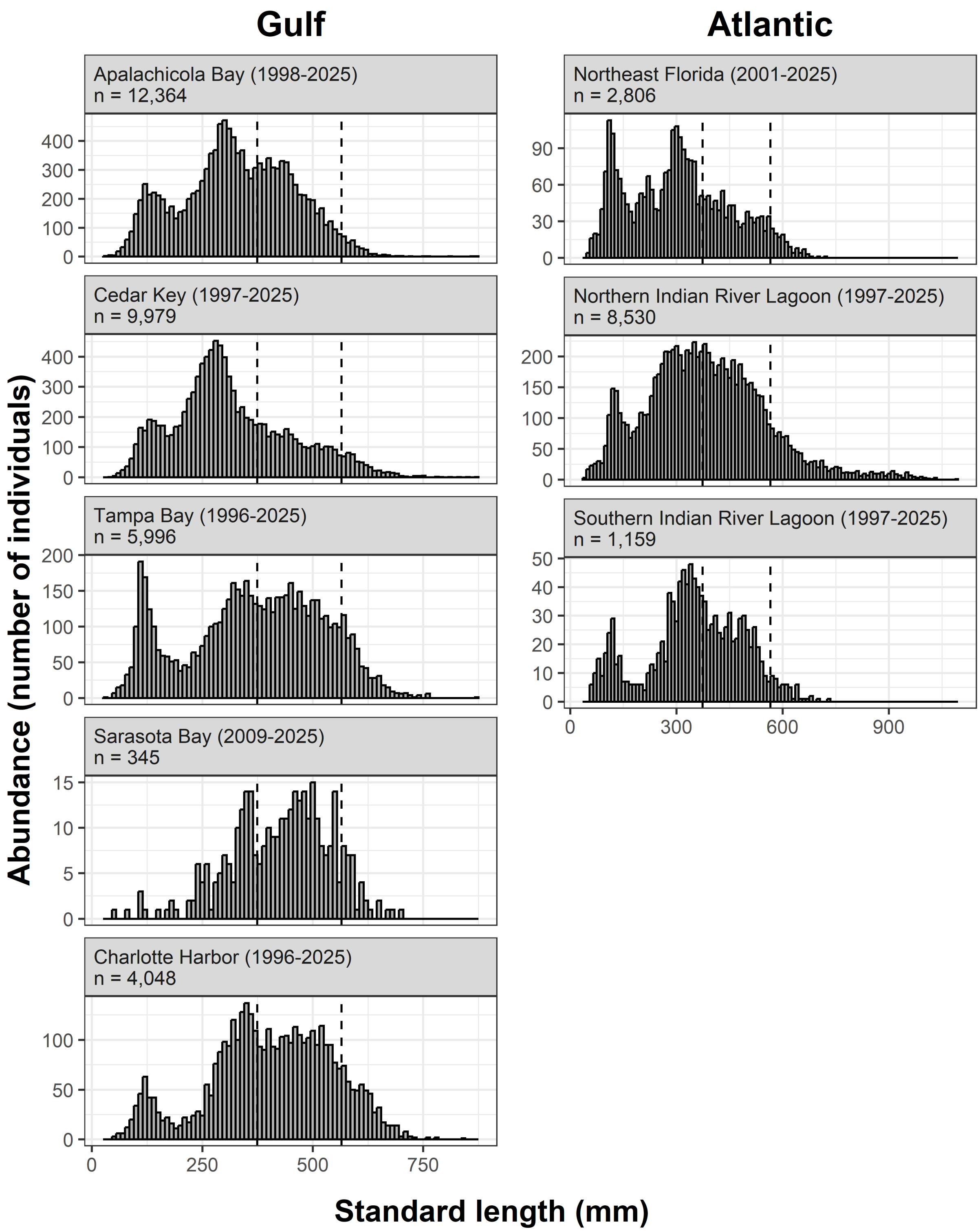

Figure 5.16: Length-frequency diagrams of Red Drum collected in 183-m haul seines. Vertical dashed lines indicate the lower and upper recreational size limits for Red Drum in each estuary.

5.4 Spotted Seatrout, *Cynoscion nebulosus*

Spotted Seatrout, *Cynoscion nebulosus*, occur in temperate to tropical estuarine and coastal waters on the Atlantic and Gulf coasts of the United States (Bortone 2002). In Florida, Spotted Seatrout have historically supported economically important recreational and commercial fisheries. Overall, annual commercial landings of Spotted Seatrout in Florida declined quite slowly during the period 1950 through the 1970s (Murphy and Addis 2011). During the early 1990s, statewide commercial landings never exceeded much more than 500,000 fish and dropped drastically to fewer than 50,000 fish after implementation of the constitutional amendment significantly limiting the use of entangling gear in 1995 and the establishment of a 3-month open season in 1996. Declines in the number of commercial trips from the mid-1980s to more recent years were over 90% on the Atlantic coast and nearly 99% on the Gulf coast (Murphy and Addis 2011). With these regulatory changes, the Spotted Seatrout fishery has moved from a mixed-sector fishery, to primarily a recreational fishery that makes up more than 99% of the total landings in Florida (13,133,000 fish during 2011-2015, Addis et al. 2018). Between 1990 and 2022, various commercial and recreational fishing regulations were adopted in an effort to support the rebuilding of Spotted Seatrout stocks (Murphy and Muller 1999; Addis et al. 2023). In Florida, studies have indicated the presence of Spotted Seatrout stock subdivisions with most of the major estuaries having a separate stock (Iversen and Tabb 1962; Seyoum et al. 2014). Since 2012, the FWC has managed Spotted Seatrout in four different regions, increasing to five regions in 2020, with different regulations in each region (Addis et al. 2023). Over the years, various management regulations have been exercised based upon updated stock assessments and regional responses to environmental perturbations (i.e., red tides), which at various times have resulted in seasonal and emergency closures for each of the management zones. There have also been adjustments to the legal harvest size of Spotted Seatrout, with the most recent change adopted February 1, 2020 which set a recreational slot limit of 325-410 mm SL (15-19 in TL).

Adult Spotted Seatrout begin to spawn in March or April in Tampa Bay and Charlotte Harbor (McMichael and Peters 1989) and in April or May in the northern portion of the Indian River Lagoon (IRL), Cedar Key, Apalachicola (Moody 1949; Tabb 1961; Crabtree and Adams 1998; DeVries et al. 2002), and Northeast Florida (MacDonald et al. 2009). Spotted Seatrout are generally reproductively mature at age 2 (males ≥200 mm standard length [SL], females ≥235 mm SL, Murphy and Addis 2011). Protracted spawning of Spotted Seatrout continues throughout the summer and into late September or October, depending upon location (Murphy and Muller 1999). Spawning generally occurs during the evening hours in deep channels and depressions near grass flats in estuarine areas with water temperatures >21°C (Tabb 1961; Helser et al. 1993). Estuarine water temperatures below 20°C may reduce hatching success for Spotted Seatrout (Gray et al. 1991).

In an effort to monitor year-class strength and to improve the ability to predict future adult Spotted Seatrout abundances, relative indices of abundance (IOAs) were developed for young-of-the-year (YOY) Spotted Seatrout recruitment into selected Florida estuaries. Abundance data for YOY Spotted Seatrout (≤100 mm SL) collected from stratified-random 21.3-m seine samples were examined to assess recruitment in eight Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the IRL. Young-of-the-year Spotted Seatrout recruited to habitats sampled with 21.3-m seines primarily from April through October in Tampa Bay, Sarasota Bay, and Charlotte Harbor, and from May through November in Cedar Key, Northeast Florida, and the northern and southern portions of the IRL. In Apalachicola Bay, recruitment of YOY Spotted Seatrout was evident from June through

October. These recruitment periods coincide with published recruitment and spawning periods of Spotted Seatrout throughout Florida (Moody 1949; Nelson and Leffler 2001; DeVries et al. 2002; Walters et al. 2007). Therefore, these bay-specific months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Indices were not calculated for estuaries where 21.3-m seines were not deployed or where limited data were available. Data from stratified-random 183-m haul seines collected within these same Florida estuarine systems (including the southern IRL) were used to develop IOAs for adult Spotted Seatrout (≥200 mm SL). Indices for adult fish were derived by including all Spotted Seatrout ≥200 mm SL collected between January and December from 1996 to 2025. Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year Spotted Seatrout (≤100 mm SL) collected in 21.3-m seines and of adult Spotted Seatrout (>200 mm SL) collected in 183-m haul seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates). Note different scales for estimates from 21.3-m and 183-m seines.

Apalachicola Bay

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in bay habitats of Apalachicola Bay did not show a significant trend since 1998 (Figure 5.17). Relative abundance of YOY Spotted Seatrout in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Apalachicola Bay did not show a significant trend since 1998 (Figure 5.17). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

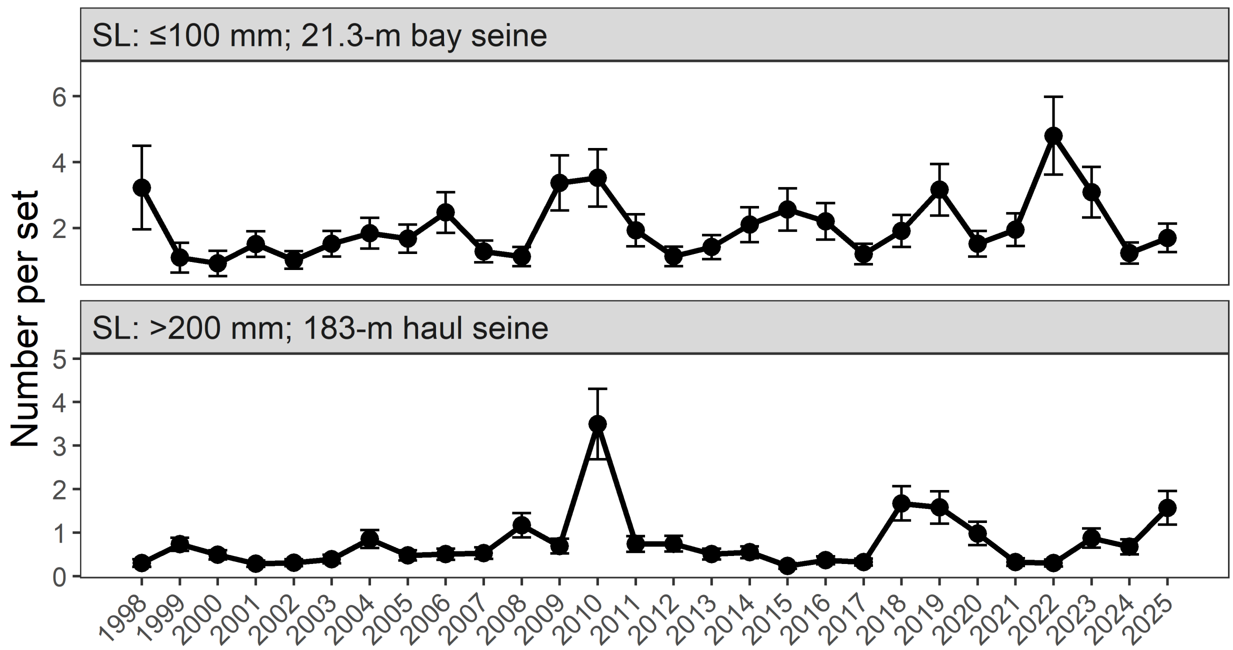

Figure 5.17: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult Spotted Seatrout collected between 1998 and 2025 during Apalachicola Bay stratified-random sampling.

Cedar Key

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in river habitats of Cedar Key have generally decreased since 1996 (Figure 5.18). Relative abundance of YOY Spotted Seatrout in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in bay habitats of Cedar Key did not show a significant trend since 1996 (Figure 5.18). Relative abundance of YOY Spotted Seatrout in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Cedar Key did not show a significant trend since 1997 (Figure 5.18). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

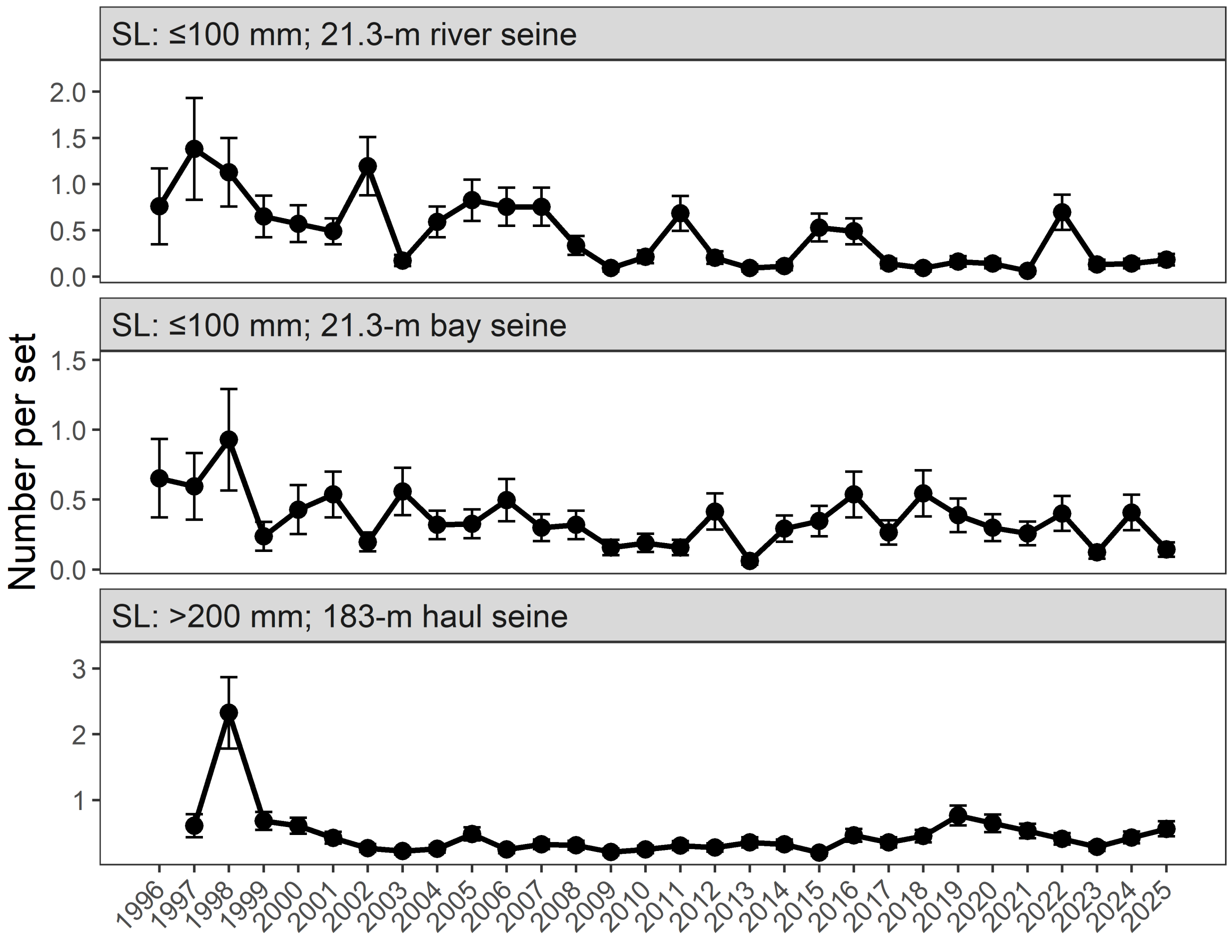

Figure 5.18: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 1996 and 2025 during Cedar Key stratified-random sampling.

Tampa Bay

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in river habitats of Tampa Bay have generally decreased since 1996 (Figure 5.19). Relative abundance of YOY Spotted Seatrout in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in bay habitats of Tampa Bay have generally decreased since 1996 (Figure 5.19). Relative abundance of YOY Spotted Seatrout in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Tampa Bay did not show a significant trend since 1996 (Figure 5.19). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

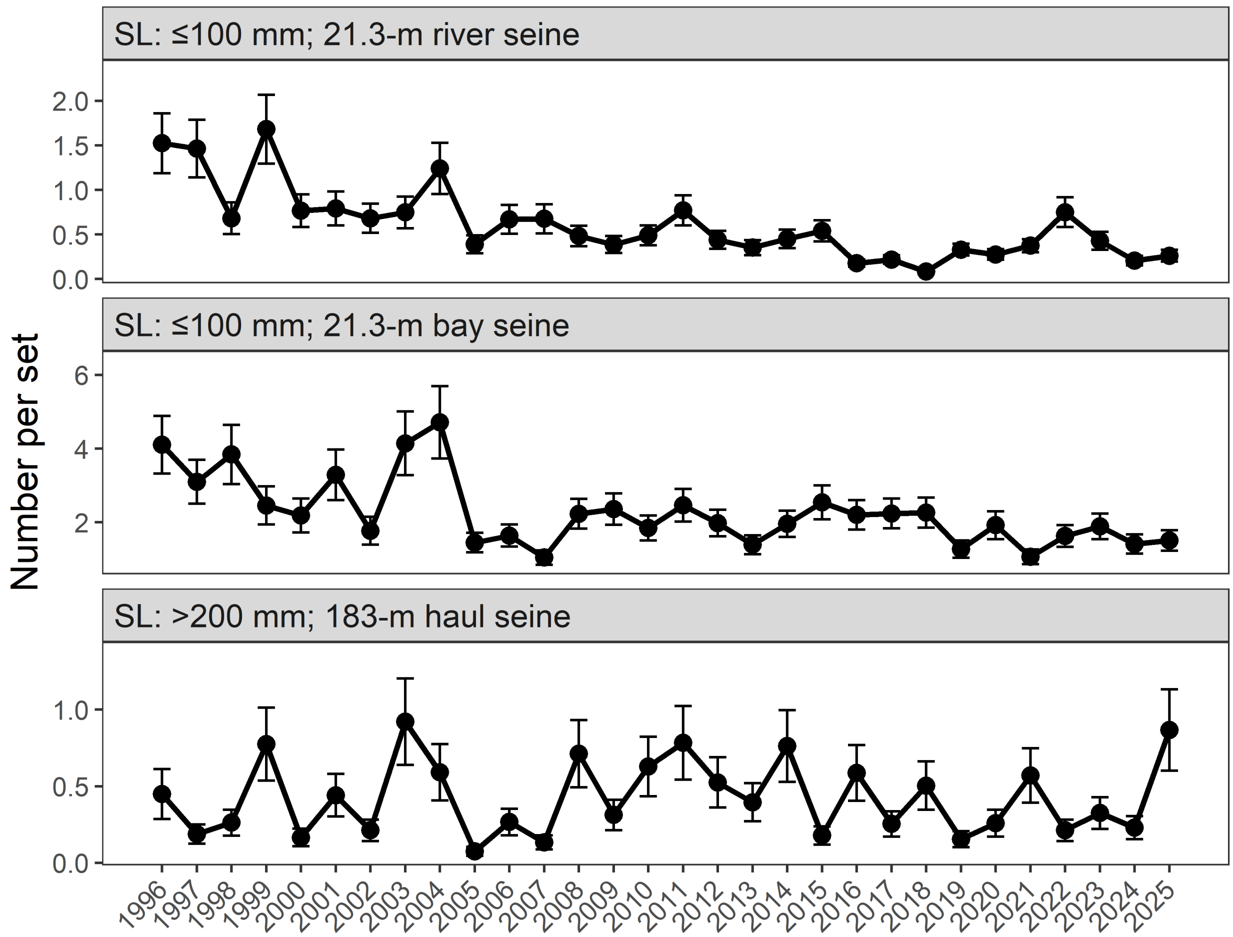

Figure 5.19: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 1996 and 2025 during Tampa Bay stratified-random sampling.

Sarasota Bay

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in bay habitats of Sarasota Bay did not show a significant trend since 2009 (Figure 5.20). Relative abundance of YOY Spotted Seatrout in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Sarasota Bay did not show a significant trend since 2010 (Figure 5.20). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

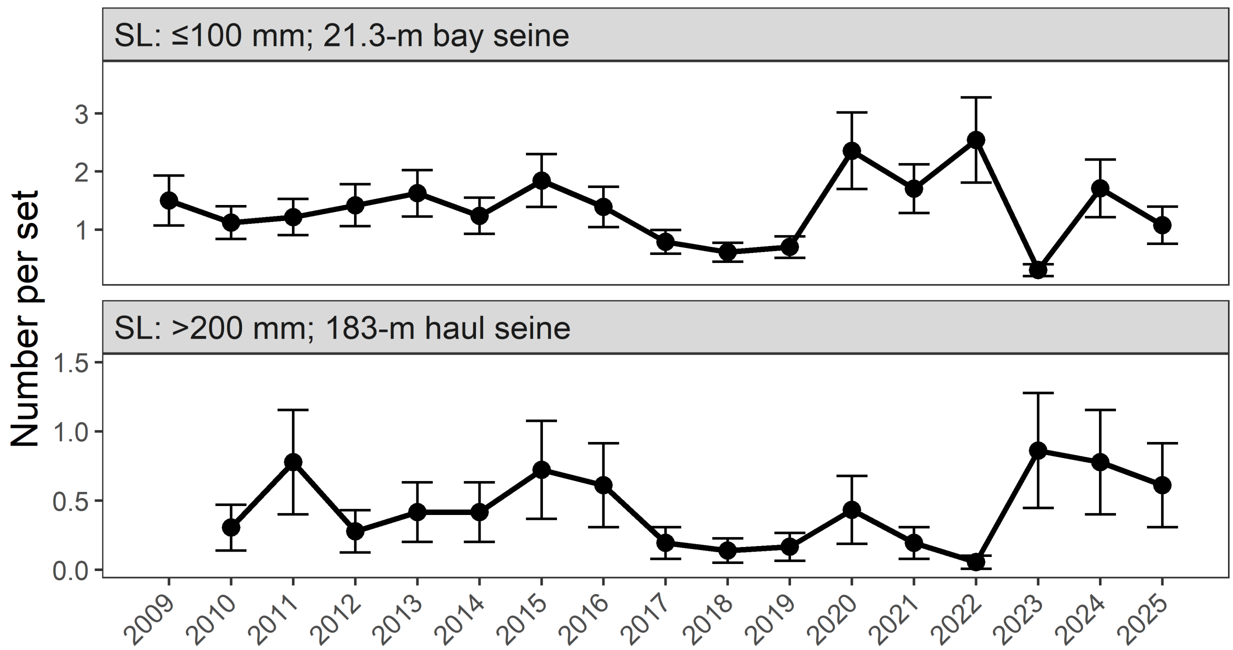

Figure 5.20: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 2009 and 2025 during Sarasota Bay bimonthly stratified-random sampling.

Charlotte Harbor

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in river habitats of Charlotte Harbor have generally decreased since 1996 (Figure 5.21). Relative abundance of YOY Spotted Seatrout in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in bay habitats of Charlotte Harbor have generally decreased since 1996 (Figure 5.21). Relative abundance of YOY Spotted Seatrout in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Charlotte Harbor did not show a significant trend since 1996 (Figure 5.21). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

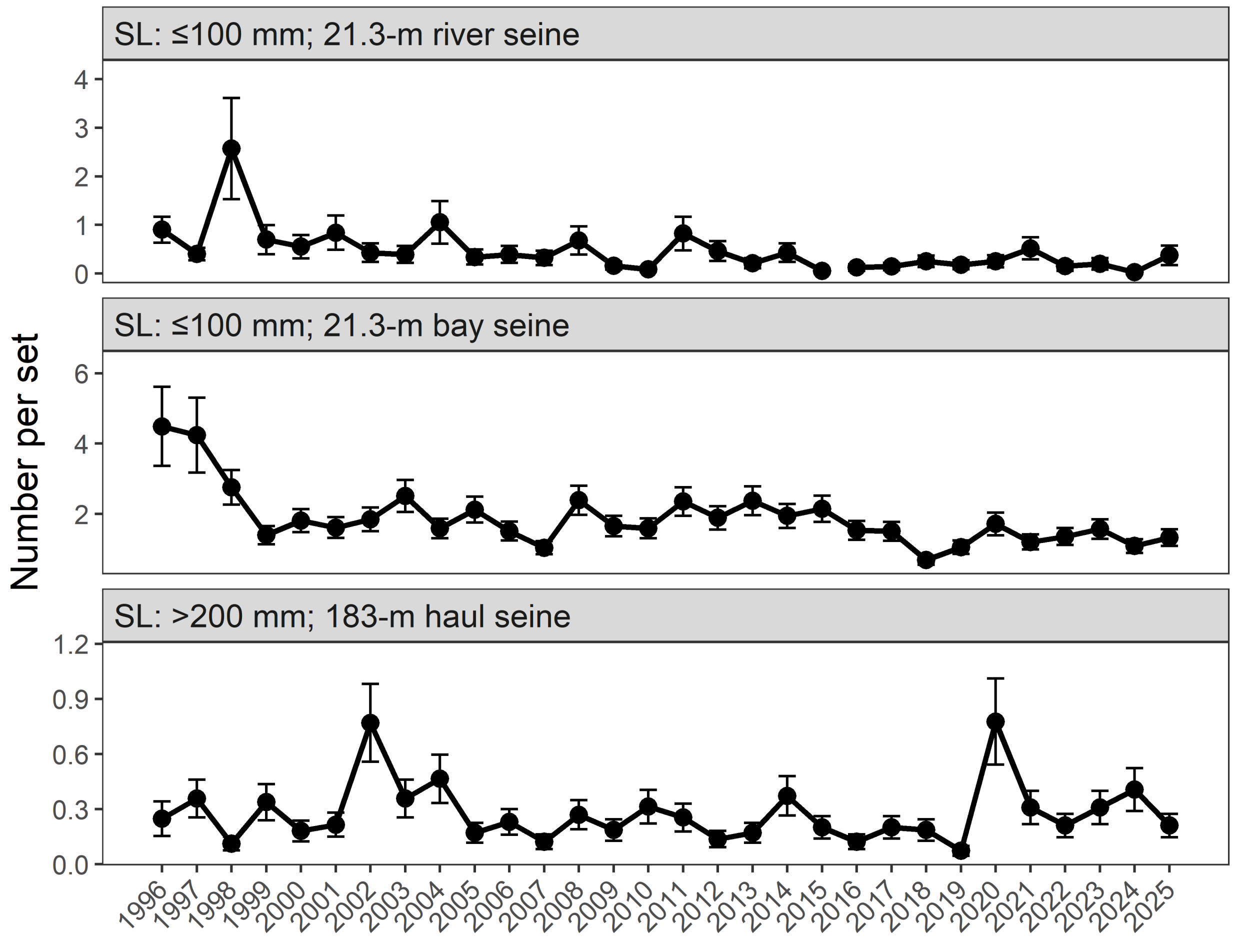

Figure 5.21: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016.

Northeast Florida

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in river habitats of Northeast Florida have generally decreased since 2001 (Figure 5.22). Relative abundance of YOY Spotted Seatrout in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Northeast Florida have generally decreased since 2001 (Figure 5.22). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

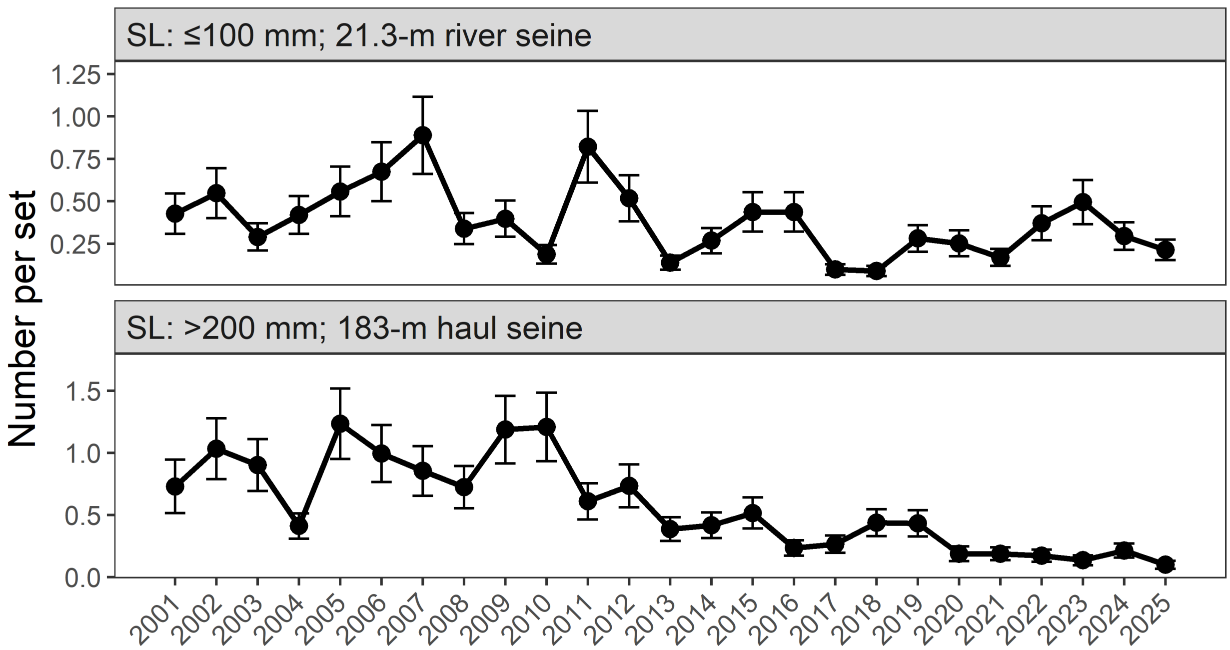

Figure 5.22: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 2001 and 2025 during Northeast Florida stratified-random sampling.

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in river habitats of Northern Indian River Lagoon did not show a significant trend since 1999 (Figure 5.23). Relative abundance of YOY Spotted Seatrout in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in bay habitats of Northern Indian River Lagoon have generally decreased since 1996 (Figure 5.23). Relative abundance of YOY Spotted Seatrout in bay habitats in 2025 increased from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in Northern Indian River Lagoon did not show a significant trend since 1997 (Figure 5.23). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

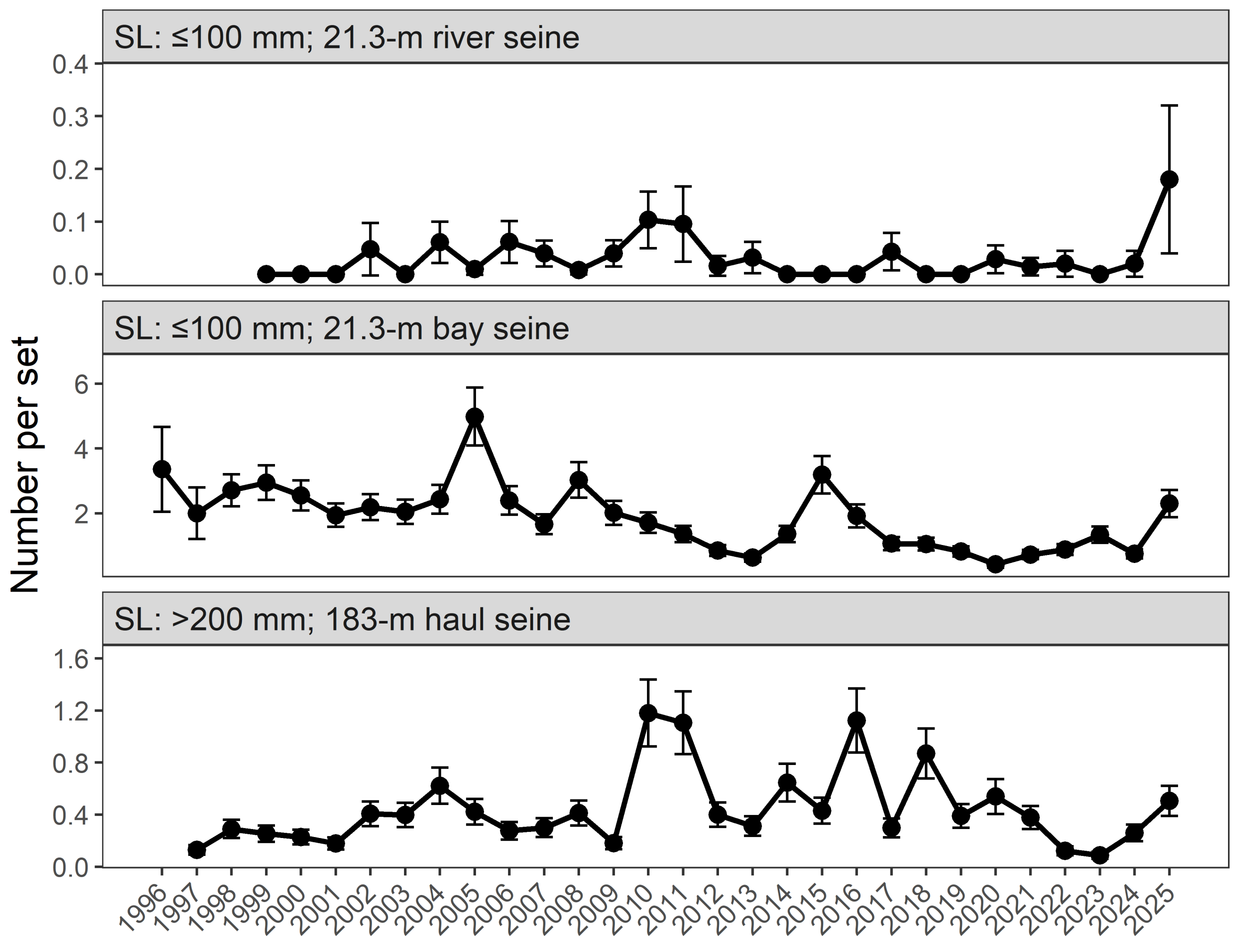

Figure 5.23: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 1996 and 2025 during Northern Indian River Lagoon stratified-random sampling.

Southern Indian River Lagoon

Annual IOAs of YOY (≤100 mm SL) Spotted Seatrout in river habitats of the Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.24). Relative abundance of YOY Spotted Seatrout in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>200 mm SL) Spotted Seatrout in the Southern Indian River Lagoon did not show a significant trend since 1997 (Figure 5.24). Relative abundance of adult Spotted Seatrout in 2025 did not differ significantly from the previous year.

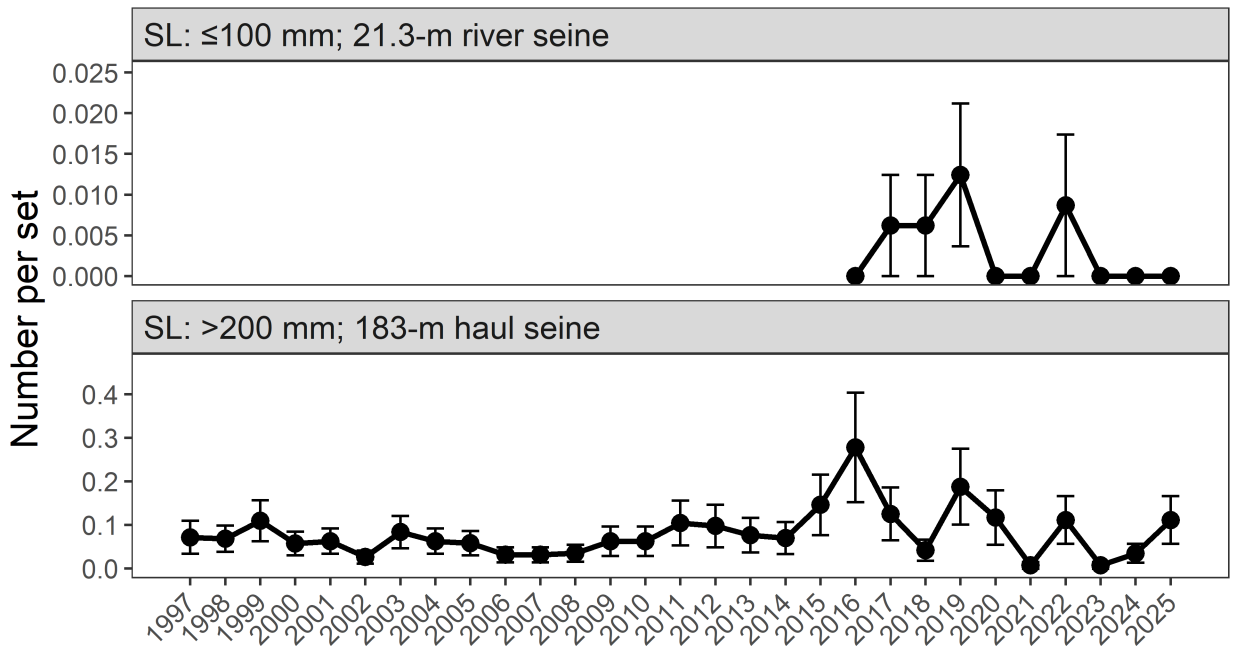

Figure 5.24: Relative abundance (±1 SE) of young-of-the-year (≤100 mm SL) and adult (>200 mm SL) Spotted Seatrout collected between 1997 and 2025 during Southern Indian River Lagoon stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016.

Length-Frequency Diagrams

The following figure shows length-frequency diagrams of Spotted Seatrout collected in 183-m haul seines. All lengths are standard length (SL). Note different scales and years of collection for each estuary. Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on multiple life histories of Spotted Seatrout in Florida estuaries (Figure 5.25). Spotted Seatrout length-frequency distributions generally followed a bimodal or polymodal distribution across estuaries.

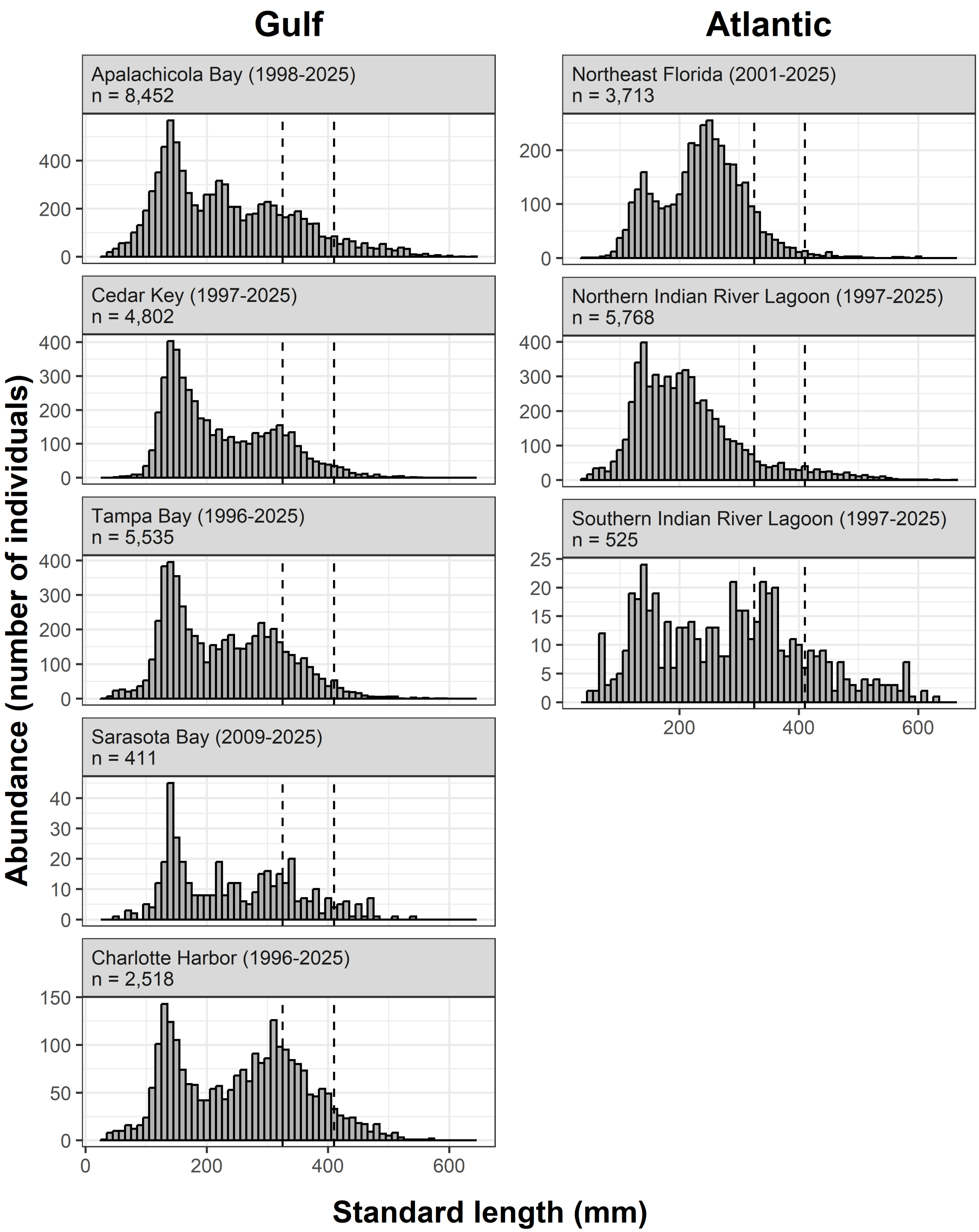

Figure 5.25: Length-frequency diagrams of Spotted Seatrout collected in 183-m haul seines. Vertical dashed lines indicate the lower and upper recreational size limits for Spotted Seatrout in each estuary.

5.5 Sheepshead, *Archosargus probatocephalus*

The Sheepshead (*Archosargus probatocephalus*) occurs from Nova Scotia (Gilhen et al. 1976) to Brazil (Caldwell 1965) and is common in coastal waters from the Chesapeake Bay to Texas in the United States (Bigelow and Schroeder 1953). Historically, more Sheepshead have been landed by recreational fishers than by commercial fishers (82–99% of the combined annual landings during 2000–2015) along Florida's Gulf coast (Munyandorero et al. 2017). Sheepshead in Florida waters are currently regulated by minimum size (305 mm total length) and a bag limit (8 fish/day). The most recent stock assessment for Sheepshead used Fisheries-Independent Monitoring (FIM) program data to derive annual indices of abundance (IOAs) during different life history stages to guide coast-specific catch-at-age models (Munyandorero et al. 2017). This stock assessment determined that Sheepshead stocks on the Gulf and Atlantic coasts appeared abundant enough to supply adequate numbers of new recruits while maintaining current harvest rates.

The reproductive season for adult Sheepshead is February through April in Florida waters and the newly recruited young-of-the-year (YOY) are most abundant in shallow estuarine areas between April and June. Regression analyses conducted by FIM for YOY Sheepshead show they reach 40 mm standard length (SL) at approximately 90 days and 130 mm SL at one year of age. Sheepshead in Florida waters enter the fishery at 242 mm SL, which typically corresponds to an age of 3 to 6 years (Dutka-Gianelli and Murie 2001).

To monitor year-class strength and improve the ability to predict future adult Sheepshead abundance, the FIM program developed annual IOAs for two life history stages: YOY and fully recruited to the fishery. Abundance data for YOY (≤40 mm SL) collected in stratified-random 21.3-m seines were examined to assess recruitment in four Florida estuaries: Tampa Bay, Sarasota Bay, Charlotte Harbor, and the northern portion of the Indian River Lagoon (IRL). This life history stage was not examined for Apalachicola Bay, Cedar Key, Northeast Florida, or the southern portion of the IRL due to small sample sizes. Young-of-the-year Sheepshead recruited to habitats sampled with 21.3-m seines primarily from April through June. These months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Abundance indices were also calculated for Sheepshead fully recruited to the fishery (≥242 mm SL) for eight Florida estuarine areas: Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the IRL. Data from stratified-random 183-m haul seines were used to develop IOAs for fully recruited Sheepshead from January through December of each year. Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year Sheepshead (≤40 mm SL) collected in 21.3-m seines and of legal-sized Sheepshead (≥242 mm SL) collected in 183-m haul seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates). Note different scales for estimates from 21.3-m and 183-m seines.

Apalachicola Bay

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Apalachicola Bay did not show a significant trend since 1998 (Figure 5.26). Relative of abundance of fully recruited Sheepshead in 2025 did not differ significantly from the previous year.

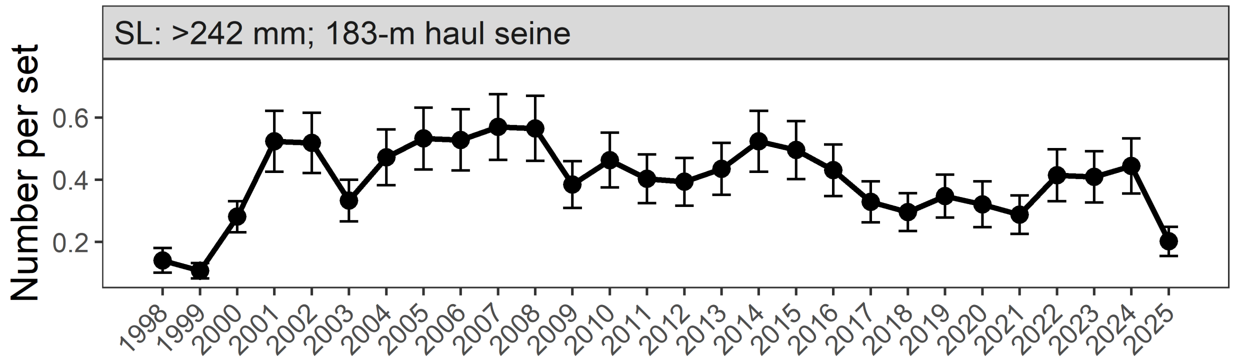

Figure 5.26: Relative abundance (±1 SE) of legal-sized Sheepshead collected between 1998 and 2025 during Apalachicola Bay stratified-random sampling.

Cedar Key

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Cedar Key have generally decreased since 1997 (Figure 5.27). Relative abundance of fully recruited Sheepshead in 2025 did not differ significantly from the previous year.

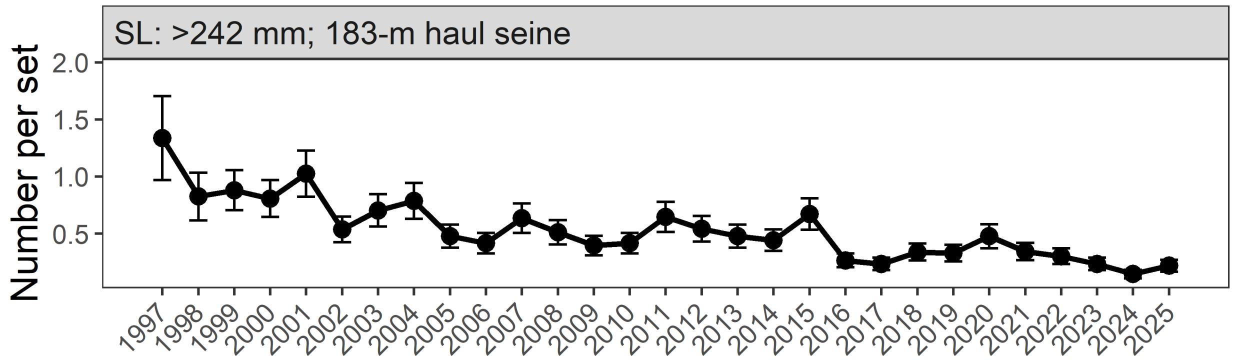

Figure 5.27: Relative abundance (±1 SE) of legal-sized (≥242 mm SL) Sheepshead collected between 1997 and 2025 during Cedar Key stratified-random sampling.

Tampa Bay

Annual IOAs of YOY (≤40 mm SL) Sheepshead in river habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.28). Relative abundance of YOY Sheepshead in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Sheepshead in bay habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.28). Relative abundance of YOY Sheepshead in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Tampa Bay did not show a significant trend since 1996 (Figure 5.28). Relative abundance of fully recruited Sheepshead in 2025 did not differ significantly from the previous year.

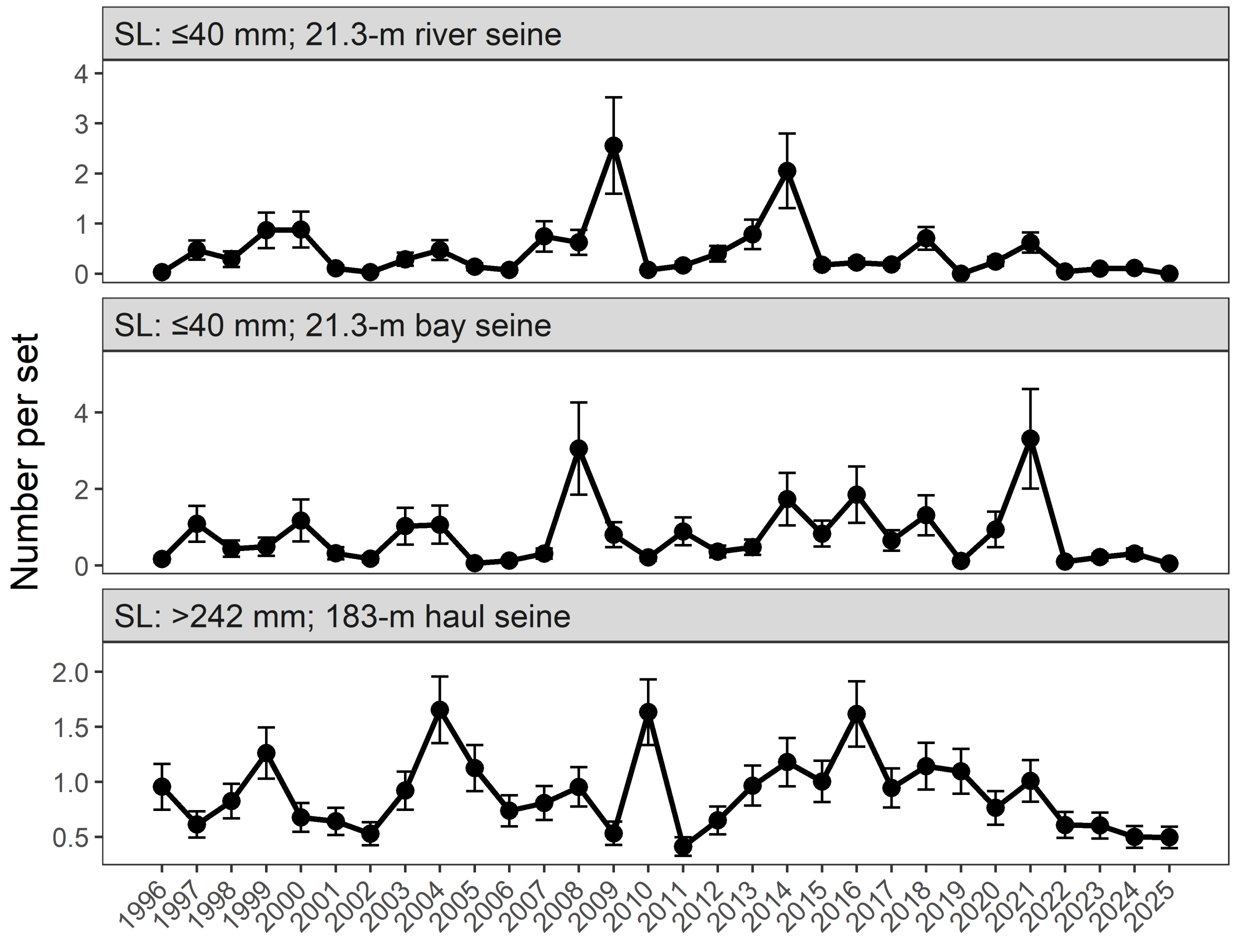

Figure 5.28: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal-sized (≥242 mm SL) Sheepshead collected between 1996 and 2025 during Tampa Bay stratified-random sampling.

Sarasota Bay

Annual IOAs of YOY (≤40 mm SL) Sheepshead in bay habitats of Sarasota Bay did not show a significant trend since 2009 (Figure 5.29). Relative abundance of YOY Sheepshead in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Sarasota Bay did not show a significant trend since 2010 (Figure 5.29). Relative abundance of fully recruited Sheepshead in 2025 did not differ significantly from the previous year.

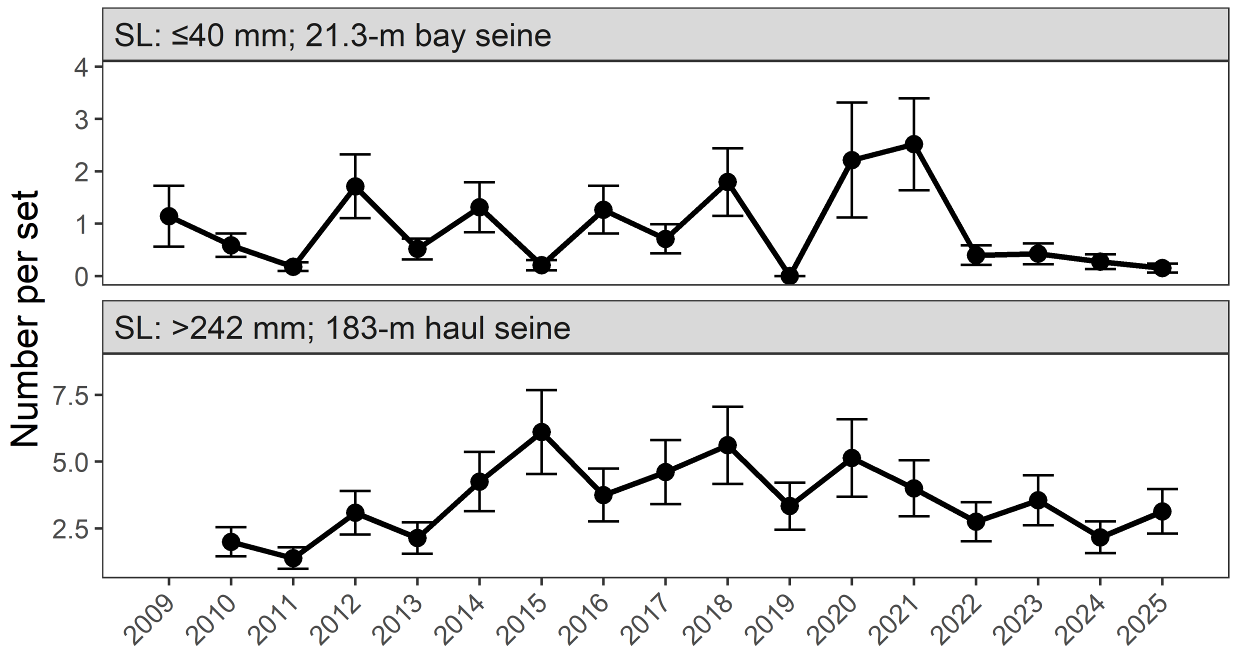

Figure 5.29: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal-sized (≥242 mm SL) Sheepshead collected between 2010 and 2025 during Sarasota Bay bimonthly stratified-random sampling.

Annual IOAs of YOY (≤40 mm SL) Sheepshead in river habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.30). Relative abundance of YOY Sheepshead in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Sheepshead in bay habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.30). Relative abundance of YOY Sheepshead in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Charlotte Harbor have generally increased since 1996 (Figure 5.30). Relative abundance of fully recruited Sheepshead in 2025 did not differ significantly from the previous year.

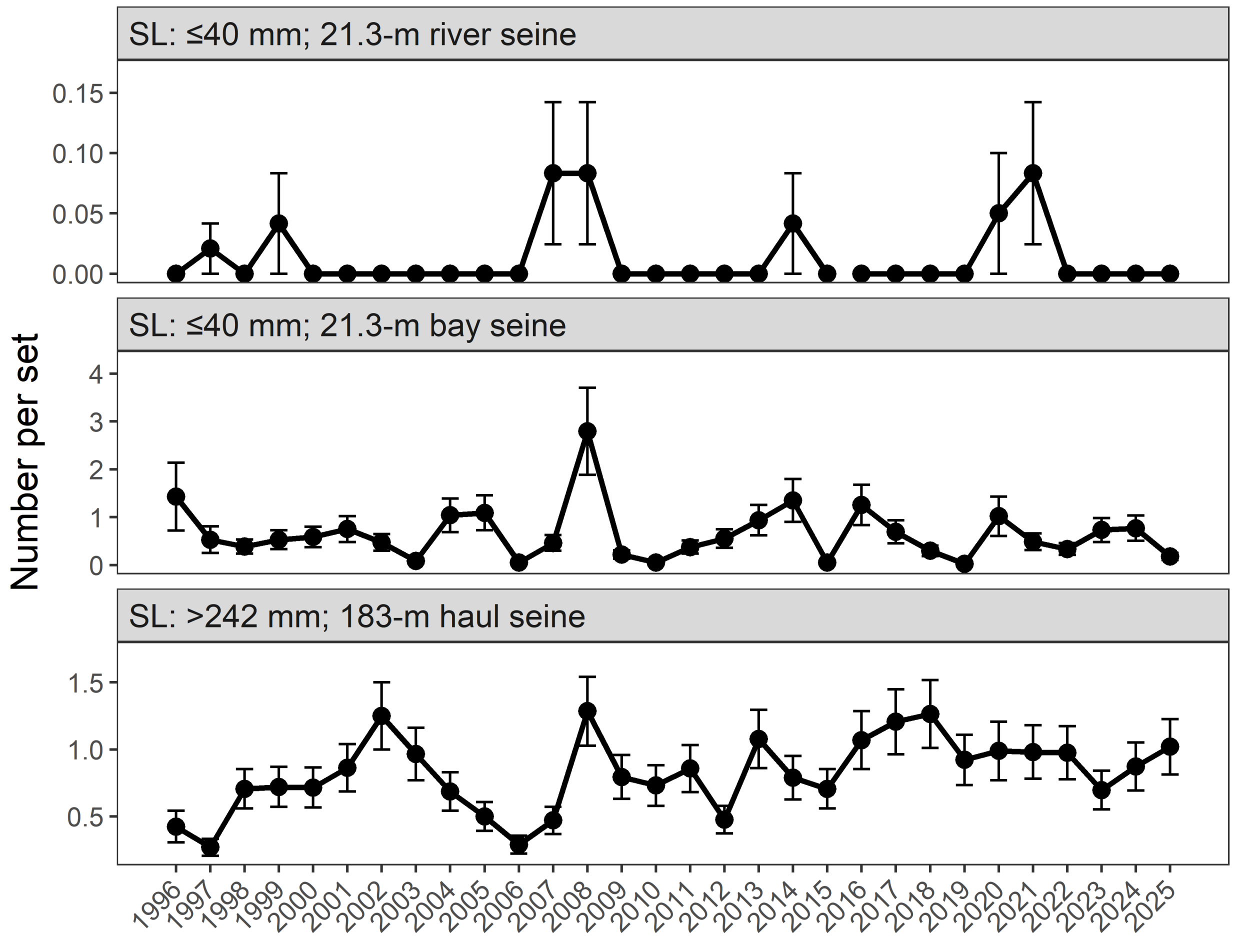

Figure 5.30: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal-sized (≥242 mm SL) Sheepshead collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016.

Northeast Florida

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Northeast Florida have generally decreased since 2001 (Figure 5.31). Relative abundance of fully recruited Sheepshead in 2025 decreased from the previous year.

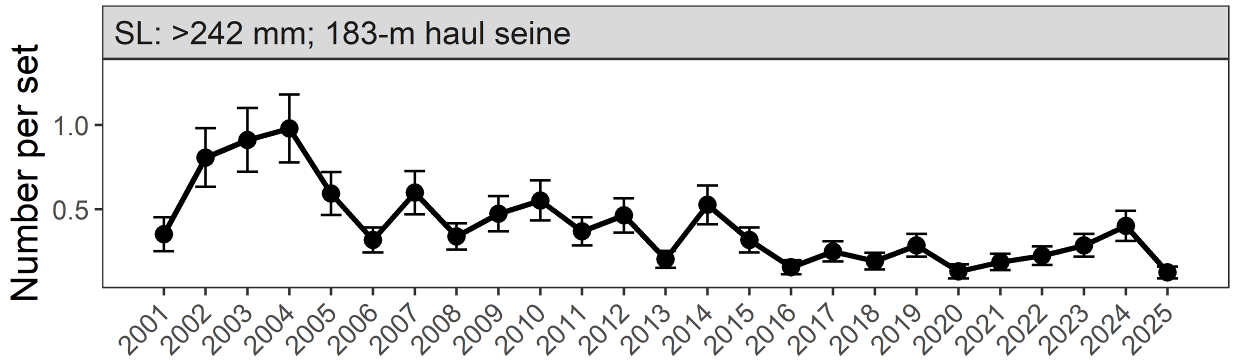

Figure 5.31: Relative abundance (±1 SE) of legal-sized (≥242 mm SL) Sheepshead collected between 2001 and 2025 during Northeast Florida stratified-random sampling.

Northern Indian River Lagoon

Annual IOAs of YOY (≤40 mm SL) Sheepshead in river habitats of Northern Indian River Lagoon did not show a significant trend since 1999 (Figure 5.32). Relative abundance of YOY Sheepshead in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤40 mm SL) Sheepshead in bay habitats of Northern Indian River Lagoon did not show a significant trend since 1996 (Figure 5.32). Relative abundance of YOY Sheepshead in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Northern Indian River Lagoon have generally decreased since 1997 (Figure 5.32). Relative abundance of fully recruited Sheepshead abundance in 2025 did not differ significantly from the previous year.

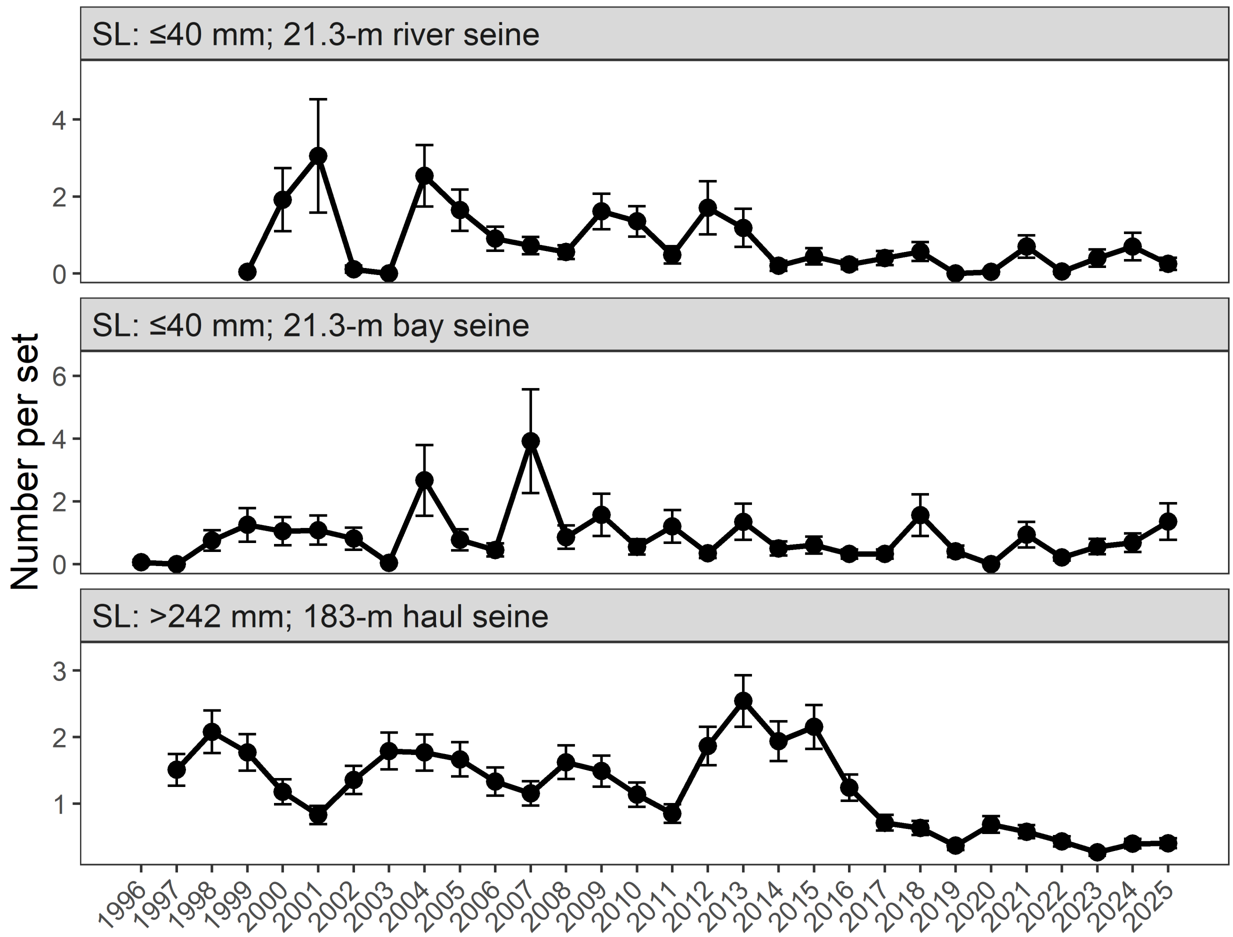

Figure 5.32: Relative abundance (±1 SE) of young-of-the-year (≤40 mm SL) and legal-sized (≥242 mm SL) Sheepshead collected between 1996 and 2025 during Northern Indian River Lagoon stratified-random sampling.

Southern Indian River Lagoon

Annual IOAs of fully recruited (≥242 mm SL) Sheepshead in Southern Indian River Lagoon have generally decreased since 1997 (Figure 5.33). Relative abundance of fully recruited Sheepshead in 2025 did not differ significantly from the previous year.

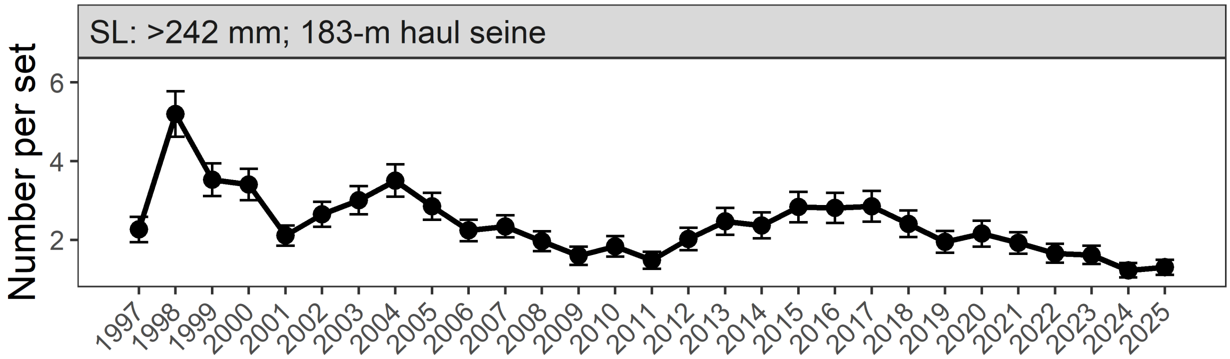

Figure 5.33: Relative abundance (±1 SE) of legal-sized Sheepshead collected between 1997 and 2025 during Southern Indian River Lagoon stratified-random sampling.

Length-Frequency Diagrams

The following figure shows length-frequency diagrams of Sheepshead collected in 183-m haul seines. All lengths are standard length (SL). Note different scales and years of collection for each estuary. Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on multiple life histories of Sheepshead in Florida estuaries (Figure 5.34). Sheepshead length-frequency distributions varied between unimodal and bimodal among estuaries.

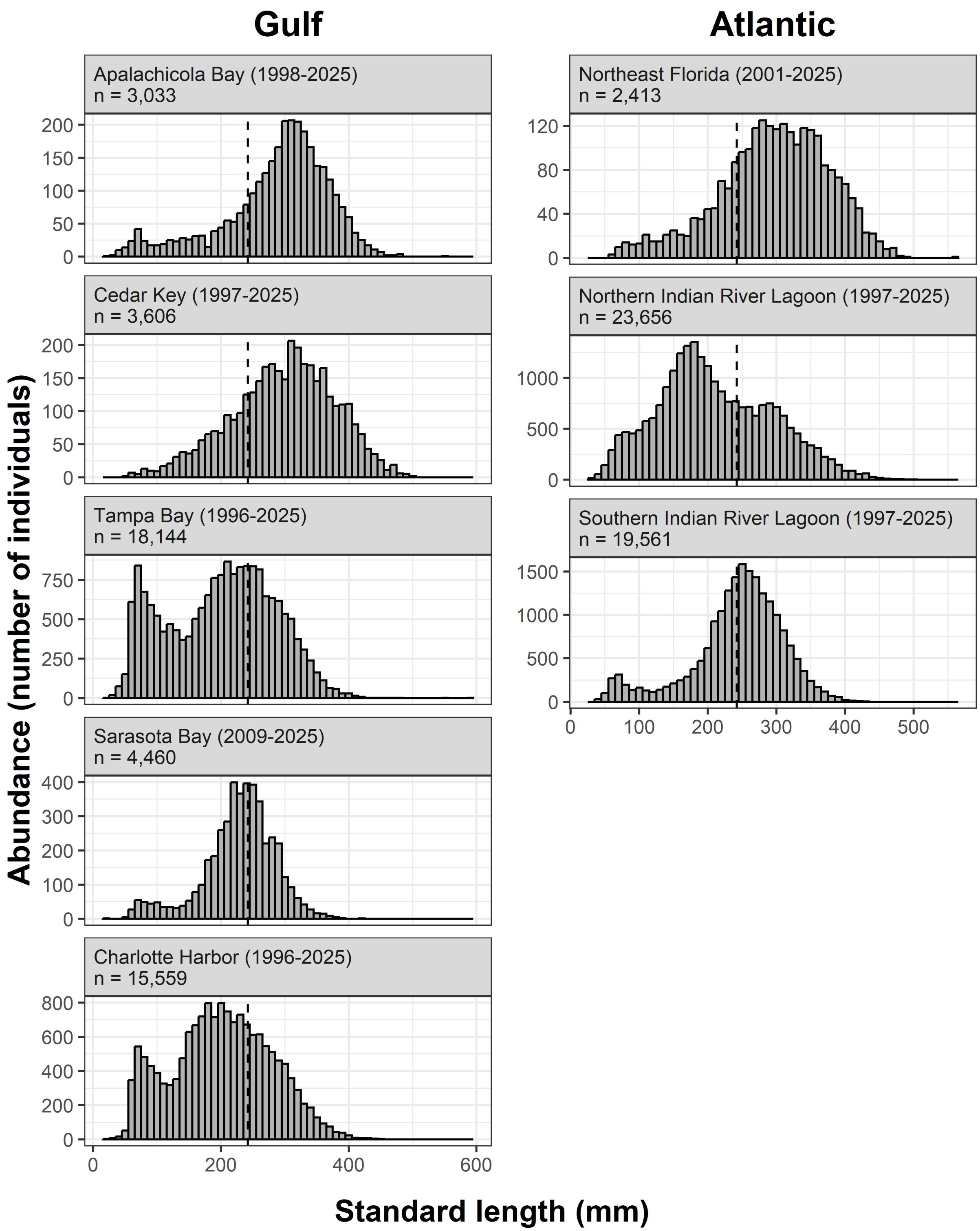

Figure 5.34: Length-frequency diagrams of Sheepshead collected in 183-m haul seines. Vertical dashed lines indicate the lower recreational size limits for Sheepshead in each estuary

5.6 Pinfish, *Lagodon rhomboides*

Pinfish, *Lagodon rhomboides*, is an ecologically and recreationally important sparid found in marine and estuarine waters from Massachusetts to Texas (Bigelow and Schroeder 1953; Caldwell 1957). It is one of the most abundant resident species in estuaries of the northeastern Gulf (Hoese and Jones 1963; Hansen 1969; Ogren and Brusher 1977). Densities of Pinfish have been found to be positively correlated to seagrass and drift algae cover (Rydene and Matheson 2003; Faletti et al. 2019). Studies have shown that predation by Pinfish plays a role in the organization of seagrass macro benthic faunal assemblages (Young et al. 1976; Young and Young 1977). Pinfish are a major link between primary and secondary production as individuals >60 mm standard length (SL) consume and digest seagrasses and encrusting epiphytes (Stoner 1980; Weinstein et al. 1982; Montgomery and Targett 1992). Pinfish represent a large percentage of the offshore movement of nearshore nutrients and carbon to reef fish stocks in the Gulf (Nelson et al. 2013). Pinfish of all sizes are commonly targeted by anglers for use as bait for recreationally important species such as Sailfish (*Istiophorus platypterus*), Red Drum (*Sciaenops ocellatus*), Spotted Seatrout (*Cynoscion nebulosus*), Southern Flounder (*Paralichthys lethostigma*), Common Snook (*Centropomus undecimalis*), and Gag Grouper (*Mycteroperca microlepis*).

To monitor year-class strength and improve the ability to predict future Pinfish abundances, indices of relative abundance (IOAs) were developed for young-of-the-year (YOY) Pinfish recruitment into selected Florida estuaries. Abundance data for YOY Pinfish (≤80 mm SL) that were collected in stratified-random 21.3-m seine samples were examined to assess recruitment into eight Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the Indian River Lagoon (IRL). Young-of-the-year Pinfish recruited to habitats sampled with 21.3-m seines primarily from January through June and IOAs were calculated using catch data from these months only. This time period coincides with the published recruitment period for this species (Nelson 1998). The maximum size that individuals of YOY cohorts attain by June is 80 mm SL (Nelson 1998). Data from stratified-random 183-m haul seines were used to develop IOAs for subadult/adult fish (≥100 mm SL) collected throughout the year for eight Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Sarasota Bay, Charlotte Harbor, Northeast Florida, Northern IRL, and Southern IRL. All IOAs were calculated using data beginning in 1996, however estuaries varied in the specific time period sampled. Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year Pinfish (≤80 mm SL) collected in 21.3-m seines and of subadult and adult Pinfish (>100 mm SL) collected in 183-m haul seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates). Note different scales for estimates from 21.3-m and 183-m seines.

Apalachicola Bay

Annual IOAs of YOY (≤80 mm SL) Pinfish in bay habitats of Apalachicola Bay did not show a significant trend since 1998 (Figure 5.35). Relative abundance of YOY Pinfish in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Apalachicola Bay did not show a significant trend since 1998 (Figure 5.35). Relative abundance of subadult and adult Pinfish in 2025 did not differ significantly from the previous year.

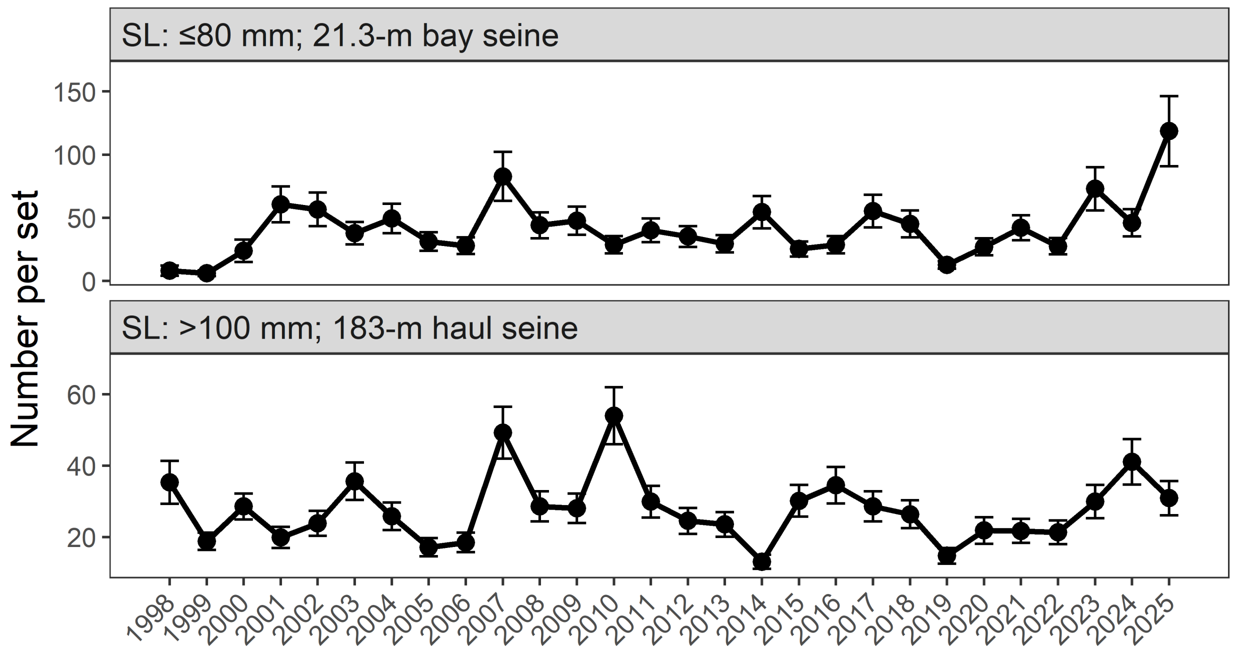

Figure 5.35: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 1998 and 2025 during Apalachicola Bay stratified-random sampling.

Cedar Key

Annual IOAs of YOY (≤80 mm SL) Pinfish in river habitats of Cedar Key did not show a significant trend since 1996 (Figure 5.36). Relative abundance of YOY Pinfish in river habitats in 2025 increased from the previous year.

Annual IOAs of YOY (≤80 mm SL) Pinfish in bay habitats of Cedar Key did not show a significant trend since 1996 (Figure 5.36). Relative abundance of YOY Pinfish in bay habitats in 2025 increased from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Cedar Key have generally decreased since 1997 (Figure 5.36). Relative abundance of subadult and adult Pinfish in 2025 did not differ significantly from the previous year.

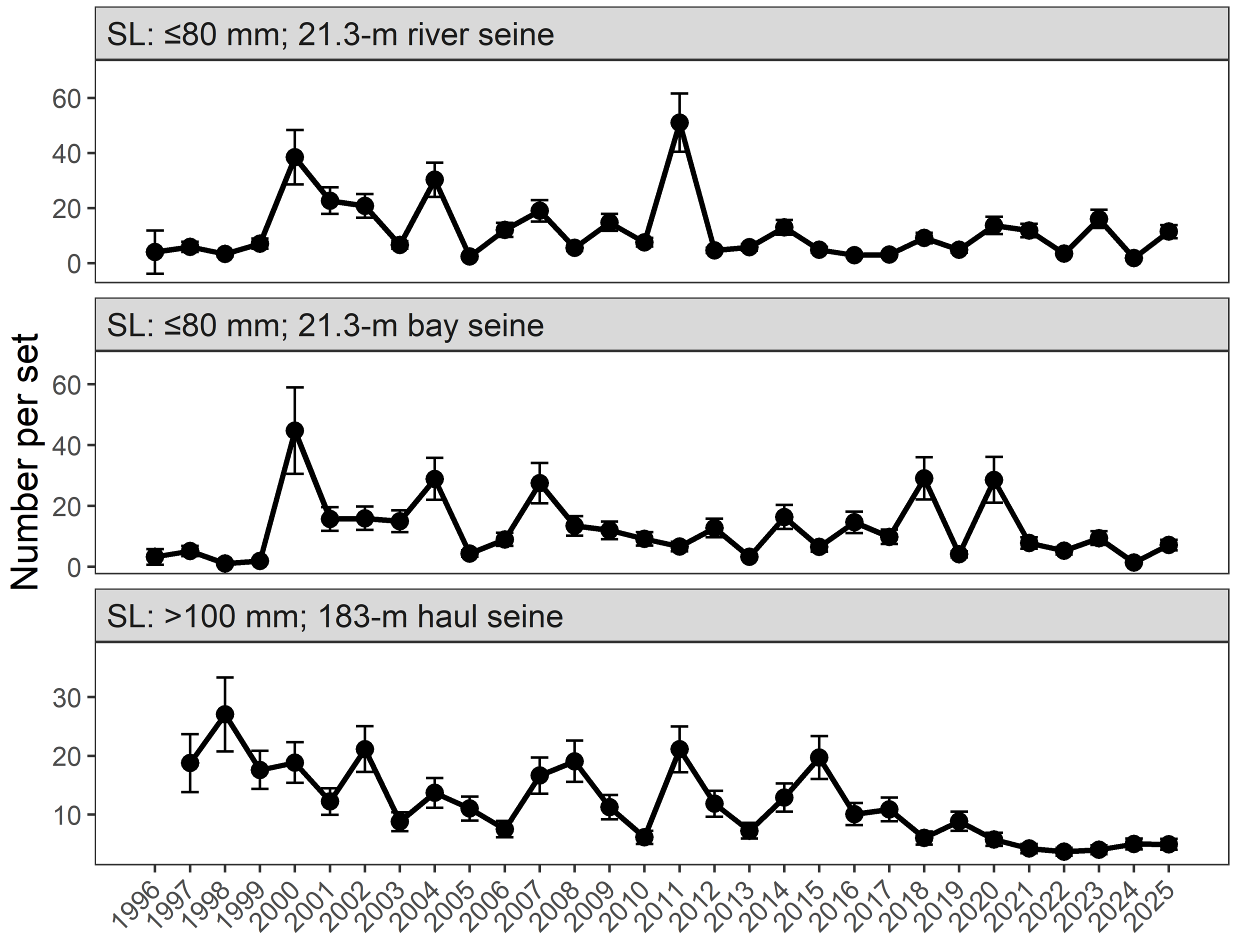

Figure 5.36: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 1996 and 2025 during Cedar Key stratified-random sampling.

Tampa Bay

Annual IOAs of YOY (≤80 mm SL) Pinfish in river habitats of Tampa Bay have generally decreased since 1996 (Figure 5.37). Relative abundance of YOY Pinfish in river habitats in 2025 increased from the previous year.

Annual IOAs of YOY (≤80 mm SL) Pinfish in bay habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.37). Relative abundance of YOY Pinfish in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Tampa Bay have generally increased since 1996 (Figure 5.37). Relative abundance of subadult and adult Pinfish in 2025 did not differ significantly from the previous year.

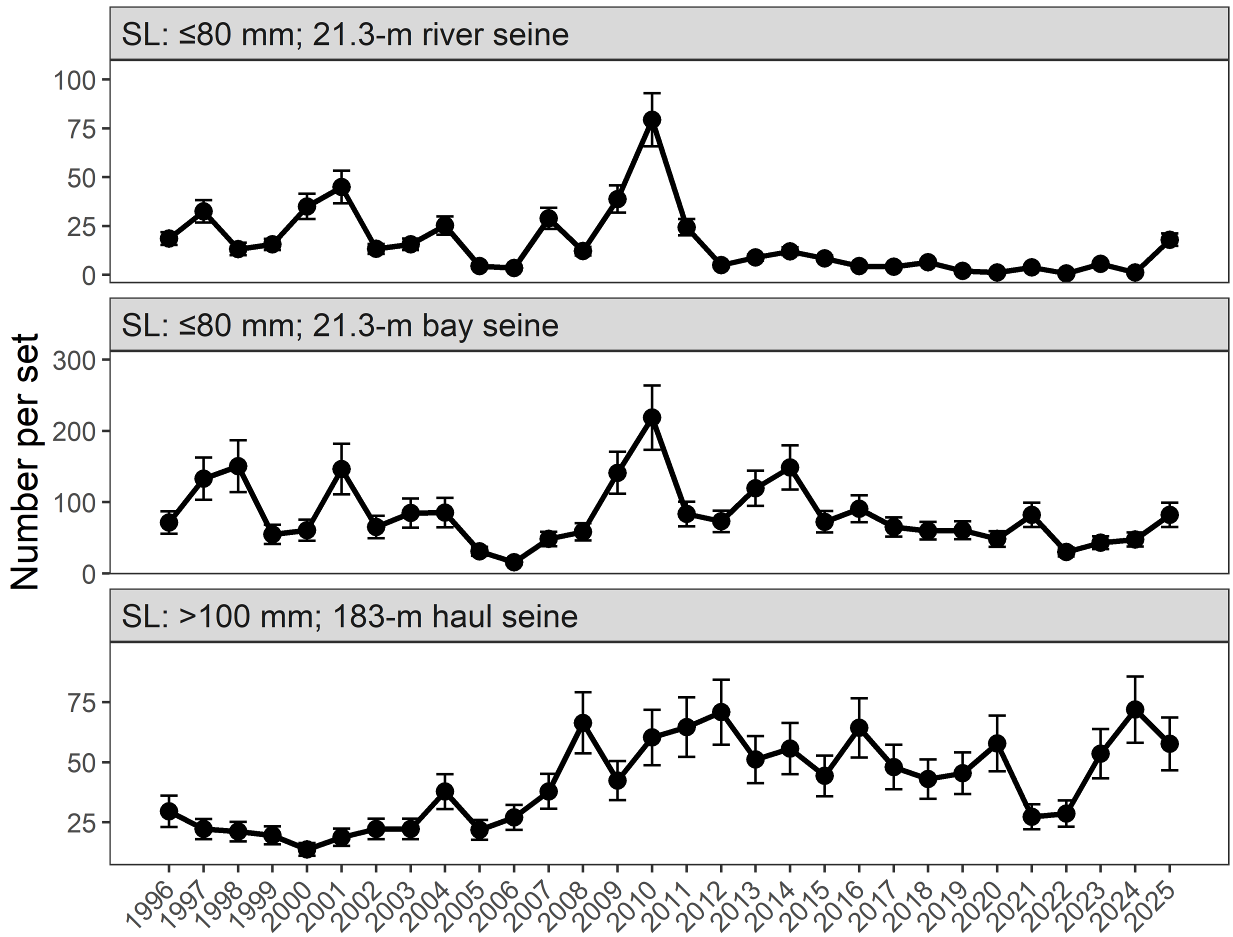

Figure 5.37: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 1996 and 2025 during Tampa Bay stratified-random sampling.

Sarasota Bay

Annual IOAs of YOY (≤80 mm SL) Pinfish in bay habitats of Sarasota Bay did not show a significant trend since 2009 (Figure 5.38). Relative abundance of YOY Pinfish in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Sarasota Bay did not show a significant trend since 2010 (Figure 5.38). Relative abundance of subadult and adult Pinfish in 2025 did not differ significantly from the previous year.

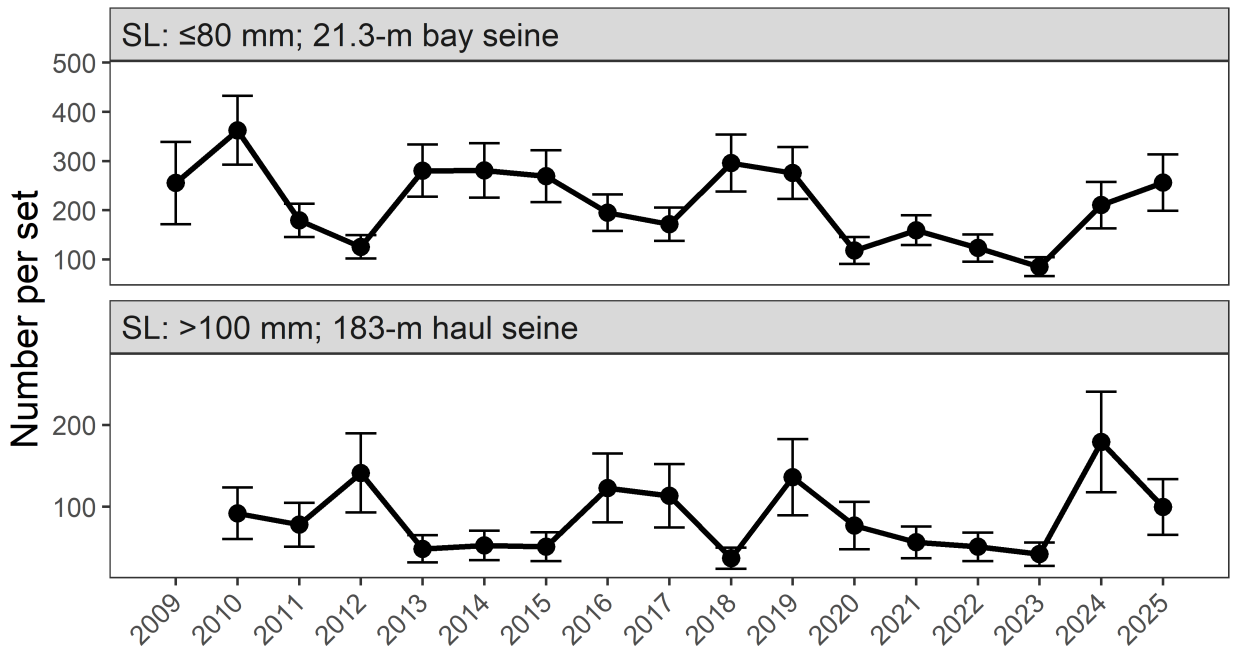

Figure 5.38: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 2009 and 2025 during Sarasota Bay bimonthly stratified-random sampling.

Annual IOAs of YOY (≤80 mm SL) Pinfish in river habitats of Charlotte Harbor have generally decreased since 1996 (Figure 5.39). Relative abundance of YOY Pinfish in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤80 mm SL) Pinfish in bay habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.39). Relative abundance of YOY Pinfish in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Charlotte Harbor have generally increased since 1996 (Figure 5.39). Relative abundance of subadult and adult Pinfish in 2025 decreased from the previous year.

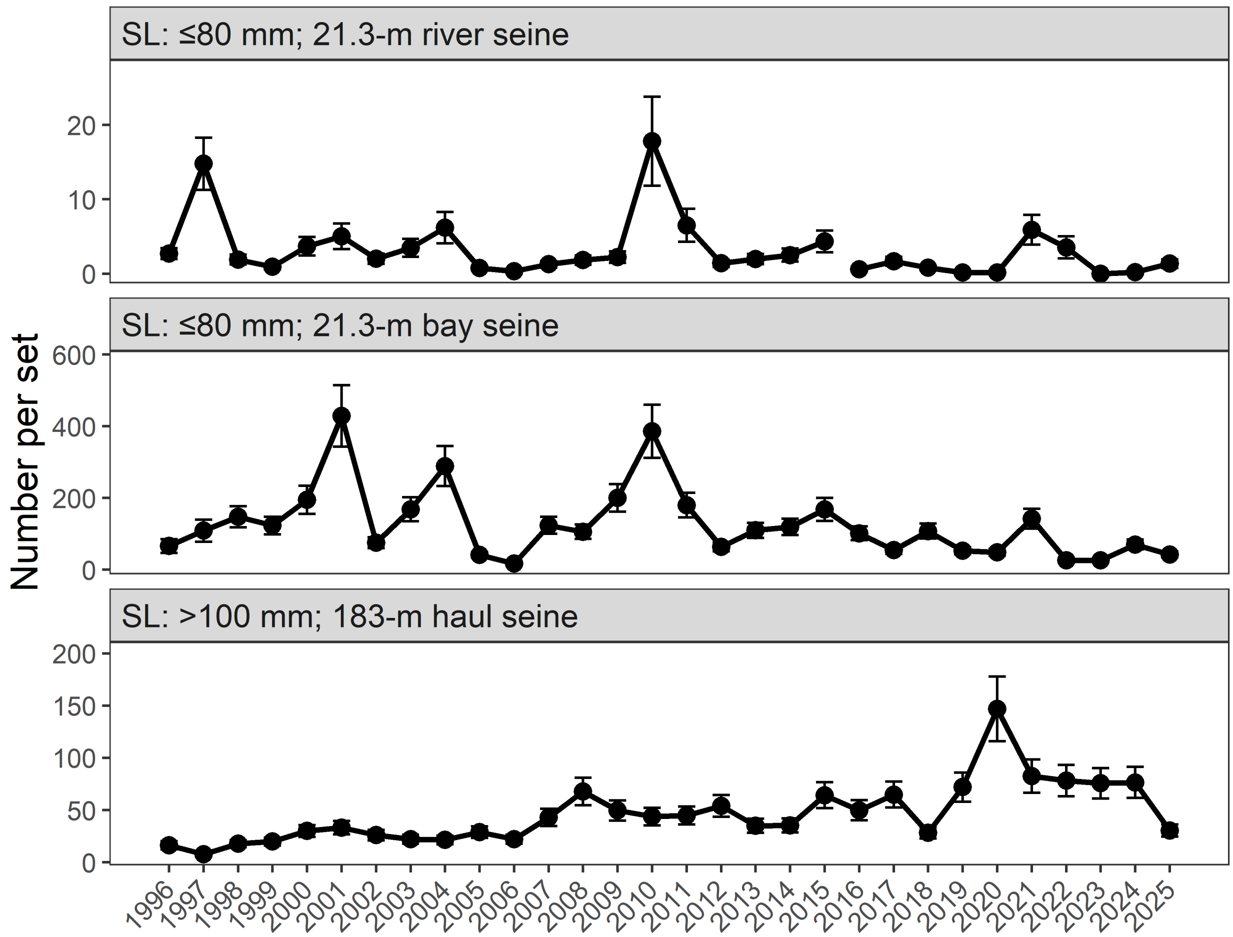

Figure 5.39: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016.

Northeast Florida

Annual IOAs of YOY (≤80 mm SL) Pinfish in river habitats of Northeast Florida did not show a significant trend since 2001 (Figure 5.40). Relative abundance of YOY Pinfish in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Northeast Florida have generally decreased since 2001 (Figure 5.40). Relative abundance of subadult and adult Pinfish in 2025 did not differ significantly from the previous year.

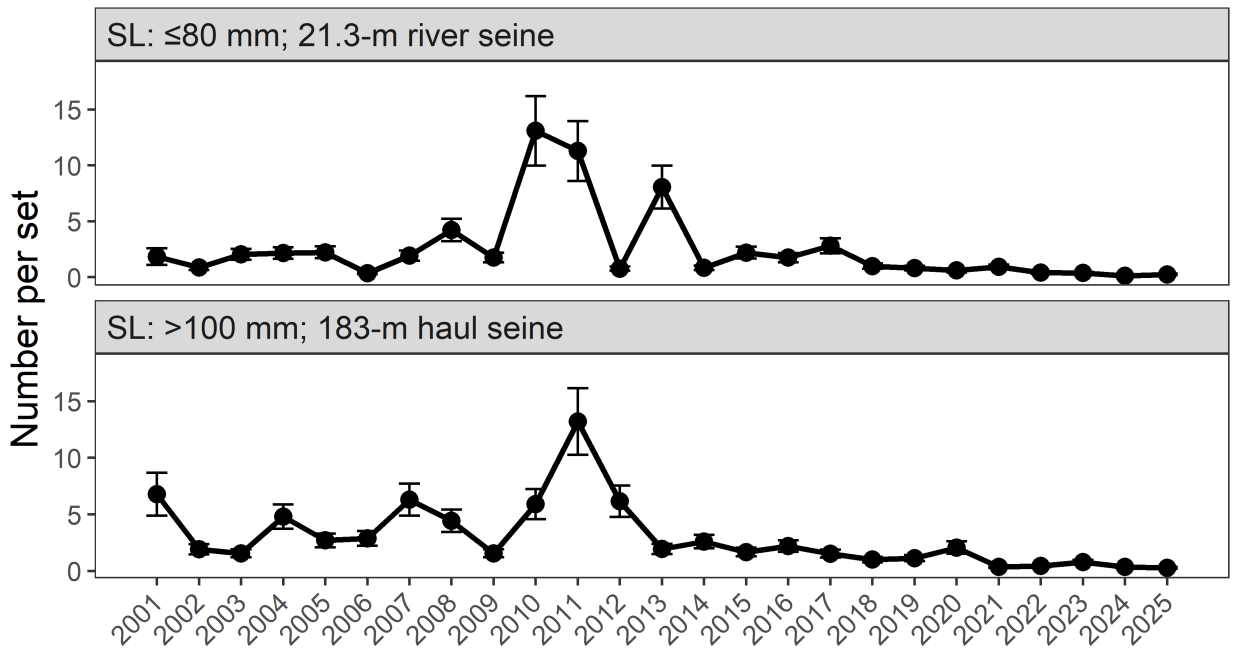

Figure 5.40: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 2001 and 2025 during Northeast Florida stratified-random sampling.

Annual IOAs of YOY (≤80 mm SL) Pinfish in river habitats of Northern Indian River Lagoon did not show a significant trend since 1999 (Figure 5.41). Relative abundance of YOY Pinfish in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤80 mm SL) Pinfish in bay habitats of Northern Indian River Lagoon did not show a significant trend since 1996 (Figure 5.41). Relative abundance of YOY Pinfish in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Northern Indian River Lagoon have generally decreased since 1997 (Figure 5.41). Relative abundance of subadult and adult Pinfish in 2025 increased from the previous year.

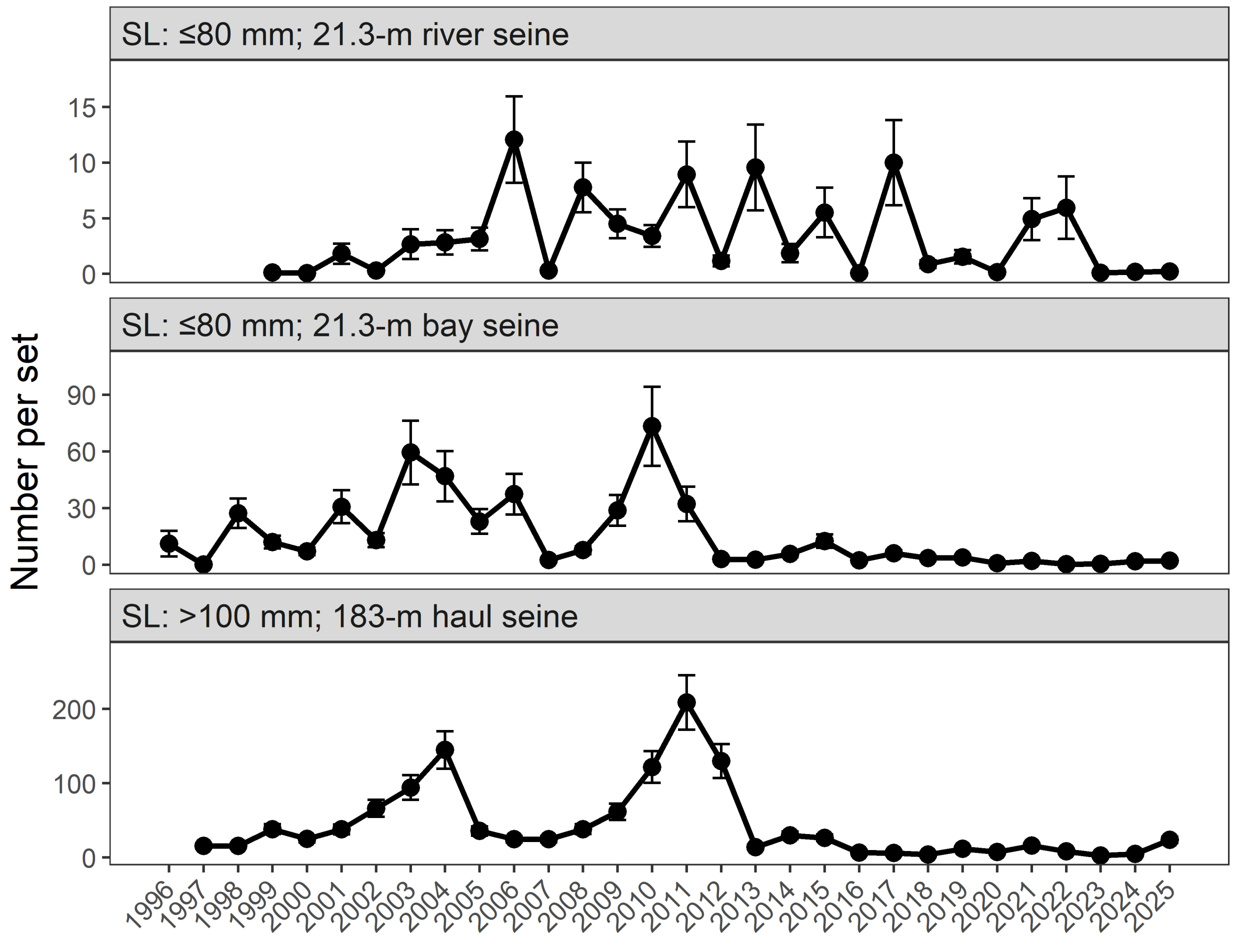

Figure 5.41: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 1996 and 2025 during Northern Indian River Lagoon stratified-random sampling.

Southern Indian River Lagoon

Annual IOAs of YOY (≤80 mm SL) Pinfish in river habitats of Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.42). Relative abundance of YOY Pinfish in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of subadult and adult (>100 mm SL) Pinfish in Southern Indian River Lagoon have generally decreased since 1997 (Figure 5.42). Relative abundance of subadult and adult Pinfish in 2025 increased from the previous year.

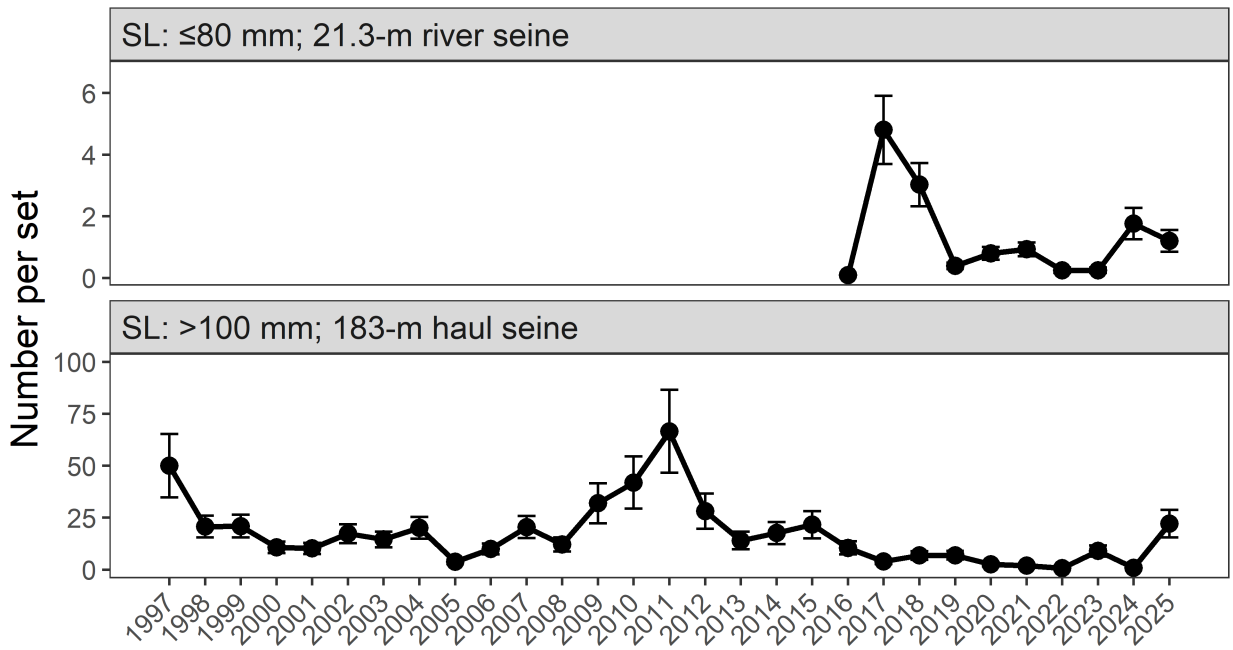

Figure 5.42: Relative abundance (±1 SE) of young-of-the-year (≤80 mm SL) and subadult/adult (>100 mm SL) Pinfish collected between 1997 and 2025 during Southern Indian River Lagoon stratified-random sampling. Note that river sampling began in 2016 to include previously underrepresented habitats (i.e., tidal creeks and tributaries).

Length-Frequency Diagrams

The following figure shows length-frequency diagrams of Pinfish collected in 183-m haul seines. All lengths are standard length (SL). Note different scales and years of collection for each estuary. Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on subadult and adult Pinfish in Florida estuaries (Figure 5.43). Pinfish length-frequency distributions generally followed a unimodal-to-bimodal distribution across estuaries.

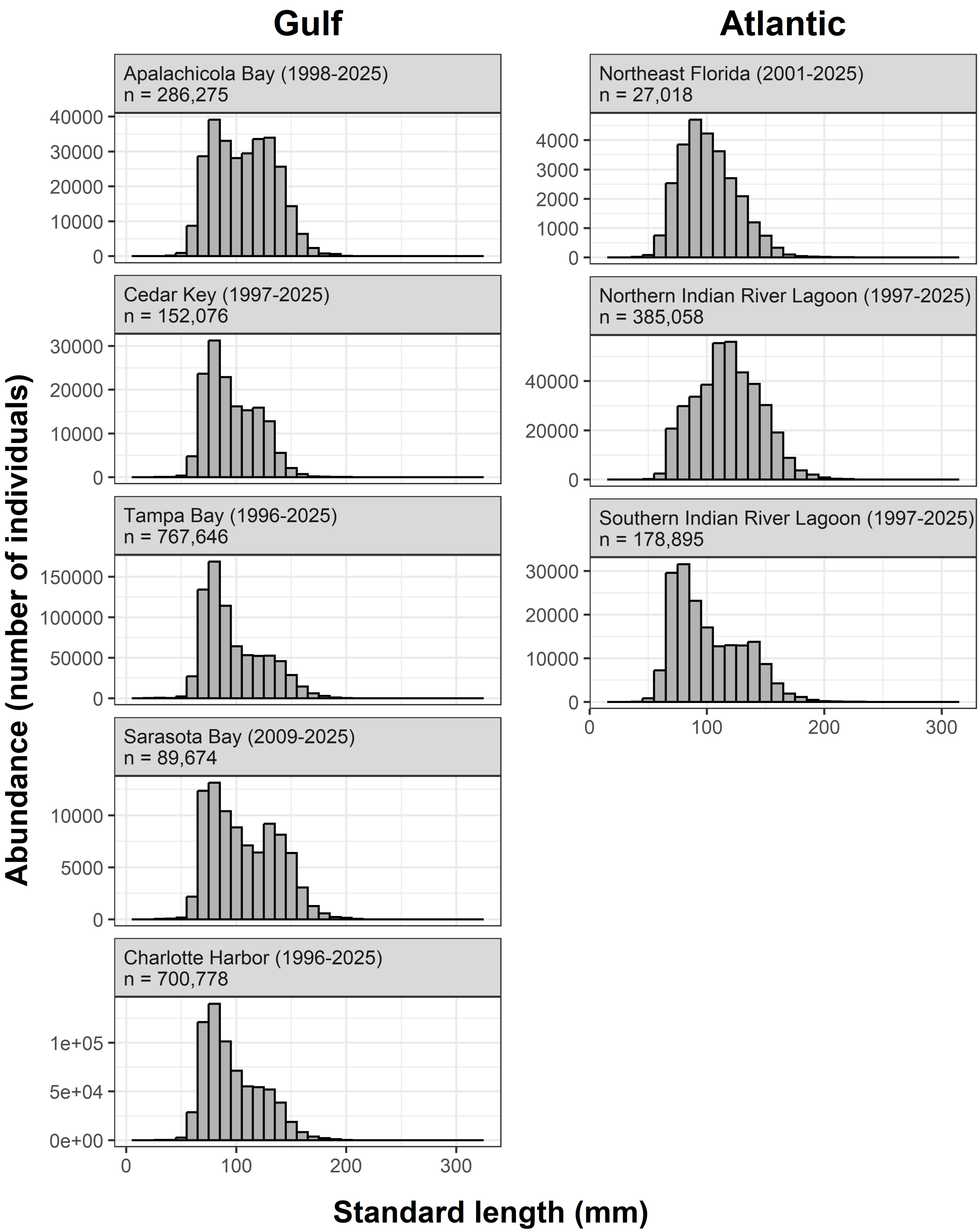

Figure 5.43: Length-frequency diagrams of Pinfish collected in 183-m haul seines.

5.7 Striped Mullet, *Mugil cephalus*

Striped Mullet, *Mugil cephalus*, are one of Florida's most abundant and widespread estuarine-dependent fishes (Odum 1970; Leard et al. 1995). Striped Mullet supported a valuable commercial fishery from the early 1960s through the early 1990s, with approximately 90% of all U.S. landings occurring in the Gulf and over 80% of all commercial landings occurring in Florida waters (Rivas 1980; Leard et al. 1995; Mahmoudi 1997). From 1930 to 1993, Florida Gulf coast landings averaged 26 million pounds annually (Chagaris et al. 2014). Changes were documented from 1991 to 1994 when commercial Striped Mullet landings in Florida severely declined from 79% to 46% of the total Gulf production (Leard et al. 1995). Following the implementation of the Florida net limitation referendum (July 1, 1995), which eliminated the use of entangling nets within three miles of the Atlantic coast and nine miles of the Gulf coast, Striped Mullet commercial landings were further reduced to approximately 5 million pounds (Mahmoudi 2005). After an initial decline in fishing effort and landings following the net limitation referendum, fishing effort and landings in Florida waters have gradually increased to approximately 8 million pounds annually. Due to substantial declines in fishing mortality rates since the net limitation, overall stock size and spawning stock biomass have increased significantly. Stocks throughout the state of Florida are healthy, and current levels of fishing effort appear to be sustainable (Chagaris et al. 2014).

Striped Mullet form large schools in estuarine and nearshore waters from October to December. These schools then migrate to offshore spawning areas over the outer continental shelf and slope during the passage of weather fronts from October through February. Typically, young-of-the-year (YOY) Striped Mullet recruit to Florida's estuaries at 20 to 35 mm standard length (SL, Kilby 1948; Futch 1966). Recruitment usually begins in January and continues through April, with peaks in abundance during February and March; however, previous analyses of length-frequency data indicated that recruitment has occurred in Florida's estuaries as early as the end of December.

To monitor year-class strength and to improve the ability to predict future adult Striped Mullet abundances, relative indices of abundance (IOAs) were developed for YOY Striped Mullet recruitment into selected Florida estuaries. Abundance data for YOY Striped Mullet (≤35 mm SL) that were collected in stratified-random 21.3-m seine samples were examined to assess recruitment into seven Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the Indian River Lagoon. Young-of-the-year Striped Mullet recruited to habitats sampled with 21.3-m seines primarily from January to March. Therefore, these specific months were used to define the respective recruitment seasons for each estuary in subsequent analyses. Separate analyses for river and bay sets were conducted when possible to examine differences in recruitment between the two habitats. Indices were not calculated for estuaries where 21.3-m seines were not deployed or where limited data were available. Subadult and adult and Striped Mullet are occasionally caught in 183-m seines; however, due to the unique behavior of these fish, we do not report IOAs for this life stage here as catches are not indicative of a representative sample. Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year Striped Mullet (≤35 mm SL) collected in 21.3-m seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates).

Apalachicola Bay

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in bay habitats of Apalachicola Bay have generally increased since 1998 (Figure 5.44). Relative abundance of YOY Striped Mullet in bay habitats in 2025 did not differ significantly from the previous year.

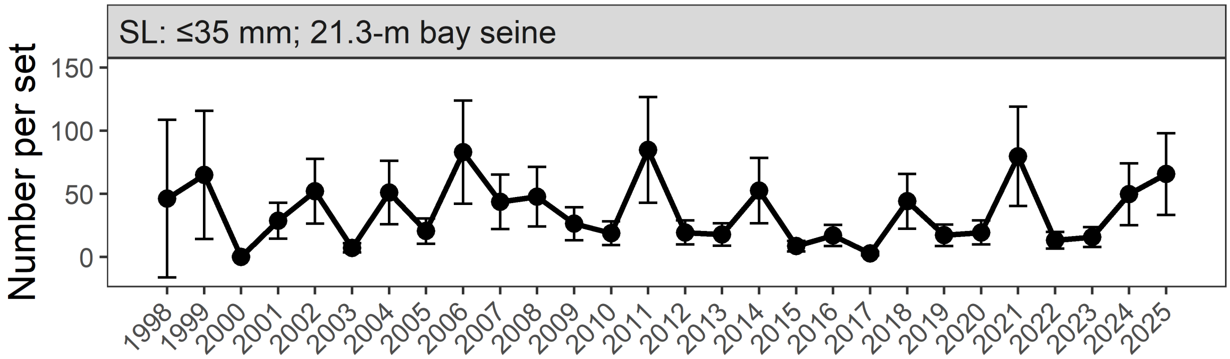

Figure 5.44: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 1998 and 2025 during Apalachicola Bay stratified-random sampling.

Cedar Key

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in river habitats of Cedar Key did not show a significant trend since 1997 (Figure 5.45). Relative abundance of YOY Striped Mullet in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in bay habitats of Cedar Key did not show a significant trend since 1997 (Figure 5.45). Relative abundance of YOY Striped Mullet in bay habitats in 2025 did not differ significantly from the previous year.

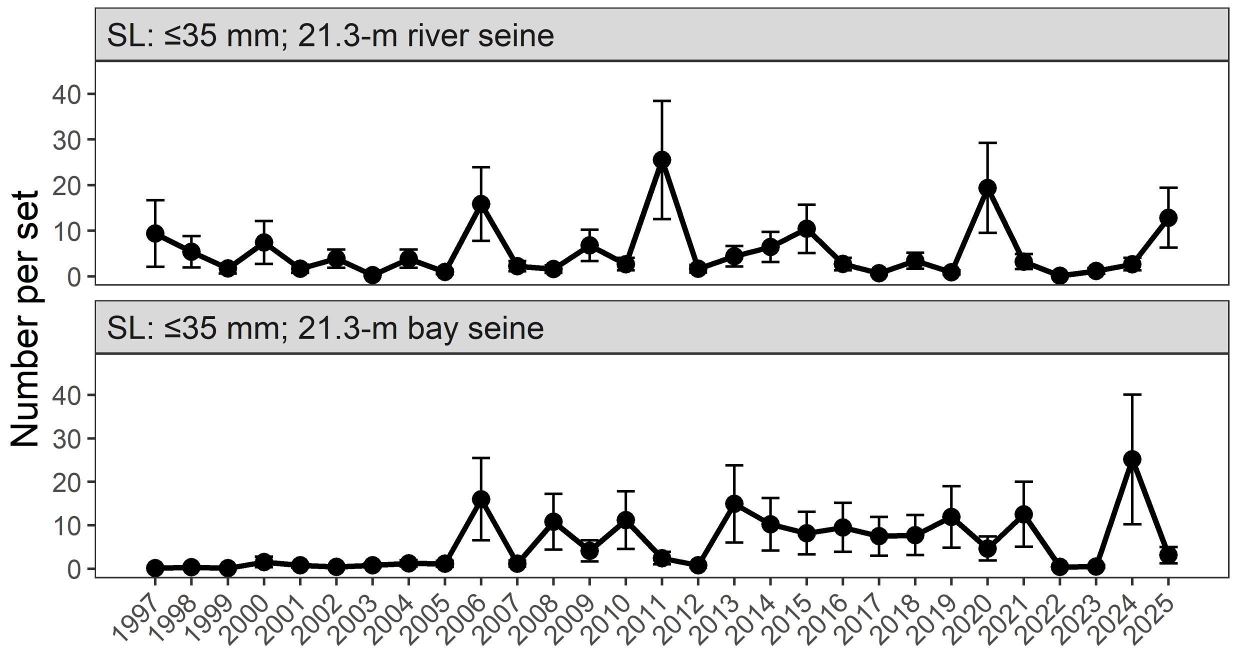

Figure 5.45: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 1997 and 2025 during Cedar Key stratified-random sampling.

Tampa Bay

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in river habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.46). Relative abundance of YOY Striped Mullet in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in bay habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.46). Relative abundance of YOY Striped Mullet in bay habitats in 2025 did not differ significantly from the previous year.

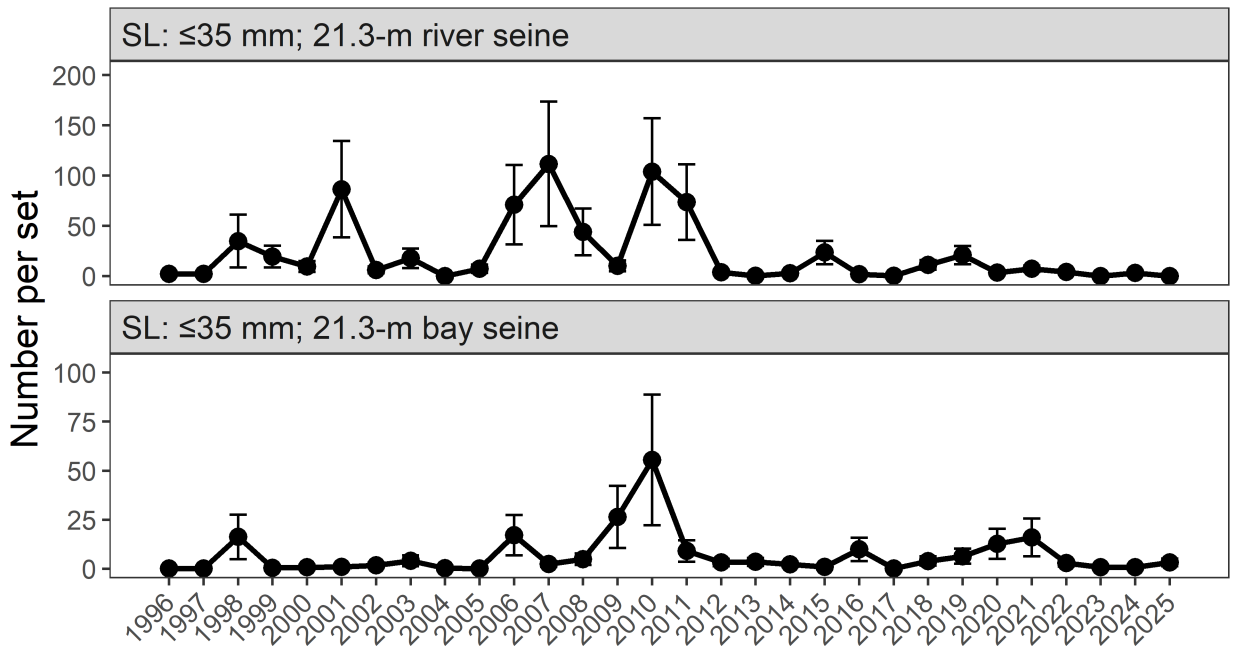

Figure 5.46: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 1996 and 2025 during Tampa Bay stratified-random sampling.

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in river and tidal creek habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.47). Relative abundance of YOY Striped Mullet in river and tidal creek habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in bay habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.47). Relative abundance of YOY Striped Mullet in bay habitats in 2025 did not differ significantly from the previous year.

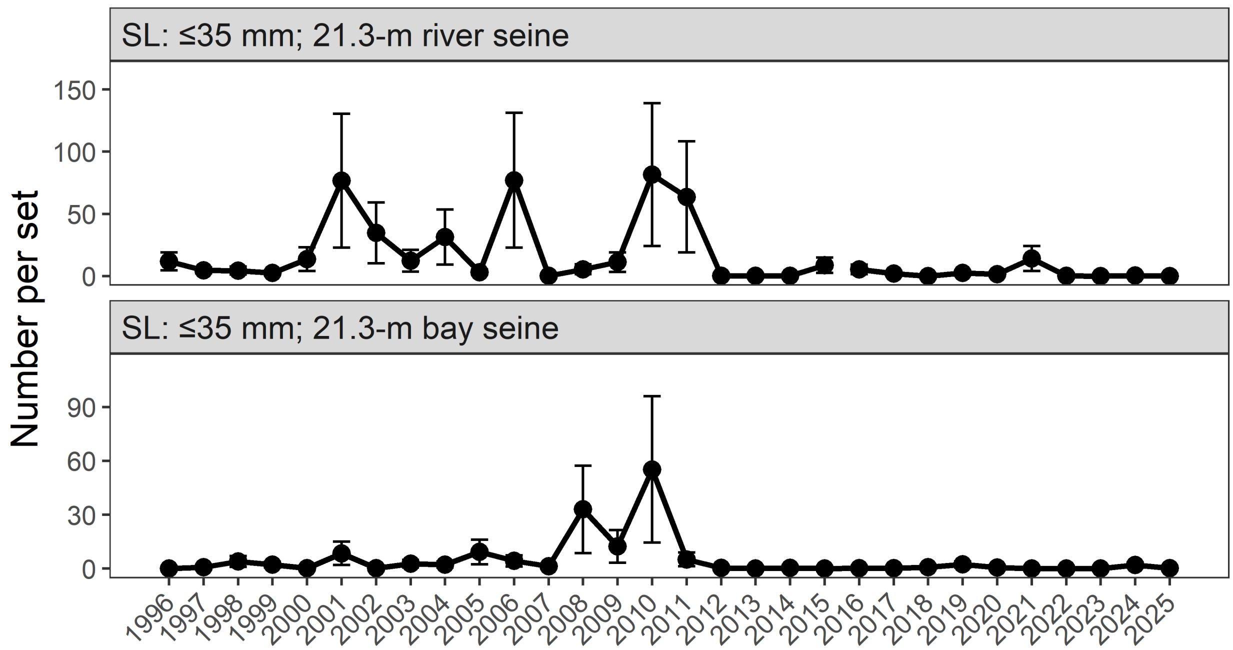

Figure 5.47: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016.

Northeast Florida

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in river habitats of Northeast Florida did not show a significant trend since 2002 (Figure 5.48). Relative abundance of YOY Striped Mullet in river habitats in 2025 did not differ significantly from the previous year.

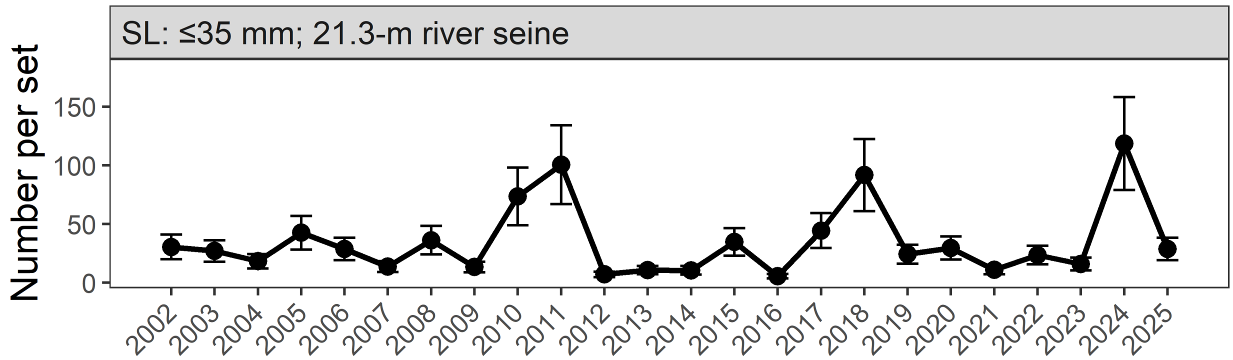

Figure 5.48: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 2002 and 2025 during Northeast Florida stratified-random sampling.

Northern Indian River Lagoon

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in river habitats of Northern Indian River Lagoon did not show a significant trend since 1999 (Figure 5.49). Relative abundance of YOY Striped Mullet in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in bay habitats of Northern Indian River Lagoon have generally increased since 1996 (Figure 5.49). Relative abundance of YOY Striped Mullet in bay habitats in 2025 did not differ significantly from the previous year.

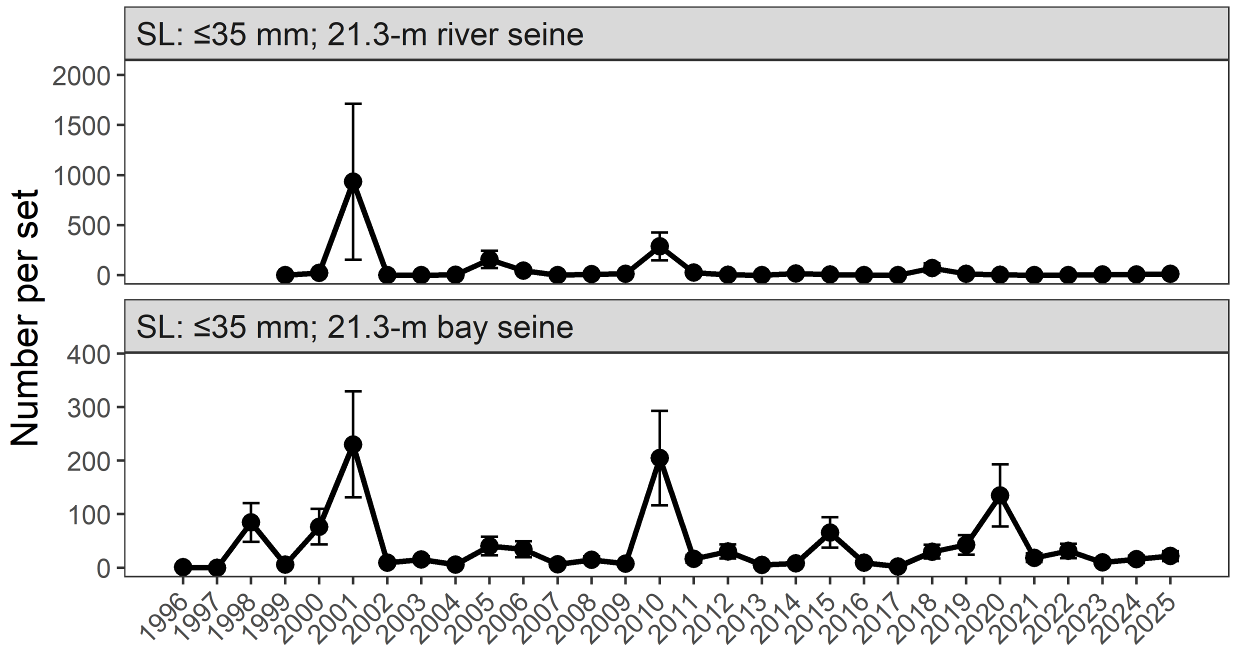

Figure 5.49: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 1996 and 2025 during Northern Indian River Lagoon stratified-random sampling.

Southern Indian River Lagoon

Annual IOAs of YOY (≤35 mm SL) Striped Mullet in river and tidal creek habitats of Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.50). Relative abundance of YOY Striped Mullet in river and tidal creek habitats in 2025 did not differ significantly from the previous year.

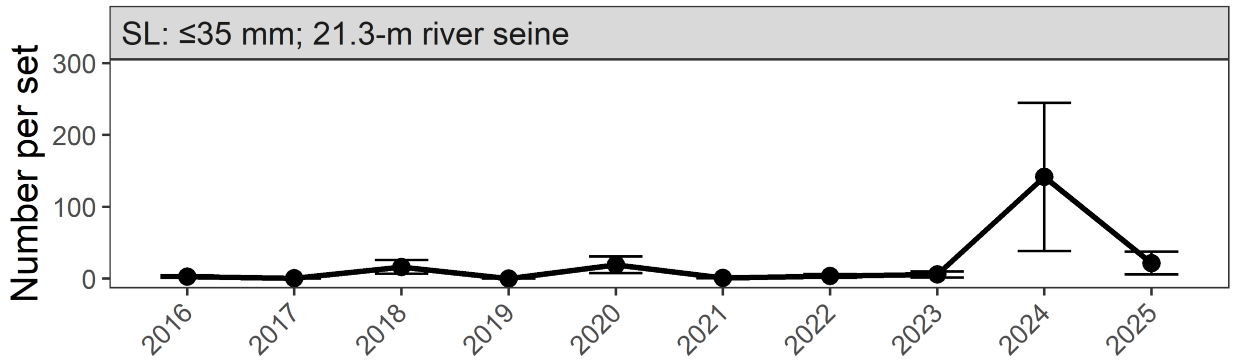

Figure 5.50: Relative abundance (±1 SE) of young-of-the-year (≤35 mm SL) Striped Mullet collected between 2016 and 2025 during Southern Indian River Lagoon stratified-random sampling. Note that river sampling began in 2016 to include previously underrepresented habitats (i.e., tidal creeks and tributaries).

5.8 Blue Crab, *Callinectes sapidus*

Blue Crab, *Callinectes sapidus*, support valuable commercial and recreational fisheries along the Gulf and Atlantic coasts of Florida. From 1996 to 2022, commercial landings on Florida's Gulf and Atlantic coasts averaged 6.2 and 3.1 million pounds per year and were worth an estimated 7.0 and 4.1 million dollars, respectively (Florida Fish and Wildlife Conservation Commission 2022). Following the implementation of the Florida net limitation referendum (July 1, 1995), which eliminated the use of entangling nets within three miles of the Atlantic coast and nine miles of the Gulf coast, concerns were raised that Blue Crab populations might experience increased fishing pressure from former net fishers. Even though annual commercial landings in the Gulf peaked in 1998 at almost 13 million pounds, catch-per-unit effort was already beginning to decline (Steele and Bert 1998). Landings have decreased over the years, with the lowest commercial landings of Blue Crab occurring in 2008 for the Gulf coast and 2009 for the Atlantic coast (Florida Fish and Wildlife Conservation Commission 2022; Addis et al. 2023). Commercial fishing effort for Blue Crab has been limited in recent years by restricted species permits although there are no quotas for Blue Crab landings. The annual recreational harvest of Blue Crab is not currently known or surveyed, so the total catch may be much higher than the recorded commercial landings. The two most recent Blue Crab stock assessments for Florida indicate that Blue Crabs are highly resilient to fishing pressure and despite a generally decreasing trend in fishing mortality, abundances have remained relatively stable since the 1990's (Murphy et al. 2007; Cooper et al. 2013).

Blue Crabs are an integral part of estuarine ecosystems in Florida, whether scavenging carrion or preying upon young-of-the-year (YOY) fishes, mollusks, and crustaceans. They play a valuable role in controlling populations of other estuarine species. In areas with depleted Blue Crab populations, mollusks that graze on *Spartina alterniflora* can become overpopulated and contribute to salt marsh die-offs (Silliman and Bertness 2002). Blue Crab are prey for important sportfish species such as Black Drum (Simmons and Breuer 1962), Red Drum (Gunter 1945; Scharf and Schlight 2000), Common Snook (Blewett et al. 2006), and Cobia (Meyer and Franks 1996). In addition to predation and harvest by humans, Blue Crab populations are affected by a myriad of other factors such as freshwater inflows (Wilber 1994; Flaherty and Guenther 2011), pollution, disease, and habitat alteration. Spawning in Florida generally occurs from March through October with some limited spawning reported during winter months (Steele and Bert 1994).

To monitor year-class strength and improve the ability to predict future adult Blue Crab abundances, indices of relative abundance (IOAs) were developed for YOY Blue Crab in selected Florida estuaries. Abundance data for YOY Blue Crab (≤80 mm carapace width [CW], Archambault et al. 1990; Steele and Bert 1994) collected in stratified-random 21.3-m seine samples were examined to assess recruitment into seven Florida estuaries: Apalachicola Bay, Cedar Key, Tampa Bay, Charlotte Harbor, Northeast Florida, and the northern and southern portions of the Indian River Lagoon (IRL). Young-of-the-year Blue Crabs were collected with 21.3-m seines during all months, but length-frequency histograms indicate they were primarily collected from August through March. These months were therefore used to define the recruitment seasons for each estuary in subsequent analyses. Data collected from August through December of each year were combined with data from January through March of the following year to create a biological year of data. The IOA for 2025 therefore only included data from August through December 2025. Separate analyses for river and bay sets were conducted when possible to examine differences in recruitment between the two habitats. Although sampling with 21.3-m seines began earlier in Northern IRL, YOY Blue Crab IOAs were only calculated for data after 1997 for bay seines and 2000 for river seines, following the addition of spatial zones that yielded adequate numbers of YOY Blue Crab for analyses. Indices were not calculated for estuaries where 21.3-m seines were not deployed or where limited time series data were available.

The FIM program also monitored the abundance of adult Blue Crab (>80 mm CW) within these same Florida estuaries (including Southern IRL) using stratified-random 183-m haul seines. Note, however, that some individuals classified as adults (>80 mm CW) may still have been reproductively immature as a result of individual variation in growth rates and timing of maturity (Archambault et al. 1990; Steele and Bert 1994). Due to historical changes in sampling design and available habitat, only consistently sampled zones and habitats (bay or river) in each estuary were included to generate annual IOAs.

Indices of Abundance

The following figures show relative abundance of young-of-the-year Blue Crab (≤80 mm CW) collected in 21.3-m seines and of adult Blue Crab (>80 mm CW) collected in 183-m haul seines during stratified-random sampling across all estuaries. Points represent an unbiased estimate of the mean abundance (calculated as the median value of the distribution of model estimates), while the vertical bars represent the standard error of the estimate (calculated as the 25th-75th percentiles of model estimates). Note different scales for estimates from 21.3-m and 183-m seines.

Apalachicola Bay

Annual IOAs of YOY (≤80 mm CW) Blue Crab in bay habitats of Apalachicola Bay have generally increased since 1997 (Figure 5.51). Relative abundance of YOY Blue Crab in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Apalachicola Bay did not show a significant trend since 1998 (Figure 5.51). Relative abundance of adult Blue Crab in 2025 did not differ significantly from the previous year.

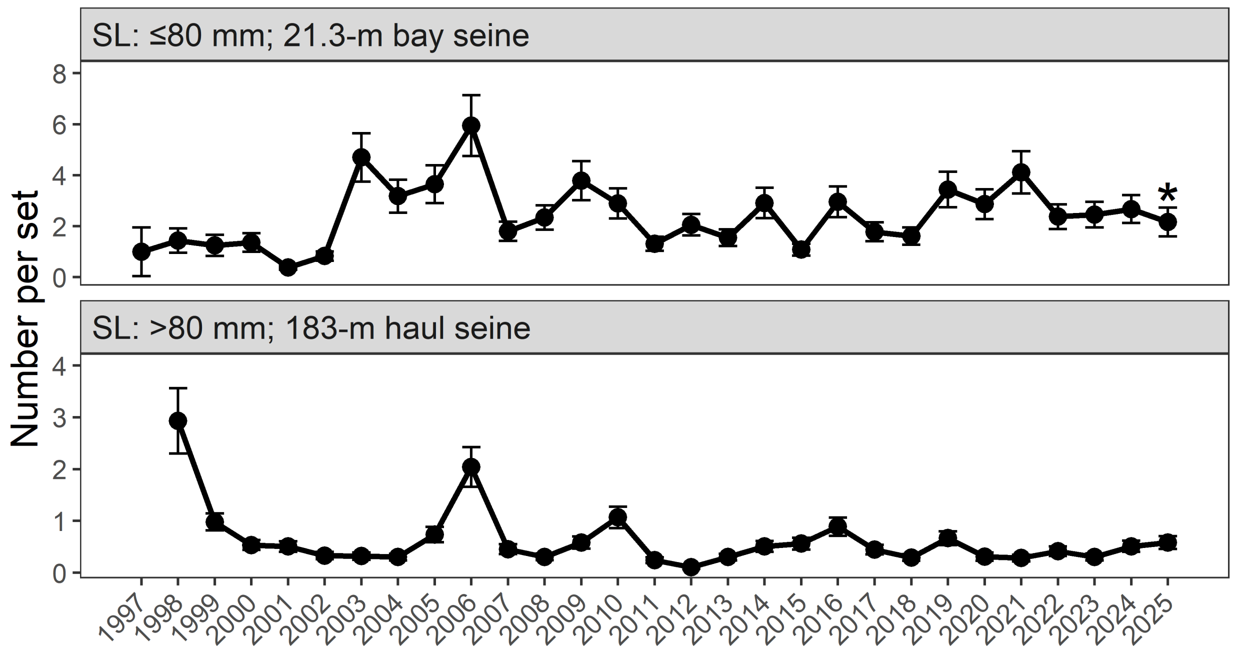

Figure 5.51: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 1997 and 2025 during Apalachicola Bay stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared*.

Cedar Key

Annual IOAs of YOY (≤80 mm CW) Blue Crab in river habitats of Cedar Key did not show a significant trend since 1996 (Figure 5.52). Relative abundance of YOY Blue Crab in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of YOY (≤80 mm CW) Blue Crab in bay habitats of Cedar Key did not show a significant trend since 1996 (Figure 5.52). Relative abundance of YOY Blue Crab in bay habitats in 2025 decreased from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Cedar Key did not show a significant trend since 1997 (Figure 5.52). Relative abundance of adult Blue Crab in 2025 did not differ significantly from the previous year.

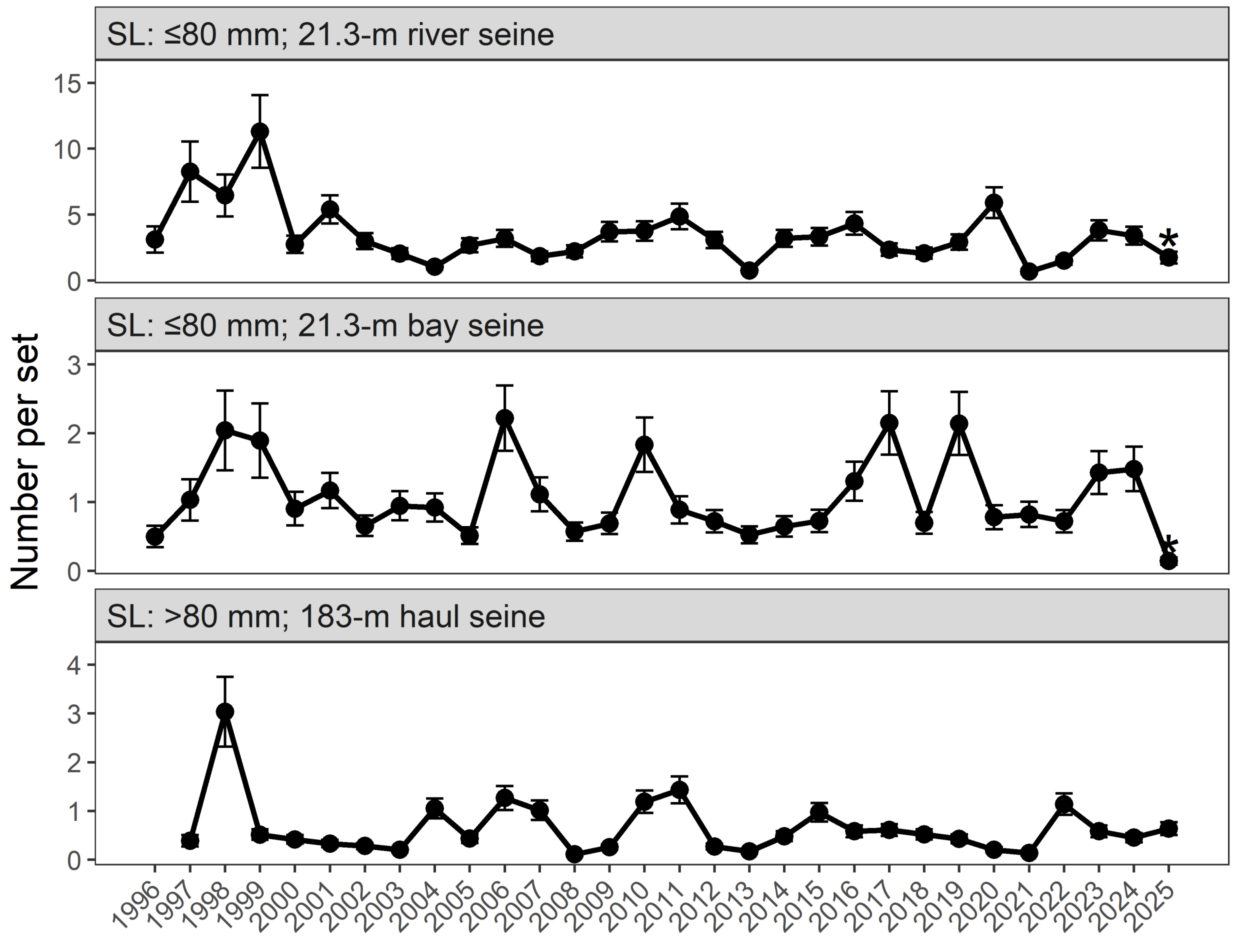

Figure 5.52: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 1996 and 2025 during Cedar Key stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared*..

Tampa Bay

Annual IOAs of YOY (≤80 mm CW) Blue Crab in river habitats of Tampa Bay have generally decreased since 1996 (Figure 5.53). Relative abundance of YOY Blue Crab in river habitats in 2025 decreased from the previous year.

Annual IOAs of YOY (≤80 mm CW) Blue Crab in bay habitats of Tampa Bay did not show a significant trend since 1996 (Figure 5.53). Relative abundance of YOY Blue Crab in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Tampa Bay have generally decreased since 1996 (Figure 5.53). Relative abundance of adult Blue Crab in 2025 did not differ significantly from the previous year.

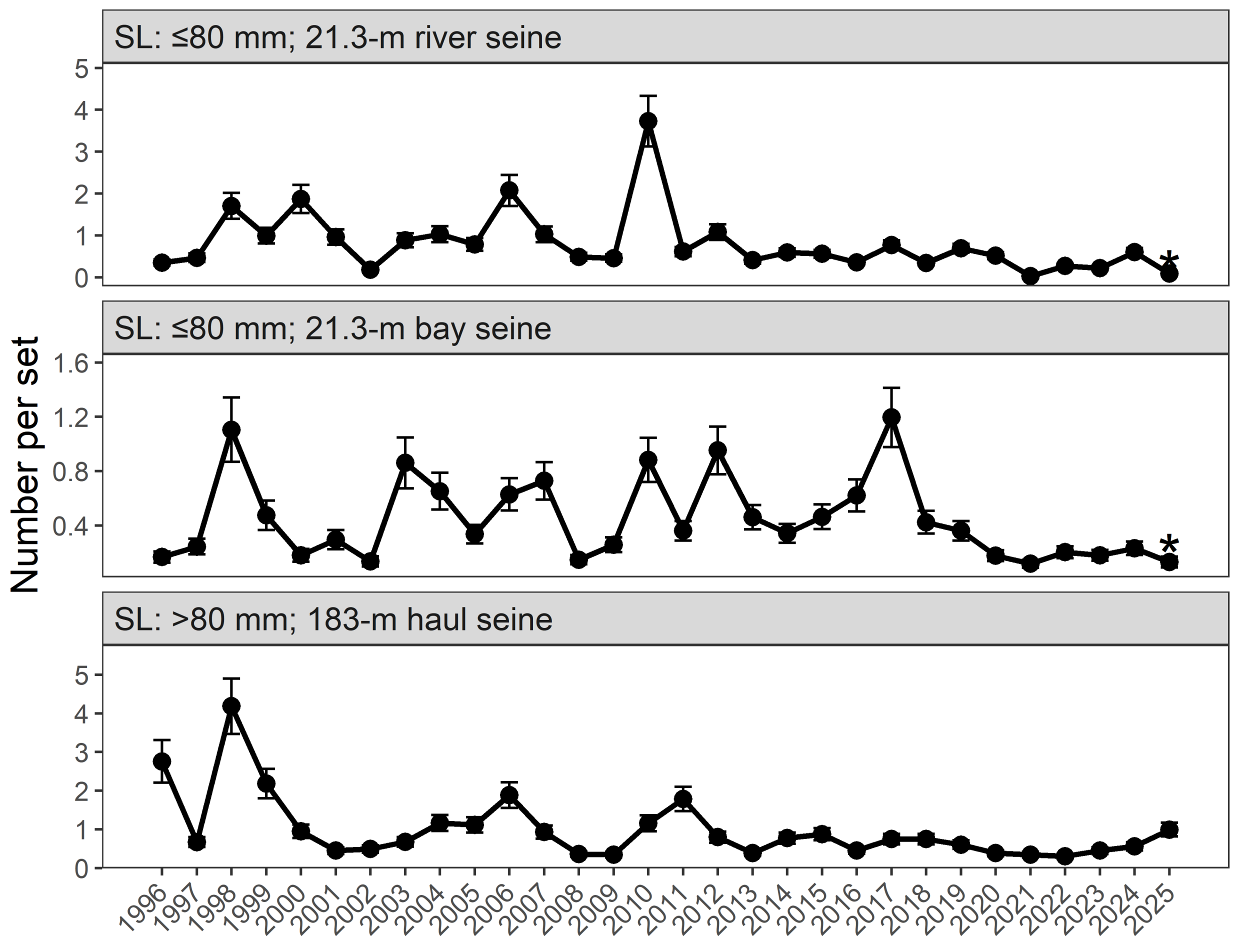

Figure 5.53: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 1996 and 2025 during Tampa Bay stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared*..

Charlotte Harbor

Annual IOAs of YOY (≤80 mm CW) Blue Crab in river habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.54). Relative abundance of YOY Blue Crab in river habitats in 2025 decreased from the previous year.

Annual IOAs of YOY (≤80 mm CW) Blue Crab in bay habitats of Charlotte Harbor did not show a significant trend since 1996 (Figure 5.54). Relative abundance of YOY Blue Crab in bay habitats in 2025 decreased from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Charlotte Harbor did not show a significant trend since 1996 (Figure 5.54). Relative abundance of adult Blue Crab in 2025 did not differ significantly from the previous year.

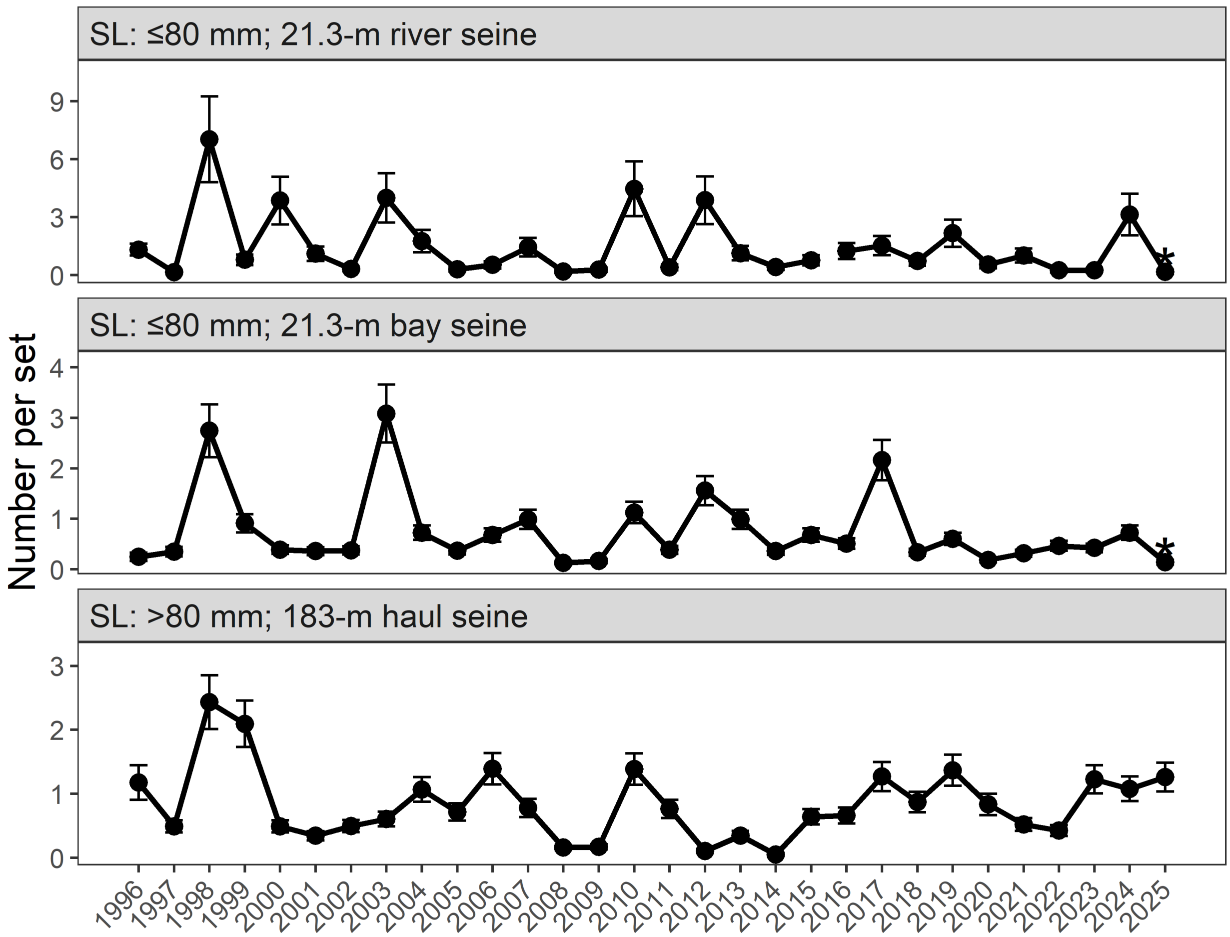

Figure 5.54: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 1996 and 2025 during Charlotte Harbor stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. These changes are reflected in the break in the IOA time series between 2015 and 2016. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared*..

Northeast Florida

Annual IOAs of YOY (≤80 mm CW) Blue Crab in river habitats of Northeast Florida have generally decreased since 2001 (Figure 5.55). Relative abundance of YOY Blue Crab in river habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Northeast Florida have generally decreased since 2001 (Figure 5.55). Relative abundance of adult Blue Crab in 2025 decreased from the previous year.

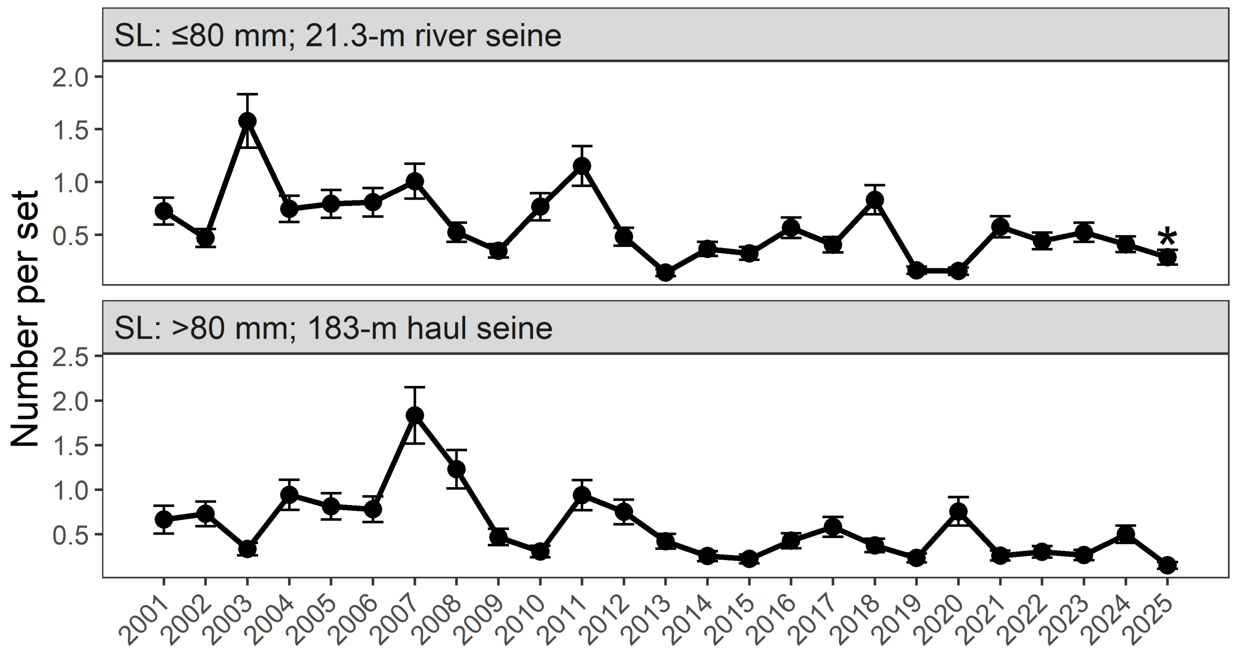

Figure 5.55: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 2001 and 2025 during Northeast Florida stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared*..

Annual IOAs of YOY (≤80 mm CW) Blue Crab in river habitats of Northern Indian River Lagoon have generally increased since 1998 (Figure 5.56). Relative abundance of YOY Blue Crab in river habitats in 2025 decreased from the previous year.

Annual IOAs of YOY (≤80 mm CW) Blue Crab in bay habitats of Northern Indian River Lagoon did not show a significant trend since 1996 (Figure 5.56). Relative abundance of YOY Blue Crab in bay habitats in 2025 did not differ significantly from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Northern Indian River Lagoon have generally decreased since 1997 (Figure 5.56). Relative abundance of adult Blue Crab abundance in 2025 did not differ significantly from the previous year.

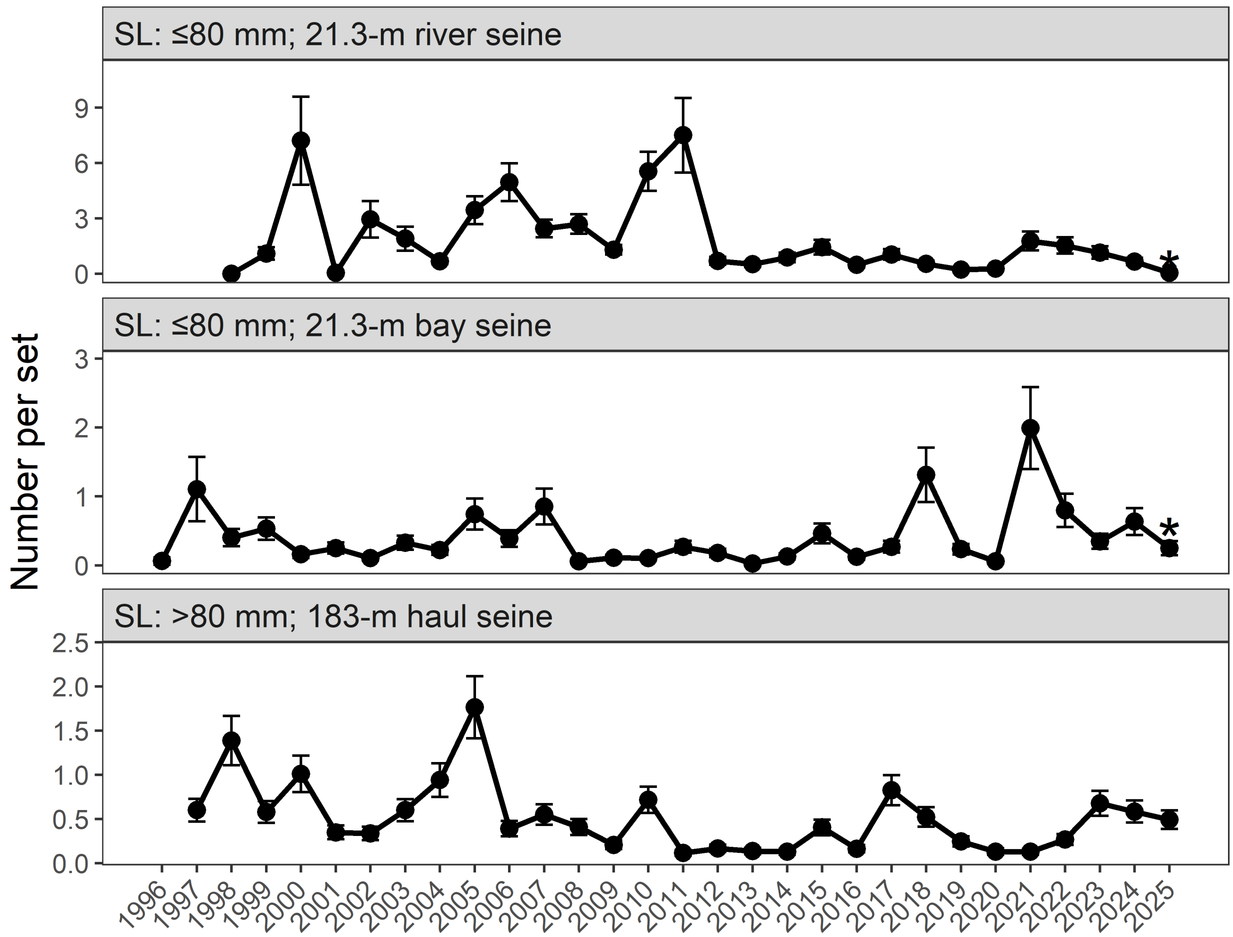

Figure 5.56: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 1996 and 2025 during Northern Indian River Lagoon stratified-random sampling. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared.*.

Annual IOAs of YOY (≤80 mm CW) Blue Crab in river habitats of Southern Indian River Lagoon did not show a significant trend since 2016 (Figure 5.57). Relative abundance of YOY Blue Crab in river habitats in 2025 decreased from the previous year.

Annual IOAs of adult (>80 mm CW) Blue Crab in Southern Indian River Lagoon have generally decreased since 1997 (Figure 5.57). Relative abundance of adult Blue Crab in 2025 did not differ significantly from the previous year.

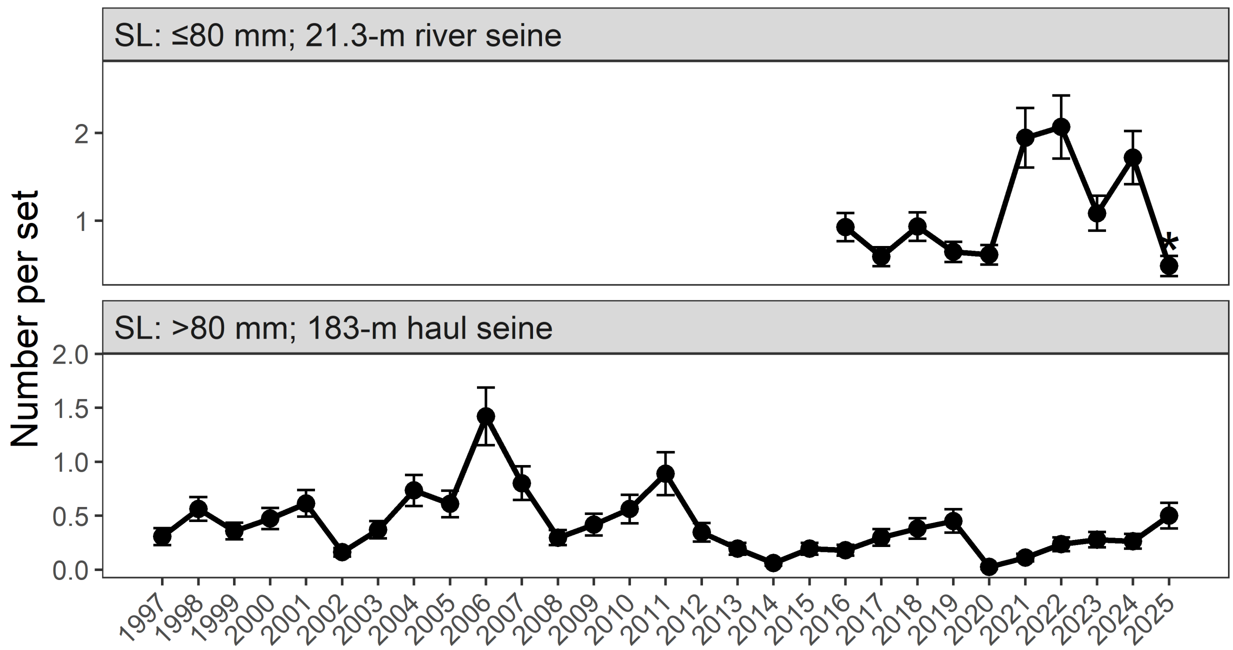

Figure 5.57: Relative abundance (±1 SE) of young-of-the-year (≤80 mm CW) and adult (>80 mm CW) Blue Crab collected between 1997 and 2025 during Southern Indian River Lagoon stratified-random sampling. Note that survey design changes were implemented in 2016 to include sampling of tidal creeks and tributaries. **21.3-m seine IOAs for 2025 do not include a complete biological year because data from January-March of 2026 were unavailable at the time the report was prepared*..

Length-Frequency Diagrams

The following figure shows length-frequency diagrams of Blue Crab collected in 183-m haul seines. All lengths are carapace width (CW). Note different scales and years of collection for each estuary. Length-frequency data collected with 183-m haul seines indicate that this gear provides valuable information on adult Blue Crab in Florida estuaries (Figure 5.58).

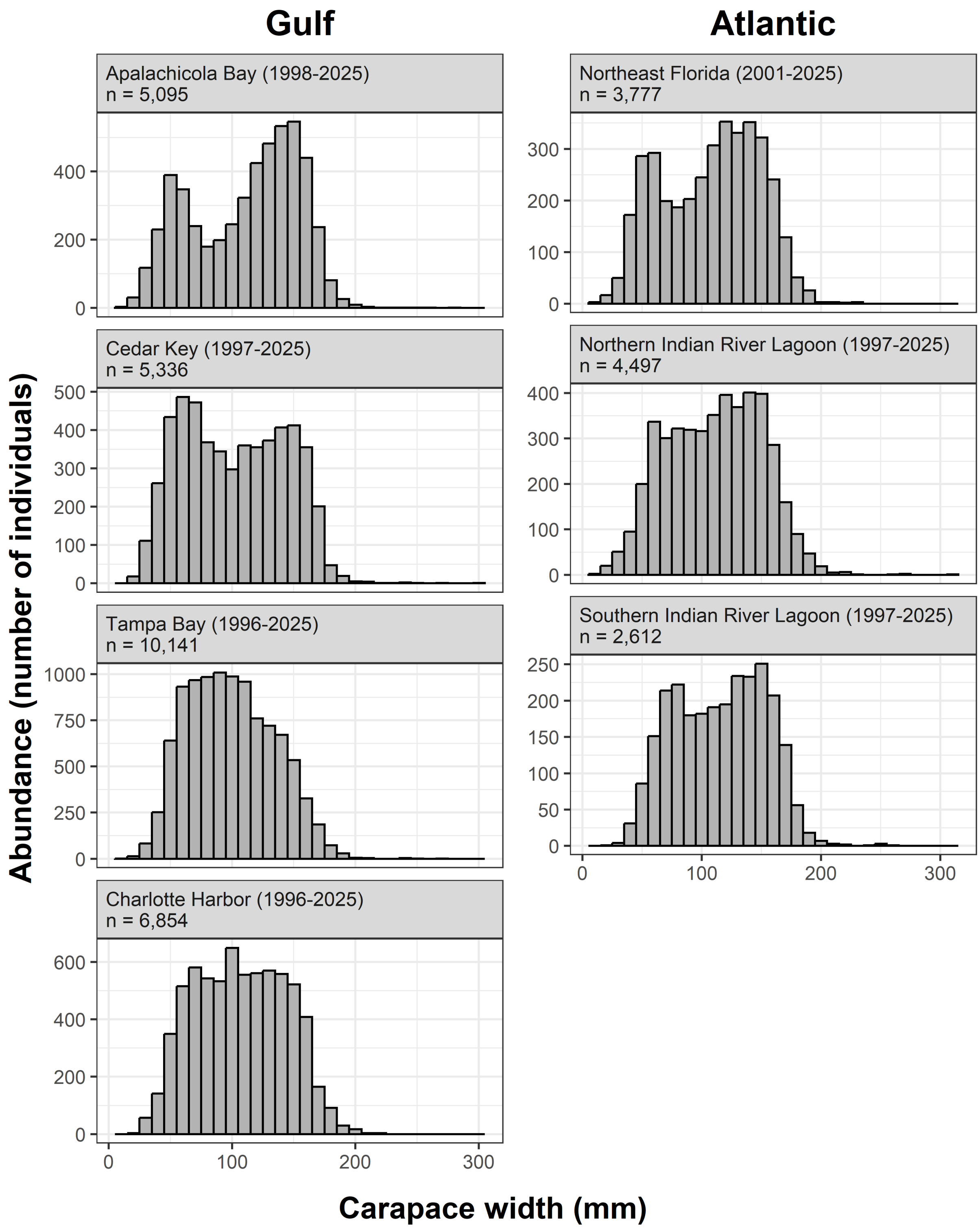

Figure 5.58: Length-frequency diagrams of Blue Crab collected in 183-m haul seines.

6 Fish Health Monitoring

6.1 Introduction

Long-term, multi-gear, and multi-habitat sampling programs, such as the Fisheries-Independent Monitoring (FIM) program, not only provide fish population information to fisheries managers, but also help to document changes and evaluate the effects of natural and anthropogenic disturbances on ecosystems (Wolfe et al. 1987). Increased urban development in coastal areas has made adjacent aquatic ecosystems (estuaries, bays, and tidal rivers) some of the most intensively fertilized environments on earth (Cloern et al. 1995). The influx of nutrients and other materials commonly associated with urban development and industry has led to concerns about the concomitant eutrophication and degradation of water quality in Florida's coastal systems. Evidence of a correlation between environmental degradation and the occurrence of certain fish diseases continues to accumulate (Sindermann 1979). The incidence of gross external abnormalities (GEAs) in marine species, defined as those illnesses or deformations easily observed in the field, provide valuable information on the level of environmental stress placed upon species in estuarine and coastal waters (Fournie et al. 1996). Baseline information on the frequency of occurrence of GEAs is necessary to identify changes in the ecological health of Florida's estuaries.

The Fish and Wildlife Research Institute's (FWRI) FIM program began to document visually observed GEAs (including parasites) on fish and selected invertebrates in Florida's estuaries in April 1998. The main objectives of the fish health monitoring component of the FIM program are to categorize prominent types of GEAs observed, identify which species are most susceptible, and document normal background levels of fish health problems[1]. This report summarizes the occurrence of GEAs observed on fish ≥75 mm standard length (SL) and selected invertebrates collected during routine stratified-random sampling (SRS) in select Florida estuaries in 2025 (Figure 1.1).

6.2 Methods

Fish health monitoring was conducted in all Florida estuarine areas sampled by the FIM program. All fish (≥75 mm SL) and selected invertebrates were visually examined for GEAs. Abnormalities that were opportunistically observed on specimens <75 mm SL were also recorded; however, they are not presented in this report. Specimens with gross external abnormalities were assigned a Gross External Abnormality (GEA) code in the field by FIM staff, packed on ice, and returned to the lab. These specimens were sent to the FWRI's Fish and Wildlife Health (FWH) group in St. Petersburg, Florida, for detailed diagnosis. Specimens collected from estuaries outside the Tampa Bay region were either fixed in 10% formalin or shipped on ice to the FWH group. After

[1] Prior to 2022, FIM's Annual Report incorrectly documented the total number of individuals collected for each species (Table 6.2), resulting in overestimates of the proportion of unhealthy specimens in any given year. This has been rectified in current and future Annual Reports.

evaluating each specimen, the FWH group assigned a GEA code to each specimen. Gross external abnormality codes assigned by fish pathologists in the FWH group took priority over those assigned in the field. Specimens that were assigned a GEA code and released in the field (i.e., fish with scoliosis or gill isopods) retained their original GEA code assigned in the field by FIM program staff. Nine GEA codes were used:

Code	Description
P	Parasitic infestation
B	Red or bloody areas (no scale loss)
F	Fin rot (inflamed or frayed fins)
U	Ulcer or lesion (muscle tissue affected)
E	Erosion or scale loss (only epidermis or dermis involved, muscle tissue not affected)
S	Skeletal abnormalities (vertebral, opercular, or fin deformities)
T	Tumor, cyst (raised area)
O	Other (i.e., emaciated fish, healing wound, eye discoloration, missing parts, and mechanical damage)
D	Dead prior to collection

6.3 Results and Discussion

Of the 268,978 fish (≥75 mm SL) and selected invertebrates that were collected statewide during FIM SRS in 2025, 1,109 (31 taxa, 0.4%) were observed to have a GEA (Table 6.1). Northern Indian River Lagoon had the highest incidence of specimens with GEAs (1.8%). Santa Rosa Sound, Choctawhatchee Bay (0, 0%) had the lowest incidence of specimens with observed GEAs. Statewide, nine categories of GEAs were observed in 2025. The most often identified GEA was parasitic infection (P; n=1,038; Table 6.2) accounting for 93.6% of all GEAs observed from all estuaries. The next most common GEA observed was fin rot (F; n=20). Of the top 10 taxa observed to have a GEA, six were of recreational or commercial importance (i.e., Selected Taxa). *Ariopsis felis* (n=870) had the highest incidence of GEAs. The majority of the GEAs for that species were parasitic infection (P; n=854). *Ariopsis felis* (8.7%) had the highest prevalence of GEAs.

Table 6.1: Incidence of external abnormalities in fish and selected invertebrates collected during stratified-random sampling in each estuary during 2025.

Estuary	Number Collected	Number Affected	Percent Affected
Santa Rosa Sound	800	0	0
Choctawhatchee Bay	1,733	0	0
Apalachicola Bay	53,309	8	<0.1
Cedar Key	22,277	2	<0.1
Tampa Bay	70,655	20	<0.1
Sarasota Bay	8,247	3	<0.1
Charlotte Harbor	33,408	15	<0.1
Northeast Florida	11,329	3	<0.1
Northern Indian River Lagoon	41,279	590	1.4
Southern Indian River Lagoon	25,941	468	1.8
Total	**268,978**	**1,109**	**0.4**

Data are based only on fish ≥75 mm SL and include total number collected, number affected by gross external abnormalities, and percentage affected by gross external abnormalities.

Table 6.2: Top 10 taxa having gross external abnormalities, sorted by descending Percent Affected, collected from all estuaries sampled by the Fisheries-Independent Monitoring program during stratified-random sampling, 2025.

Taxa	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Ariopsis felis	9,958	870	854	12	2	.	.	.	.	2	.	8.7
Sphoeroides testudineus	340	10	9	1	.	.	.	.	.	.	.	2.9
Mugil cephalus	**9,400**	**99**	**93**	**.**	**4**	**1**	**.**	**1**	**.**	**.**	**.**	**1.1**
Hypanus say	1,083	9	8	.	1	.	.	.	.	.	.	0.8
Mugil curema	**9,375**	**52**	**44**	**.**	**7**	**.**	**.**	**1**	**.**	**.**	**.**	**0.6**
Callinectes sapidus	**2,360**	**9**	**8**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**0.4**
Centropomus undecimalis	**2,984**	**7**	**.**	**1**	**.**	**.**	**1**	**.**	**.**	**1**	**4**	**0.2**
Sciaenops ocellatus	**2,313**	**4**	**.**	**.**	**.**	**2**	**.**	**1**	**.**	**1**	**.**	**0.2**
Archosargus probatocephalus	**3,145**	**5**	**2**	**.**	**.**	**1**	**.**	**2**	**.**	**.**	**.**	**0.2**
Brevoortia spp.	9,246	6	5	.	.	1	.	.	.	.	.	<0.1
Subtotal (top 10 taxa with GEAs)	**50,204**	**1,071**	**1,023**	**14**	**14**	**5**	**1**	**5**	**.**	**5**	**4**	**2.1**
Total (all taxa)	**268,978**	**1,109**	**1,038**	**16**	**20**	**7**	**2**	**9**	**2**	**7**	**8**	**0.4**

[1] P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Number collected = total number of each species collected (≥75 mm SL). Number affected = total number of individuals (≥75 mm SL) observed with abnormalities. The number of fish affected is further broken down by specific GEA Code. Percent affected = (number affected / number collected) * 100. Taxa in bold font are categorized as Selected Taxa by the FIM program.

6.4 Incidence by Bay

For each bay, specimens examined refers to the total number of each species collected (≥75 mm SL). Number affected refers to the total number of individuals (≥75 mm SL) observed with abnormalities. The number of fish affected is further broken down by specific GEA Code. Percent affected is calculated as (Number affected / Number collected) * 100. Taxa in bold font are categorized as Selected Taxa by the FIM program.

Santa Rosa Sound: Apalachicola Bay staff examined 800 specimens for GEAs. No GEAs were reported in this estuary.

Choctawhatchee Bay: Apalachicola Bay staff examined 1,733 specimens for GEAs. No GEAs were reported in this estuary.

Apalachicola Bay: Apalachicola Bay staff examined 53,309 specimens for GEAs. There were eight individuals (<0.1%) from six taxa, five of which were selected taxa, that had a GEA (Table 6.3). Fin rot (F; n=3) was the most common GEA observed and accounted for 37.5% of the affected Apalachicola Bay specimens.

Cedar Key: Cedar Key staff examined 22,277 specimens for GEAs. There were two individuals (<0.1%) from two taxa, zero of which were selected taxa, that had a GEA (Table 6.4). Parasitic infection (P; n=2) was the most common GEA observed and accounted for 100% of the affected Cedar Key specimens.

Tampa Bay: Tampa Bay staff examined 70,655 specimens for GEAs. There were 20 individuals (<0.1%) from 12 taxa, six of which were selected taxa, that had a GEA (Table 6.5). Parasitic infection (P; n=9) was the most common GEA observed and accounted for 45% of the affected Tampa Bay specimens.

Sarasota Bay: Tampa Bay staff examined 8,247 specimens for GEAs. There were three individuals (<0.1%) from two taxa, one of which were selected taxa, that had a GEA (Table 6.6). Parasitic infection (P; n=3) was the most common GEA observed and accounted for 100% of the affected Sarasota Bay specimens.

Charlotte Harbor: Charlotte Harbor staff examined 33,408 specimens for GEAs. There were 15 individuals (<0.1%) from six taxa, three of which were selected taxa, that had a GEA (Table 6.7). Dead (D; n=7) was the most common GEA observed and accounted for 46.7% of the affected Charlotte Harbor specimens.

Northeast Florida: Northeast Florida staff examined 11,329 specimens for GEAs. There were three individuals (<0.1%) from three taxa, one of which were selected taxa, that had a GEA (Table 6.8). Ulcer or lesion (U; n=3) was the most common GEA observed and accounted for 100% of the affected Northeast Florida specimens.

Northern Indian River Lagoon: Northern Indian River Lagoon staff examined 41,279 specimens for GEAs. There were 590 individuals (1.4%) from 15 taxa, five of which were selected taxa, that had a GEA (Table 6.9). Parasitic infection (P; n=553) was the most common GEA observed and accounted for 93.7% of the affected Northern Indian River Lagoon specimens.

Southern Indian River Lagoon: Southern Indian River Lagoon staff examined 25,941 specimens for GEAs. There were 468 individuals (1.8%) from eight taxa, three of which were selected taxa, that had a GEA (Table 6.10). Parasitic infection (P; n=465) was the most common GEA observed and accounted for 99.4% of the affected Southern Indian River Lagoon specimens.

Table 6.3: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Apalachicola Bay stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Cynoscion arenarius	**99**	**1**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Ariopsis felis	531	2	.	.	1	.	.	.	.	1	.	0.4
Sciaenops ocellatus	**706**	**2**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**1**	**.**	**0.3**
Cynoscion nebulosus	**556**	**1**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**0.2**
Micropogonias undulatus	**1,132**	**1**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**<0.1**
Mugil cephalus	**2,843**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**<0.1**
Total (all taxa)	**53,309**	**8**	**.**	**.**	**3**	**1**	**1**	**1**	**.**	**2**	**.**	**<0.1**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.4: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Cedar Key stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Lepisosteus platyrhincus	4	1	1	.	.	.	.	.	.	.	.	25
Brevoortia spp.	766	1	1	.	.	.	.	.	.	.	.	0.1
Total (all taxa)	**22,277**	**2**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**<0.1**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.5: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Tampa Bay stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Hypanus say	39	1	.	.	1	.	.	.	.	.	.	2.6
Strongylura timucu	42	1	1	.	.	.	.	.	.	.	.	2.4
Brevoortia spp.	245	4	4	.	.	.	.	.	.	.	.	1.6
Callinectes sapidus	**567**	**4**	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**0.7**
Centropomus undecimalis	**797**	**3**	**.**	**1**	**.**	**.**	**1**	**.**	**.**	**1**	**.**	**0.4**
Sciaenops ocellatus	**444**	**1**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**0.2**
Mugil curema	**497**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**0.2**
Hypanus sabinus	624	1	.	.	.	.	.	.	.	.	1	0.2
Archosargus probatocephalus	**791**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**0.1**
Elops saurus	**4,144**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**<0.1**
Eucinostomus gula	13,176	1	1	.	.	.	.	.	.	.	.	<0.1
Lagodon rhomboides	22,802	1	.	.	.	.	.	.	1	.	.	<0.1
Total (all taxa)	**70,655**	**20**	**9**	**1**	**1**	**1**	**1**	**3**	**1**	**2**	**1**	**<0.1**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.6: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Sarasota Bay stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Anchoa hepsetus	1	1	1	.	.	.	.	.	.	.	.	100
Callinectes sapidus	**91**	**2**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2.2**
Total (all taxa)	**8,247**	**3**	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**<0.1**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.7: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Charlotte Harbor stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Hemiramphus brasiliensis	10	3	3	.	.	.	.	.	.	.	.	30
Eugerres plumieri	408	3	.	.	.	.	.	.	.	.	3	0.7
Callinectes sapidus	**509**	**3**	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**0.6**
Centropomus undecimalis	**940**	**4**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**4**	**0.4**
Archosargus probatocephalus	**803**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**0.1**
Strongylura notata	986	1	.	.	.	.	.	1	.	.	.	0.1
Total (all taxa)	**33,408**	**15**	**6**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**7**	**<0.1**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.8: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Northeast Florida stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Archosargus probatocephalus	**99**	**1**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Lagodon rhomboides	143	1	.	.	.	1	.	.	.	.	.	0.7
Brevoortia spp.	1,221	1	.	.	.	1	.	.	.	.	.	<0.1
Total (all taxa)	**11,329**	**3**	**.**	**.**	**.**	**3**	**.**	**.**	**.**	**.**	**.**	**<0.1**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.9: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Northern Indian River Lagoon stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Strongylura marina	13	2	2	.	.	.	.	.	.	.	.	15.4
Ariopsis felis	3,152	416	402	12	1	.	.	.	.	1	.	13.2
Mugil cephalus	**1,040**	**97**	**93**	**.**	**4**	**.**	**.**	**.**	**.**	**.**	**.**	**9.3**
Hypanus say	411	8	8	.	.	.	.	.	.	.	.	1.9
Pogonias cromis	**241**	**3**	**.**	**.**	**.**	**1**	**.**	**1**	**.**	**1**	**.**	**1.2**
Sphoeroides testudineus	94	1	.	1	.	.	.	.	.	.	.	1.1
Chilomycterus schoepfii	199	2	.	1	.	.	.	.	.	1	.	1
Mugil curema	**6,226**	**49**	**44**	**.**	**5**	**.**	**.**	**.**	**.**	**.**	**.**	**0.8**
Archosargus rhomboidalis	271	2	.	.	2	.	.	.	.	.	.	0.7
Strongylura notata	228	1	.	.	.	.	.	.	1	.	.	0.4
Archosargus probatocephalus	**495**	**2**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**0.4**
Sphoeroides nephelus	793	3	.	1	2	.	.	.	.	.	.	0.4
Sciaenops ocellatus	**315**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**0.3**
Hypanus sabinus	979	1	1	.	.	.	.	.	.	.	.	0.1
Diapterus auratus	4,257	2	1	.	.	.	.	1	.	.	.	<0.1
Total (all taxa)	**41,279**	**590**	**553**	**15**	**14**	**1**	**.**	**3**	**1**	**3**	**.**	**1.4**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Table 6.10: List of taxa, sorted by Percent Affected in descending order, having gross external abnormalities collected in Southern Indian River Lagoon stratified-random sampling, 2025.

Scientific Name	Number Collected (≥75 mm SL)	Number Affected (≥75 mm SL)	Gross External Abnormality (GEA) code[1]									Percent Affected
			P	B	F	U	E	S	T	O	D	
Ariopsis felis	1,164	452	452	.	.	.	.	.	.	.	.	38.8
Sphoeroides testudineus	246	9	9	.	.	.	.	.	.	.	.	3.7
Bagre marinus	29	1	1	.	.	.	.	.	.	.	.	3.4
Caranx hippos	142	1	1	.	.	.	.	.	.	.	.	0.7
Micropogonias undulatus	**200**	**1**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**0.5**
Mugil cephalus	**419**	**1**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**0.2**
Mugil curema	**1,516**	**2**	**.**	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**0.1**
Diapterus auratus	6,742	1	1	.	.	.	.	.	.	.	.	<0.1
Total (all taxa)	**25,941**	**468**	**465**	**.**	**2**	**1**	**.**	**.**	**.**	**.**	**.**	**1.8**

[1]P = parasitic infestation; B = red or bloody areas; F = fin rot; U = ulcer or lesion; E = erosion or scale loss; S = skeletal abnormalities; T = tumor/cysts; O = other; D = dead.

Part II

Fisheries-Independent Monitoring: Polyhaline Seagrass Sampling

7 Introduction

The Fisheries-Independent Monitoring (FIM) program has conducted inshore (estuarine) monitoring in various eastern Gulf estuaries as early as 1989, but habitats commonly occupied by juvenile reef fish species (i.e., seagrass beds and shoals) were underrepresented. Indeed, the FIM program captured highly variable numbers of juveniles of estuarine-dependent reef species, resulting in highly variable indices of juvenile abundance (Switzer et al. 2012, 2015; Flaherty-Walia et al. 2015). Researchers and managers recommended improving indices of juvenile abundance for reef species (Switzer et al. 2012; Flaherty-Walia et al. 2015) so in 2008, FIM initiated a complementary sampling survey to fulfill the mission of providing timely and accurate data for fishery management. Results from existing FIM data for the eastern Gulf were used to inform the design of the complementary survey to characterize the abundance of juvenile Gag, *Mycteroperca microlepis* (Casey et al. 2007; Switzer et al. 2015), and other estuarine-dependent and seagrass-associated reef fishes by targeting the preferred polyhaline (salinity>18 PSU) seagrass habitat. Work in Charlotte Harbor was instrumental in developing the survey, as Casey et al. (2007) documented that juvenile Gag were collected mainly between April and December in habitats with ≥50% seagrass cover. In 2008, the FIM program initiated this complementary polyhaline seagrass survey to extend its standard, long-term monitoring survey to deep seagrass habitats found in estuaries already sampled by the FIM program and in adjacent estuaries not sampled by the FIM program. The polyhaline seagrass survey was originally conducted in St. Andrew Bay, Apalachicola Bay, three sub-areas in the Big Bend area (near St. Marks, the Econfina and Steinhatchee Rivers), Tampa Bay, and Charlotte Harbor. In 2021, polyhaline seagrass survey methodology was adopted in Choctawhatchee Bay and Santa Rosa Sound near Fort Walton to help provide data for Spotted Seatrout, *Cynoscion nebulosus*, management (Figure 7.1). This survey provides necessary data for improving existing single species assessments as well as furthering the development of a multi-species, ecosystem-based approach to fisheries resource assessment on the West Florida shelf and eastern Gulf waters.

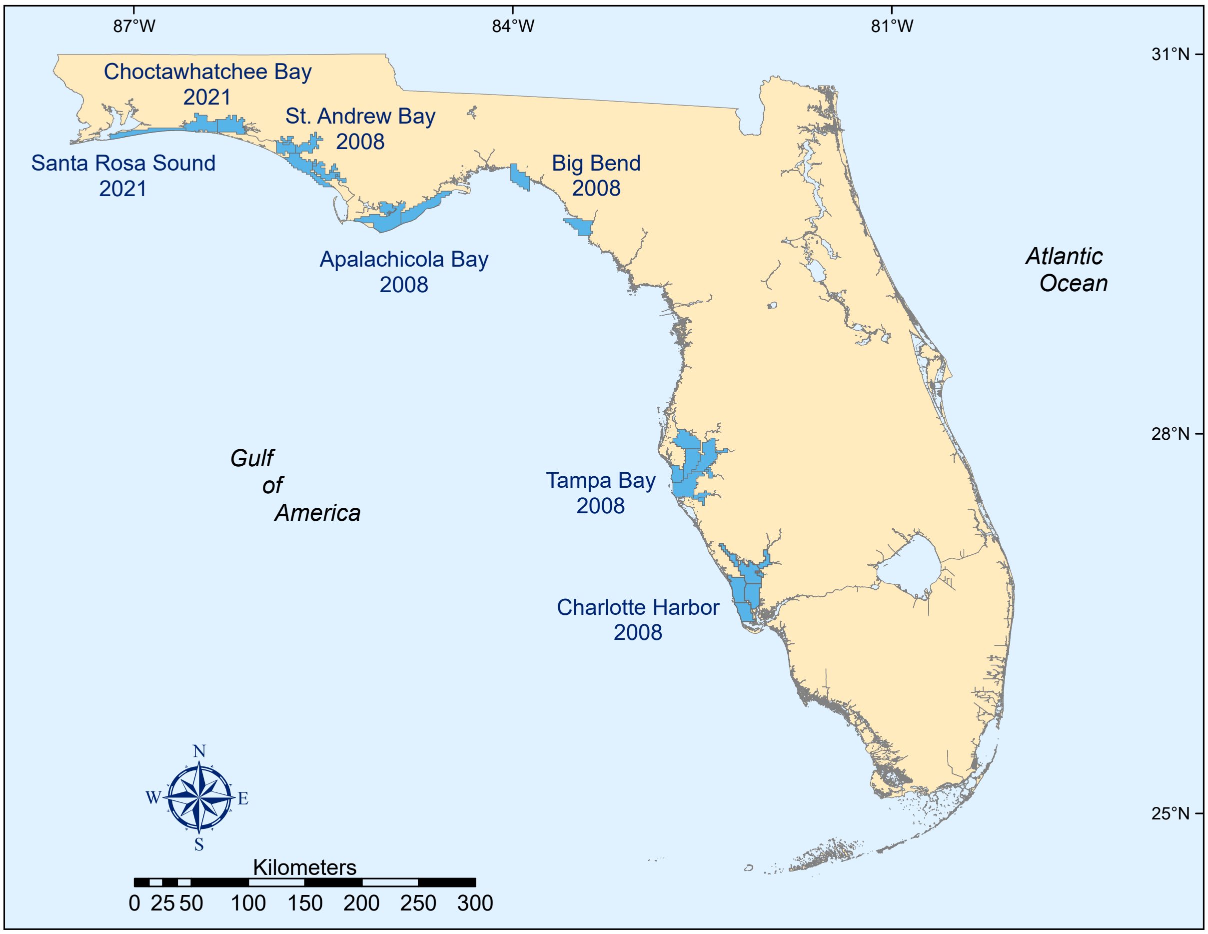

Figure 7.1: Locations of Polyhaline Seagrass Survey study areas sampled by the Fisheries-Independent Monitoring program. Years indicate initiation of sampling.

8 Methods

The polyhaline seagrass survey was conducted along the eastern Gulf between 26° and 31° N latitude within six estuarine systems and the Big Bend area (Figure 7.1). The sampling universe for each area was created using bathymetry and seagrass coverage data from the local water management districts. To ensure sampling effort was allocated spatially within each estuarine system, spatial sampling zones were created. Sampling strata were defined based on bathymetric variability and seagrass coverage: microgrids (0.1-nm²) that were in the appropriate depth range (1.0-7.6m) for the sampling gear and contained known seagrass were included in the universe. The sampling gear was identical to that used in the standard long-term FIM stratified random sampling survey: the 6.1-m otter trawl. All sample work-up methods were the same as those described in Chapter 2.

Monthly (June–November) surveys were conducted following a stratified-random survey design where microgrids were randomly selected. Trawling was conducted over areas with >50% submerged aquatic vegetation coverage and where water depth ranged between 1.0 and 7.6 m. Additional details regarding 6.1-m otter trawl sampling in the WI survey can be found in Switzer et al. (2012), Flaherty-Walia et al. (2015), and Schrandt et al. (2018; 2021, 2023). Sampling of polyhaline seagrass areas was conducted in Santa Rosa Sound, Choctawhatchee Bay, St. Andrew Bay, Apalachicola Bay, the Big Bend region (in proximity to the Econfina and Steinhatchee Rivers), Tampa Bay, and Charlotte Harbor. This section includes a description of and catch summary from each estuarine system for all taxa sampled as well as for species of interest, which include reef-associated species and managed species (Table 8.1). Several of these species are also included in the list of selected taxa that are highlighted in FIM's core sampling (Table 4). Catch summaries are combined over all zones within each estuarine system.

Table 8.1: Animals designated as species of interest by the Fisheries Independent Monitoring program because of their recreational and commercial importance or association with reef structure.

Scientific Name	Common Name
Archosargus probatocephalus	Sheepshead
Centropomus undecimalis	Common Snook
Centropristis striata	Black Sea Bass
Cynoscion nebulosus	Spotted Seatrout
Epinephelus morio	Red Grouper
Haemulon plumierii	White Grunt
Lachnolaimus maximus	Hogfish
Lutjanus griseus	Gray Snapper
Lutjanus synagris	Lane Snapper
Mycteroperca microlepis	Gag
Sciaenops ocellatus	Red Drum

Table 8.2: Summary of catch and effort data by estuary for polyhaline seagrass sampling, 2025.

Bay	Hauls	Animals
Santa Rosa Sound	16	9,672
Choctawhatchee Bay	18	9,666
St. Andrew Bay	72	32,324
Apalachicola Bay	96	33,775
Big Bend	180	25,198
Tampa Bay	144	39,025
Charlotte Harbor	120	38,250
Total	**646**	**187,910**

9 Data Summary by Estuary

9.1 Santa Rosa Sound

Santa Rosa Sound is a 109-km^2 lagoon connecting Pensacola Bay to the west and Choctawhatchee Bay to the east (Northwest Florida Water Management District 2017a). The lagoon has no tidal tributaries for direct freshwater input but is connected to the Gulf by a deep pass west of Santa Rosa Island (Figure 9.1). Shoreline vegetation consists primarily of the marsh grasses *Spartina alterniflora* and *Panicum hemitomon* (Miller et al. 2001). Bottom substrate is mostly sand (Miller et al. 2001) and bottom vegetation consists primarily of seagrasses such as *Halodule wrightii* and *Thalassia testudinum* (Bradley and Houser 2009). Seagrass beds covered nearly 25% of the lagoon in 1960, but by 1992 less than half remained because of wastewater discharge, dredging, and beach modifications (Handley et al. 2007). By 2010, seagrass coverage declined by an additional 5% (Yarbro and Carlson 2016).

Monthly sampling in Santa Rosa Sound was completed from June through November with a total of 9,672 individuals collected across 16 samples (Table 8.2). The most abundant taxa collected in Santa Rosa Sound polyhaline seagrass sampling were *Lagodon rhomboides* (n=7,122) and *Bairdiella chrysoura* (n=673), accounting for 80.6% of the trawl catch (Table 9.1). The taxa most frequently caught in Santa Rosa Sound polyhaline seagrass sampling were *Lagodon rhomboides* (100.0% occurrence) and *Bairdiella chrysoura* (100.0% occurrence).

A total of 68 animals from three species of interest were collected, representing 0.7% of the entire polyhaline seagrass trawl catch (Table 9.2). *Cynoscion nebulosus* (n=66) was the most abundant species of interest, accounting for 97.1% of the species of interest collected in polyhaline seagrass trawls (Table 9.2). The species of interest most frequently caught in Santa Rosa Sound polyhaline seagrass sampling were *Cynoscion nebulosus* (68.8% occurrence) and *Lutjanus griseus* (6.2% occurrence).

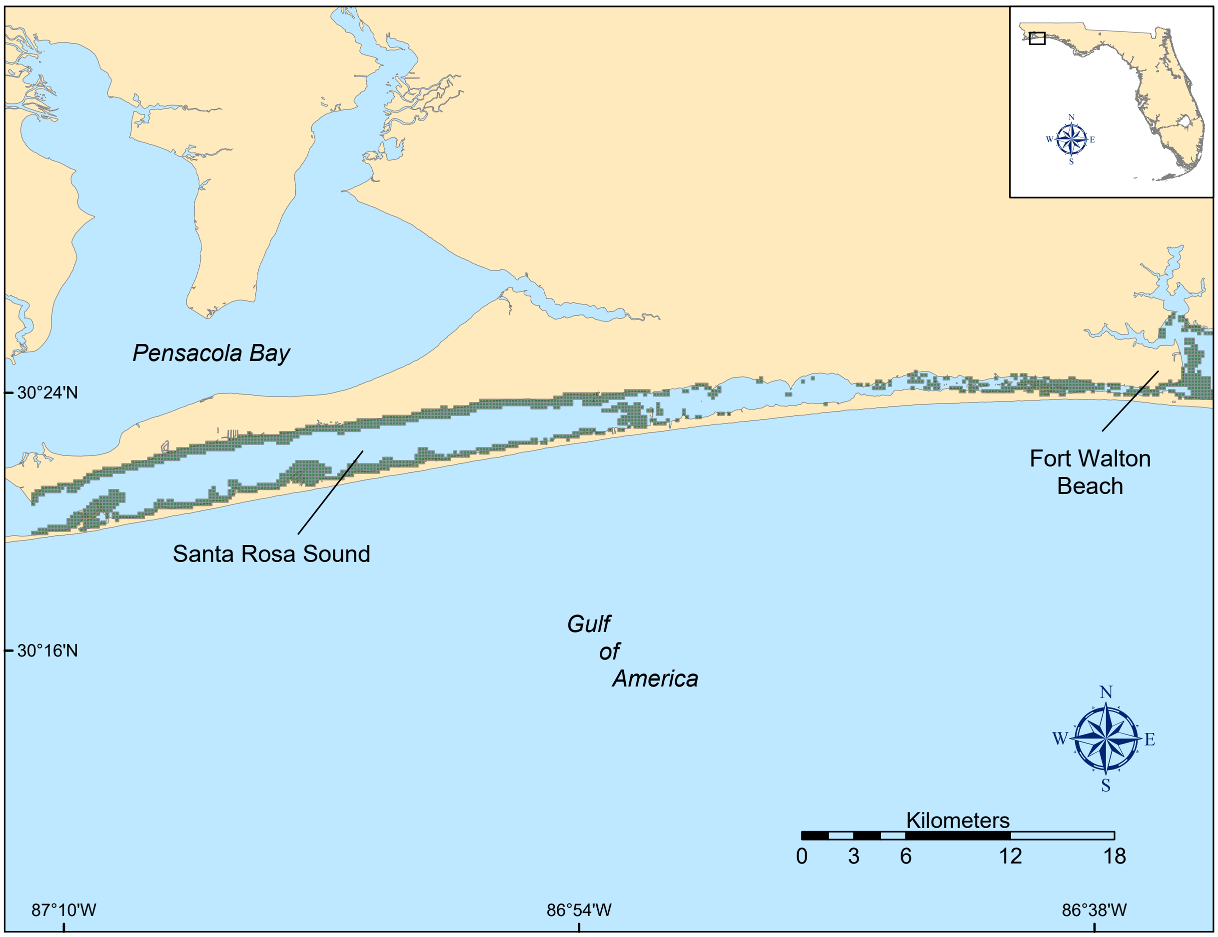

Figure 9.1: Santa Rosa Sound polyhaline seagrass habitat sampling universe. Microgrids ($0.1nm^2$) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.1: Catch statistics for 10 dominant taxa collected in 16 6.1-m otter trawl samples during Santa Rosa Sound polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	7,122	73.6	100.0	35.11	8.46	134.21	164.15	52	0.27	25	145
Bairdiella chrysoura	673	7.0	100.0	4.40	1.06	115.79	20.69	46	0.88	12	153
Orthopristis chrysoptera	620	6.4	100.0	2.92	0.43	81.47	8.54	97	1.81	32	195
Callinectes sapidus	261	2.7	93.8	2.43	0.52	86.27	7.15	63	1.56	4	180
Syngnathus floridae	216	2.2	93.8	2.08	0.40	76.78	6.45	150	1.81	65	200
Farfantepenaeus spp.	153	1.6	87.5	1.42	0.54	152.77	8.84	11	0.17	5	14
Syngnathus scovelli	122	1.3	93.8	1.12	0.28	100.75	4.05	98	1.23	69	128
Farfantepenaeus duorarum	90	0.9	87.5	0.83	0.21	100.73	3.37	17	0.18	15	22
Chasmodes saburrae	64	0.7	68.8	0.60	0.25	165.75	3.90	44	1.34	19	71
Cynoscion nebulosus	66	0.7	68.8	0.56	0.24	176.72	3.24	50	3.39	17	130
Subtotal	9,387	97.1	.	.	.	.	.	.	.	4	200
Total	**9,672**	**100.0**	**.**	**91.72**	**13.39**	**58.40**	**183.71**	**.**	**.**	**4**	**370**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.2: Catch statistics for species of interest collected in 16 6.1-m otter trawl samples during Santa Rosa Sound polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Cynoscion nebulosus	66	0.7	68.8	0.56	0.24	176.72	3.24	50	3.39	17	130
Lutjanus griseus	1	<0.1	6.2	0.01	0.01	400.00	0.15	39	.	39	39
Sciaenops ocellatus	1	<0.1	6.2	0.01	0.01	400.00	0.13	190	.	190	190
Total	**68**	**0.7**	**.**	**0.61**	**0.26**	**172.83**	**3.37**	**.**	**.**	**17**	**190**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

9.2 Choctawhatchee Bay

Choctawhatchee Bay (Figure 9.2) is a 334-km^2 estuary located in the central Florida Panhandle that is connected to the Gulf by a shallow man-made channel, East Pass, near the city of Destin (Handley et al. 2007; Northwest Florida Water Management District 2017b). Tidal influence is minimal and tidal ranges are small, from 0.15 to 0.5 meters (Huguenard et al. 2016). Major habitat types in Choctawhatchee Bay include tidal marshes, seagrass beds, bayous, and oyster beds (Northwest Florida Water Management District 2017b). Shoreline vegetation consists mostly of the marsh grasses *Juncus roemerianus*, *Spartina alterniflora*, and *Scirpus* spp. (Northwest Florida Water Management District 2017b). Choctawhatchee Bay is moderately deep with depths ranging from 3 to 13 meters and bottom substrate that is mostly sand, mud, and shell (Handley et al. 2007; Northwest Florida Water Management District 2017b). Bottom vegetation is predominantly *Halodule wrightii* with patches of *Ruppia maritima* and *Thalassia testudinum* (Handley et al. 2007; Northwest Florida Water Management District 2017b). Choctawhatchee Bay seagrass beds covered 17.2 km^2 in 1992 but had declined by 55% by 2007 (Yarbro and Carlson 2016). Seagrass losses observed in Choctawhatchee Bay are a result of urbanization, especially the construction of seawalls, which reduces the size of intertidal areas and impedes seagrass growth (Handley et al. 2007).

Monthly sampling in Choctawhatchee Bay was completed from June through November with a total of 9,666 individuals collected across 18 samples (Table 8.2). The most abundant taxa collected in Choctawhatchee Bay polyhaline seagrass sampling were *Lagodon rhomboides* (n=5,590) and *Bairdiella chrysoura* (n=1,344), accounting for 71.7% of the trawl catch (Table 9.3). The taxa most frequently caught in Choctawhatchee Bay polyhaline seagrass sampling were *Lagodon rhomboides* (100.0% occurrence) and *Bairdiella chrysoura* (100.0% occurrence).

A total of 248 animals from three species of interest were collected, representing 2.6% of the entire polyhaline seagrass trawl catch (Table 9.4). *Cynoscion nebulosus* (n=244) was the most abundant species of interest, accounting for 98.4% of the species of interest collected in polyhaline seagrass trawls (Table 9.4). The species of interest most frequently caught in Choctawhatchee Bay polyhaline seagrass sampling were *Cynoscion nebulosus* (94.4% occurrence) and *Lutjanus griseus* (11.1% occurrence).

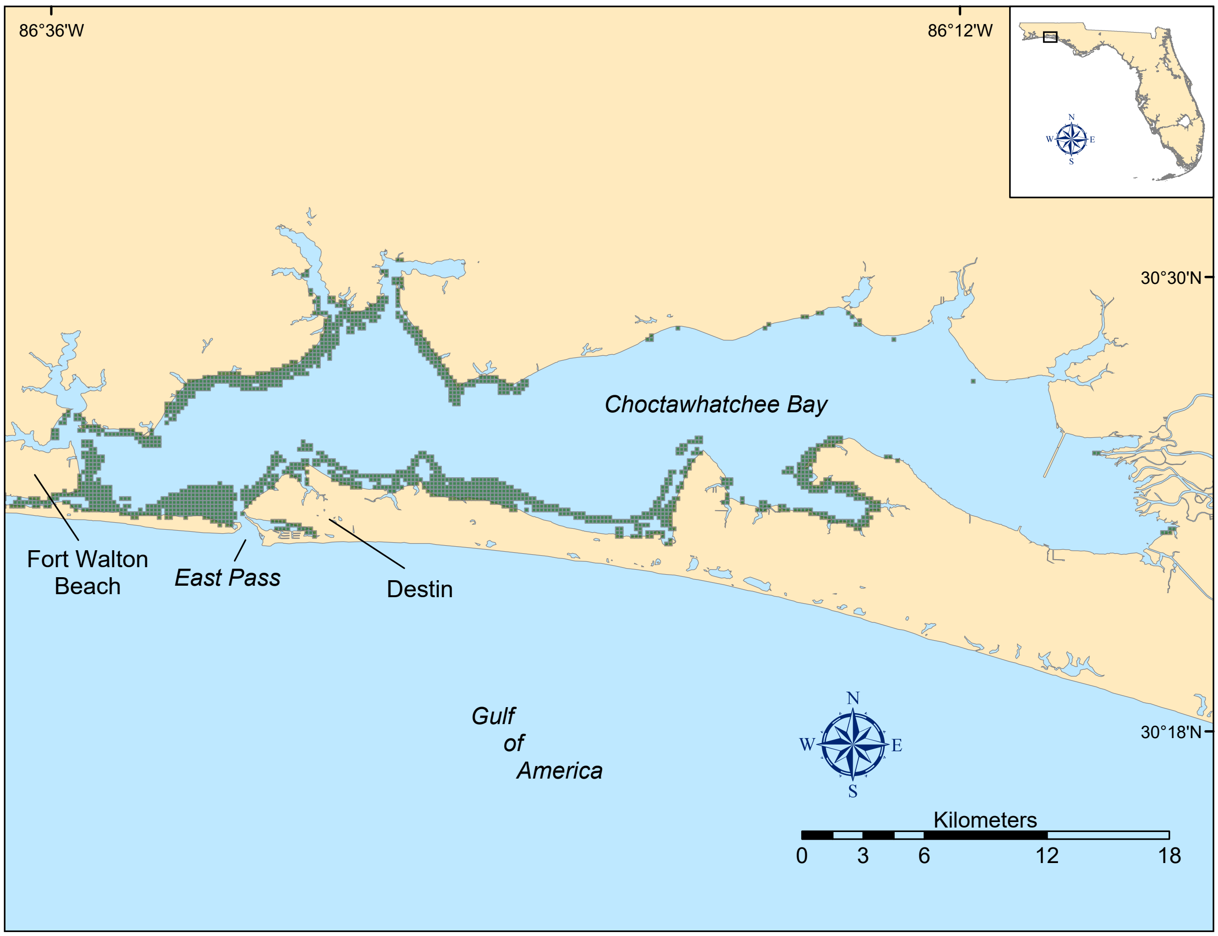

Figure 9.2: Choctawhatchee Bay polyhaline seagrass habitat sampling universe. Micro-grids (0.1nm^2) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.3: Catch statistics for 10 dominant taxa collected in 18 6.1-m otter trawl samples during Choctawhatchee Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	5,590	57.8	100.0	24.56	5.27	121.44	125.20	54	0.27	24	162
Bairdiella chrysoura	1,344	13.9	100.0	8.12	2.25	132.77	36.16	44	0.46	13	153
Orthopristis chrysoptera	455	4.7	100.0	2.69	0.35	64.64	5.55	79	1.44	22	187
Callinectes sapidus	273	2.8	100.0	2.24	0.47	90.09	7.08	59	2.08	5	184
Anchoa mitchilli	286	3.0	5.6	2.14	2.14	424.26	38.59	25	0.11	22	29
Eucinostomus spp.	274	2.8	77.8	2.09	0.64	130.36	7.96	30	0.25	14	39
Leiostomus xanthurus	290	3.0	55.6	2.07	1.19	250.20	17.81	61	1.53	41	173
Cynoscion nebulosus	244	2.5	94.4	1.91	0.40	89.90	5.80	48	1.27	16	117
Syngnathus scovelli	128	1.3	88.9	0.98	0.34	147.28	6.21	86	1.18	37	112
Paralichthys albigutta	109	1.1	100.0	0.84	0.15	74.90	2.29	121	4.28	57	307
Subtotal	8,993	92.9	.	.	.	.	.	.	.	5	307
Total	**9,666**	**100.0**	**.**	**75.28**	**11.49**	**64.76**	**202.24**	**.**	**.**	**4**	**335**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.4: Catch statistics for species of interest collected in 18 6.1-m otter trawl samples during Choctawhatchee Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Cynoscion nebulosus	244	2.5	94.4	1.91	0.40	89.90	5.80	48	1.27	16	117
Lutjanus griseus	2	<0.1	11.1	0.01	0.01	291.04	0.13	86	74.00	12	160
Sciaenops ocellatus	2	<0.1	11.1	0.01	0.01	291.04	0.13	160	0.50	160	161
Total	**248**	**2.6**	**.**	**1.94**	**0.41**	**89.85**	**5.94**	**.**	**.**	**12**	**161**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

9.3 St. Andrew Bay

St. Andrew Bay (Figure 9.3) is located adjacent to Panama City, Florida and covers approximately 280 square miles (Keppner and Keppner 2001). The estuary includes several smaller bays and extends almost 50 miles along the Gulf Coast. St. Andrew Bay is unique from other estuaries in the study due to its lack of direct freshwater inflow from a major river system. However, it does receive freshwater flow from numerous creeks, bayous and wastewater treatment plants. This limited amount of freshwater maximizes the influence of Gulf water, which is connected to the bay via West Pass. St. Andrew Bay has the largest stock of seagrass in the Florida panhandle. Tidal flats and salt marshes are also prevalent in the bay system ("GulfBase Website" 2023).

Monthly sampling in St. Andrew Bay was completed from June through November with a total of 32,324 individuals collected across 72 samples (Table 8.2). The most abundant taxa collected in St. Andrew Bay polyhaline seagrass sampling were *Lagodon rhomboides* (n=21,668) and *Orthopristis chrysoptera* (n=4,094), accounting for 79.7% of the trawl catch (Table 9.5). The taxa most frequently caught in St. Andrew Bay polyhaline seagrass sampling were *Lagodon rhomboides* (100.0% occurrence) and *Orthopristis chrysoptera* (94.4% occurrence).

A total of 218 animals from six species of interest were collected, representing 0.7% of the entire polyhaline seagrass trawl catch (Table 9.6). *Lutjanus synagris* (n=110) was the most abundant species of interest, accounting for 50.5% of the species of interest collected in polyhaline seagrass trawls (Table 9.6). The species of interest most frequently caught in St. Andrew Bay polyhaline seagrass sampling were *Lutjanus synagris* (34.7% occurrence) and *Cynoscion nebulosus* (31.9% occurrence).

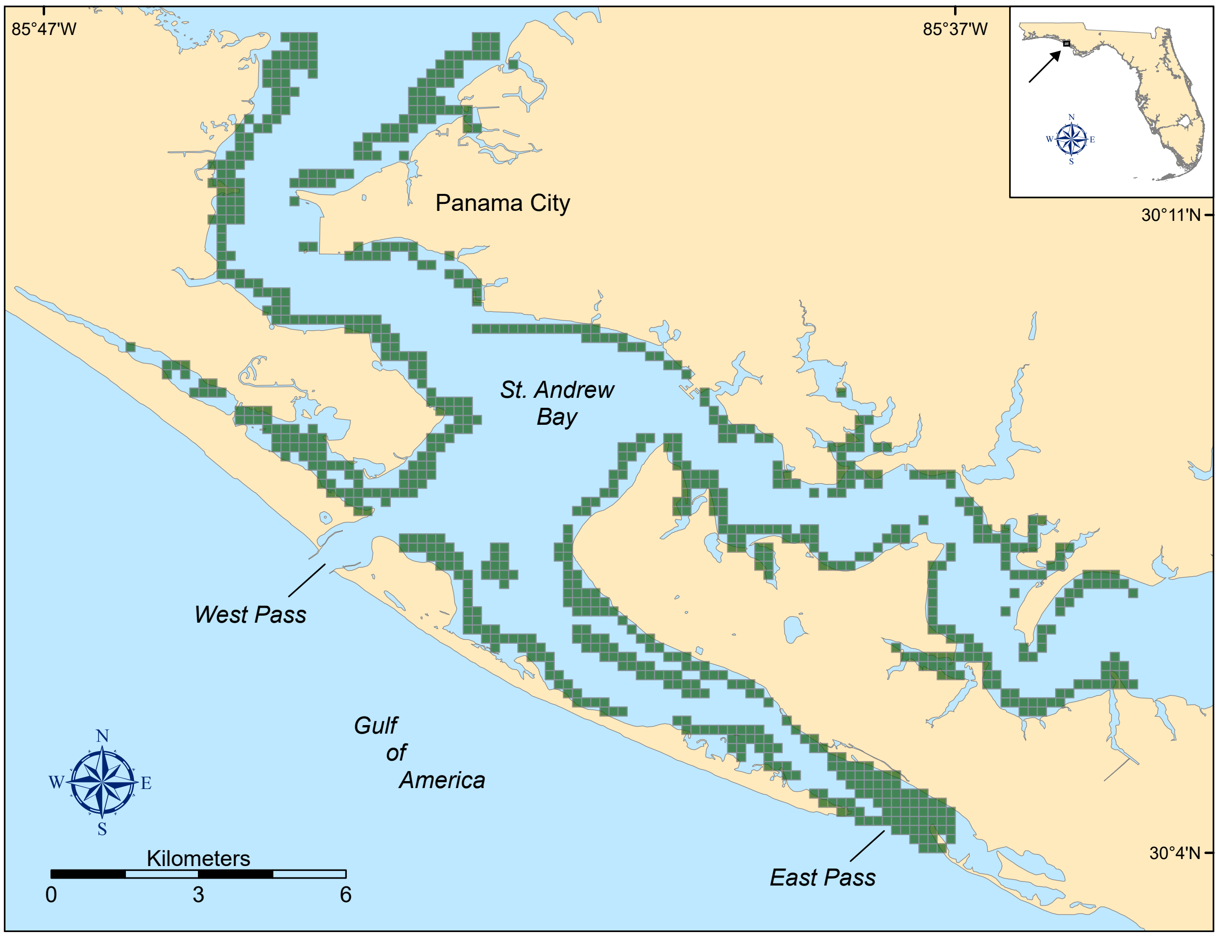

Figure 9.3: St. Andrew Bay polyhaline seagrass habitat sampling universe. Microgrids ($0.1nm^2$) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.5: Catch statistics for 10 dominant taxa collected in 72 6.1-m otter trawl samples during St. Andrew Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	21,668	67.0	100.0	29.24	3.26	112.64	152.31	58	0.15	23	184
Orthopristis chrysoptera	4,094	12.7	94.4	5.42	0.72	134.85	32.83	67	0.51	15	194
Eucinostomus spp.	1,316	4.1	79.2	2.48	0.53	179.90	30.22	24	0.18	11	39
Stephanolepis hispida	1,253	3.9	61.1	2.33	0.59	213.43	23.61	56	0.39	14	103
Bairdiella chrysoura	860	2.7	65.3	1.59	0.34	185.73	20.54	57	0.92	15	146
Syngnathus floridae	608	1.9	86.1	1.17	0.14	102.83	6.00	157	1.16	45	224
Callinectes sapidus	441	1.4	59.7	0.85	0.17	166.19	8.09	83	1.60	10	179
Paralichthys albigutta	254	0.8	84.7	0.48	0.06	101.16	2.25	129	3.79	49	308
Syngnathus scovelli	177	0.5	62.5	0.34	0.05	128.24	1.95	102	1.09	53	129
Nicholsina usta	166	0.5	36.1	0.31	0.08	212.93	3.64	64	2.28	17	177
Subtotal	30,837	95.5	.	.	.	.	.	.	.	10	308
Total	**32,324**	**100.0**	**.**	**61.63**	**4.86**	**66.93**	**186.03**	**.**	**.**	**4**	**362**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.6: Catch statistics for species of interest collected in 72 6.1-m otter trawl samples during St. Andrew Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lutjanus synagris	110	0.3	34.7	0.21	0.08	327.17	5.55	53	1.89	18	102
Lutjanus griseus	50	0.2	20.8	0.10	0.03	308.30	2.16	49	2.99	24	132
Cynoscion nebulosus	50	0.2	31.9	0.09	0.02	195.17	0.81	65	6.76	17	213
Centropristis striata	4	<0.1	5.6	0.01	<0.01	415.70	0.13	109	10.08	94	138
Mycteroperca microlepis	3	<0.1	2.8	0.01	<0.01	621.05	0.25	125	21.79	90	165
Lachnolaimus maximus	1	<0.1	1.4	<0.01	<0.01	848.53	0.13	130	.	130	130
Total	**218**	**0.7**	**.**	**0.42**	**0.10**	**202.20**	**6.30**	**.**	**.**	**17**	**213**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

9.4 Apalachicola Bay

Apalachicola Bay (Figure 9.4) is a shallow, semi-enclosed estuary, located on the northwestern coast of Florida. The estuary is bounded by a barrier island complex (St. Vincent Island, Little St. George Island, St. George Island, and Dog Island) and connected to the Gulf through four passes (Indian Pass, West Pass, Sikes Cut, and East Pass). East of Dog Island, St. George Sound is open to the Gulf. Freshwater inflow to Apalachicola Bay primarily comes from the Apalachicola River and to a lesser extent the Carrabelle River (Livingston 1983). Shoreline vegetation consists largely of marsh grasses, and bottom substrates are typically characterized as sand or mud with oyster beds scattered throughout the bay (Ingle and Dawson 1953). Less than 7% of the substrate is covered by seagrass (Continental Shelf Associates, Inc. 1985b).

Monthly sampling in Apalachicola Bay was completed from June through November with a total of 33,775 individuals collected across 96 samples (Table 8.2). The most abundant taxa collected in Apalachicola Bay polyhaline seagrass sampling were *Lagodon rhomboides* (n=14,331) and *Orthopristis chrysoptera* (n=7,292), accounting for 64.0% of the trawl catch (Table 9.7). The taxa most frequently caught in Apalachicola Bay polyhaline seagrass sampling were *Lagodon rhomboides* (96.9% occurrence) and *Orthopristis chrysoptera* (92.7% occurrence).

A total of 631 animals from nine species of interest were collected, representing 1.9% of the entire polyhaline seagrass trawl catch (Table 9.8). *Cynoscion nebulosus* (n=321) was the most abundant species of interest, accounting for 50.9% of the species of interest collected in polyhaline seagrass trawls (Table 9.8). The species of interest most frequently caught in Apalachicola Bay polyhaline seagrass sampling were *Cynoscion nebulosus* (46.9% occurrence) and *Centropristis striata* (40.6% occurrence).

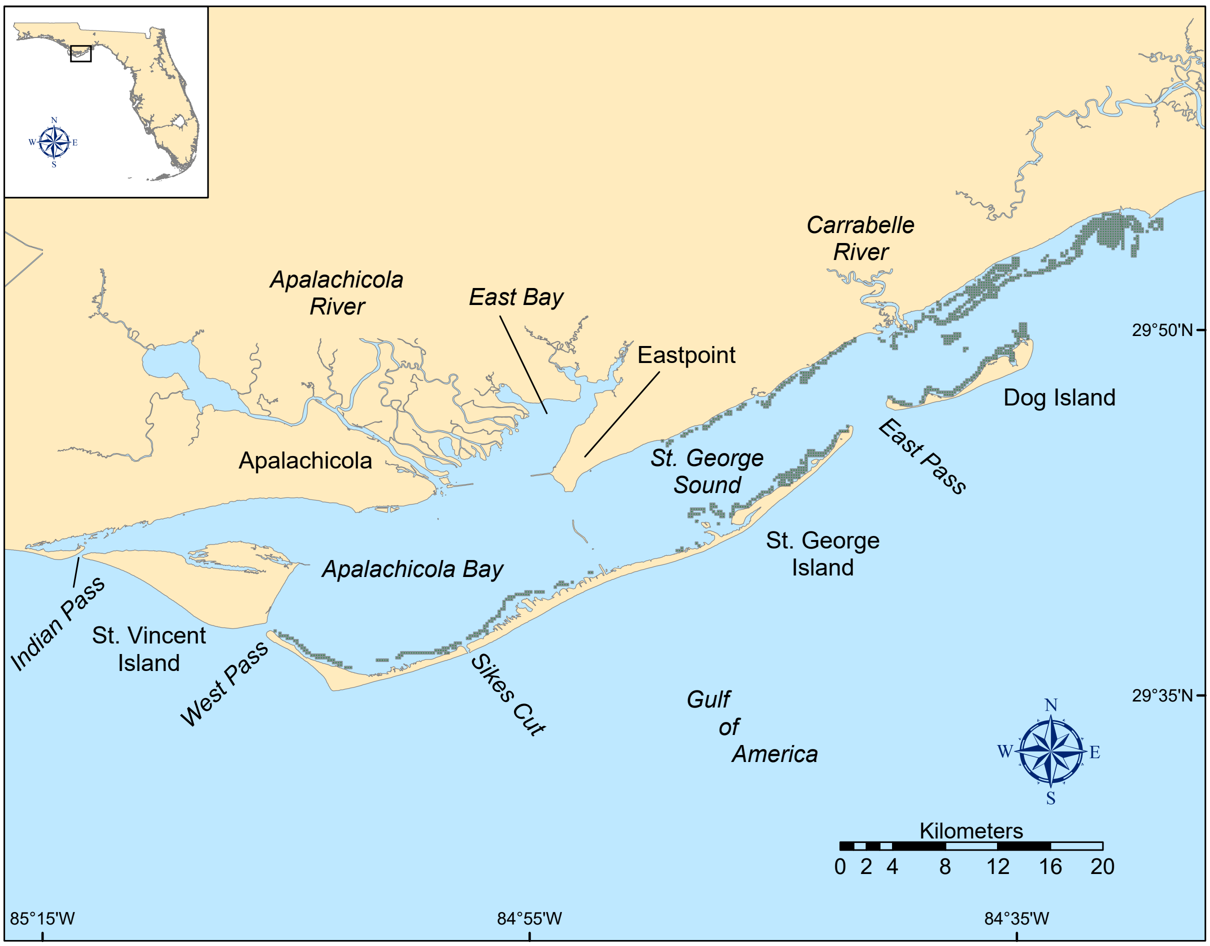

Figure 9.4: Apalachicola Bay polyhaline seagrass habitat sampling universe. Microgrids ($0.1 nm^2$) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.7: Catch statistics for 10 dominant taxa collected in 96 6.1-m otter trawl samples during Apalachicola Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	14,331	42.4	96.9	13.78	1.85	162.47	149.27	65	0.21	20	185
Orthopristis chrysoptera	7,292	21.6	92.7	6.45	0.95	185.27	95.30	64	0.42	15	205
Bairdiella chrysoura	4,035	11.9	70.8	4.83	0.78	178.32	39.29	51	0.39	12	156
Eucinostomus spp.	1,427	4.2	76.0	2.26	0.66	286.33	58.46	23	0.18	9	39
Farfantepenaeus spp.	967	2.9	43.8	1.54	0.38	239.39	20.99	9	0.09	3	14
Syngnathus scovelli	734	2.2	53.1	1.17	0.31	257.73	21.25	93	0.53	34	128
Callinectes sapidus	592	1.8	60.4	0.93	0.20	207.95	12.14	71	1.61	5	184
Stephanolepis hispida	578	1.7	61.5	0.83	0.17	200.28	10.79	55	0.86	12	132
Syngnathus floridae	547	1.6	52.1	0.83	0.18	218.43	11.47	154	1.07	55	224
Paralichthys albigutta	382	1.1	91.7	0.57	0.05	84.32	2.19	139	3.27	51	422
Subtotal	30,885	91.4	.	.	.	.	.	.	.	3	422
Total	**33,775**	**100.0**	**.**	**50.43**	**5.43**	**105.54**	**303.19**	**.**	**.**	**3**	**428**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.8: Catch statistics for species of interest collected in 96 6.1-m otter trawl samples during Apalachicola Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Cynoscion nebulosus	321	1.0	46.9	0.44	0.11	262.10	7.83	51	2.79	12	354
Centropristis striata	147	0.4	40.6	0.22	0.04	186.92	2.55	86	3.89	31	216
Lutjanus synagris	110	0.3	35.4	0.18	0.04	199.41	1.69	35	1.96	13	124
Lutjanus griseus	19	0.1	11.5	0.03	0.01	430.31	1.18	80	12.98	12	230
Archosargus probatocephalus	12	<0.1	10.4	0.02	0.01	341.50	0.45	87	25.67	21	333
Mycteroperca microlepis	10	<0.1	7.3	0.02	0.01	385.62	0.34	157	8.01	114	188
Haemulon plumierii	6	<0.1	5.2	0.01	<0.01	460.22	0.30	42	2.56	31	49
Sciaenops ocellatus	4	<0.1	3.1	0.01	<0.01	594.73	0.30	242	28.87	175	294
Lachnolaimus maximus	2	<0.1	2.1	<0.01	<0.01	689.16	0.13	68	33.50	34	101
Total	**631**	**1.9**	**.**	**0.97**	**0.15**	**150.19**	**8.36**	**.**	**.**	**12**	**354**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

9.5 Big Bend

The Big Bend is an area along the Gulf Coast of Florida that is considered an open estuary system (Figure 9.5). Freshwater inflow into the estuary comes primarily from the Suwannee River with additional input from many fringing marsh tidal creeks (Lindberg et al. 1992). The shoreline consists largely of marsh grasses, oyster bars, and mud flats. Seagrass meadows primarily occur in the southern portions of the estuary (Tuckey and Dehaven 2006).

Monthly sampling in the Big Bend was completed from June through November with a total of 25,198 individuals collected across 180 samples (Table 8.2). The most abundant taxa collected in Big Bend polyhaline seagrass sampling were *Lagodon rhomboides* (n=12,881) and *Bairdiella chrysoura* (n=1,751), accounting for 58.0% of the trawl catch (Table 9.9). The taxa most frequently caught in Big Bend polyhaline seagrass sampling were *Lagodon rhomboides* (98.9% occurrence) and *Syngnathus floridae* (91.1% occurrence).

A total of 1,780 animals fromeight species of interest were collected, representing 7.1% of the entire polyhaline seagrass trawl catch (Table 9.10). *Haemulon plumierii* (n=909) was the most abundant species of interest, accounting for 51.1% of the species of interest collected in polyhaline seagrass trawls (Table 9.10). The species of interest most frequently caught in Big Bend polyhaline seagrass sampling were *Centropristis striata* (73.9% occurrence) and *Haemulon plumierii* (65.0% occurrence).

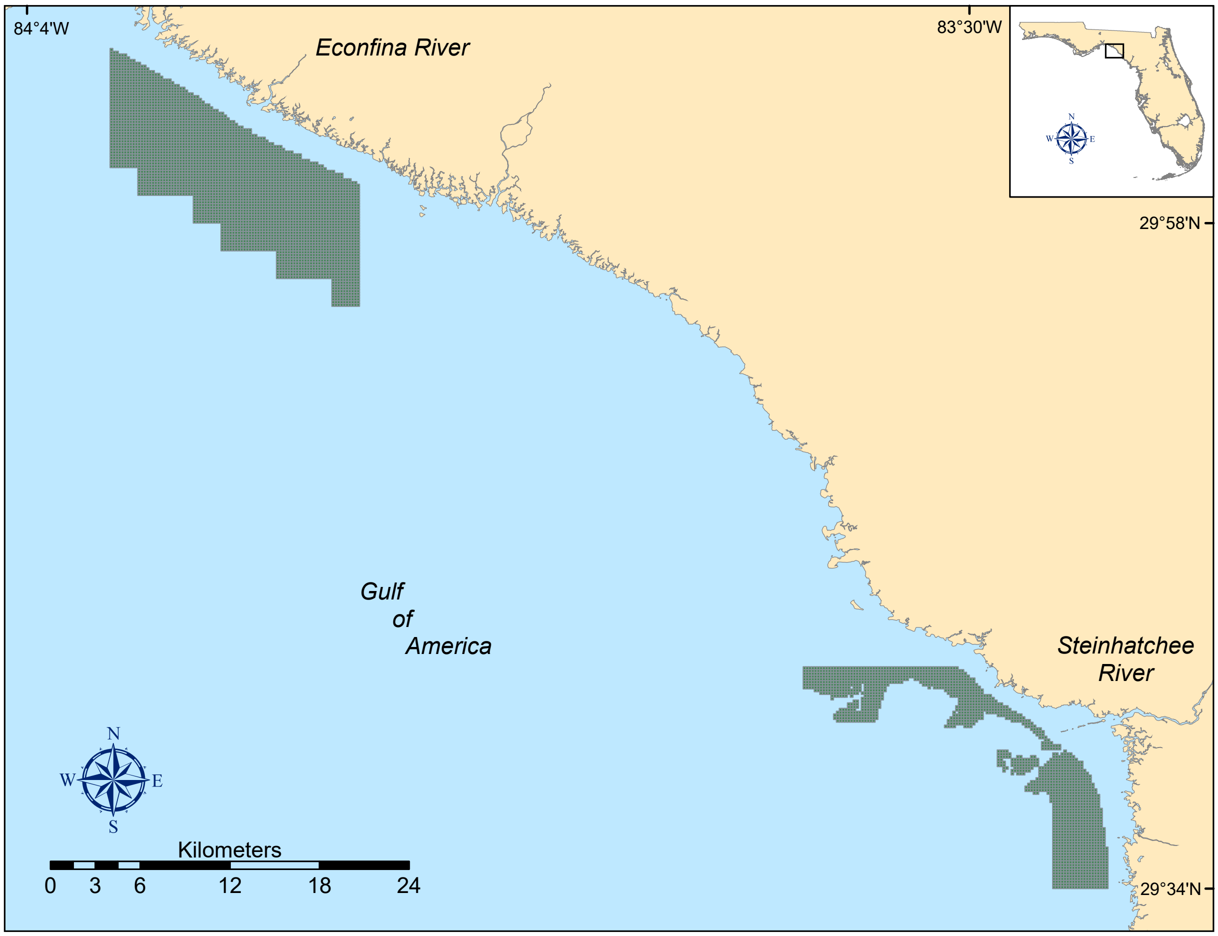

Figure 9.5: Big Bend polyhaline seagrass habitat sampling universe. Microgrids ($0.1nm^2$) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.9: Catch statistics for 10 dominant taxa collected in 180 6.1-m otter trawl samples during Big Bend polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	12,881	51.1	98.9	9.73	0.99	156.00	134.92	56	0.21	14	208
Bairdiella chrysoura	1,751	6.9	82.2	1.65	0.15	130.15	19.16	68	0.70	12	159
Syngnathus floridae	1,540	6.1	91.1	1.50	0.11	96.64	8.23	154	0.75	52	219
Orthopristis chrysoptera	1,296	5.1	71.7	1.15	0.12	148.61	8.90	80	1.01	14	215
Haemulon plumierii	909	3.6	65.0	1.00	0.11	150.31	9.98	40	0.35	16	79
Monacanthus ciliatus	996	4.0	72.2	0.97	0.12	169.20	13.76	46	0.40	12	121
Diplodus holbrookii	949	3.8	58.9	0.88	0.11	178.21	11.33	57	0.76	28	165
Opsanus beta	723	2.9	72.2	0.80	0.12	193.97	12.48	95	2.72	11	272
Eucinostomus spp.	681	2.7	56.7	0.66	0.13	272.29	18.75	28	0.25	11	39
Centropristis striata	599	2.4	73.9	0.58	0.05	105.67	2.43	102	1.53	28	236
Subtotal	22,325	88.6	.	.	.	.	.	.	.	11	272
Total	**25,198**	**100.0**	**.**	**25.23**	**1.65**	**87.80**	**158.15**	**.**	**.**	**4**	**399**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.10: Catch statistics for species of interest collected in 180 6.1-m otter trawl samples during Big Bend polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Haemulon plumierii	909	3.6	65.0	1.00	0.11	150.31	9.98	40	0.35	16	79
Centropristis striata	599	2.4	73.9	0.58	0.05	105.67	2.43	102	1.53	28	236
Lutjanus synagris	140	0.6	35.0	0.13	0.02	179.97	1.20	56	2.26	14	115
Cynoscion nebulosus	77	0.3	27.2	0.08	0.01	232.18	1.73	73	5.47	20	208
Lachnolaimus maximus	26	0.1	10.0	0.03	0.01	351.14	0.67	100	5.63	36	141
Lutjanus griseus	21	0.1	6.1	0.02	0.01	470.40	0.90	60	4.08	22	93
Mycteroperca microlepis	7	<0.1	3.3	0.01	<0.01	559.93	0.27	162	14.16	82	192
Archosargus probatocephalus	1	<0.1	0.6	<0.01	<0.01	1,341.64	0.22	399	.	399	399
Total	**1,780**	**7.1**	**.**	**1.85**	**0.14**	**102.45**	**11.60**	**.**	**.**	**14**	**399**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

9.6 Tampa Bay

Tampa Bay is a drowned river estuary located on the western central coast of Florida (Figure 9.6). The bay is connected to the Gulf through two main channels and several smaller passes and channels. Freshwater inflow into the bay comes from over 100 tributaries, although more than 80% enters from four main rivers (Hillsborough, Alafia, Manatee, and Little Manatee; (Schmidt and Luther 2002)). Shoreline vegetation consists largely of mangroves and marsh grasses, and bottom substrates are typically characterized as sand, mud, oysters, or a combination thereof (Flannery 1989). Seagrass meadows are the dominant vegetative cover in Tampa Bay and are widely distributed throughout the bay (Haddad 1989).

Monthly sampling in Tampa Bay was completed from June through November with a total of 39,025 individuals collected across 144 samples (Table 8.2). The most abundant taxa collected in Tampa Bay polyhaline seagrass sampling were *Lagodon rhomboides* (n=22,332) and *Eucinostomus* spp. (n=4,989), accounting for 70.0% of the trawl catch (Table 9.11). The taxa most frequently caught in Tampa Bay polyhaline seagrass sampling were *Lagodon rhomboides* (93.1% occurrence) and *Orthopristis chrysoptera* (83.3% occurrence).

A total of 768 animals from nine species of interest were collected, representing 2% of the entire polyhaline seagrass trawl catch (Table 9.12). *Cynoscion nebulosus* (n=326) was the most abundant species of interest, accounting for 42.4% of the species of interest collected in polyhaline seagrass trawls (Table 9.12). The species of interest most frequently caught in Tampa Bay polyhaline seagrass sampling were *Cynoscion nebulosus* (38.2% occurrence) and *Archosargus probatocephalus* (34.0% occurrence).

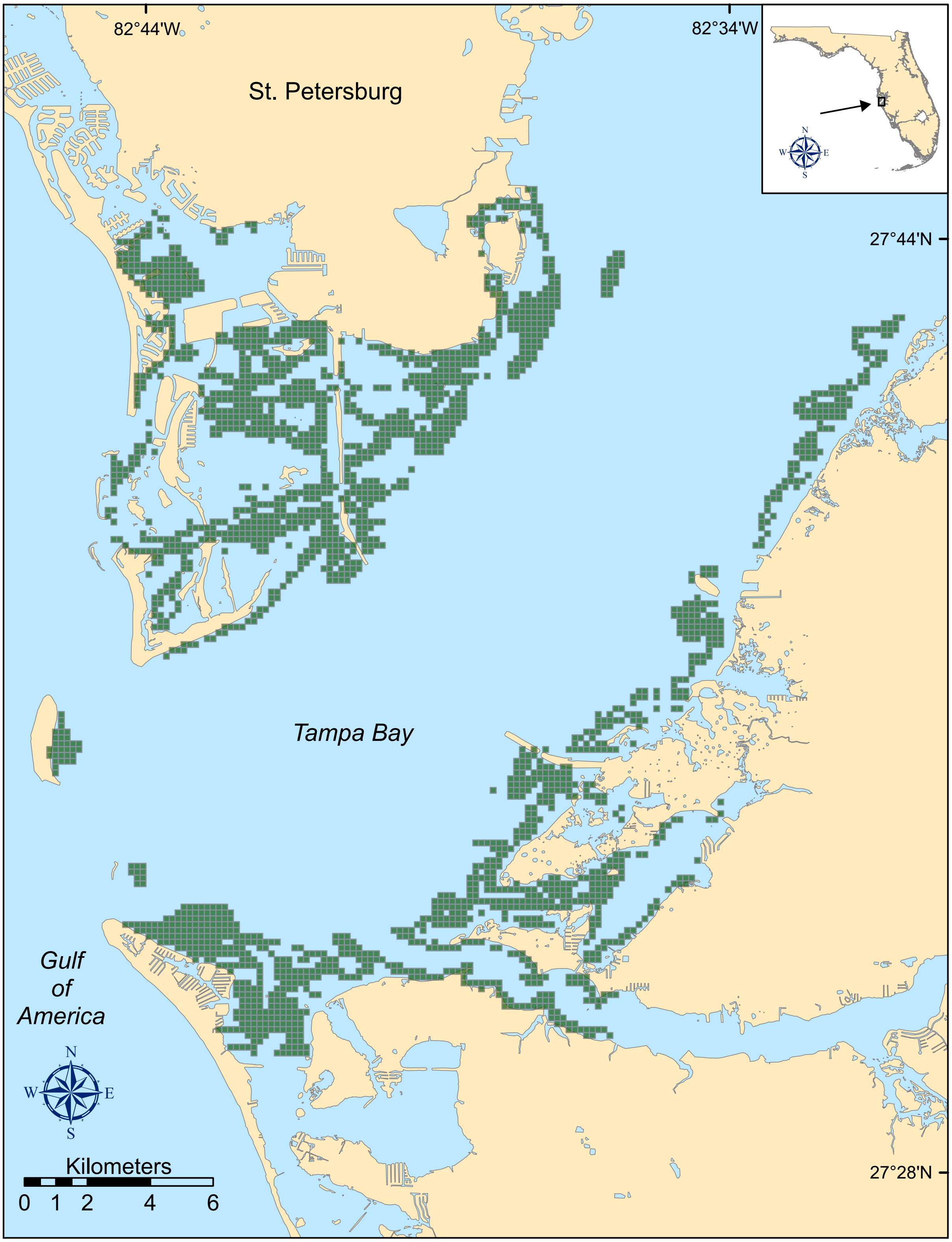

Figure 9.6: Tampa Bay polyhaline seagrass habitat sampling universe. Microgrids ($0.1nm^2$) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.11: Catch statistics for 10 dominant taxa collected in 144 6.1-m otter trawl samples during Tampa Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	22,332	57.2	93.1	19.36	2.06	135.63	144.51	75	0.20	22	195
Eucinostomus spp.	4,989	12.8	77.8	4.88	0.89	217.72	67.95	24	0.10	8	39
Bairdiella chrysoura	3,374	8.6	65.3	3.17	0.58	225.06	44.97	60	0.59	11	182
Orthopristis chrysoptera	1,957	5.0	83.3	1.73	0.19	137.09	10.66	93	0.78	24	208
Eucinostomus gula	743	1.9	76.4	0.72	0.08	126.78	5.55	67	0.86	40	179
Syngnathus scovelli	604	1.5	47.2	0.61	0.13	246.49	9.44	88	0.64	38	142
Farfantepenaeus duorarum	583	1.5	37.5	0.60	0.15	300.44	12.68	9	0.11	3	19
Chilomycterus schoepfii	617	1.6	76.4	0.59	0.06	118.94	4.29	101	1.71	12	229
Callinectes sapidus	574	1.5	53.5	0.58	0.10	202.33	9.28	97	1.28	13	165
Gobiosoma robustum	326	0.8	22.2	0.33	0.11	410.04	13.64	24	0.19	20	39
Subtotal	36,099	92.4	.	.	.	.	.	.	.	3	229
Total	**39,025**	**100.0**	**.**	**38.38**	**3.13**	**97.74**	**198.18**	**.**	**.**	**3**	**451**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.12: Catch statistics for species of interest collected in 144 6.1-m otter trawl samples during Tampa Bay polyhaline seagrass sampling, June-November, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Cynoscion nebulosus	326	0.8	38.2	0.32	0.08	299.88	6.91	36	2.00	12	313
Archosargus probatocephalus	117	0.3	34.0	0.12	0.02	212.35	1.65	108	5.94	18	310
Lutjanus griseus	107	0.3	31.9	0.10	0.02	225.82	1.96	134	4.37	20	240
Haemulon plumierii	99	0.3	26.4	0.09	0.02	240.96	1.47	67	3.08	17	163
Mycteroperca microlepis	72	0.2	21.5	0.07	0.01	245.12	0.84	180	6.18	92	448
Centropristis striata	29	0.1	12.5	0.03	0.01	341.30	0.81	112	5.92	75	202
Lutjanus synagris	13	<0.1	7.6	0.01	<0.01	371.75	0.30	67	6.65	25	102
Epinephelus morio	4	<0.1	2.8	<0.01	<0.01	595.22	0.15	97	11.11	69	115
Sciaenops ocellatus	1	<0.1	0.7	<0.01	<0.01	1,200.00	0.13	312	.	312	312
Total	**768**	**2.0**	**.**	**0.75**	**0.09**	**143.47**	**7.08**	**.**	**.**	**12**	**448**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

9.7 Charlotte Harbor

Charlotte Harbor (Figure 9.7) is a drowned river estuary located on the southwestern coast of Florida (Charlotte Harbor National Estuary program 2000). The bay is connected to the Gulf by passes at Boca Grande, San Carlos, and several smaller inlets. Freshwater inflow principally comes from the Peace, Caloosahatchee, and Myakka rivers. Shoreline vegetation consists largely of fringing mangroves, and seagrasses are the dominant bottom vegetation in shallow waters.

Monthly sampling in Charlotte Harbor was completed from June through November with a total of 38,250 individuals collected across 120 samples (Table 8.2). The most abundant taxa collected in Charlotte Harbor polyhaline seagrass sampling were *Lagodon rhomboides* (n=16,065) and *Eucinostomus* spp. (n=5,069), accounting for 55.3% of the trawl catch (Table 9.13). The taxa most frequently caught in Charlotte Harbor polyhaline seagrass sampling were *Lagodon rhomboides* (97.5% occurrence) and *Eucinostomus* spp. (91.7% occurrence).

A total of 992 animals from seven species of interest were collected, representing 2.6% of the entire polyhaline seagrass trawl catch (Table 9.14). *Haemulon plumierii* (n=266) was the most abundant species of interest, accounting for 26.8% of the species of interest collected in polyhaline seagrass trawls (Table 9.14). The species of interest most frequently caught in Charlotte Harbor polyhaline seagrass sampling were *Lutjanus synagris* (52.5% occurrence) and *Lutjanus griseus* (49.2% occurrence).

Figure 9.7: Charlotte Harbor polyhaline seagrass habitat sampling universe. Microgrids (0.1nm^2) eligible to be sampled are indicated in green. Adjacent areas that met the sampling requirements, but were not necessarily included in the original universe, could be sampled if necessary.

Table 9.13: Catch statistics for 10 dominant taxa collected in 120 6.1-m otter trawl samples during Charlotte Harbor polyhaline seagrass sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Lagodon rhomboides	16,065	42.0	97.5	18.53	2.23	131.53	160.55	78	0.18	29	169
Eucinostomus spp.	5,069	13.3	91.7	5.88	1.01	187.21	66.65	26	0.10	11	39
Orthopristis chrysoptera	3,472	9.1	76.7	3.91	0.91	256.01	79.74	94	0.38	38	203
Bairdiella chrysoura	2,852	7.5	68.3	3.28	0.58	193.69	35.48	62	0.48	9	161
Eucinostomus gula	1,983	5.2	81.7	2.25	1.00	488.45	120.62	67	0.33	40	118
Syngnathus scovelli	1,379	3.6	71.7	1.56	0.58	408.73	64.76	89	0.41	44	143
Syngnathus floridae	756	2.0	65.8	0.87	0.15	186.20	10.12	174	1.27	73	272
Chilomycterus schoepfii	688	1.8	85.0	0.80	0.07	94.91	4.20	91	1.34	13	216
Lucania parva	696	1.8	13.3	0.79	0.53	737.96	60.31	22	0.13	12	35
Callinectes sapidus	547	1.4	50.8	0.63	0.16	275.79	17.00	102	1.15	15	196
Subtotal	33,507	87.7	.	.	.	.	.	.	.	9	272
Total	**38,250**	**100.0**	**.**	**44.10**	**3.88**	**96.45**	**237.60**	**.**	**.**	**4**	**322**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

Table 9.14: Catch statistics for species of interest collected in 120 6.1-m otter trawl samples during Charlotte Harbor polyhaline seagrass sampling, 2025.

	Number			Density Estimate (animals/100m^2)				Standard Length (mm)			
Species	**No.**	**%**	**% Occur**	**Mean**	**Stderr**	**CV**	**Max**	**Mean**	**Stderr**	**Min**	**Max**
Haemulon plumierii	266	0.7	41.7	0.31	0.07	258.03	5.67	56	1.29	17	145
Lutjanus synagris	225	0.6	52.5	0.26	0.06	238.60	5.80	70	1.84	14	135
Lutjanus griseus	198	0.5	49.2	0.24	0.05	246.92	4.63	101	4.55	11	264
Mycteroperca microlepis	118	0.3	28.3	0.14	0.04	286.96	2.85	176	3.01	112	239
Cynoscion nebulosus	97	0.3	28.3	0.11	0.03	246.45	2.02	36	2.69	12	214
Archosargus probatocephalus	66	0.2	22.5	0.08	0.02	256.16	1.35	73	7.43	20	270
Epinephelus morio	22	0.1	10.8	0.03	0.01	323.46	0.51	117	4.22	83	164
Total	**992**	**2.6**	**.**	**1.16**	**0.15**	**137.25**	**9.25**	**.**	**.**	**11**	**270**

Percent (%) is the percent of the total catch represented by that taxon; percent occurrence (% Occur) is the percentage of samples in which that taxon was collected; CV is the coefficient of variation of the mean. Taxa are ranked in order of decreasing mean density.

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A Fisheries-Independent Monitoring Core Sampling Appendix Tables

A.1 Santa Rosa Sound

Table A.1: Monthly summary of taxa collected during Santa Rosa Sound stratified-random sampling, 2025.

Species	Month							Total
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=4	E=4	E=0	E=0	E=0	E=0	E=0	E=8
Ariopsis felis	3	1	.	.	.	.	.	4
Callinectes sapidus	**4**	**2**	**.**	**.**	**.**	**.**	**.**	**6**
Cyprinodon variegatus	1	.	.	.	.	.	.	1
Eucinostomus argenteus	2	.	.	.	.	.	.	2
Eucinostomus harengulus	5	1	.	.	.	.	.	6
Fundulus grandis	8	.	.	.	.	.	.	8
Fundulus similis	15	1	.	.	.	.	.	16
Hypanus sabinus	.	5	.	.	.	.	.	5
Hypanus say	.	2	.	.	.	.	.	2
Lagodon rhomboides	289	498	.	.	.	.	.	787
Leiostomus xanthurus	**21**	**46**	**.**	**.**	**.**	**.**	**.**	**67**
Menticirrhus saxatilis	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**2**
Mugil cephalus	**12**	**19**	**.**	**.**	**.**	**.**	**.**	**31**
Oligoplites saurus	1	1	.	.	.	.	.	2
Opsanus beta	.	1	.	.	.	.	.	1
Orthopristis chrysoptera	3	1	.	.	.	.	.	4
Paralichthys albigutta	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Prionotus scitulus	.	2	.	.	.	.	.	2
Sciaenops ocellatus	**4**	**3**	**.**	**.**	**.**	**.**	**.**	**7**
Trachinotus carolinus	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Total	**368**	**587**	**.**	**.**	**.**	**.**	**.**	**955**

Effort, or total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.2: Summary by gear and stratum of taxa collected during Santa Rosa Sound stratified-random sampling, 2025.

Species	**Gear and Strata**		**Total**
	183-m haul seine		
	Over	**Nonover**	
	E=1	**E=7**	**E=8**
Ariopsis felis	.	4	4
Callinectes sapidus	**1**	**5**	**6**
Cyprinodon variegatus	.	1	1
Eucinostomus argenteus	.	2	2
Eucinostomus harengulus	.	6	6
Fundulus grandis	.	8	8
Fundulus similis	1	15	16
Hypanus sabinus	.	5	5
Hypanus say	.	2	2
Lagodon rhomboides	80	707	787
Leiostomus xanthurus	**1**	**66**	**67**
Menticirrhus saxatilis	**.**	**2**	**2**
Mugil cephalus	**2**	**29**	**31**
Oligoplites saurus	.	2	2
Opsanus beta	1	.	1
Orthopristis chrysoptera	.	4	4
Paralichthys albigutta	**.**	**1**	**1**
Prionotus scitulus	.	2	2
Sciaenops ocellatus	**.**	**7**	**7**
Trachinotus carolinus	**.**	**1**	**1**
Total	**86**	**869**	**955**

Sampling with 183-m haul seine was stratified by the presence or absence of overhanging vegetation (’Over’ or ’Nonover’). Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.3: Summary by zone of taxa collected during Santa Rosa Sound stratified-random sampling, 2025.

Species	Zone A	Total
	E=8	E=8
Ariopsis felis	4	4
Callinectes sapidus	**6**	**6**
Cyprinodon variegatus	1	1
Eucinostomus argenteus	2	2
Eucinostomus harengulus	6	6
Fundulus grandis	8	8
Fundulus similis	16	16
Hypanus sabinus	5	5
Hypanus say	2	2
Lagodon rhomboides	787	787
Leiostomus xanthurus	**67**	**67**
Menticirrhus saxatilis	**2**	**2**
Mugil cephalus	**31**	**31**
Oligoplites saurus	2	2
Opsanus beta	1	1
Orthopristis chrysoptera	4	4
Paralichthys albigutta	**1**	**1**
Prionotus scitulus	2	2
Sciaenops ocellatus	**7**	**7**
Trachinotus carolinus	**1**	**1**
Total	**955**	**955**

Zone A was located in Santa Rosa Sound. Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.2 Choctawhatchee Bay

Table A.4: Monthly summary of taxa collected during Choctawhatchee Bay stratified-random sampling, 2025.

Species	Month							Total
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=5	E=5	E=0	E=0	E=0	E=0	E=0	E=10
Ariopsis felis	8	.	.	.	.	.	.	8
Bairdiella chrysoura	12	146	.	.	.	.	.	158
Callinectes sapidus	**.**	**4**	**.**	**.**	**.**	**.**	**.**	**4**
Caranx hippos	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Chilomycterus schoepfii	.	1	.	.	.	.	.	1
Cynoscion nebulosus	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**2**
Elops saurus	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Eucinostomus harengulus	5	21	.	.	.	.	.	26
Farfantepenaeus aztecus	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Farfantepenaeus duorarum	**.**	**7**	**.**	**.**	**.**	**.**	**.**	**7**
Fundulus similis	.	1	.	.	.	.	.	1
Hypanus sabinus	1	3	.	.	.	.	.	4
Hyporhamphus meeki	2	.	.	.	.	.	.	2
Lagodon rhomboides	468	1,137	.	.	.	.	.	1,605
Leiostomus xanthurus	**39**	**51**	**.**	**.**	**.**	**.**	**.**	**90**
Lutjanus griseus	**1**	**16**	**.**	**.**	**.**	**.**	**.**	**17**
Micropogonias undulatus	**14**	**7**	**.**	**.**	**.**	**.**	**.**	**21**
Micropterus salmoides	.	2	.	.	.	.	.	2
Mugil cephalus	**15**	**18**	**.**	**.**	**.**	**.**	**.**	**33**
Mugil curema	**2**	**9**	**.**	**.**	**.**	**.**	**.**	**11**
Orthopristis chrysoptera	16	114	.	.	.	.	.	130
Paralichthys albigutta	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**2**
Prionotus scitulus	1	.	.	.	.	.	.	1
Sciaenops ocellatus	**11**	**16**	**.**	**.**	**.**	**.**	**.**	**27**
Selene vomer	.	1	.	.	.	.	.	1

Species	Month							Total
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=5	E=5	E=0	E=0	E=0	E=0	E=0	E=10
Sphoeroides nephelus	1	1	.	.	.	.	.	2
Strongylura marina	.	5	.	.	.	.	.	5
Strongylura notata	.	1	.	.	.	.	.	1
Symphurus plagiusa	.	1	.	.	.	.	.	1
Syngnathus scovelli	3	.	.	.	.	.	.	3
Synodus foetens	.	1	.	.	.	.	.	1
Total	**603**	**1,566**	**.**	**.**	**.**	**.**	**.**	**2,169**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.5: Summary by gear and stratum of taxa collected during Choctawhatchee Bay stratified-random sampling, 2025.

Species	Gear and Strata		Total
	183-m haul seine		
	Over	Nonover	
	E=1	E=9	E=10
Ariopsis felis	4	4	8
Bairdiella chrysoura	.	158	158
Callinectes sapidus	**.**	**4**	**4**
Caranx hippos	**1**	**.**	**1**
Chilomycterus schoepfii	.	1	1
Cynoscion nebulosus	**.**	**2**	**2**
Elops saurus	**.**	**1**	**1**
Eucinostomus harengulus	.	26	26
Farfantepenaeus aztecus	**.**	**1**	**1**
Farfantepenaeus duorarum	**.**	**7**	**7**
Fundulus similis	.	1	1
Hypanus sabinus	1	3	4
Hyporhamphus meeki	.	2	2
Lagodon rhomboides	15	1,590	1,605
Leiostomus xanthurus	**16**	**74**	**90**
Lutjanus griseus	**.**	**17**	**17**
Micropogonias undulatus	**14**	**7**	**21**
Micropterus salmoides	.	2	2
Mugil cephalus	**6**	**27**	**33**
Mugil curema	**1**	**10**	**11**
Orthopristis chrysoptera	.	130	130
Paralichthys albigutta	**.**	**2**	**2**
Prionotus scitulus	.	1	1
Sciaenops ocellatus	**5**	**22**	**27**
Selene vomer	.	1	1
Sphoeroides nephelus	.	2	2

Species	Gear and Strata		Total
	183-m haul seine		
	Over	Nonover	
	E=1	E=9	E=10
Strongylura marina	.	5	5
Strongylura notata	.	1	1
Symphurus plagiusa	.	1	1
Syngnathus scovelli	.	3	3
Synodus foetens	.	1	1
Total	**63**	**2,106**	**2,169**

Sampling with 183-m haul seine was stratified by the presence or absence of overhanging vegetation (’Over’ or ’Nonover’). Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.6: Summary by zone of taxa collected during Choctawhatchee Bay stratified-random sampling, 2025.

Species	Zone		Total
	B	C	
	E=6	E=4	E=10
Ariopsis felis	4	4	8
Bairdiella chrysoura	1	157	158
Callinectes sapidus	**.**	**4**	**4**
Caranx hippos	**.**	**1**	**1**
Chilomycterus schoepfii	1	.	1
Cynoscion nebulosus	**1**	**1**	**2**
Elops saurus	**.**	**1**	**1**
Eucinostomus harengulus	25	1	26
Farfantepenaeus aztecus	**.**	**1**	**1**
Farfantepenaeus duorarum	**.**	**7**	**7**
Fundulus similis	1	.	1
Hypanus sabinus	1	3	4
Hyporhamphus meeki	2	.	2
Lagodon rhomboides	1,218	387	1,605
Leiostomus xanthurus	**62**	**28**	**90**
Lutjanus griseus	**16**	**1**	**17**
Micropogonias undulatus	**6**	**15**	**21**
Micropterus salmoides	.	2	2
Mugil cephalus	**16**	**17**	**33**
Mugil curema	**10**	**1**	**11**
Orthopristis chrysoptera	49	81	130
Paralichthys albigutta	**.**	**2**	**2**
Prionotus scitulus	1	.	1
Sciaenops ocellatus	**16**	**11**	**27**
Selene vomer	1	.	1
Sphoeroides nephelus	2	.	2
Strongylura marina	5	.	5

Species	Zone		Total
	B	C	
	E=6	E=4	E=10
Strongylura notata	1	.	1
Symphurus plagiusa	1	.	1
Syngnathus scovelli	3	.	3
Synodus foetens	.	1	1
Total	**1,443**	**726**	**2,169**

Zones B-C were located in Choctawhatchee Bay. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.3 Apalachicola Bay

Table A.7: Monthly summary of taxa collected during Apalachicola Bay stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Abudefduf saxatilis	.	.	.	.	.	.	1	.	.	.	.	.	1
Acanthostracion quadricornis	.	.	1	1	.	.	2	.	.	.	.	.	4
Achirus lineatus	.	.	.	.	.	.	.	.	.	1	.	.	1
Alburnops petersoni	.	.	21	27	46	64	283	205	195	7	.	.	848
Alosa alabamae	.	.	.	.	.	1	.	.	.	.	.	.	1
Alosa chrysochloris	.	.	.	.	12	.	.	.	.	.	.	.	12
Aluterus schoepfii	.	.	.	.	.	.	.	2	.	1	.	.	3
Ameiurus catus	.	.	.	.	1	2	.	.	.	.	.	.	3
Anchoa hepsetus	.	.	.	.	35	161	31	5	10	76	.	.	318
Anchoa mitchilli	564	5	568	646	317	539	10,123	7,765	16,103	505	4,687	105	41,927
Anchoa spp.	.	.	.	.	1	.	15	.	.	1	.	.	17
Ancylopsetta quadrocellata	2	.	.	33	.	1	5	.	1	8	1	.	51
Aphredoderus sayanus	.	.	.	1	.	.	.	.	.	.	.	.	1
Archosargus probatocephalus	**.**	**2**	**2**	**2**	**10**	**12**	**6**	**7**	**1**	**13**	**6**	**4**	**65**
Argopecten irradians	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Ariopsis felis	18	11	1	31	29	77	160	174	113	212	1	.	827
Astroscopus y-graecum	.	.	1	1	.	.	.	.	.	.	.	.	2
Bagre marinus	.	.	1	1	2	2	2	.	3	46	.	.	57

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Bairdiella chrysoura	1	15	2,013	60	262	1,454	599	308	102	1,322	21	3	6,160
Bathygobius soporator	1	.	.	.	.	.	.	.	.	1	.	.	2
***Brevoortia* spp.**	**6**	**1,008**	**6,531**	**23,130**	**345**	**13**	**13**	**16**	**48**	**6,463**	**4**	**.**	**37,577**
Calamus sp.	.	.	.	1	.	.	.	.	.	.	.	.	1
Callinectes ornatus	1	.	.	.	.	.	.	.	.	.	.	.	1
Callinectes sapidus	**81**	**112**	**117**	**206**	**60**	**55**	**576**	**122**	**129**	**65**	**218**	**91**	**1,832**
Callinectes similis	1	.	.	43	2	1	9	4	3	46	.	.	109
Callinectes sp.	.	.	1	.	.	.	.	.	.	.	.	.	1
Caranx crysos	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**6**	**.**	**.**	**7**
Caranx hippos	**.**	**.**	**.**	**.**	**.**	**2**	**17**	**16**	**7**	**2**	**.**	**.**	**44**
Caranx latus	.	.	.	.	.	.	.	.	4	2	.	.	6
Carcharhinus isodon	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**.**	**.**	**2**
Carcharhinus leucas	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Centropristis striata	**3**	**.**	**2**	**5**	**.**	**1**	**1**	**.**	**1**	**7**	**1**	**.**	**21**
Chaetodipterus faber	.	.	.	10	.	5	9	19	.	3	1	.	47
Chalinops pauciradiatus	.	.	.	.	.	.	.	.	.	.	1	.	1
Chasmodes saburrae	.	.	.	.	.	.	4	2	.	2	.	1	9
Chilomycterus schoepfii	1	.	11	8	.	5	4	.	1	36	2	4	72
Chloroscombrus chrysurus	1	.	.	4	.	.	5	5	.	2	.	.	17
Citharichthys macrops	.	.	1	8	.	.	6	.	.	14	.	3	32
Citharichthys spilopterus	.	.	3	.	10	12	25	12	6	.	.	.	68
Clupeiformes spp.	.	1	4	2	.	.	.	.	.	.	.	.	7

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Ctenogobius boleosoma	2	15	60	71	51	22	20	3	71	46	92	37	490
Cynoscion arenarius	**6**	**.**	**.**	**41**	**128**	**159**	**1,009**	**27**	**271**	**27**	**45**	**.**	**1,713**
Cynoscion nebulosus	**4**	**172**	**27**	**22**	**13**	**56**	**41**	**114**	**86**	**100**	**33**	**88**	**756**
Cynoscion nothus	**.**	**.**	**.**	**4**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**6**
Cynoscion sp.	.	.	.	1	.	.	.	.	.	.	.	.	1
Cyprinodon variegatus	10	.	1	1	.	116	136	29	.	1	1	2	297
Diapterus auratus	.	.	.	.	.	.	.	.	.	.	1	.	1
Diplectrum bivittatum	1	.	.	.	.	.	.	.	.	.	.	.	1
Diplectrum formosum	**6**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**6**
Diplodus holbrookii	.	.	.	.	161	1	.	1	.	24	.	.	187
Dorosoma cepedianum	.	.	.	2	1	.	.	.	.	6	.	.	9
Dorosoma petenense	.	.	.	.	7	757	.	5	57	11	.	.	837
Echeneis neucratoides	.	.	.	.	.	.	.	4	.	.	.	.	4
Elops saurus	**.**	**.**	**1**	**1**	**3**	**849**	**39**	**16**	**25**	**92**	**11**	**.**	**1,037**
Enneacanthus gloriosus	11	.	9	14	13	55	13	4	9	.	11	.	139
Erimyzon sucetta	.	.	1	.	.	1	1	.	.	.	.	.	3
Etropus crossotus	75	4	4	66	.	2	197	14	52	292	19	5	730
Etropus cyclosquamus	.	.	.	.	.	.	4	.	.	.	.	.	4
Etropus microstomus	.	.	.	2	.	.	.	.	.	.	.	.	2
Eucinostomus argenteus	.	.	.	.	.	.	10	.	.	4	.	.	14
Eucinostomus gula	4	.	.	.	.	.	35	36	53	108	296	18	550
Eucinostomus harengulus	2	.	.	.	.	.	51	51	99	53	17	5	278

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Eucinostomus spp.	.	.	.	.	.	631	956	697	337	488	212	89	3,410
Farfantepenaeus aztecus	**1**	**.**	**.**	**.**	**4**	**31**	**44**	**.**	**.**	**.**	**.**	**.**	**80**
Farfantepenaeus duorarum	**14**	**.**	**1**	**57**	**24**	**39**	**12**	**13**	**.**	**9**	**5**	**1**	**175**
***Farfantepenaeus* spp.**	**.**	**20**	**41**	**120**	**245**	**35**	**189**	**62**	**21**	**86**	**120**	**70**	**1,009**
Fundulus chrysotus	1	4	5	10	1	17	12	2	.	1	10	.	63
Fundulus confluentus	2	.	.	1	.	.	.	.	.	.	3	1	7
Fundulus grandis	9	4	9	.	.	.	1	10	.	4	19	23	79
Fundulus similis	4	1	12	3	.	15	6	2	.	18	93	12	166
Gambusia holbrooki	34	66	5	16	.	4	2	1	1	8	106	5	248
Gobionellus oceanicus	.	.	.	.	.	.	.	.	1	.	.	.	1
Gobiosoma bosc	2	17	37	8	2	9	13	1	3	4	44	12	152
Gobiosoma longipala	.	.	.	.	.	.	2	.	.	.	.	.	2
Gobiosoma robustum	1	6	15	.	1	2	1	.	.	.	.	.	26
Gobiosoma spp.	7	6	4	.	1	.	11	3	5	6	30	9	82
Gymnura lessae	.	.	2	5	.	5	3	2	3	4	1	.	25
Haemulidae sp.	.	.	.	1	.	.	.	.	.	.	.	.	1
Halichoeres bivittatus	.	.	1	.	.	.	.	.	.	.	.	.	1
Harengula jaguana	.	.	.	1	.	8	207	131	17,143	186	10	.	17,686
Hemicaranx amblyrhynchus	.	.	.	.	.	.	1	1	.	.	.	.	2
Heterandria formosa	.	1	9	24	4	38	1	4	.	4	71	.	156
Hippocampus erectus	2	.	.	1	1	.	5	.	.	1	.	.	10
Hippocampus zosterae	.	.	.	.	.	.	.	.	.	.	1	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Hypanus americanus	.	.	.	.	.	1	.	.	4	2	.	.	7
Hypanus sabinus	21	16	34	57	170	135	94	99	148	241	40	9	1,064
Hypanus say	.	.	.	9	4	8	13	24	14	19	.	.	91
Hypanus sp.	.	.	.	.	.	.	.	.	.	1	.	.	1
Hypleurochilus caudovittatus	.	.	.	.	.	.	.	.	.	1	.	.	1
Hyporhamphus meeki	.	.	.	.	.	.	2	.	7	.	5	.	14
Hyporhamphus sp.	.	.	.	.	.	1	.	.	.	.	.	.	1
Hypsoblennius hentz	1	.	.	.	.	1	.	.	.	1	.	1	4
Ictalurus punctatus	6	.	1	.	1	.	.	1	1	.	.	.	10
Ictalurus sp.	.	.	.	.	1	.	.	.	.	.	.	.	1
Lagodon rhomboides	160	2,123	4,301	2,728	5,817	2,385	1,885	2,015	3,204	2,219	1,211	241	28,289
Larimus fasciatus	.	.	.	.	.	.	.	.	.	1	.	.	1
Leiostomus xanthurus	**856**	**5,319**	**4,866**	**1,427**	**513**	**301**	**432**	**192**	**441**	**275**	**24**	**3**	**14,649**
Lepisosteus oculatus	.	.	2	.	4	1	2	.	.	.	1	.	10
Lepisosteus osseus	1	.	1	.	.	.	.	1	1	.	.	.	4
Lepomis macrochirus	2	.	11	1	2	1	3	1	1	1	2	1	26
Lepomis microlophus	14	3	12	3	4	17	3	1	13	13	25	6	114
Lepomis punctatus	15	6	4	9	2	30	8	.	8	6	36	.	124
Lepomis spp.	.	3	.	.	17	15	4	.	1	.	8	.	48
Limulus polyphemus	.	.	.	.	.	.	.	.	3	.	.	.	3
Litopenaeus setiferus	**193**	**36**	**7**	**52**	**2**	**1,521**	**5,145**	**122**	**2,069**	**74**	**174**	**4**	**9,399**
Lucania goodei	1	.	19	3	3	8	.	.	1	.	3	.	38

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Lucania parva	1,682	99	347	109	58	1,724	590	601	45	820	1,727	289	8,091
Lutjanus griseus	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**4**	**5**	**5**	**1**	**.**	**17**
Lutjanus synagris	**.**	**.**	**.**	**.**	**.**	**3**	**4**	**3**	**1**	**12**	**.**	**.**	**23**
Membras martinica	.	.	.	.	12	17	40	205	36	20	1	.	331
Menidia spp.	42	115	53	30	106	400	328	641	123	29	113	246	2,226
***Menippe* spp.**	**45**	**.**	**1**	**68**	**1**	**.**	**49**	**.**	**.**	**7**	**.**	**.**	**171**
Menticirrhus americanus	**3**	**.**	**.**	**3**	**24**	**5**	**39**	**26**	**39**	**45**	**5**	**1**	**190**
Menticirrhus littoralis	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**5**	**2**	**3**	**.**	**.**	**11**
Menticirrhus saxatilis	**.**	**.**	**.**	**18**	**4**	**3**	**1**	**.**	**.**	**.**	**.**	**.**	**26**
Menticirrhus spp.	.	.	.	1	.	.	.	.	.	1	.	.	2
Microgobius gulosus	.	1	14	10	15	52	5	2	10	10	34	6	159
Microgobius thalassinus	6	.	.	6	.	1	41	.	.	7	12	1	74
Micropogonias undulatus	**226**	**135**	**150**	**564**	**276**	**135**	**306**	**93**	**78**	**117**	**149**	**554**	**2,783**
Micropterus salmoides	7	5	9	10	183	84	22	.	7	3	12	8	350
Minytrema melanops	.	.	.	.	.	1	.	.	.	.	.	.	1
Monacanthus ciliatus	.	.	.	.	.	.	.	.	.	1	2	.	3
Morone chrysops x saxatilis	.	.	.	.	.	.	.	1	.	.	.	.	1
Mugil cephalus	**253**	**1,634**	**2,886**	**567**	**187**	**174**	**213**	**449**	**139**	**143**	**318**	**100**	**7,063**
Mugil curema	**.**	**41**	**6**	**37**	**44**	**140**	**7**	**2**	**38**	**40**	**113**	**9**	**477**
Mycteroperca microlepis	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**	**15**	**.**	**.**	**.**	**17**
Myrophis punctatus	3	3	.	.	.	.	.	.	.	.	.	.	6
Narcine bancroftii	.	.	.	.	.	.	.	1	1	.	.	.	2

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Nicholsina usta	.	.	.	.	.	.	.	.	.	.	1	.	1
Notemigonus crysoleucas	.	.	4	6	13	58	21	9	41	.	.	.	152
Ogcocephalus cubifrons	1	2	2	5	.	.	2	3	3	8	1	11	38
Oligoplites saurus	.	.	.	.	.	7	21	18	12	12	.	.	70
Opisthonema oglinum	.	.	.	.	28	.	124	1	12	26	.	.	191
Opsanus beta	.	.	.	1	1	7	4	.	1	8	1	.	23
Orthopristis chrysoptera	1	.	.	101	3,704	588	278	149	182	1,040	48	.	6,091
Paralichthys albigutta	**9**	**44**	**38**	**37**	**21**	**33**	**93**	**44**	**33**	**53**	**10**	**12**	**427**
Paralichthys lethostigma	**2**	**6**	**36**	**3**	**10**	**3**	**15**	**1**	**6**	**2**	**6**	**.**	**90**
Paralichthys squamilentus	**.**	**1**	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**4**
Penaeidae sp.	.	1	.	.	.	.	.	.	.	.	.	.	1
Peprilus burti	2	.	.	2	.	.	.	.	.	.	.	.	4
Peprilus paru	1	.	.	5	.	79	1	.	.	.	.	.	86
Peprilus sp.	.	.	1	.	.	.	.	.	.	.	.	.	1
Poecilia latipinna	2	.	.	.	.	.	.	6	.	.	3	.	11
Pogonias cromis	**.**	**6**	**1**	**18**	**32**	**1**	**3**	**5**	**5**	**18**	**3**	**3**	**95**
Pomatomus saltatrix	**.**	**.**	**.**	**19**	**10**	**1**	**2**	**2**	**5**	**1**	**.**	**.**	**40**
Pomoxis nigromaculatus	.	.	.	.	2	.	2	.	.	.	.	.	4
Porichthys plectrodon	.	.	.	.	.	.	1	.	.	.	.	.	1
Portunus spp.	5	.	.	15	3	.	13	.	.	42	.	.	78
Prionotus longispinosus	.	.	.	3	.	.	.	.	.	.	.	.	3
Prionotus rubio	3	.	.	1	.	.	1	.	.	.	.	.	5

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Prionotus scitulus	2	.	1	44	2	1	21	.	1	22	4	1	99
Prionotus tribulus	11	1	1	25	3	1	2	4	5	4	5	5	67
Rhinoptera bonasus	.	.	.	.	.	8	.	.	.	.	.	.	8
Rimapenaeus constrictus	.	.	.	4	.	.	.	.	.	.	.	.	4
Rimapenaeus similis	1	.	.	10	.	.	1	.	.	1	.	.	13
Rimapenaeus spp.	8	.	.	1	.	.	5	.	.	56	1	.	71
Sciaenidae spp.	.	.	.	4	.	.	.	.	.	.	.	.	4
Sciaenops ocellatus	**2**	**91**	**55**	**117**	**120**	**66**	**53**	**43**	**52**	**85**	**88**	**95**	**867**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**1**	**.**	**.**	**3**
Selene vomer	.	.	.	.	.	1	2	3	.	2	.	.	8
Serraniculus pumilio	.	.	.	4	.	.	.	.	.	1	.	.	5
Serranus subligarius	.	.	.	.	.	.	.	.	.	4	.	.	4
Sparidae sp.	1	.	.	.	.	.	.	.	.	.	.	.	1
Sphoeroides nephelus	.	1	.	1	3	.	4	1	.	7	2	2	21
Sphoeroides parvus	.	.	.	.	.	.	1	.	.	2	.	.	3
Sphoeroides spp.	.	.	.	3	7	2	.	.	.	.	1	.	13
Sphyraena barracuda	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**2**	**4**	**.**	**7**
Sphyrna tiburo	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Stellifer lanceolatus	.	.	.	1	.	.	16	6	.	.	.	.	23
Stephanolepis hispida	.	.	.	.	12	.	1	.	.	3	.	.	16
Stomolophus meleagris	.	.	.	.	.	.	.	58	.	.	.	.	58
Strongylura marina	.	.	17	1	2	8	8	1	6	2	9	5	59

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=43	E=45	E=49	E=57	E=49	E=45	E=61	E=45	E=49	E=57	E=49	E=45	E=594
Strongylura notata	.	.	.	1	6	1	12	5	5	8	5	.	43
Strongylura spp.	.	.	.	1	13	5	.	.	.	.	.	.	19
Symphurus plagiusa	19	9	5	26	5	3	199	1	5	31	23	10	336
Syngnathus floridae	.	.	10	1	5	.	15	3	7	6	5	1	53
Syngnathus louisianae	3	.	.	3	1	2	6	2	1	13	1	.	32
Syngnathus scovelli	20	15	33	7	22	15	20	31	5	10	8	4	190
Syngnathus springeri	.	.	.	1	.	.	.	.	.	.	.	.	1
Synodus foetens	5	1	1	25	15	12	20	8	14	39	8	4	152
Trachinotus carolinus	**.**	**.**	**.**	**.**	**.**	**.**	**3**	**15**	**6**	**.**	**.**	**.**	**24**
Trachinotus falcatus	**.**	**.**	**.**	**.**	**1**	**.**	**8**	**1**	**7**	**2**	**.**	**.**	**19**
Triglidae sp.	.	.	.	.	.	.	.	.	.	1	.	.	1
Trinectes maculatus	6	5	11	22	8	4	25	28	24	31	16	3	183
Tylosurus crocodilus	.	.	.	.	.	.	.	1	.	.	.	.	1
Urophycis floridana	5	.	1	9	.	.	.	.	.	.	.	.	15
Xiphopenaeus kroyeri	.	.	.	.	1	.	.	4	.	.	.	1	6
Total	**4,526**	**11,192**	**22,466**	**30,931**	**13,292**	**13,330**	**25,161**	**14,841**	**41,860**	**16,086**	**10,463**	**2,224**	**206,372**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.8: Summary by gear and stratum of taxa collected during Apalachicola Bay stratified-random sampling, 2025.

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Abudefduf saxatilis	.	.	1	.	.	.	1
Acanthostracion quadricornis	.	.	.	.	3	1	4
Achirus lineatus	.	.	1	.	.	.	1
Alburnops petersoni	17	.	2	829	.	.	848
Alosa alabamae	.	.	1	.	.	.	1
Alosa chrysochloris	.	.	.	.	.	12	12
Aluterus schoepfii	2	.	.	.	.	1	3
Ameiurus catus	.	.	.	2	.	1	3
Anchoa hepsetus	96	13	179	.	.	30	318
Anchoa mitchilli	1,518	1,040	2,310	8,694	.	28,365	41,927
Anchoa spp.	.	.	.	.	.	17	17
Ancylopsetta quadrocellata	.	.	.	.	7	44	51
Aphredoderus sayanus	.	.	.	1	.	.	1
Archosargus probatocephalus	**8**	**1**	**1**	**2**	**49**	**4**	**65**
Argopecten irradians	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Ariopsis felis	7	176	90	.	217	337	827
Astroscopus y-graecum	.	.	2	.	.	.	2
Bagre marinus	.	.	.	.	56	1	57
Bairdiella chrysoura	2,008	20	437	3	3,665	27	6,160
Bathygobius soporator	.	.	1	.	.	1	2
***Brevoortia* spp.**	**33**	**2,532**	**24,822**	**3,614**	**6,565**	**11**	**37,577**
Calamus sp.	.	.	.	.	.	1	1
Callinectes ornatus	.	.	.	.	.	1	1
Callinectes sapidus	**115**	**303**	**480**	**438**	**164**	**332**	**1,832**
Callinectes similis	.	.	57	.	.	52	109
Callinectes sp.	.	.	1	.	.	.	1

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Caranx crysos	**.**	**.**	**.**	**.**	**7**	**.**	**7**
Caranx hippos	**.**	**2**	**.**	**.**	**42**	**.**	**44**
Caranx latus	.	.	.	.	6	.	6
Carcharhinus isodon	**.**	**.**	**.**	**.**	**2**	**.**	**2**
Carcharhinus leucas	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Centropristis striata	**4**	**.**	**.**	**.**	**8**	**9**	**21**
Chaetodipterus faber	.	1	17	.	19	10	47
Chalinops pauciradiatus	.	1	.	.	.	.	1
Chasmodes saburrae	6	.	2	.	1	.	9
Chilomycterus schoepfii	8	.	2	.	59	3	72
Chloroscombrus chrysurus	.	.	.	.	10	7	17
Citharichthys macrops	1	3	8	.	5	15	32
Citharichthys spilopterus	.	5	.	1	41	21	68
Clupeiformes spp.	.	2	4	.	.	1	7
Ctenogobius boleosoma	63	31	263	91	.	42	490
Cynoscion arenarius	**55**	**195**	**399**	**4**	**8**	**1,052**	**1,713**
Cynoscion nebulosus	**117**	**8**	**65**	**2**	**556**	**8**	**756**
Cynoscion nothus	**.**	**.**	**.**	**.**	**.**	**6**	**6**
Cynoscion sp.	.	.	.	.	.	1	1
Cyprinodon variegatus	1	.	291	.	5	.	297
Diapterus auratus	.	.	.	.	1	.	1
Diplectrum bivittatum	.	.	.	.	.	1	1
Diplectrum formosum	**.**	**.**	**.**	**.**	**.**	**6**	**6**
Diplodus holbrookii	75	.	97	.	15	.	187
Dorosoma cepedianum	.	.	.	.	9	.	9
Dorosoma petenense	513	1	19	243	55	6	837
Echeneis neucratoides	.	.	.	.	4	.	4
Elops saurus	**.**	**1**	**4**	**.**	**1,032**	**.**	**1,037**

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Enneacanthus gloriosus	4	.	.	135	.	.	139
Erimyzon sucetta	.	.	.	3	.	.	3
Etropus crossotus	.	7	5	.	163	555	730
Etropus cyclosquamus	.	.	.	.	.	4	4
Etropus microstomus	.	.	.	.	.	2	2
Eucinostomus argenteus	.	2	.	.	.	12	14
Eucinostomus gula	48	30	46	.	384	42	550
Eucinostomus harengulus	13	23	135	14	60	33	278
Eucinostomus spp.	1,781	324	1,091	141	.	73	3,410
Farfantepenaeus aztecus	**3**	**.**	**5**	**.**	**27**	**45**	**80**
Farfantepenaeus duorarum	**9**	**1**	**12**	**2**	**60**	**91**	**175**
***Farfantepenaeus* spp.**	**307**	**81**	**533**	**40**	**10**	**38**	**1,009**
Fundulus chrysotus	3	.	.	60	.	.	63
Fundulus confluentus	.	.	1	6	.	.	7
Fundulus grandis	.	.	45	.	34	.	79
Fundulus similis	.	.	117	.	49	.	166
Gambusia holbrooki	2	.	3	243	.	.	248
Gobionellus oceanicus	.	.	.	.	.	1	1
Gobiosoma bosc	14	.	25	111	.	2	152
Gobiosoma longipala	.	.	.	.	.	2	2
Gobiosoma robustum	12	1	13	.	.	.	26
Gobiosoma spp.	4	.	16	59	.	3	82
Gymnura lessae	.	.	2	.	20	3	25
Haemulidae sp.	1	.	.	.	.	.	1
Halichoeres bivittatus	1	.	.	.	.	.	1
Harengula jaguana	200	37	54	.	17,379	16	17,686
Hemicaranx amblyrhynchus	.	1	.	.	.	1	2
Heterandria formosa	1	.	.	155	.	.	156

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Hippocampus erectus	.	1	.	.	.	9	10
Hippocampus zosterae	1	.	.	.	.	.	1
Hypanus americanus	.	.	.	.	7	.	7
Hypanus sabinus	3	9	28	1	916	107	1,064
Hypanus say	.	2	1	.	79	9	91
Hypanus sp.	.	.	.	.	1	.	1
Hypleurochilus caudovittatus	.	.	1	.	.	.	1
Hyporhamphus meeki	3	.	.	.	11	.	14
Hyporhamphus sp.	.	.	1	.	.	.	1
Hypsoblennius hentz	3	.	.	.	.	1	4
Ictalurus punctatus	.	.	.	1	.	9	10
Ictalurus sp.	.	.	.	1	.	.	1
Lagodon rhomboides	12,551	329	2,747	641	11,720	301	28,289
Larimus fasciatus	.	.	.	.	.	1	1
Leiostomus xanthurus	**1,904**	**4,004**	**4,970**	**1,350**	**1,601**	**820**	**14,649**
Lepisosteus oculatus	.	.	.	8	1	1	10
Lepisosteus osseus	.	.	.	1	2	1	4
Lepomis macrochirus	2	.	.	22	.	2	26
Lepomis microlophus	14	.	1	86	.	13	114
Lepomis punctatus	3	.	.	121	.	.	124
Lepomis spp.	.	.	1	43	.	4	48
Limulus polyphemus	.	.	.	.	3	.	3
Litopenaeus setiferus	**1,718**	**709**	**1,475**	**73**	**58**	**5,366**	**9,399**
Lucania goodei	.	.	.	38	.	.	38
Lucania parva	3,527	48	3,763	746	.	7	8,091
Lutjanus griseus	**4**	**2**	**2**	**1**	**7**	**1**	**17**
Lutjanus synagris	**10**	**.**	**.**	**.**	**1**	**12**	**23**
Membras martinica	16	53	262	.	.	.	331

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Menidia spp.	212	89	1,539	380	5	1	2,226
***Menippe* spp.**	**.**	**.**	**2**	**.**	**1**	**168**	**171**
Menticirrhus americanus	**.**	**20**	**91**	**.**	**32**	**47**	**190**
Menticirrhus littoralis	**.**	**.**	**1**	**.**	**10**	**.**	**11**
Menticirrhus saxatilis	**1**	**4**	**18**	**.**	**3**	**.**	**26**
Menticirrhus spp.	.	.	.	.	.	2	2
Microgobius gulosus	41	1	88	19	2	8	159
Microgobius thalassinus	.	10	12	.	.	52	74
Micropogonias undulatus	**.**	**203**	**893**	**17**	**974**	**696**	**2,783**
Micropterus salmoides	56	.	5	286	.	3	350
Minytrema melanops	.	.	.	1	.	.	1
Monacanthus ciliatus	2	.	.	.	1	.	3
Morone chrysops x saxatilis	.	.	.	.	1	.	1
Mugil cephalus	**10**	**14**	**4,224**	**7**	**2,808**	**.**	**7,063**
Mugil curema	**.**	**.**	**149**	**.**	**328**	**.**	**477**
Mycteroperca microlepis	**.**	**.**	**.**	**.**	**17**	**.**	**17**
Myrophis punctatus	1	1	3	.	.	1	6
Narcine bancroftii	.	.	.	.	2	.	2
Nicholsina usta	1	.	.	.	.	.	1
Notemigonus crysoleucas	13	.	.	139	.	.	152
Ogcocephalus cubifrons	.	.	.	.	35	3	38
Oligoplites saurus	3	2	37	2	26	.	70
Opisthonema oglinum	144	28	4	.	13	2	191
Opsanus beta	1	1	.	.	17	4	23
Orthopristis chrysoptera	3,427	57	930	.	1,419	258	6,091
Paralichthys albigutta	**23**	**31**	**61**	**.**	**276**	**36**	**427**
Paralichthys lethostigma	**1**	**11**	**10**	**12**	**12**	**44**	**90**
Paralichthys squamilentus	**.**	**1**	**2**	**.**	**1**	**.**	**4**

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Penaeidae sp.	.	.	1	.	.	.	1
Peprilus burti	.	.	.	.	.	4	4
Peprilus paru	.	.	.	.	79	7	86
Peprilus sp.	.	1	.	.	.	.	1
Poecilia latipinna	.	.	8	3	.	.	11
Pogonias cromis	**.**	**.**	**.**	**.**	**95**	**.**	**95**
Pomatomus saltatrix	**.**	**1**	**.**	**.**	**39**	**.**	**40**
Pomoxis nigromaculatus	.	.	.	3	.	1	4
Porichthys plectrodon	.	.	.	.	.	1	1
Portunus spp.	.	4	6	.	.	68	78
Prionotus longispinosus	.	.	.	.	.	3	3
Prionotus rubio	.	.	.	.	.	5	5
Prionotus scitulus	2	6	6	.	6	79	99
Prionotus tribulus	3	9	6	1	16	32	67
Rhinoptera bonasus	.	.	.	.	8	.	8
Rimapenaeus constrictus	.	.	.	.	.	4	4
Rimapenaeus similis	.	.	.	.	.	13	13
Rimapenaeus spp.	.	14	22	1	.	34	71
Sciaenidae spp.	.	.	.	.	.	4	4
Sciaenops ocellatus	**18**	**33**	**182**	**1**	**632**	**1**	**867**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**3**	**.**	**3**
Selene vomer	.	.	.	.	6	2	8
Serraniculus pumilio	.	.	.	.	.	5	5
Serranus subligarius	.	.	1	.	.	3	4
Sparidae sp.	.	.	.	.	.	1	1
Sphoeroides nephelus	3	.	4	.	13	1	21
Sphoeroides parvus	.	.	.	.	.	3	3
Sphoeroides spp.	2	4	7	.	.	.	13

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=72	E=60	E=108	E=84	E=198	E=72	E=594
Sphyraena barracuda	**.**	**.**	**.**	**.**	**7**	**.**	**7**
Sphyrna tiburo	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Stellifer lanceolatus	.	.	.	.	7	16	23
Stephanolepis hispida	12	.	.	.	1	3	16
Stomolophus meleagris	.	3	.	.	55	.	58
Strongylura marina	2	1	6	1	49	.	59
Strongylura notata	3	.	15	.	25	.	43
Strongylura spp.	.	2	11	5	1	.	19
Symphurus plagiusa	2	18	36	10	2	268	336
Syngnathus floridae	47	2	4	.	.	.	53
Syngnathus louisianae	8	2	3	.	.	19	32
Syngnathus scovelli	112	6	27	25	1	19	190
Syngnathus springeri	.	.	.	.	.	1	1
Synodus foetens	17	12	29	.	42	52	152
Trachinotus carolinus	**.**	**.**	**3**	**.**	**21**	**.**	**24**
Trachinotus falcatus	**.**	**.**	**8**	**.**	**11**	**.**	**19**
Triglidae sp.	.	.	.	.	.	1	1
Trinectes maculatus	3	1	13	33	34	99	183
Tylosurus crocodilus	1	.	.	.	.	.	1
Urophycis floridana	1	.	.	.	.	14	15
Xiphopenaeus kroyeri	.	.	5	.	1	.	6
Total	**30,981**	**10,591**	**53,383**	**18,972**	**52,344**	**40,101**	**206,372**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 21.3-m river seine, 183-m haul seine, and 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.9: Summary by zone of taxa collected during Apalachicola Bay stratified-random sampling, 2025.

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Abudefduf saxatilis	1	.	.	1
Acanthostracion quadricornis	.	4	.	4
Achirus lineatus	.	1	.	1
Alburnops petersoni	19	.	829	848
Alosa alabamae	1	.	.	1
Alosa chrysochloris	.	.	12	12
Aluterus schoepfii	.	3	.	3
Ameiurus catus	.	.	3	3
Anchoa hepsetus	43	273	2	318
Anchoa mitchilli	9,877	1,601	30,449	41,927
Anchoa spp.	3	.	14	17
Ancylopsetta quadrocellata	13	38	.	51
Aphredoderus sayanus	.	.	1	1
Archosargus probatocephalus	**25**	**34**	**6**	**65**
Argopecten irradians	**1**	**.**	**.**	**1**
Ariopsis felis	587	237	3	827
Astroscopus y-graecum	.	2	.	2
Bagre marinus	52	5	.	57
Bairdiella chrysoura	2,641	3,515	4	6,160
Bathygobius soporator	2	.	.	2
***Brevoortia* spp.**	**33,871**	**84**	**3,622**	**37,577**
Calamus sp.	.	1	.	1
Callinectes ornatus	1	.	.	1
Callinectes sapidus	**1,057**	**208**	**567**	**1,832**
Callinectes similis	92	17	.	109
Callinectes sp.	.	1	.	1
Caranx crysos	**.**	**7**	**.**	**7**

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Caranx hippos	**10**	**34**	**.**	**44**
Caranx latus	1	5	.	6
Carcharhinus isodon	**.**	**2**	**.**	**2**
Carcharhinus leucas	**1**	**.**	**.**	**1**
Centropristis striata	**.**	**21**	**.**	**21**
Chaetodipterus faber	25	21	1	47
Chalinops pauciradiatus	.	1	.	1
Chasmodes saburrae	1	8	.	9
Chilomycterus schoepfii	.	72	.	72
Chloroscombrus chrysurus	6	11	.	17
Citharichthys macrops	18	14	.	32
Citharichthys spilopterus	63	2	3	68
Clupeiformes spp.	7	.	.	7
Ctenogobius boleosoma	352	36	102	490
Cynoscion arenarius	**1,505**	**80**	**128**	**1,713**
Cynoscion nebulosus	**353**	**397**	**6**	**756**
Cynoscion nothus	**6**	**.**	**.**	**6**
Cynoscion sp.	1	.	.	1
Cyprinodon variegatus	269	28	.	297
Diapterus auratus	1	.	.	1
Diplectrum bivittatum	.	1	.	1
Diplectrum formosum	**.**	**6**	**.**	**6**
Diplodus holbrookii	17	170	.	187
Dorosoma cepedianum	9	.	.	9
Dorosoma petenense	545	43	249	837
Echeneis neucratoides	.	4	.	4
Elops saurus	**925**	**112**	**.**	**1,037**
Enneacanthus gloriosus	4	.	135	139
Erimyzon sucetta	.	.	3	3

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Etropus crossotus	434	296	.	730
Etropus cyclosquamus	.	4	.	4
Etropus microstomus	.	2	.	2
Eucinostomus argenteus	4	10	.	14
Eucinostomus gula	30	520	.	550
Eucinostomus harengulus	103	132	43	278
Eucinostomus spp.	887	2,327	196	3,410
Farfantepenaeus aztecus	**53**	**27**	**.**	**80**
Farfantepenaeus duorarum	**100**	**70**	**5**	**175**
***Farfantepenaeus* spp.**	**749**	**217**	**43**	**1,009**
Fundulus chrysotus	3	.	60	63
Fundulus confluentus	1	.	6	7
Fundulus grandis	64	15	.	79
Fundulus similis	39	127	.	166
Gambusia holbrooki	3	2	243	248
Gobionellus oceanicus	.	.	1	1
Gobiosoma bosc	39	.	113	152
Gobiosoma longipala	.	2	.	2
Gobiosoma robustum	.	26	.	26
Gobiosoma spp.	15	5	62	82
Gymnura lessae	16	9	.	25
Haemulidae sp.	.	1	.	1
Halichoeres bivittatus	.	1	.	1
Harengula jaguana	157	17,519	10	17,686
Hemicaranx amblyrhynchus	2	.	.	2
Heterandria formosa	1	.	155	156
Hippocampus erectus	3	7	.	10
Hippocampus zosterae	.	1	.	1
Hypanus americanus	.	7	.	7

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Hypanus sabinus	477	584	3	1,064
Hypanus say	22	69	.	91
Hypanus sp.	.	1	.	1
Hypleurochilus caudovittatus	1	.	.	1
Hyporhamphus meeki	.	14	.	14
Hyporhamphus sp.	.	1	.	1
Hypsoblennius hentz	2	2	.	4
Ictalurus punctatus	.	.	10	10
Ictalurus sp.	.	.	1	1
Lagodon rhomboides	9,927	17,710	652	28,289
Larimus fasciatus	1	.	.	1
Leiostomus xanthurus	**8,170**	**4,725**	**1,754**	**14,649**
Lepisosteus oculatus	.	1	9	10
Lepisosteus osseus	1	1	2	4
Lepomis macrochirus	2	.	24	26
Lepomis microlophus	15	.	99	114
Lepomis punctatus	3	.	121	124
Lepomis spp.	1	.	47	48
Limulus polyphemus	.	3	.	3
Litopenaeus setiferus	**8,221**	**484**	**694**	**9,399**
Lucania goodei	.	.	38	38
Lucania parva	7,308	30	753	8,091
Lutjanus griseus	**8**	**7**	**2**	**17**
Lutjanus synagris	**8**	**15**	**.**	**23**
Membras martinica	281	50	.	331
Menidia spp.	1,349	496	381	2,226
***Menippe* spp.**	**1**	**170**	**.**	**171**
Menticirrhus americanus	**147**	**40**	**3**	**190**
Menticirrhus littoralis	**.**	**11**	**.**	**11**

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Menticirrhus saxatilis	**12**	**14**	**.**	**26**
Menticirrhus spp.	2	.	.	2
Microgobius gulosus	70	62	27	159
Microgobius thalassinus	69	5	.	74
Micropogonias undulatus	**2,437**	**135**	**211**	**2,783**
Micropterus salmoides	61	.	289	350
Minytrema melanops	.	.	1	1
Monacanthus ciliatus	.	3	.	3
Morone chrysops x saxatilis	1	.	.	1
Mugil cephalus	**5,635**	**1,421**	**7**	**7,063**
Mugil curema	**353**	**124**	**.**	**477**
Mycteroperca microlepis	**16**	**1**	**.**	**17**
Myrophis punctatus	4	2	.	6
Narcine bancroftii	.	2	.	2
Nicholsina usta	.	1	.	1
Notemigonus crysoleucas	13	.	139	152
Ogcocephalus cubifrons	3	35	.	38
Oligoplites saurus	22	46	2	70
Opisthonema oglinum	28	163	.	191
Opsanus beta	3	20	.	23
Orthopristis chrysoptera	1,220	4,871	.	6,091
Paralichthys albigutta	**148**	**279**	**.**	**427**
Paralichthys lethostigma	**39**	**1**	**50**	**90**
Paralichthys squamilentus	**.**	**4**	**.**	**4**
Penaeidae sp.	.	1	.	1
Peprilus burti	4	.	.	4
Peprilus paru	86	.	.	86
Peprilus sp.	1	.	.	1
Poecilia latipinna	8	.	3	11

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Pogonias cromis	**72**	**23**	**.**	**95**
Pomatomus saltatrix	**23**	**17**	**.**	**40**
Pomoxis nigromaculatus	.	.	4	4
Porichthys plectrodon	1	.	.	1
Portunus spp.	51	27	.	78
Prionotus longispinosus	3	.	.	3
Prionotus rubio	4	1	.	5
Prionotus scitulus	23	76	.	99
Prionotus tribulus	33	31	3	67
Rhinoptera bonasus	8	.	.	8
Rimapenaeus constrictus	1	3	.	4
Rimapenaeus similis	13	.	.	13
Rimapenaeus spp.	66	3	2	71
Sciaenidae spp.	4	.	.	4
Sciaenops ocellatus	**492**	**373**	**2**	**867**
Scomberomorus maculatus	**.**	**3**	**.**	**3**
Selene vomer	3	5	.	8
Serraniculus pumilio	1	4	.	5
Serranus subligarius	1	3	.	4
Sparidae sp.	.	.	1	1
Sphoeroides nephelus	2	19	.	21
Sphoeroides parvus	2	1	.	3
Sphoeroides spp.	1	12	.	13
Sphyraena barracuda	**2**	**5**	**.**	**7**
Sphyrna tiburo	**.**	**1**	**.**	**1**
Stellifer lanceolatus	22	1	.	23
Stephanolepis hispida	.	16	.	16
Stomolophus meleagris	3	55	.	58
Strongylura marina	17	41	1	59

Species	Zone			Total
	A	B	C	
	E=243	E=243	E=108	E=594
Strongylura notata	19	24	.	43
Strongylura spp.	7	7	5	19
Symphurus plagiusa	271	35	30	336
Syngnathus floridae	.	53	.	53
Syngnathus louisianae	21	11	.	32
Syngnathus scovelli	65	82	43	190
Syngnathus springeri	.	1	.	1
Synodus foetens	44	108	.	152
Trachinotus carolinus	**.**	**24**	**.**	**24**
Trachinotus falcatus	**5**	**14**	**.**	**19**
Triglidae sp.	1	.	.	1
Trinectes maculatus	50	54	79	183
Tylosurus crocodilus	.	1	.	1
Urophycis floridana	7	8	.	15
Xiphopenaeus kroyeri	2	4	.	6
Total	**102,628**	**61,176**	**42,568**	**206,372**

Zones A and B were located in Apalachicola Bay, and Zone C encompassed the lower Apalachicola River. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.4 Cedar Key

Table A.10: Monthly summary of taxa collected during Cedar Key stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Acanthostracion quadricornis	3	.	1	2	.	.	.	.	.	4	.	.	10
Achirus lineatus	.	.	.	.	.	4	4	.	2	1	.	.	11
Alburnops petersoni	6	1	16	.	8	.	.	.	.	.	1	.	32
Alosa alabamae	.	3	1	.	.	.	.	.	.	.	.	.	4
Alosa chrysochloris	.	.	.	1	.	.	.	.	.	.	.	.	1
Ameiurus catus	4	.	.	2	.	.	.	.	6	.	.	.	12
Anchoa hepsetus	.	1	.	4	127	1,287	87	55	8	613	1	.	2,183
Anchoa mitchilli	212	62	54	318	295	4,812	2,101	4,218	2,662	5,159	3,324	989	24,206
Ancylopsetta quadrocellata	1	.	2	1	.	.	2	.	.	.	.	.	6
Archosargus probatocephalus	**.**	**.**	**1**	**3**	**4**	**12**	**6**	**14**	**6**	**10**	**27**	**.**	**83**
Ariopsis felis	37	3	63	101	83	394	212	132	86	64	25	170	1,370
Astroscopus y-graecum	.	2	.	.	.	.	1	.	.	.	.	.	3
Bagre marinus	.	.	.	3	6	3	22	27	67	42	.	.	170
Bairdiella chrysoura	832	627	413	259	58	84	182	114	156	368	53	141	3,287
Bathygobius soporator	1	1	.	1	.	.	.	.	5	5	4	1	18
***Brevoortia* spp.**	**2**	**138**	**1,024**	**34**	**16**	**122**	**210**	**72**	**319**	**130**	**1**	**1**	**2,069**
Calamus arctifrons	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Callinectes sapidus	**233**	**111**	**64**	**80**	**65**	**50**	**42**	**29**	**29**	**49**	**44**	**45**	**841**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Caranx hippos	**.**	**.**	**.**	**.**	**.**	**1**	**1**	**7**	**14**	**48**	**.**	**.**	**71**
Caranx latus	.	.	.	.	.	.	1	.	.	.	.	.	1
Centropomus undecimalis	**1**	**3**	**.**	**28**	**5**	**9**	**12**	**9**	**3**	**6**	**10**	**.**	**86**
Centropristis striata	**.**	**.**	**.**	**2**	**1**	**.**	**.**	**.**	**.**	**6**	**.**	**.**	**9**
Chaetodipterus faber	.	.	.	.	16	15	27	35	24	17	.	.	134
Chasmodes saburrae	.	.	.	.	.	.	.	2	1	.	.	.	3
Chilomycterus schoepfii	19	4	.	1	2	1	7	2	.	6	1	.	43
Chloroscombrus chrysurus	.	.	.	.	.	2	1	.	.	.	.	.	3
Citharichthys macrops	.	.	.	1	.	.	5	.	.	6	.	.	12
Ctenogobius boleosoma	.	.	3	11	4	4	.	1	.	.	1	.	24
Ctenogobius smaragdus	.	.	.	.	1	.	.	.	.	.	.	.	1
Cynoscion arenarius	**.**	**.**	**.**	**2**	**87**	**62**	**94**	**81**	**66**	**28**	**1**	**.**	**421**
Cynoscion nebulosus	**37**	**12**	**11**	**13**	**8**	**2**	**10**	**17**	**31**	**32**	**16**	**9**	**198**
Cyprinodon variegatus	9	4	.	1	.	.	.	.	.	.	.	1	15
Diplectrum formosum	**1**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**4**	**.**	**.**	**6**
Diplodus holbrookii	.	.	.	.	.	.	.	.	.	1	.	.	1
Dorosoma cepedianum	48	.	10	20	5	1	6	1	2	6	.	66	165
Echeneis neucratoides	.	1	.	.	1	8	.	.	2	5	.	.	17
Elops saurus	**2**	**13**	**1**	**11**	**73**	**69**	**72**	**69**	**95**	**385**	**82**	**24**	**896**
Etropus crossotus	71	21	23	20	.	2	66	5	9	73	7	5	302
Eucinostomus gula	73	1	1	6	.	.	7	15	90	121	220	37	571
Eucinostomus harengulus	34	34	.	11	24	1	111	91	43	86	51	195	681

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Eucinostomus spp.	179	35	1	6	1	19	177	763	402	501	857	547	3,488
Farfantepenaeus duorarum	**2**	**.**	**.**	**13**	**.**	**.**	**.**	**.**	**.**	**3**	**.**	**1**	**19**
***Farfantepenaeus* spp.**	**.**	**1**	**1**	**.**	**2**	**12**	**37**	**3**	**1**	**11**	**24**	**11**	**103**
Fundulus confluentus	3	3	6	.	.	.	.	.	.	.	.	.	12
Fundulus grandis	201	146	13	12	42	11	.	.	60	13	8	91	597
Fundulus seminolis	24	6	18	2	.	.	12	.	.	38	15	2	117
Fundulus similis	16	18	40	1	2	3	.	1	.	1	2	32	116
Fundulus xenicus	1	213	17	10	1	.	.	2	5	1	19	5	274
Gambusia holbrooki	110	12	230	3	.	.	.	.	15	70	13	.	453
Gobiosoma bosc	9	4	2	.	.	2	2	.	.	15	10	6	50
Gobiosoma robustum	2	.	.	.	.	3	1	.	.	4	.	.	10
Gobiosoma spp.	1	.	.	.	.	1	.	.	.	9	2	1	14
Gymnura lessae	.	.	.	2	3	.	4	15	8	5	.	.	37
Haemulon plumierii	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**45**	**.**	**.**	**46**
Harengula jaguana	.	.	.	46	628	510	97	128	95	306	6	2	1,818
Hippocampus erectus	.	.	.	3	.	.	1	.	.	.	2	.	6
Hypanus americanus	.	.	.	1	.	.	2	.	1	6	.	.	10
Hypanus sabinus	80	47	127	124	112	184	310	95	236	160	46	29	1,550
Hypanus say	.	.	.	22	49	12	42	31	230	13	.	.	399
Hypleurochilus caudovittatus	.	.	.	.	.	.	1	.	.	.	.	.	1
Hyporhamphus meeki	.	.	.	.	.	.	.	.	.	1	.	.	1
Hyporhamphus spp.	.	.	.	.	1	1	.	.	.	.	.	.	2

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Labidesthes vanhyningi	.	.	.	.	.	.	.	6	.	.	1	.	7
Lagodon rhomboides	390	219	1,088	361	214	399	301	616	637	376	192	23	4,816
Leiostomus xanthurus	**2,523**	**5,015**	**5,023**	**717**	**214**	**495**	**238**	**247**	**324**	**458**	**100**	**17**	**15,371**
Lepisosteus osseus	2	1	2	2	1	.	1	.	7	.	.	.	16
Lepisosteus platyrhincus	.	.	.	2	1	.	.	.	1	.	.	.	4
Lepomis macrochirus	.	.	1	.	.	.	.	.	.	2	5	.	8
Lepomis punctatus	.	1	.	.	.	.	.	1	.	.	9	.	11
Lepomis spp.	.	.	.	.	3	.	.	.	.	.	2	.	5
Limulus polyphemus	2	2	6	36	1	.	.	.	.	27	.	.	74
Litopenaeus setiferus	**8**	**5**	**4**	**381**	**3**	**78**	**100**	**4,843**	**203**	**80**	**6**	**10**	**5,721**
Lucania goodei	.	.	2	.	.	.	.	.	.	.	.	.	2
Lucania parva	12	.	12	1	.	.	.	.	.	.	4	7	36
Lutjanus griseus	**1**	**.**	**.**	**2**	**3**	**10**	**4**	**1**	**5**	**10**	**4**	**.**	**40**
Lutjanus synagris	**1**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**5**	**.**	**.**	**7**
Megalops atlanticus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Membras martinica	.	.	.	449	334	4,805	961	277	49	4	1	.	6,880
Menidia spp.	160	130	68	33	49	761	349	125	94	171	71	239	2,250
***Menippe* spp.**	**9**	**.**	**1**	**11**	**.**	**1**	**2**	**2**	**.**	**5**	**5**	**.**	**36**
Menticirrhus americanus	**2**	**.**	**6**	**10**	**38**	**71**	**131**	**60**	**118**	**84**	**61**	**4**	**585**
Menticirrhus saxatilis	**.**	**.**	**.**	**1**	**7**	**1**	**.**	**.**	**.**	**.**	**8**	**7**	**24**
Microgobius gulosus	.	.	.	.	.	.	.	.	.	.	1	.	1
Microgobius thalassinus	.	.	1	.	.	.	.	.	.	.	1	.	2

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Micropogonias undulatus	**1**	**.**	**54**	**150**	**45**	**8**	**64**	**32**	**76**	**62**	**1**	**1**	**494**
Micropterus salmoides	.	.	.	.	1	.	.	2	4	1	4	.	12
Monacanthus ciliatus	.	.	.	.	.	.	.	.	.	3	.	.	3
Mugil cephalus	**899**	**556**	**748**	**370**	**321**	**188**	**282**	**131**	**100**	**64**	**338**	**259**	**4,256**
Mugil curema	**1**	**234**	**1**	**2**	**1**	**1**	**.**	**23**	**4**	**4**	**7**	**.**	**278**
Mugil trichodon	**28**	**.**	**1**	**3**	**19**	**4**	**23**	**19**	**1**	**9**	**34**	**2**	**143**
Notemigonus crysoleucas	.	.	.	.	1	.	.	.	.	.	.	.	1
Ogcocephalus cubifrons	46	77	14	122	28	32	38	3	18	19	4	9	410
Oligoplites saurus	.	.	.	.	6	29	37	36	19	9	7	.	143
Opisthonema oglinum	17	.	.	3	11	15	1	.	13	181	4	.	245
Opsanus beta	.	1	.	1	.	.	2	.	1	2	.	.	7
Opsopoeodus emiliae	.	.	1	.	.	.	.	.	.	.	.	.	1
Orthopristis chrysoptera	8	1	.	2	22	87	27	50	40	52	7	.	296
Paralichthys albigutta	**8**	**7**	**12**	**20**	**19**	**25**	**18**	**6**	**6**	**5**	**3**	**.**	**129**
Paralichthys lethostigma	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Peprilus burti	.	.	1	.	7	.	.	.	.	.	.	.	8
Peprilus paru	.	.	.	.	3	.	26	17	4	.	.	.	50
Poecilia latipinna	2	.	1	20	1	.	1	1	3	12	.	4	45
Pogonias cromis	**18**	**.**	**60**	**32**	**15**	**115**	**43**	**51**	**40**	**26**	**6**	**13**	**419**
Pomatomus saltatrix	**.**	**.**	**.**	**10**	**16**	**4**	**5**	**.**	**.**	**.**	**.**	**.**	**35**
Portunus spp.	.	.	.	4	9	2	7	1	.	12	8	3	46
Prionotus scitulus	12	2	.	12	7	3	3	4	2	32	2	2	81

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Prionotus tribulus	16	9	9	6	2	1	.	1	2	3	11	2	62
Rhinoptera bonasus	.	3	.	.	5	3	4	3	3	.	1	5	27
Sciaenops ocellatus	**23**	**19**	**14**	**80**	**130**	**48**	**24**	**56**	**24**	**68**	**162**	**110**	**758**
Scomberomorus maculatus	.	.	.	.	.	.	.	.	**1**	.	.	.	**1**
Scorpaena brasiliensis	.	.	.	1	.	.	1	.	.	.	.	.	2
Selene vomer	.	.	.	.	1	.	3	1	.	.	.	.	5
Serraniculus pumilio	1	.	.	.	.	.	.	.	.	5	.	1	7
Sphoeroides nephelus	2	1	.	.	17	6	.	2	.	.	25	5	58
Sphyraena barracuda	.	.	.	.	.	.	.	.	**1**	.	.	.	**1**
Sphyrna tiburo	.	.	.	**1**	**3**	.	.	**2**	.	**1**	.	.	**7**
Stephanolepis hispida	1	.	.	.	1	1	.	.	.	1	9	.	13
Strongylura marina	3	64	2	.	8	4	.	6	8	1	3	1	100
Strongylura notata	.	.	1	.	.	.	.	3	.	1	3	3	11
Strongylura spp.	.	.	.	1	3	.	1	.	.	.	.	.	5
Strongylura timucu	.	.	.	.	4	2	1	.	1	.	.	.	8
Syacium papillosum	.	.	.	.	.	.	1	.	.	.	.	.	1
Symphurus plagiusa	18	.	12	17	1	6	5	3	1	20	6	1	90
Syngnathus floridae	.	.	.	.	.	.	2	5	1	20	.	.	28
Syngnathus louisianae	.	.	.	.	.	.	3	.	.	3	.	.	6
Syngnathus scovelli	1	1	.	.	.	.	11	10	7	3	.	.	33
Synodus foetens	4	.	.	2	8	5	3	1	1	8	1	2	35
Trachinotus carolinus	.	.	.	.	.	**2**	.	**1**	.	**1**	.	.	**4**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=61	E=51	E=51	E=652
Trachinotus falcatus	**.**	**2**	**1**	**.**	**.**	**6**	**.**	**12**	**42**	**2**	**8**	**.**	**73**
Trinectes maculatus	9	30	16	.	1	3	2	2	2	3	1	1	70
Tylosurus crocodilus	.	.	.	.	.	1	.	.	.	.	.	.	1
Urophycis floridana	2	.	.	1	.	.	.	.	.	.	.	.	3
Total	**6,484**	**7,908**	**9,305**	**4,049**	**3,314**	**14,925**	**6,700**	**12,697**	**6,642**	**10,333**	**5,999**	**3,143**	**91,499**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.11: Summary by gear and stratum of taxa collected during Cedar Key stratified-random sampling, 2025.

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=13	E=131	E=108	E=168	E=192	E=40	E=652
Acanthostracion quadricornis	1	.	.	.	1	8	10
Achirus lineatus	.	1	4	6	.	.	11
Alburnops petersoni	.	.	.	32	.	.	32
Alosa alabamae	.	.	.	.	4	.	4
Alosa chrysochloris	.	.	.	.	1	.	1
Ameiurus catus	.	.	.	6	6	.	12
Anchoa hepsetus	7	1,989	167	17	.	3	2,183
Anchoa mitchilli	57	4,815	5,705	13,355	.	274	24,206
Ancylopsetta quadrocellata	.	.	.	.	4	2	6
Archosargus probatocephalus	**.**	**1**	**1**	**1**	**80**	**.**	**83**
Ariopsis felis	1	215	29	4	1,097	24	1,370
Astroscopus y-graecum	.	.	2	.	.	1	3
Bagre marinus	.	67	12	.	88	3	170
Bairdiella chrysoura	106	8	108	87	2,857	121	3,287
Bathygobius soporator	.	.	1	17	.	.	18
***Brevoortia* spp.**	**.**	**790**	**133**	**382**	**764**	**.**	**2,069**
Calamus arctifrons	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Callinectes sapidus	**2**	**114**	**107**	**387**	**205**	**26**	**841**
Caranx hippos	**.**	**1**	**.**	**.**	**70**	**.**	**71**
Caranx latus	.	.	.	.	1	.	1
Centropomus undecimalis	**.**	**.**	**.**	**3**	**83**	**.**	**86**
Centropristis striata	**5**	**.**	**.**	**.**	**1**	**3**	**9**
Chaetodipterus faber	.	3	16	.	111	4	134
Chasmodes saburrae	2	.	1	.	.	.	3
Chilomycterus schoepfii	3	7	2	1	15	15	43
Chloroscombrus chrysurus	.	1	1	1	.	.	3

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=13	E=131	E=108	E=168	E=192	E=40	E=652
Citharichthys macrops	.	2	.	.	.	10	12
Ctenogobius boleosoma	.	8	3	13	.	.	24
Ctenogobius smaragdus	.	.	.	1	.	.	1
Cynoscion arenarius	**1**	**62**	**172**	**143**	**30**	**13**	**421**
Cynoscion nebulosus	**8**	**1**	**12**	**21**	**156**	**.**	**198**
Cyprinodon variegatus	.	2	4	9	.	.	15
Diplectrum formosum	**.**	**.**	**.**	**.**	**.**	**6**	**6**
Diplodus holbrookii	.	.	.	.	.	1	1
Dorosoma cepedianum	.	.	.	.	165	.	165
Echeneis neucratoides	.	.	.	.	17	.	17
Elops saurus	**.**	**1**	**1**	**4**	**890**	**.**	**896**
Etropus crossotus	1	18	16	1	89	177	302
Eucinostomus gula	7	38	300	72	109	45	571
Eucinostomus harengulus	1	48	168	411	51	2	681
Eucinostomus spp.	257	52	880	2,298	.	1	3,488
Farfantepenaeus duorarum	**.**	**2**	**1**	**.**	**5**	**11**	**19**
***Farfantepenaeus* spp.**	**1**	**22**	**55**	**21**	**.**	**4**	**103**
Fundulus confluentus	.	.	.	12	.	.	12
Fundulus grandis	.	3	66	460	68	.	597
Fundulus seminolis	.	.	.	117	.	.	117
Fundulus similis	.	3	72	26	15	.	116
Fundulus xenicus	.	2	.	272	.	.	274
Gambusia holbrooki	.	.	.	453	.	.	453
Gobiosoma bosc	.	3	1	46	.	.	50
Gobiosoma robustum	.	1	2	5	.	2	10
Gobiosoma spp.	.	1	.	13	.	.	14
Gymnura lessae	.	.	.	.	36	1	37
Haemulon plumierii	**45**	**.**	**.**	**.**	**.**	**1**	**46**

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=13	E=131	E=108	E=168	E=192	E=40	E=652
Harengula jaguana	108	12	103	15	1,579	1	1,818
Hippocampus erectus	.	1	1	.	.	4	6
Hypanus americanus	.	.	.	.	10	.	10
Hypanus sabinus	.	27	23	1	1,446	53	1,550
Hypanus say	.	2	.	.	391	6	399
Hypleurochilus caudovittatus	.	.	.	.	.	1	1
Hyporhamphus meeki	.	.	.	.	1	.	1
Hyporhamphus spp.	.	1	1	.	.	.	2
Labidesthes vanhyningi	.	.	.	7	.	.	7
Lagodon rhomboides	739	642	312	1,005	2,068	50	4,816
Leiostomus xanthurus	**.**	**3,613**	**5,085**	**4,733**	**1,774**	**166**	**15,371**
Lepisosteus osseus	.	.	.	2	14	.	16
Lepisosteus platyrhincus	.	.	.	4	.	.	4
Lepomis macrochirus	.	.	.	8	.	.	8
Lepomis punctatus	.	.	.	11	.	.	11
Lepomis spp.	.	.	.	5	.	.	5
Limulus polyphemus	.	3	.	1	69	1	74
Litopenaeus setiferus	**.**	**16**	**214**	**290**	**5,139**	**62**	**5,721**
Lucania goodei	.	.	.	2	.	.	2
Lucania parva	.	.	.	36	.	.	36
Lutjanus griseus	**2**	**.**	**3**	**19**	**16**	**.**	**40**
Lutjanus synagris	**4**	**.**	**.**	**.**	**.**	**3**	**7**
Megalops atlanticus	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Membras martinica	1	1,118	3,502	2,259	.	.	6,880
Menidia spp.	1	107	1,065	1,077	.	.	2,250
***Menippe* spp.**	**.**	**5**	**2**	**.**	**3**	**26**	**36**
Menticirrhus americanus	**.**	**109**	**354**	**7**	**105**	**10**	**585**
Menticirrhus saxatilis	**.**	**8**	**15**	**.**	**1**	**.**	**24**

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=13	E=131	E=108	E=168	E=192	E=40	E=652
Microgobius gulosus	.	.	.	1	.	.	1
Microgobius thalassinus	.	1	1	.	.	.	2
Micropogonias undulatus	**.**	**73**	**140**	**16**	**251**	**14**	**494**
Micropterus salmoides	.	.	.	12	.	.	12
Monacanthus ciliatus	3	.	.	.	.	.	3
Mugil cephalus	**.**	**37**	**226**	**762**	**3,231**	**.**	**4,256**
Mugil curema	**.**	**3**	**.**	**.**	**275**	**.**	**278**
Mugil trichodon	**.**	**2**	**29**	**14**	**98**	**.**	**143**
Notemigonus crysoleucas	.	.	.	1	.	.	1
Ogcocephalus cubifrons	2	2	9	.	371	26	410
Oligoplites saurus	1	28	42	33	39	.	143
Opisthonema oglinum	136	9	2	.	98	.	245
Opsanus beta	2	.	.	.	2	3	7
Opsopoeodus emiliae	.	.	.	1	.	.	1
Orthopristis chrysoptera	99	10	37	.	105	45	296
Paralichthys albigutta	**1**	**16**	**14**	**5**	**89**	**4**	**129**
Paralichthys lethostigma	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Peprilus burti	.	.	.	.	8	.	8
Peprilus paru	.	1	.	.	49	.	50
Poecilia latipinna	.	.	.	45	.	.	45
Pogonias cromis	**.**	**4**	**18**	**.**	**397**	**.**	**419**
Pomatomus saltatrix	**.**	**2**	**.**	**.**	**33**	**.**	**35**
Portunus spp.	1	18	14	.	.	13	46
Prionotus scitulus	.	17	16	.	2	46	81
Prionotus tribulus	.	13	12	7	22	8	62
Rhinoptera bonasus	.	.	.	.	27	.	27
Sciaenops ocellatus	**.**	**3**	**90**	**271**	**391**	**3**	**758**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**1**	**.**	**1**

Species	Gear and Strata						Total
	21.3-m bay seine			21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	Veg	Unveg	Shore				
	E=13	E=131	E=108	E=168	E=192	E=40	E=652
Scorpaena brasiliensis	.	.	.	.	.	2	2
Selene vomer	.	.	2	.	3	.	5
Serraniculus pumilio	3	.	.	.	.	4	7
Sphoeroides nephelus	.	17	25	11	4	1	58
Sphyraena barracuda	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Sphyrna tiburo	**.**	**.**	**.**	**.**	**7**	**.**	**7**
Stephanolepis hispida	.	4	7	1	.	1	13
Strongylura marina	.	6	4	8	82	.	100
Strongylura notata	.	.	6	.	5	.	11
Strongylura spp.	.	1	3	1	.	.	5
Strongylura timucu	.	.	.	3	5	.	8
Syacium papillosum	.	.	.	.	.	1	1
Symphurus plagiusa	.	24	30	7	.	29	90
Syngnathus floridae	27	.	1	.	.	.	28
Syngnathus louisianae	3	.	.	.	.	3	6
Syngnathus scovelli	24	1	.	7	.	1	33
Synodus foetens	3	4	12	3	4	9	35
Trachinotus carolinus	**.**	**.**	**2**	**.**	**2**	**.**	**4**
Trachinotus falcatus	**.**	**2**	**11**	**.**	**60**	**.**	**73**
Trinectes maculatus	.	2	3	61	1	3	70
Tylosurus crocodilus	.	.	.	1	.	.	1
Urophycis floridana	.	.	.	.	.	3	3
Total	**1,665**	**14,246**	**19,478**	**29,450**	**25,299**	**1,361**	**91,499**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline (’Shore’ or offshore) within 5-m. Sampling with 21.3-m river seine, 183-m haul seine, and 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.12: Summary by zone of taxa collected during Cedar Key stratified-random sampling, 2025.

Species	Zone			Total
	B	C	F	
	E=344	E=248	E=60	E=652
Acanthostracion quadricornis	.	10	.	10
Achirus lineatus	6	4	1	11
Alburnops petersoni	.	.	32	32
Alosa alabamae	4	.	.	4
Alosa chrysochloris	1	.	.	1
Ameiurus catus	6	.	6	12
Anchoa hepsetus	308	1,874	1	2,183
Anchoa mitchilli	18,240	3,100	2,866	24,206
Ancylopsetta quadrocellata	.	6	.	6
Archosargus probatocephalus	**24**	**59**	**.**	**83**
Ariopsis felis	867	503	.	1,370
Astroscopus y-graecum	1	2	.	3
Bagre marinus	76	94	.	170
Bairdiella chrysoura	2,293	986	8	3,287
Bathygobius soporator	10	.	8	18
***Brevoortia* spp.**	**2,027**	**38**	**4**	**2,069**
Calamus arctifrons	**.**	**1**	**.**	**1**
Callinectes sapidus	**439**	**204**	**198**	**841**
Caranx hippos	**58**	**13**	**.**	**71**
Caranx latus	.	1	.	1
Centropomus undecimalis	**47**	**38**	**1**	**86**
Centropristis striata	**.**	**9**	**.**	**9**
Chaetodipterus faber	92	42	.	134
Chasmodes saburrae	1	2	.	3
Chilomycterus schoepfii	6	37	.	43
Chloroscombrus chrysurus	3	.	.	3
Citharichthys macrops	6	6	.	12

Species	Zone			Total
	B	C	F	
	E=344	E=248	E=60	E=652
Ctenogobius boleosoma	17	2	5	24
Ctenogobius smaragdus	1	.	.	1
Cynoscion arenarius	**312**	**108**	**1**	**421**
Cynoscion nebulosus	**140**	**51**	**7**	**198**
Cyprinodon variegatus	14	.	1	15
Diplectrum formosum	**.**	**6**	**.**	**6**
Diplodus holbrookii	1	.	.	1
Dorosoma cepedianum	140	25	.	165
Echeneis neucratoides	15	2	.	17
Elops saurus	**649**	**247**	**.**	**896**
Etropus crossotus	162	140	.	302
Eucinostomus gula	124	412	35	571
Eucinostomus harengulus	245	200	236	681
Eucinostomus spp.	917	1,070	1,501	3,488
Farfantepenaeus duorarum	**10**	**9**	**.**	**19**
***Farfantepenaeus* spp.**	**59**	**41**	**3**	**103**
Fundulus confluentus	5	.	7	12
Fundulus grandis	485	33	79	597
Fundulus seminolis	.	.	117	117
Fundulus similis	66	50	.	116
Fundulus xenicus	270	.	4	274
Gambusia holbrooki	21	.	432	453
Gobiosoma bosc	14	.	36	50
Gobiosoma robustum	1	4	5	10
Gobiosoma spp.	.	1	13	14
Gymnura lessae	2	35	.	37
Haemulon plumierii	**.**	**46**	**.**	**46**
Harengula jaguana	1,371	447	.	1,818
Hippocampus erectus	.	6	.	6

Species	Zone			Total
	B	C	F	
	E=344	E=248	E=60	E=652
Hypanus americanus	3	7	.	10
Hypanus sabinus	520	1,029	1	1,550
Hypanus say	218	181	.	399
Hypleurochilus caudovittatus	1	.	.	1
Hyporhamphus meeki	.	1	.	1
Hyporhamphus spp.	1	1	.	2
Labidesthes vanhyningi	.	.	7	7
Lagodon rhomboides	1,795	2,783	238	4,816
Leiostomus xanthurus	**10,241**	**4,635**	**495**	**15,371**
Lepisosteus osseus	12	3	1	16
Lepisosteus platyrhincus	3	.	1	4
Lepomis macrochirus	.	.	8	8
Lepomis punctatus	.	.	11	11
Lepomis spp.	.	.	5	5
Limulus polyphemus	5	69	.	74
Litopenaeus setiferus	**5,314**	**352**	**55**	**5,721**
Lucania goodei	.	.	2	2
Lucania parva	2	.	34	36
Lutjanus griseus	**25**	**5**	**10**	**40**
Lutjanus synagris	**1**	**6**	**.**	**7**
Megalops atlanticus	**1**	**.**	**.**	**1**
Membras martinica	3,759	2,907	214	6,880
Menidia spp.	908	878	464	2,250
***Menippe* spp.**	**2**	**34**	**.**	**36**
Menticirrhus americanus	**372**	**213**	**.**	**585**
Menticirrhus saxatilis	**13**	**11**	**.**	**24**
Microgobius gulosus	.	.	1	1
Microgobius thalassinus	2	.	.	2
Micropogonias undulatus	**358**	**136**	**.**	**494**

Species	Zone			Total
	B	C	F	
	E=344	E=248	E=60	E=652
Micropterus salmoides	.	.	12	12
Monacanthus ciliatus	.	3	.	3
Mugil cephalus	**3,520**	**724**	**12**	**4,256**
Mugil curema	**249**	**29**	**.**	**278**
Mugil trichodon	**45**	**95**	**3**	**143**
Notemigonus crysoleucas	.	.	1	1
Ogcocephalus cubifrons	6	404	.	410
Oligoplites saurus	75	59	9	143
Opisthonema oglinum	67	178	.	245
Opsanus beta	.	7	.	7
Opsopoeodus emiliae	.	.	1	1
Orthopristis chrysoptera	11	285	.	296
Paralichthys albigutta	**54**	**72**	**3**	**129**
Paralichthys lethostigma	**1**	**.**	**.**	**1**
Peprilus burti	7	1	.	8
Peprilus paru	47	3	.	50
Poecilia latipinna	31	.	14	45
Pogonias cromis	**314**	**105**	**.**	**419**
Pomatomus saltatrix	**22**	**13**	**.**	**35**
Portunus spp.	15	31	.	46
Prionotus scitulus	22	59	.	81
Prionotus tribulus	29	33	.	62
Rhinoptera bonasus	15	12	.	27
Sciaenops ocellatus	**586**	**51**	**121**	**758**
Scomberomorus maculatus	**1**	**.**	**.**	**1**
Scorpaena brasiliensis	.	2	.	2
Selene vomer	2	3	.	5
Serraniculus pumilio	.	7	.	7
Sphoeroides nephelus	35	22	1	58

Species	Zone			Total
	B	C	F	
	E=344	E=248	E=60	E=652
Sphyraena barracuda	**.**	**1**	**.**	**1**
Sphyrna tiburo	**.**	**7**	**.**	**7**
Stephanolepis hispida	6	7	.	13
Strongylura marina	35	65	.	100
Strongylura notata	4	7	.	11
Strongylura spp.	3	2	.	5
Strongylura timucu	8	.	.	8
Syacium papillosum	.	1	.	1
Symphurus plagiusa	68	21	1	90
Syngnathus floridae	.	28	.	28
Syngnathus louisianae	1	5	.	6
Syngnathus scovelli	3	25	5	33
Synodus foetens	9	26	.	35
Trachinotus carolinus	**2**	**2**	**.**	**4**
Trachinotus falcatus	**50**	**23**	**.**	**73**
Trinectes maculatus	7	6	57	70
Tylosurus crocodilus	1	.	.	1
Urophycis floridana	2	1	.	3
Total	**58,465**	**25,640**	**7,394**	**91,499**

Zone B encompassed the northern portion of the universe and included all tidal creeks; Zone C encompassed the southern portion of the universe; Zone F encompassed the lower Suwanee River. Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.5 Tampa Bay

Table A.13: Monthly summary of taxa collected during Tampa Bay stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Acanthostracion quadricornis	17	2	20	33	11	11	9	2	16	18	4	24	167
Achirus lineatus	6	4	1	16	3	9	22	15	22	19	11	6	134
Aetobatus narinari	.	.	.	.	.	.	.	1	.	1	.	.	2
Aluterus schoepfii	1	.	.	2	.	.	2	.	.	1	.	.	6
Ameiurus catus	2	.	.	.	.	.	.	.	.	.	.	.	2
Anarchopterus criniger	.	1	.	.	.	.	.	.	.	.	.	.	1
Anchoa cubana	270	.	.	1,992	27	.	.	14	52	2	227	5	2,589
Anchoa hepsetus	.	.	.	.	232	114	16	2	13	74	.	2	453
Anchoa mitchilli	5,571	10,222	1,069	18,413	3,128	1,175	1,107	29,014	5,348	47,433	143,208	12,650	278,338
Anchoa sp.	.	.	.	.	.	.	.	.	1	.	.	.	1
Ancylopsetta quadrocellata	1	.	1	.	.	.	.	.	.	.	.	.	2
Archosargus probatocephalus	**69**	**219**	**63**	**39**	**55**	**83**	**43**	**91**	**36**	**55**	**51**	**28**	**832**
Argopecten irradians	**.**	**.**	**.**	**.**	**1**	**1**	**1**	**.**	**.**	**.**	**.**	**2**	**5**
Ariopsis felis	226	197	133	162	134	322	402	262	212	294	43	47	2,434
Astroscopus y-graecum	.	1	.	.	.	.	.	.	.	.	.	.	1
Bagre marinus	.	.	.	.	.	3	4	2	8	29	.	.	46
Bairdiella chrysoura	4	376	205	481	308	320	567	413	278	61	92	263	3,368
Bathygobius soporator	1	1	.	.	.	.	.	.	.	.	26	3	31

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Belonesox belizanus	.	.	.	1	.	.	.	1	.	.	.	.	2
***Brevoortia* spp.**	**5**	**6**	**.**	**1,903**	**3**	**533**	**125**	**37**	**27**	**8**	**.**	**.**	**2,647**
Calamus penna	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**3**	**3**
Callinectes ornatus	.	.	1	.	.	.	.	.	.	.	.	.	1
Callinectes sapidus	**168**	**39**	**107**	**170**	**79**	**94**	**114**	**33**	**99**	**28**	**32**	**63**	**1,026**
Caranx crysos	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**4**	**.**	**.**	**5**
Caranx hippos	**.**	**6**	**.**	**3**	**2**	**2**	**17**	**7**	**.**	**51**	**3**	**7**	**98**
Carcharhinus limbatus	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**
Centropomus undecimalis	**86**	**111**	**51**	**61**	**35**	**126**	**45**	**119**	**55**	**71**	**94**	**59**	**913**
Centropristis striata	**.**	**.**	**.**	**.**	**1**	**.**	**1**	**.**	**.**	**.**	**21**	**.**	**23**
Chaetodipterus faber	.	.	25	29	20	43	9	47	55	16	1	24	269
Chasmodes saburrae	.	.	1	2	.	5	5	6	7	11	5	8	50
Chilomycterus schoepfii	38	6	24	33	9	21	20	7	10	19	16	22	225
Chloroscombrus chrysurus	1	.	.	.	281	.	1	.	4	.	.	.	287
Citharichthys macrops	.	.	.	2	.	.	.	.	.	.	3	.	5
Corvula batabana	.	.	.	.	.	.	.	.	.	.	1	.	1
Ctenogobius boleosoma	1	.	.	.	1	.	.	.	.	.	.	.	2
Cynoscion arenarius	**4**	**.**	**.**	**9**	**1**	**1**	**173**	**41**	**76**	**41**	**18**	**.**	**364**
Cynoscion nebulosus	**9**	**57**	**98**	**11**	**21**	**93**	**80**	**65**	**140**	**115**	**275**	**18**	**982**
Cyprinodon variegatus	48	95	15	28	1	5	2	3	7	19	6	29	258
Diapterus auratus	9	12	.	8	.	33	1	9	87	1	1	8	169
Diodon holocanthus	.	.	.	.	.	.	.	.	.	.	1	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Diplectrum formosum	**9**	**.**	**1**	**5**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**16**
Diplodus holbrookii	.	.	.	3	4	8	6	2	.	2	56	.	81
Dorosoma cepedianum	.	.	.	.	.	.	4	.	.	25	.	.	29
Dorosoma petenense	.	2	.	7	.	.	.	.	14	178	.	.	201
Echeneis neucratoides	.	.	.	1	.	.	.	.	.	.	.	1	2
Elops saurus	**1,692**	**129**	**733**	**147**	**307**	**198**	**132**	**165**	**70**	**247**	**120**	**237**	**4,177**
Elops sp.	1	.	.	.	.	.	.	.	.	.	.	.	1
Etropus crossotus	.	.	2	4	.	.	.	.	.	.	1	.	7
Eucinostomus gula	793	1,147	3,257	1,125	596	531	495	2,448	1,886	2,939	2,737	3,798	21,752
Eucinostomus harengulus	439	366	155	404	216	131	113	483	364	262	720	632	4,285
Eucinostomus spp.	1,103	1,508	55	339	85	474	1,302	3,151	3,226	6,489	7,241	5,092	30,065
Eugerres plumieri	161	16	41	109	19	64	126	437	351	103	128	32	1,587
Farfantepenaeus duorarum	**22**	**21**	**15**	**71**	**6**	**111**	**157**	**142**	**218**	**877**	**76**	**40**	**1,756**
Floridichthys carpio	94	14	37	16	8	29	1	296	61	371	157	169	1,253
Fundulus confluentus	2	.	.	.	.	.	.	.	.	.	.	.	2
Fundulus grandis	106	907	165	54	.	27	.	16	5	48	21	9	1,358
Fundulus seminolis	1	.	.	.	.	.	.	3	5	11	10	.	30
Fundulus similis	1,038	43	4	5	.	.	.	19	1	25	4	45	1,184
Fundulus sp.	1	.	.	.	.	.	.	.	.	.	.	.	1
Fundulus xenicus	8	19	11	.	.	.	.	.	.	.	.	.	38
Gambusia holbrooki	88	.	.	.	.	.	.	.	.	.	108	.	196
Gerreidae spp.	.	.	.	.	.	.	.	2	.	.	1	.	3

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Gobiesox strumosus	.	.	.	.	.	.	.	.	.	.	.	1	1
Gobionellus oceanicus	.	.	.	2	1	.	.	.	.	.	.	.	3
Gobiosoma bosc	6	11	.	2	2	8	2	4	4	13	21	3	76
Gobiosoma longipala	1	.	.	.	.	.	4	.	.	.	.	.	5
Gobiosoma robustum	15	12	5	20	8	9	5	3	1	7	3	12	100
Gobiosoma spp.	9	6	.	1	9	6	13	6	32	15	13	15	125
Gymnura lessae	.	2	1	.	.	.	2	.	.	1	.	.	6
Haemulon plumierii	**.**	**.**	**.**	**1**	**3**	**4**	**.**	**2**	**8**	**9**	**7**	**11**	**45**
Harengula jaguana	200	2,259	82	107	86	129	279	807	2,706	621	956	837	9,069
Hemiramphidae spp.	2	.	.	.	.	.	.	.	.	.	.	.	2
Hemiramphus brasiliensis	.	.	3	.	.	.	.	.	.	.	.	.	3
Hippocampus erectus	3	.	.	2	.	2	2	1	.	1	1	.	12
Hippocampus zosterae	7	.	1	.	1	2	2	.	.	.	1	4	18
Hypanus americanus	.	.	1	1	.	.	3	.	2	.	.	.	7
Hypanus sabinus	26	26	87	34	68	53	86	66	98	63	12	8	627
Hypanus say	.	1	1	4	5	7	9	2	6	1	3	.	39
Hyporhamphus meeki	.	1	.	1	.	.	.	.	1	.	1	.	4
Hyporhamphus sp.	.	.	.	.	1	.	.	.	.	.	.	.	1
Hyporhamphus unifasciatus	.	.	.	.	.	.	.	.	.	.	1	.	1
Labidesthes vanhyningi	.	.	.	.	.	.	.	.	1	.	.	.	1
Lagocephalus laevigatus	.	.	.	.	1	.	.	.	.	.	.	.	1
Lagodon rhomboides	311	5,136	2,357	6,717	5,935	3,887	3,689	2,869	6,470	3,154	3,528	1,835	45,888

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Leiostomus xanthurus	**9**	**3,679**	**334**	**834**	**67**	**133**	**250**	**39**	**136**	**107**	**7**	**.**	**5,595**
Lepisosteus osseus	.	.	.	.	.	.	.	1	.	.	.	.	1
Lepisosteus platyrhincus	.	.	.	.	.	.	.	.	.	.	.	1	1
Lepomis macrochirus	3	22	.	.	.	.	.	17	4	2	.	.	48
Lepomis microlophus	.	6	.	.	.	.	.	.	.	1	.	.	7
Lepomis sp.	.	.	.	.	.	.	.	.	1	.	.	.	1
Limulus polyphemus	.	.	1	5	.	.	4	2	3	24	.	.	39
Lophogobius cyprinoides	5	38	.	2	.	1	.	1	.	6	2	1	56
Lucania goodei	4	.	.	.	.	.	.	.	1	.	.	.	5
Lucania parva	543	1,004	9	229	45	971	231	108	952	1,315	379	114	5,900
Lutjanus griseus	**5**	**1**	**.**	**.**	**6**	**15**	**14**	**58**	**29**	**12**	**8**	**.**	**148**
Lutjanus synagris	**1**	**1**	**1**	**1**	**.**	**.**	**.**	**.**	**.**	**1**	**8**	**2**	**15**
Mayaheros urophthalmus	23	8	.	1	.	.	1	.	3	.	1	.	37
Membras martinica	.	.	.	2	.	23	4	3	.	3	.	.	35
Menidia spp.	467	1,313	1,026	703	441	1,858	6,150	2,405	1,200	1,038	2,016	829	19,446
***Menippe* spp.**	**9**	**1**	**2**	**7**	**.**	**.**	**1**	**.**	**.**	**16**	**.**	**.**	**36**
Menticirrhus americanus	**1**	**.**	**31**	**47**	**3**	**6**	**29**	**12**	**23**	**82**	**3**	**.**	**237**
Menticirrhus littoralis	**.**	**.**	**1**	**1**	**.**	**24**	**.**	**.**	**.**	**12**	**1**	**.**	**39**
Menticirrhus saxatilis	**2**	**2**	**3**	**9**	**.**	**.**	**.**	**.**	**.**	**3**	**2**	**1**	**22**
Menticirrhus sp.	.	.	.	.	.	.	.	.	.	1	.	.	1
Microgobius gulosus	18	84	23	42	199	274	341	289	312	216	232	162	2,192
Microgobius thalassinus	.	.	.	1	.	.	35	2	.	.	.	.	38

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Micropogonias undulatus	**.**	**.**	**.**	**2**	**.**	**.**	**4**	**.**	**1**	**2**	**.**	**.**	**9**
Monacanthus ciliatus	.	.	.	.	.	.	.	.	.	.	.	3	3
Mugil cephalus	**396**	**55**	**118**	**117**	**33**	**57**	**13**	**17**	**4**	**14**	**16**	**47**	**887**
Mugil curema	**54**	**6**	**6**	**72**	**7**	**5**	**3**	**10**	**.**	**14**	**8**	**322**	**507**
Mugil sp.	.	.	.	.	.	.	.	.	.	.	.	1	1
Mugil trichodon	**238**	**68**	**49**	**25**	**3**	**175**	**11**	**18**	**4**	**14**	**41**	**72**	**718**
Mycteroperca microlepis	**.**	**.**	**.**	**.**	**1**	**1**	**1**	**.**	**5**	**.**	**15**	**.**	**23**
Nicholsina usta	.	.	.	1	.	.	.	.	.	.	2	.	3
Ogcocephalus cubifrons	.	.	.	3	.	.	2	.	.	.	.	.	5
Oligoplites saurus	.	.	2	6	10	68	41	80	54	83	19	4	367
Opisthonema oglinum	.	2	437	7	243	516	1,155	112	272	3,238	262	128	6,372
Opsanus beta	1	2	2	5	9	9	29	18	12	10	8	10	115
Oreochromis niloticus	2	.	.	2	.	.	.	.	.	.	.	.	4
Oreochromis/Sarotherodon spp.	.	.	.	.	.	2	2	16	.	.	.	.	20
Orthopristis chrysoptera	4	63	32	759	277	209	188	76	144	85	96	56	1,989
Paraclinus marmoratus	.	.	.	.	.	.	.	.	.	.	.	2	2
Paralichthys albigutta	**9**	**17**	**21**	**27**	**26**	**18**	**39**	**4**	**22**	**14**	**15**	**1**	**213**
Poecilia latipinna	168	35	241	3	.	8	.	5	1	24	4	8	497
Pogonias cromis	**.**	**.**	**1**	**1**	**1**	**6**	**1**	**5**	**17**	**11**	**8**	**1**	**52**
Portunus spp.	4	.	4	48	.	1	107	.	1	8	1	.	174
Prionotus scitulus	53	3	3	144	2	3	102	3	3	87	23	1	427
Prionotus tribulus	11	5	7	8	1	.	.	.	3	6	4	3	48

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=119	E=90	E=68	E=105	E=68	E=90	E=83	E=90	E=104	E=105	E=104	E=90	E=1,116
Pseudobatos lentiginosus	.	.	.	.	1	2	.	.	.	.	.	.	3
Pterygoplichthys disjunctivus	1	.	.	1	.	.	.	.	.	.	.	.	2
Rachycentron canadum	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**	**.**	**2**
Rhinoptera bonasus	.	73	11	11	4	1	18	17	29	11	1	2	178
Rimapenaeus spp.	3	.	.	1	.	.	1	.	.	.	.	.	5
Sardinella aurita	.	.	.	.	.	.	.	.	1	.	.	.	1
Sarotherodon melanotheron	41	.	.	.	.	1	13	.	.	.	5	5	65
Sciaenops ocellatus	**216**	**116**	**40**	**85**	**43**	**45**	**26**	**63**	**29**	**26**	**125**	**105**	**919**
Scomberomorus maculatus	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**2**	**2**	**.**	**7**
Scorpaena brasiliensis	1	.	.	1	.	.	.	.	.	1	.	.	3
Selene vomer	.	.	.	.	1	1	13	1	6	8	.	1	31
Serraniculus pumilio	1	.	.	1	.	.	.	.	.	.	.	.	2
Sphoeroides nephelus	21	10	16	9	9	5	17	5	15	4	17	24	152
Sphoeroides spengleri	2	.	.	.	.	.	.	.	.	1	1	.	4
Sphyraena barracuda	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**6**	**5**	**8**	**9**	**29**
Sphyrna lewini	.	.	.	.	.	.	1	.	.	.	.	.	1
Sphyrna tiburo	**18**	**.**	**.**	**.**	**7**	**.**	**6**	**.**	**11**	**8**	**.**	**1**	**51**
Stephanolepis hispida	2	.	2	10	12	3	2	.	.	3	4	6	44
Strongylura marina	.	.	6	3	3	6	2	.	4	3	1	1	29
Strongylura notata	399	20	63	56	35	42	58	72	118	43	86	81	1,073
Strongylura spp.	.	.	.	1	2	.	.	.	.	.	.	.	3
Strongylura timucu	4	7	.	.	1	6	.	4	1	1	13	5	42

Species	Month												Total
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
	E=119	**E=90**	**E=68**	**E=105**	**E=68**	**E=90**	**E=83**	**E=90**	**E=104**	**E=105**	**E=104**	**E=90**	**E=1,116**
Symphurus plagiusa	14	3	3	27	6	.	72	6	3	13	.	1	148
Syngnathus floridae	4	.	.	4	2	.	12	4	.	.	9	3	38
Syngnathus louisianae	3	1	1	3	6	11	16	2	.	7	5	.	55
Syngnathus scovelli	16	8	1	25	36	32	41	6	17	16	11	29	238
Syngnathus spp.	.	.	.	.	.	.	2	.	.	.	.	.	2
Synodus foetens	18	10	6	22	25	10	22	5	11	10	22	26	187
Trachinotus carolinus	**.**	**1**	**1**	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**4**
Trachinotus falcatus	**10**	**.**	**.**	**3**	**.**	**.**	**.**	**.**	**2**	**28**	**6**	**7**	**56**
Trinectes maculatus	32	103	54	65	3	18	23	30	114	56	73	22	593
Xiphophorus sp.	1	.	.	.	.	.	.	.	.	.	.	.	1
Total	**15,514**	**29,748**	**11,386**	**36,022**	**13,288**	**13,240**	**18,302**	**44,631**	**25,659**	**70,529**	**163,637**	**28,150**	**470,106**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.14: Summary by gear and stratum of taxa collected during Tampa Bay stratified-random sampling, 2025.

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=112	E=128	E=168	E=171	E=153	E=184	E=56	E=144	E=1,116
Acanthostracion quadricornis	9	1	.	.	.	38	71	48	167
Achirus lineatus	8	16	52	7	12	1	5	33	134
Aetobatus narinari	.	.	.	.	.	1	1	.	2
Aluterus schoepfii	.	.	2	.	.	.	.	4	6
Ameiurus catus	.	.	.	.	.	.	.	2	2
Anarchopterus criniger	.	1	.	.	.	.	.	.	1
Anchoa cubana	241	57	2,263	.	1	.	.	27	2,589
Anchoa hepsetus	34	.	.	112	19	.	.	288	453
Anchoa mitchilli	3,233	2,794	27,320	127,276	112,474	.	.	5,241	278,338
Anchoa sp.	1	.	.	.	.	.	.	.	1
Ancylopsetta quadrocellata	.	.	.	.	.	1	.	1	2
Archosargus probatocephalus	**8**	**.**	**17**	**12**	**21**	**506**	**189**	**79**	**832**
Argopecten irradians	**.**	**.**	**1**	**.**	**.**	**1**	**2**	**1**	**5**
Ariopsis felis	48	54	24	1	1	1,722	257	327	2,434
Astroscopus y-graecum	.	.	1	.	.	.	.	.	1
Bagre marinus	.	.	.	.	.	45	1	.	46
Bairdiella chrysoura	934	41	437	20	57	1,225	572	82	3,368
Bathygobius soporator	.	1	17	2	11	.	.	.	31
Belonesox belizanus	.	.	.	1	1	.	.	.	2
***Brevoortia* spp.**	**2**	**1,057**	**.**	**572**	**773**	**218**	**25**	**.**	**2,647**
Calamus penna	**.**	**.**	**.**	**.**	**.**	**.**	**3**	**.**	**3**
Callinectes ornatus	.	.	.	.	.	.	1	.	1
Callinectes sapidus	**40**	**34**	**68**	**51**	**73**	**206**	**132**	**422**	**1,026**
Caranx crysos	**.**	**.**	**.**	**.**	**.**	**1**	**4**	**.**	**5**
Caranx hippos	**.**	**1**	**4**	**1**	**.**	**73**	**18**	**1**	**98**
Carcharhinus limbatus	**.**	**.**	**.**	**.**	**.**	**1**	**1**	**.**	**2**

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=112	E=128	E=168	E=171	E=153	E=184	E=56	E=144	E=1,116
Centropomus undecimalis	**.**	**.**	**5**	**98**	**141**	**467**	**199**	**3**	**913**
Centropristis striata	**1**	**.**	**.**	**.**	**.**	**.**	**22**	**.**	**23**
Chaetodipterus faber	1	3	5	1	.	134	104	21	269
Chasmodes saburrae	26	2	21	1	.	.	.	.	50
Chilomycterus schoepfii	16	4	5	1	.	63	65	71	225
Chloroscombrus chrysurus	.	.	1	.	.	.	283	3	287
Citharichthys macrops	.	.	.	.	.	.	3	2	5
Corvula batabana	.	.	.	.	.	.	1	.	1
Ctenogobius boleosoma	1	.	1	.	.	.	.	.	2
Cynoscion arenarius	**1**	**.**	**3**	**66**	**30**	**28**	**1**	**235**	**364**
Cynoscion nebulosus	**227**	**14**	**147**	**286**	**26**	**223**	**40**	**19**	**982**
Cyprinodon variegatus	1	.	167	21	69	.	.	.	258
Diapterus auratus	.	.	1	35	19	5	109	.	169
Diodon holocanthus	.	.	.	.	.	1	.	.	1
Diplectrum formosum	**.**	**.**	**.**	**.**	**.**	**1**	**2**	**13**	**16**
Diplodus holbrookii	10	1	2	.	.	5	62	1	81
Dorosoma cepedianum	.	.	.	.	.	29	.	.	29
Dorosoma petenense	.	.	.	.	.	35	166	.	201
Echeneis neucratoides	.	.	.	.	.	1	1	.	2
Elops saurus	**.**	**4**	**8**	**25**	**60**	**3,318**	**757**	**5**	**4,177**
Elops sp.	.	.	.	.	.	.	.	1	1
Etropus crossotus	.	.	.	.	.	.	7	.	7
Eucinostomus gula	820	381	3,179	1,307	3,111	8,307	3,394	1,253	21,752
Eucinostomus harengulus	10	172	537	1,610	1,219	557	44	136	4,285
Eucinostomus spp.	6,855	523	10,362	5,896	6,133	.	.	296	30,065
Eugerres plumieri	36	4	276	292	420	316	43	200	1,587
Farfantepenaeus duorarum	**358**	**54**	**976**	**97**	**88**	**4**	**4**	**175**	**1,756**
Floridichthys carpio	23	14	630	277	309	.	.	.	1,253

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=112	E=128	E=168	E=171	E=153	E=184	E=56	E=144	E=1,116
Fundulus confluentus	.	.	.	2	.	.	.	.	2
Fundulus grandis	1	5	1,100	41	190	21	.	.	1,358
Fundulus seminolis	.	.	.	27	3	.	.	.	30
Fundulus similis	7	.	1,043	24	106	4	.	.	1,184
Fundulus sp.	.	.	.	.	1	.	.	.	1
Fundulus xenicus	.	.	34	3	1	.	.	.	38
Gambusia holbrooki	.	.	.	118	78	.	.	.	196
Gerreidae spp.	.	.	.	.	3	.	.	.	3
Gobiesox strumosus	.	.	.	.	1	.	.	.	1
Gobionellus oceanicus	.	.	.	2	.	.	.	1	3
Gobiosoma bosc	.	1	.	38	31	.	.	6	76
Gobiosoma longipala	.	.	.	.	.	.	.	5	5
Gobiosoma robustum	48	5	42	1	1	.	.	3	100
Gobiosoma spp.	42	8	19	14	19	.	.	23	125
Gymnura lessae	.	.	.	.	.	5	.	1	6
Haemulon plumierii	**23**	**.**	**8**	**.**	**.**	**7**	**7**	**.**	**45**
Harengula jaguana	1,266	187	1,397	108	11	5,157	867	76	9,069
Hemiramphidae spp.	.	.	.	.	.	2	.	.	2
Hemiramphus brasiliensis	.	.	.	.	.	.	3	.	3
Hippocampus erectus	2	3	1	.	.	3	.	3	12
Hippocampus zosterae	16	.	1	1	.	.	.	.	18
Hypanus americanus	.	.	.	.	.	3	4	.	7
Hypanus sabinus	3	11	7	6	3	427	87	83	627
Hypanus say	1	1	2	.	.	21	13	1	39
Hyporhamphus meeki	2	.	.	.	.	2	.	.	4
Hyporhamphus sp.	.	1	.	.	.	.	.	.	1
Hyporhamphus unifasciatus	.	.	.	.	.	.	1	.	1
Labidesthes vanhyningi	.	.	.	1	.	.	.	.	1

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=112	E=128	E=168	E=171	E=153	E=184	E=56	E=144	E=1,116
Lagocephalus laevigatus	.	.	.	.	.	1	.	.	1
Lagodon rhomboides	10,637	1,068	7,130	578	2,095	15,954	7,634	792	45,888
Leiostomus xanthurus	**124**	**98**	**3,030**	**338**	**1,300**	**518**	**164**	**23**	**5,595**
Lepisosteus osseus	.	.	.	1	.	.	.	.	1
Lepisosteus platyrhincus	.	.	.	1	.	.	.	.	1
Lepomis macrochirus	.	.	.	41	3	.	.	4	48
Lepomis microlophus	.	.	.	7	.	.	.	.	7
Lepomis sp.	.	.	.	1	.	.	.	.	1
Limulus polyphemus	.	1	2	.	.	34	2	.	39
Lophogobius cyprinoides	.	.	.	45	9	.	.	2	56
Lucania goodei	.	.	.	1	4	.	.	.	5
Lucania parva	2,055	21	3,261	208	351	.	.	4	5,900
Lutjanus griseus	**15**	**2**	**9**	**6**	**5**	**80**	**20**	**11**	**148**
Lutjanus synagris	**4**	**.**	**1**	**.**	**.**	**.**	**8**	**2**	**15**
Mayaheros urophthalmus	.	.	1	8	23	3	.	2	37
Membras martinica	.	4	30	1	.	.	.	.	35
Menidia spp.	522	5,971	2,438	4,161	6,354	.	.	.	19,446
***Menippe* spp.**	**2**	**.**	**.**	**.**	**.**	**.**	**1**	**33**	**36**
Menticirrhus americanus	**6**	**3**	**128**	**7**	**.**	**44**	**10**	**39**	**237**
Menticirrhus littoralis	**.**	**.**	**.**	**.**	**.**	**.**	**39**	**.**	**39**
Menticirrhus saxatilis	**.**	**4**	**16**	**.**	**.**	**.**	**1**	**1**	**22**
Menticirrhus sp.	.	.	1	.	.	.	.	.	1
Microgobius gulosus	549	181	596	340	368	.	.	158	2,192
Microgobius thalassinus	.	2	.	.	.	.	.	36	38
Micropogonias undulatus	**.**	**.**	**.**	**.**	**.**	**7**	**.**	**2**	**9**
Monacanthus ciliatus	3	.	.	.	.	.	.	.	3
Mugil cephalus	**.**	**1**	**383**	**69**	**52**	**347**	**35**	**.**	**887**
Mugil curema	**.**	**1**	**1**	**3**	**2**	**480**	**20**	**.**	**507**

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=112	E=128	E=168	E=171	E=153	E=184	E=56	E=144	E=1,116
Mugil sp.	.	.	1	.	.	.	.	.	1
Mugil trichodon	**.**	**.**	**30**	**2**	**4**	**426**	**256**	**.**	**718**
Mycteroperca microlepis	**1**	**.**	**.**	**.**	**.**	**5**	**17**	**.**	**23**
Nicholsina usta	.	.	.	.	.	1	2	.	3
Ogcocephalus cubifrons	.	.	.	.	.	.	.	5	5
Oligoplites saurus	25	8	62	63	93	85	31	.	367
Opisthonema oglinum	6	2	53	5	.	5,753	536	17	6,372
Opsanus beta	4	3	2	.	2	76	13	15	115
Oreochromis niloticus	.	.	.	2	2	.	.	.	4
Oreochromis/Sarotherodon spp.	14	.	1	3	1	.	.	1	20
Orthopristis chrysoptera	562	156	227	36	76	426	283	223	1,989
Paraclinus marmoratus	2	.	.	.	.	.	.	.	2
Paralichthys albigutta	**22**	**16**	**22**	**3**	**.**	**56**	**59**	**35**	**213**
Poecilia latipinna	.	6	280	50	159	2	.	.	497
Pogonias cromis	**.**	**.**	**1**	**.**	**1**	**30**	**17**	**3**	**52**
Portunus spp.	.	2	7	.	.	1	3	161	174
Prionotus scitulus	8	10	16	1	1	21	14	356	427
Prionotus tribulus	1	3	12	1	4	7	8	12	48
Pseudobatos lentiginosus	.	.	.	.	.	.	3	.	3
Pterygoplichthys disjunctivus	.	.	.	1	.	.	.	1	2
Rachycentron canadum	**.**	**.**	**.**	**.**	**.**	**1**	**1**	**.**	**2**
Rhinoptera bonasus	.	2	.	.	.	160	16	.	178
Rimapenaeus spp.	3	.	.	.	.	.	.	2	5
Sardinella aurita	.	.	1	.	.	.	.	.	1
Sarotherodon melanotheron	.	.	.	5	38	21	1	.	65
Sciaenops ocellatus	**4**	**5**	**342**	**95**	**120**	**288**	**64**	**1**	**919**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**.**	**3**	**4**	**.**	**7**
Scorpaena brasiliensis	.	.	.	.	.	.	2	1	3

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=112	E=128	E=168	E=171	E=153	E=184	E=56	E=144	E=1,116
Selene vomer	.	.	1	.	.	15	15	.	31
Serraniculus pumilio	.	.	.	.	.	.	.	2	2
Sphoeroides nephelus	18	8	40	1	1	44	33	7	152
Sphoeroides spengleri	.	.	.	.	.	2	1	1	4
Sphyraena barracuda	**.**	**.**	**1**	**.**	**.**	**25**	**3**	**.**	**29**
Sphyrna lewini	.	.	.	.	.	.	1	.	1
Sphyrna tiburo	**.**	**.**	**.**	**.**	**.**	**37**	**14**	**.**	**51**
Stephanolepis hispida	25	4	2	.	1	3	1	8	44
Strongylura marina	2	1	2	5	1	12	6	.	29
Strongylura notata	45	30	139	51	52	730	26	.	1,073
Strongylura spp.	.	1	2	.	.	.	.	.	3
Strongylura timucu	.	.	4	11	24	3	.	.	42
Symphurus plagiusa	11	2	15	1	4	3	2	110	148
Syngnathus floridae	30	3	1	.	.	.	.	4	38
Syngnathus louisianae	20	8	8	1	.	.	.	18	55
Syngnathus scovelli	157	17	48	1	1	.	.	14	238
Syngnathus spp.	2	.	.	.	.	.	.	.	2
Synodus foetens	38	26	41	3	2	25	19	33	187
Trachinotus carolinus	**.**	**.**	**.**	**.**	**.**	**2**	**2**	**.**	**4**
Trachinotus falcatus	**.**	**1**	**11**	**.**	**.**	**14**	**30**	**.**	**56**
Trinectes maculatus	.	1	3	250	147	.	2	190	593
Xiphophorus sp.	.	.	.	.	1	.	.	.	1
Total	**29,272**	**13,127**	**68,588**	**144,861**	**136,817**	**48,930**	**16,990**	**11,521**	**470,106**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 21.3-m river seine and 183-m haul seine was stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Sampling with 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.15: Summary by zone of taxa collected during Tampa Bay stratified-random sampling, 2025.

Species	Zone									Total
	A	B	C	D	E	K	L	M	N	
	E=144	E=132	E=172	E=104	E=156	E=129	E=117	E=96	E=66	E=1,116
Acanthostracion quadricornis	14	28	4	54	67	.	.	.	.	167
Achirus lineatus	22	18	32	9	31	6	6	5	5	134
Aetobatus narinari	.	1	.	1	.	.	.	.	.	2
Aluterus schoepfii	1	3	.	.	2	.	.	.	.	6
Ameiurus catus	.	.	.	.	.	.	2	.	.	2
Anarchopterus criniger	1	.	.	.	.	.	.	.	.	1
Anchoa cubana	.	.	2,062	497	2	.	.	1	27	2,589
Anchoa hepsetus	34	.	90	.	.	293	1	25	10	453
Anchoa mitchilli	13,807	4,248	8,964	5,256	1,393	146,936	12,406	46,344	38,984	278,338
Anchoa sp.	1	.	.	.	.	.	.	.	.	1
Ancylopsetta quadrocellata	.	.	.	.	2	.	.	.	.	2
Archosargus probatocephalus	**37**	**91**	**121**	**195**	**277**	**19**	**82**	**5**	**5**	**832**
Argopecten irradians	**.**	**.**	**4**	**.**	**1**	**.**	**.**	**.**	**.**	**5**
Ariopsis felis	748	143	769	46	458	53	194	5	18	2,434
Astroscopus y-graecum	.	1	.	.	.	.	.	.	.	1
Bagre marinus	36	6	3	1	.	.	.	.	.	46
Bairdiella chrysoura	660	475	993	665	474	36	18	38	9	3,368
Bathygobius soporator	1	15	.	.	2	.	3	6	4	31
Belonesox belizanus	.	.	.	.	.	1	.	1	.	2
***Brevoortia* spp.**	**160**	**55**	**6**	**24**	**1,057**	**827**	**504**	**3**	**11**	**2,647**
Calamus penna	**.**	**.**	**.**	**3**	**.**	**.**	**.**	**.**	**.**	**3**
Callinectes ornatus	.	.	.	1	.	.	.	.	.	1
Callinectes sapidus	**90**	**111**	**182**	**75**	**181**	**136**	**128**	**84**	**39**	**1,026**
Caranx crysos	**.**	**.**	**.**	**4**	**1**	**.**	**.**	**.**	**.**	**5**
Caranx hippos	**7**	**29**	**21**	**16**	**23**	**.**	**1**	**1**	**.**	**98**
Carcharhinus limbatus	**1**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**2**
Centropomus undecimalis	**28**	**149**	**75**	**161**	**258**	**37**	**57**	**123**	**25**	**913**

Species	Zone									Total
	A	B	C	D	E	K	L	M	N	
	E=144	E=132	E=172	E=104	E=156	E=129	E=117	E=96	E=66	E=1,116
Centropristis striata	**.**	**.**	**.**	**22**	**1**	**.**	**.**	**.**	**.**	**23**
Chaetodipterus faber	88	19	80	7	64	2	8	1	.	269
Chasmodes saburrae	.	13	10	9	17	.	1	.	.	50
Chilomycterus schoepfii	34	44	29	45	67	.	1	4	1	225
Chloroscombrus chrysurus	3	.	283	.	.	.	.	1	.	287
Citharichthys macrops	.	.	.	2	3	.	.	.	.	5
Corvula batabana	.	.	.	1	.	.	.	.	.	1
Ctenogobius boleosoma	.	.	.	2	.	.	.	.	.	2
Cynoscion arenarius	**42**	**27**	**148**	**.**	**.**	**84**	**19**	**33**	**11**	**364**
Cynoscion nebulosus	**180**	**61**	**112**	**116**	**186**	**276**	**16**	**25**	**10**	**982**
Cyprinodon variegatus	114	.	27	25	2	4	.	36	50	258
Diapterus auratus	4	1	1	31	78	14	11	10	19	169
Diodon holocanthus	.	1	.	.	.	.	.	.	.	1
Diplectrum formosum	**.**	**4**	**1**	**2**	**9**	**.**	**.**	**.**	**.**	**16**
Diplodus holbrookii	.	.	.	75	6	.	.	.	.	81
Dorosoma cepedianum	1	.	28	.	.	.	.	.	.	29
Dorosoma petenense	179	20	2	.	.	.	.	.	.	201
Echeneis neucratoides	.	2	.	.	.	.	.	.	.	2
Elops saurus	**874**	**508**	**2,398**	**156**	**151**	**67**	**10**	**5**	**8**	**4,177**
Elops sp.	.	.	.	.	.	.	.	1	.	1
Etropus crossotus	.	.	.	2	5	.	.	.	.	7
Eucinostomus gula	3,055	2,271	7,233	2,024	2,232	3,390	391	1,115	41	21,752
Eucinostomus harengulus	170	173	531	117	333	846	916	575	624	4,285
Eucinostomus spp.	1,520	3,036	2,710	5,592	4,953	5,135	2,838	2,749	1,532	30,065
Eugerres plumieri	151	73	121	.	330	288	278	173	173	1,587
Farfantepenaeus duorarum	**173**	**119**	**227**	**675**	**301**	**36**	**69**	**115**	**41**	**1,756**
Floridichthys carpio	84	14	127	259	183	584	.	2	.	1,253
Fundulus confluentus	.	.	.	.	.	.	.	.	2	2
Fundulus grandis	1,062	.	10	40	15	61	26	74	70	1,358

Species	Zone									Total
	A	B	C	D	E	K	L	M	N	
	E=144	E=132	E=172	E=104	E=156	E=129	E=117	E=96	E=66	E=1,116
Fundulus seminolis	.	.	.	.	.	30	.	.	.	30
Fundulus similis	9	.	432	611	2	130	.	.	.	1,184
Fundulus sp.	.	.	.	.	.	1	.	.	.	1
Fundulus xenicus	33	.	.	.	1	.	.	.	4	38
Gambusia holbrooki	.	.	.	.	.	.	.	2	194	196
Gerreidae spp.	.	.	.	.	.	3	.	.	.	3
Gobiesox strumosus	.	.	.	.	.	.	1	.	.	1
Gobionellus oceanicus	.	.	.	.	.	.	.	1	2	3
Gobiosoma bosc	1	.	.	.	.	12	10	29	24	76
Gobiosoma longipala	.	1	4	.	.	.	.	.	.	5
Gobiosoma robustum	22	18	15	6	37	.	1	1	.	100
Gobiosoma spp.	44	15	6	1	9	4	11	21	14	125
Gymnura lessae	2	1	.	.	3	.	.	.	.	6
Haemulon plumierii	**.**	**.**	**.**	**23**	**22**	**.**	**.**	**.**	**.**	**45**
Harengula jaguana	1,001	540	4,164	2,329	895	111	17	12	.	9,069
Hemiramphidae spp.	.	.	.	.	2	.	.	.	.	2
Hemiramphus brasiliensis	.	.	.	3	.	.	.	.	.	3
Hippocampus erectus	2	3	1	4	2	.	.	.	.	12
Hippocampus zosterae	.	9	1	2	5	.	1	.	.	18
Hypanus americanus	.	.	2	5	.	.	.	.	.	7
Hypanus sabinus	164	51	170	18	191	4	8	20	1	627
Hypanus say	7	9	11	5	6	.	1	.	.	39
Hyporhamphus meeki	.	.	1	.	3	.	.	.	.	4
Hyporhamphus sp.	.	1	.	.	.	.	.	.	.	1
Hyporhamphus unifasciatus	1	.	.	.	.	.	.	.	.	1
Labidesthes vanhyningi	.	.	.	.	.	.	.	.	1	1
Lagocephalus laevigatus	.	.	.	.	1	.	.	.	.	1
Lagodon rhomboides	1,523	7,874	3,720	16,099	13,939	1,957	355	187	234	45,888
Leiostomus xanthurus	**1,057**	**1,065**	**1,124**	**323**	**375**	**1,574**	**34**	**2**	**41**	**5,595**

Species	Zone									Total
	A	B	C	D	E	K	L	M	N	
	E=144	E=132	E=172	E=104	E=156	E=129	E=117	E=96	E=66	E=1,116
Lepisosteus osseus	.	.	.	.	.	1	.	.	.	1
Lepisosteus platyrhincus	.	.	.	.	.	1	.	.	.	1
Lepomis macrochirus	.	.	.	.	.	34	5	.	9	48
Lepomis microlophus	.	.	.	.	.	7	.	.	.	7
Lepomis sp.	.	.	.	.	.	1	.	.	.	1
Limulus polyphemus	12	18	5	.	4	.	.	.	.	39
Lophogobius cyprinoides	.	.	.	.	.	43	5	4	4	56
Lucania goodei	.	.	.	.	.	5	.	.	.	5
Lucania parva	1,377	198	156	3,156	450	124	6	44	389	5,900
Lutjanus griseus	**1**	**7**	**19**	**43**	**57**	**.**	**10**	**8**	**3**	**148**
Lutjanus synagris	**.**	**.**	**.**	**12**	**2**	**.**	**.**	**1**	**.**	**15**
Mayaheros urophthalmus	4	.	.	.	.	16	16	.	1	37
Membras martinica	25	.	9	.	.	.	1	.	.	35
Menidia spp.	991	24	1,136	6,669	111	7,360	789	893	1,473	19,446
***Menippe* spp.**	**2**	**5**	**6**	**15**	**8**	**.**	**.**	**.**	**.**	**36**
Menticirrhus americanus	**71**	**12**	**117**	**1**	**6**	**10**	**2**	**18**	**.**	**237**
Menticirrhus littoralis	**.**	**.**	**.**	**37**	**2**	**.**	**.**	**.**	**.**	**39**
Menticirrhus saxatilis	**.**	**5**	**7**	**2**	**8**	**.**	**.**	**.**	**.**	**22**
Menticirrhus sp.	.	.	.	.	1	.	.	.	.	1
Microgobius gulosus	649	59	270	54	297	220	211	172	260	2,192
Microgobius thalassinus	11	.	27	.	.	.	.	.	.	38
Micropogonias undulatus	**6**	**2**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**9**
Monacanthus ciliatus	.	.	.	.	3	.	.	.	.	3
Mugil cephalus	**132**	**142**	**46**	**208**	**238**	**101**	**2**	**7**	**11**	**887**
Mugil curema	**4**	**341**	**45**	**38**	**74**	**.**	**3**	**1**	**1**	**507**
Mugil sp.	.	.	1	.	.	.	.	.	.	1
Mugil trichodon	**32**	**38**	**42**	**231**	**369**	**4**	**1**	**1**	**.**	**718**
Mycteroperca microlepis	**.**	**1**	**.**	**18**	**4**	**.**	**.**	**.**	**.**	**23**
Nicholsina usta	.	.	.	3	.	.	.	.	.	3

Species	Zone									Total
	A	B	C	D	E	K	L	M	N	
	E=144	E=132	E=172	E=104	E=156	E=129	E=117	E=96	E=66	E=1,116
Ogcocephalus cubifrons	.	2	1	.	2	.	.	.	.	5
Oligoplites saurus	71	31	50	26	33	69	27	46	14	367
Opisthonema oglinum	1,116	4,642	430	124	54	.	6	.	.	6,372
Opsanus beta	3	12	6	57	34	.	2	1	.	115
Oreochromis niloticus	.	.	.	.	.	4	.	.	.	4
Oreochromis/Sarotherodon spp.	1	14	.	.	.	2	1	1	1	20
Orthopristis chrysoptera	42	546	91	721	475	.	.	79	35	1,989
Paraclinus marmoratus	.	.	.	.	2	.	.	.	.	2
Paralichthys albigutta	**40**	**47**	**16**	**32**	**71**	**1**	**3**	**3**	**.**	**213**
Poecilia latipinna	272	.	1	4	11	61	2	77	69	497
Pogonias cromis	**4**	**6**	**12**	**9**	**17**	**2**	**.**	**.**	**2**	**52**
Portunus spp.	.	22	49	77	26	.	.	.	.	174
Prionotus scitulus	25	114	85	56	138	3	1	5	.	427
Prionotus tribulus	7	8	10	3	13	.	2	4	1	48
Pseudobatos lentiginosus	3	.	.	.	.	.	.	.	.	3
Pterygoplichthys disjunctivus	.	.	.	.	.	1	1	.	.	2
Rachycentron canadum	**.**	**.**	**1**	**1**	**.**	**.**	**.**	**.**	**.**	**2**
Rhinoptera bonasus	52	28	29	.	69	.	.	.	.	178
Rimapenaeus spp.	.	.	.	5	.	.	.	.	.	5
Sardinella aurita	.	.	.	1	.	.	.	.	.	1
Sarotherodon melanotheron	.	13	2	1	6	.	3	35	5	65
Sciaenops ocellatus	**344**	**62**	**221**	**17**	**59**	**72**	**42**	**75**	**27**	**919**
Scomberomorus maculatus	**2**	**1**	**1**	**2**	**1**	**.**	**.**	**.**	**.**	**7**
Scorpaena brasiliensis	.	.	1	.	2	.	.	.	.	3
Selene vomer	.	8	4	16	3	.	.	.	.	31
Serraniculus pumilio	.	.	.	1	1	.	.	.	.	2
Sphoeroides nephelus	18	35	23	37	36	1	1	1	.	152
Sphoeroides spengleri	.	.	.	1	3	.	.	.	.	4
Sphyraena barracuda	**.**	**3**	**.**	**8**	**18**	**.**	**.**	**.**	**.**	**29**

Species	Zone									Total
	A	B	C	D	E	K	L	M	N	
	E=144	E=132	E=172	E=104	E=156	E=129	E=117	E=96	E=66	E=1,116
Sphyrna lewini	.	.	.	1	.	.	.	.	.	1
Sphyrna tiburo	**19**	**11**	**8**	**8**	**5**	**.**	**.**	**.**	**.**	**51**
Stephanolepis hispida	1	2	.	21	19	.	.	1	.	44
Strongylura marina	4	5	4	8	2	5	.	1	.	29
Strongylura notata	63	149	117	120	521	48	28	22	5	1,073
Strongylura spp.	1	1	.	.	1	.	.	.	.	3
Strongylura timucu	2	.	1	1	3	15	14	6	.	42
Symphurus plagiusa	39	3	76	5	16	3	.	5	1	148
Syngnathus floridae	1	11	3	15	8	.	.	.	.	38
Syngnathus louisianae	13	9	10	9	12	1	.	.	1	55
Syngnathus scovelli	22	44	35	51	81	1	2	1	1	238
Syngnathus spp.	.	.	.	2	.	.	.	.	.	2
Synodus foetens	12	41	32	51	41	1	2	7	.	187
Trachinotus carolinus	**.**	**.**	**2**	**.**	**2**	**.**	**.**	**.**	**.**	**4**
Trachinotus falcatus	**9**	**.**	**5**	**25**	**17**	**.**	**.**	**.**	**.**	**56**
Trinectes maculatus	.	.	8	.	5	153	187	48	192	593
Xiphophorus sp.	.	.	.	.	.	.	1	.	.	1
Total	**32,751**	**28,068**	**40,277**	**47,642**	**32,099**	**171,327**	**19,801**	**53,402**	**44,739**	**470,106**

Zones A–E were located in Tampa Bay, while Zones K (Alafia River), L (Little Manatee River), M (Manatee River), and N (Braden River) were tributaries of Tampa Bay. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.6 Sarasota Bay

Table A.16: Monthly summary of taxa collected during Sarasota Bay stratified-random sampling, 2025.

Species	Month						Total
	Feb	Apr	Jun	Aug	Oct	Dec	
	E=26	E=26	E=26	E=26	E=26	E=26	E=156
Acanthostracion quadricornis	1	1	.	4	2	2	10
Achirus lineatus	.	.	.	2	1	2	5
Aluterus schoepfii	.	.	.	.	.	1	1
Anchoa cubana	.	14	.	.	2	.	16
Anchoa hepsetus	.	.	3	6	2	.	11
Anchoa mitchilli	.	270	22	923	12,614	91	13,920
Archosargus probatocephalus	**44**	**30**	**27**	**59**	**91**	**97**	**348**
Ariopsis felis	4	20	34	35	63	18	174
Astroscopus y-graecum	.	2	.	.	.	.	2
Bairdiella chrysoura	5	2	63	82	73	5	230
Bathygobius soporator	.	.	1	.	.	.	1
***Brevoortia* spp.**	**.**	**1**	**.**	**4**	**.**	**.**	**5**
Calamus penna	**.**	**1**	**.**	**.**	**.**	**.**	**1**
***Calamus* spp.**	**.**	**2**	**.**	**.**	**.**	**.**	**2**
Callinectes ornatus	.	2	.	.	.	.	2
Callinectes sapidus	**11**	**57**	**38**	**35**	**13**	**11**	**165**
Caranx hippos	**.**	**5**	**.**	**4**	**.**	**2**	**11**
Caranx latus	1	.	.	1	.	.	2
Centropomus undecimalis	**34**	**41**	**53**	**78**	**68**	**27**	**301**
Chaetodipterus faber	.	4	5	1	1	.	11
Chalinops pauciradiatus	1	.	.	.	.	.	1
Chasmodes saburrae	.	.	1	2	1	4	8
Chilomycterus schoepfii	8	9	7	9	35	3	71
Chloroscombrus chrysurus	.	1	.	.	.	.	1
Ctenogobius boleosoma	.	.	5	.	1	.	6

Species	Month						Total
	Feb	Apr	Jun	Aug	Oct	Dec	
	E=26	E=26	E=26	E=26	E=26	E=26	E=156
Cynoscion nebulosus	**6**	**5**	**33**	**37**	**50**	**5**	**136**
Cyprinodon variegatus	.	.	.	1	2	.	3
Diapterus auratus	.	13	28	18	12	.	71
Diplodus holbrookii	.	1	.	.	.	.	1
Elops saurus	**4**	**.**	**6**	**4**	**4**	**29**	**47**
Eucinostomus gula	144	212	91	261	306	258	1,272
Eucinostomus harengulus	15	17	74	10	9	2	127
Eucinostomus spp.	474	178	2,653	5,822	6,903	2,003	18,033
Eugerres plumieri	.	1	9	29	1	.	40
Farfantepenaeus duorarum	**51**	**18**	**274**	**252**	**552**	**72**	**1,219**
Floridichthys carpio	5	.	4	20	43	110	182
Fundulus similis	.	.	.	.	.	1	1
Gobiosoma longipala	1	.	.	.	.	.	1
Gobiosoma robustum	17	31	16	10	9	29	112
Gobiosoma spp.	.	1	5	12	4	4	26
Gymnura lessae	.	.	1	.	.	.	1
Haemulon plumierii	**.**	**.**	**.**	**1**	**24**	**.**	**25**
Harengula jaguana	1	.	35	123	432	31	622
Hippocampus erectus	.	.	.	.	.	1	1
Hippocampus zosterae	.	1	2	2	1	3	9
Hypanus americanus	1	.	.	.	.	3	4
Hypanus sabinus	.	12	4	1	2	3	22
Hypanus say	.	4	.	1	4	1	10
Hypanus sp.	.	1	.	.	.	.	1
Hyporhamphus meeki	.	.	1	.	.	.	1
Lagodon rhomboides	4,362	10,015	1,546	3,206	2,617	835	22,581
Leiostomus xanthurus	**241**	**111**	**12**	**17**	**.**	**.**	**381**
Lucania parva	22	379	1,016	1,283	1,599	1,206	5,505
Lutjanus griseus	**.**	**1**	**32**	**83**	**65**	**5**	**186**

Species	Month						Total
	Feb	Apr	Jun	Aug	Oct	Dec	
	E=26	E=26	E=26	E=26	E=26	E=26	E=156
Lutjanus synagris	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Menidia spp.	18	14	500	290	12	55	889
Menticirrhus saxatilis	**2**	**1**	**.**	**.**	**.**	**.**	**3**
Microgobius gulosus	18	53	318	129	56	55	629
Mugil cephalus	**12**	**23**	**5**	**12**	**4**	**8**	**64**
Mugil curema	**27**	**2**	**1**	**13**	**.**	**6**	**49**
Mugil trichodon	**27**	**30**	**.**	**4**	**1**	**196**	**258**
Mycteroperca microlepis	**.**	**.**	**1**	**5**	**6**	**1**	**13**
Myrophis punctatus	.	1	.	.	.	.	1
Nicholsina usta	2	.	.	.	.	.	2
Oligoplites saurus	1	2	16	6	31	.	56
Opisthonema oglinum	4	.	5	.	24	.	33
Opsanus beta	1	1	3	2	1	2	10
Oreochromis/Sarotherodon sp.	.	.	1	.	.	.	1
Orthopristis chrysoptera	18	753	72	115	115	10	1,083
Paralichthys albigutta	**7**	**12**	**5**	**7**	**8**	**1**	**40**
Pogonias cromis	**.**	**.**	**.**	**.**	**8**	**1**	**9**
Portunus spp.	2	1	.	.	.	1	4
Prionotus scitulus	5	2	1	.	2	.	10
Prionotus tribulus	1	.	1	.	.	1	3
Rhinoptera bonasus	.	2	.	.	.	.	2
Sciaenops ocellatus	**5**	**21**	**1**	**3**	**15**	**17**	**62**
Selene vomer	.	.	.	1	.	.	1
Sphoeroides nephelus	7	14	6	3	16	14	60
Sphyraena barracuda	**.**	**1**	**.**	**5**	**8**	**10**	**24**
Stephanolepis hispida	.	4	1	.	.	.	5
Strongylura marina	.	.	1	.	.	1	2
Strongylura notata	89	48	34	37	71	77	356
Strongylura sp.	.	1	.	.	.	.	1

Species	Month						Total
	Feb	Apr	Jun	Aug	Oct	Dec	
	E=26	E=26	E=26	E=26	E=26	E=26	E=156
Strongylura timucu	.	.	.	1	.	.	1
Syngnathus floridae	1	.	3	.	.	.	4
Syngnathus louisianae	.	3	1	1	1	3	9
Syngnathus scovelli	16	39	19	8	10	21	113
Syngnathus sp.	.	.	.	.	1	.	1
Synodus foetens	21	28	9	6	8	9	81
Trachinotus carolinus	**.**	**.**	**.**	**.**	**.**	**3**	**3**
Trachinotus falcatus	**.**	**.**	**2**	**9**	**.**	**.**	**11**
Total	**5,737**	**12,519**	**7,107**	**13,095**	**26,004**	**5,357**	**69,819**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.17: Summary by gear and stratum of taxa collected during Sarasota Bay stratified-random sampling, 2025.

Species	Gear and Strata					Total
	21.3-m bay seine			183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	
	E=56	E=28	E=36	E=30	E=6	E=156
Acanthostracion quadricornis	2	.	.	6	2	10
Achirus lineatus	2	.	3	.	.	5
Aluterus schoepfii	.	.	.	.	1	1
Anchoa cubana	2	.	14	.	.	16
Anchoa hepsetus	8	.	3	.	.	11
Anchoa mitchilli	12,031	1	1,887	.	1	13,920
Archosargus probatocephalus	**4**	**.**	**10**	**263**	**71**	**348**
Ariopsis felis	.	.	3	158	13	174
Astroscopus y-graecum	.	.	2	.	.	2
Bairdiella chrysoura	144	2	38	42	4	230
Bathygobius soporator	.	.	1	.	.	1
***Brevoortia* spp.**	**.**	**.**	**1**	**.**	**4**	**5**
Calamus penna	**1**	**.**	**.**	**.**	**.**	**1**
***Calamus* spp.**	**1**	**1**	**.**	**.**	**.**	**2**
Callinectes ornatus	1	.	1	.	.	2
Callinectes sapidus	**47**	**9**	**19**	**83**	**7**	**165**
Caranx hippos	**.**	**.**	**.**	**9**	**2**	**11**
Caranx latus	.	.	.	1	1	2
Centropomus undecimalis	**1**	**.**	**1**	**246**	**53**	**301**
Chaetodipterus faber	.	.	.	11	.	11
Chalinops pauciradiatus	.	1	.	.	.	1
Chasmodes saburrae	7	.	1	.	.	8
Chilomycterus schoepfii	10	.	4	42	15	71
Chloroscombrus chrysurus	.	.	.	1	.	1
Ctenogobius boleosoma	.	.	6	.	.	6
Cynoscion nebulosus	**73**	**1**	**16**	**27**	**19**	**136**

Species	Gear and Strata					Total
	21.3-m bay seine			183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	
	E=56	E=28	E=36	E=30	E=6	E=156
Cyprinodon variegatus	1	.	2	.	.	3
Diapterus auratus	.	.	.	63	8	71
Diplodus holbrookii	1	.	.	.	.	1
Elops saurus	**.**	**.**	**.**	**35**	**12**	**47**
Eucinostomus gula	460	61	591	71	89	1,272
Eucinostomus harengulus	28	23	70	3	3	127
Eucinostomus spp.	9,691	1,957	6,385	.	.	18,033
Eugerres plumieri	.	.	14	26	.	40
Farfantepenaeus duorarum	**785**	**94**	**336**	**4**	**.**	**1,219**
Floridichthys carpio	47	.	135	.	.	182
Fundulus similis	.	.	1	.	.	1
Gobiosoma longipala	.	1	.	.	.	1
Gobiosoma robustum	58	1	53	.	.	112
Gobiosoma spp.	18	.	8	.	.	26
Gymnura lessae	.	.	.	1	.	1
Haemulon plumierii	**1**	**.**	**24**	**.**	**.**	**25**
Harengula jaguana	442	34	125	18	3	622
Hippocampus erectus	1	.	.	.	.	1
Hippocampus zosterae	9	.	.	.	.	9
Hypanus americanus	.	.	.	3	1	4
Hypanus sabinus	2	.	1	19	.	22
Hypanus say	.	.	.	10	.	10
Hypanus sp.	.	.	.	1	.	1
Hyporhamphus meeki	.	1	.	.	.	1
Lagodon rhomboides	10,031	115	5,973	4,986	1,476	22,581
Leiostomus xanthurus	**15**	**8**	**335**	**6**	**17**	**381**
Lucania parva	4,639	.	866	.	.	5,505
Lutjanus griseus	**51**	**2**	**31**	**82**	**20**	**186**

Species	Gear and Strata					Total
	21.3-m bay seine			183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	
	E=56	E=28	E=36	E=30	E=6	E=156
Lutjanus synagris	**1**	**.**	**.**	**.**	**.**	**1**
Menidia spp.	307	5	577	.	.	889
Menticirrhus saxatilis	**1**	**2**	**.**	**.**	**.**	**3**
Microgobius gulosus	393	35	201	.	.	629
Mugil cephalus	**1**	**.**	**3**	**55**	**5**	**64**
Mugil curema	**.**	**.**	**.**	**14**	**35**	**49**
Mugil trichodon	**.**	**.**	**195**	**38**	**25**	**258**
Mycteroperca microlepis	**1**	**.**	**.**	**11**	**1**	**13**
Myrophis punctatus	1	.	.	.	.	1
Nicholsina usta	.	.	.	.	2	2
Oligoplites saurus	9	4	39	4	.	56
Opisthonema oglinum	2	.	.	27	4	33
Opsanus beta	2	.	1	7	.	10
Oreochromis/Sarotherodon sp.	.	.	1	.	.	1
Orthopristis chrysoptera	734	3	106	137	103	1,083
Paralichthys albigutta	**4**	**12**	**4**	**14**	**6**	**40**
Pogonias cromis	**.**	**.**	**1**	**8**	**.**	**9**
Portunus spp.	.	2	2	.	.	4
Prionotus scitulus	.	7	1	1	1	10
Prionotus tribulus	.	2	.	1	.	3
Rhinoptera bonasus	.	.	.	2	.	2
Sciaenops ocellatus	**.**	**1**	**16**	**42**	**3**	**62**
Selene vomer	.	.	.	.	1	1
Sphoeroides nephelus	13	9	10	27	1	60
Sphyraena barracuda	**1**	**.**	**3**	**19**	**1**	**24**
Stephanolepis hispida	3	.	2	.	.	5
Strongylura marina	1	.	.	1	.	2
Strongylura notata	76	5	119	113	43	356

Species	Gear and Strata					Total
	21.3-m bay seine			183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	
	E=56	E=28	E=36	E=30	E=6	E=156
Strongylura sp.	.	.	1	.	.	1
Strongylura timucu	.	.	1	.	.	1
Syngnathus floridae	2	.	2	.	.	4
Syngnathus louisianae	6	1	2	.	.	9
Syngnathus scovelli	78	7	28	.	.	113
Syngnathus sp.	1	.	.	.	.	1
Synodus foetens	19	24	26	9	3	81
Trachinotus carolinus	**.**	**.**	**.**	**.**	**3**	**3**
Trachinotus falcatus	**.**	**.**	**.**	**3**	**8**	**11**
Total	**40,270**	**2,431**	**18,301**	**6,750**	**2,067**	**69,819**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 183-m haul seine was stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.18: Summary by zone of taxa collected during Sarasota Bay stratified-random sampling, 2025.

Species	Zone					Total
	A	B	C	D	E	
	E=24	E=48	E=30	E=24	E=30	E=156
Acanthostracion quadricornis	7	2	1	.	.	10
Achirus lineatus	1	1	2	1	.	5
Aluterus schoepfii	.	1	.	.	.	1
Anchoa cubana	.	.	.	14	2	16
Anchoa hepsetus	.	3	.	6	2	11
Anchoa mitchilli	339	348	11,396	1,583	254	13,920
Archosargus probatocephalus	**30**	**63**	**45**	**109**	**101**	**348**
Ariopsis felis	3	69	62	13	27	174
Astroscopus y-graecum	.	1	.	1	.	2
Bairdiella chrysoura	31	40	72	61	26	230
Bathygobius soporator	1	.	.	.	.	1
***Brevoortia* spp.**	**.**	**5**	**.**	**.**	**.**	**5**
Calamus penna	**1**	**.**	**.**	**.**	**.**	**1**
***Calamus* spp.**	**.**	**.**	**1**	**1**	**.**	**2**
Callinectes ornatus	.	.	1	1	.	2
Callinectes sapidus	**50**	**54**	**31**	**19**	**11**	**165**
Caranx hippos	**.**	**2**	**4**	**4**	**1**	**11**
Caranx latus	.	1	.	.	1	2
Centropomus undecimalis	**55**	**122**	**47**	**24**	**53**	**301**
Chaetodipterus faber	.	1	4	5	1	11
Chalinops pauciradiatus	.	.	.	.	1	1
Chasmodes saburrae	.	5	2	.	1	8
Chilomycterus schoepfii	12	13	14	26	6	71
Chloroscombrus chrysurus	.	.	.	.	1	1
Ctenogobius boleosoma	.	.	.	1	5	6
Cynoscion nebulosus	**25**	**14**	**41**	**35**	**21**	**136**
Cyprinodon variegatus	.	3	.	.	.	3

Species	Zone					Total
	A	B	C	D	E	
	E=24	E=48	E=30	E=24	E=30	E=156
Diapterus auratus	.	1	46	17	7	71
Diplodus holbrookii	.	1	.	.	.	1
Elops saurus	**10**	**23**	**14**	**.**	**.**	**47**
Eucinostomus gula	133	363	207	312	257	1,272
Eucinostomus harengulus	17	29	19	41	21	127
Eucinostomus spp.	1,024	7,231	2,043	5,061	2,674	18,033
Eugerres plumieri	.	9	10	20	1	40
Farfantepenaeus duorarum	**43**	**128**	**269**	**230**	**549**	**1,219**
Floridichthys carpio	30	105	42	5	.	182
Fundulus similis	1	.	.	.	.	1
Gobiosoma longipala	.	.	.	1	.	1
Gobiosoma robustum	14	33	28	22	15	112
Gobiosoma spp.	.	2	8	12	4	26
Gymnura lessae	.	.	1	.	.	1
Haemulon plumierii	**.**	**.**	**.**	**25**	**.**	**25**
Harengula jaguana	64	89	67	65	337	622
Hippocampus erectus	.	.	1	.	.	1
Hippocampus zosterae	1	4	2	.	2	9
Hypanus americanus	.	1	.	1	2	4
Hypanus sabinus	14	2	4	1	1	22
Hypanus say	3	1	3	1	2	10
Hypanus sp.	.	1	.	.	.	1
Hyporhamphus meeki	.	.	.	1	.	1
Lagodon rhomboides	2,834	10,837	1,688	3,566	3,656	22,581
Leiostomus xanthurus	**8**	**244**	**88**	**41**	**.**	**381**
Lucania parva	1,142	4,296	45	.	22	5,505
Lutjanus griseus	**28**	**20**	**24**	**64**	**50**	**186**
Lutjanus synagris	**.**	**.**	**.**	**1**	**.**	**1**
Menidia spp.	140	462	.	75	212	889

Species	Zone					Total
	A	B	C	D	E	
	E=24	E=48	E=30	E=24	E=30	E=156
Menticirrhus saxatilis	**.**	**.**	**.**	**2**	**1**	**3**
Microgobius gulosus	194	17	34	133	251	629
Mugil cephalus	**2**	**34**	**12**	**14**	**2**	**64**
Mugil curema	**9**	**21**	**1**	**18**	**.**	**49**
Mugil trichodon	**208**	**23**	**.**	**23**	**4**	**258**
Mycteroperca microlepis	**6**	**2**	**3**	**1**	**1**	**13**
Myrophis punctatus	.	1	.	.	.	1
Nicholsina usta	.	2	.	.	.	2
Oligoplites saurus	21	18	6	8	3	56
Opisthonema oglinum	.	28	.	5	.	33
Opsanus beta	6	3	1	.	.	10
Oreochromis/Sarotherodon sp.	1	.	.	.	.	1
Orthopristis chrysoptera	414	345	138	149	37	1,083
Paralichthys albigutta	**6**	**11**	**11**	**9**	**3**	**40**
Pogonias cromis	**1**	**.**	**3**	**.**	**5**	**9**
Portunus spp.	1	1	.	2	.	4
Prionotus scitulus	.	2	.	6	2	10
Prionotus tribulus	1	.	1	1	.	3
Rhinoptera bonasus	.	.	.	2	.	2
Sciaenops ocellatus	**2**	**25**	**6**	**19**	**10**	**62**
Selene vomer	.	1	.	.	.	1
Sphoeroides nephelus	17	13	10	9	11	60
Sphyraena barracuda	**.**	**10**	**5**	**3**	**6**	**24**
Stephanolepis hispida	1	3	1	.	.	5
Strongylura marina	1	.	.	.	1	2
Strongylura notata	40	116	104	60	36	356
Strongylura sp.	.	.	.	.	1	1
Strongylura timucu	.	.	.	1	.	1
Syngnathus floridae	.	4	.	.	.	4

Species	Zone					Total
	A	B	C	D	E	
	E=24	E=48	E=30	E=24	E=30	E=156
Syngnathus louisianae	2	.	3	4	.	9
Syngnathus scovelli	26	48	17	7	15	113
Syngnathus sp.	.	.	.	.	1	1
Synodus foetens	5	19	16	31	10	81
Trachinotus carolinus	**.**	**3**	**.**	**.**	**.**	**3**
Trachinotus falcatus	**.**	**8**	**3**	**.**	**.**	**11**
Total	**7,025**	**25,388**	**16,707**	**11,973**	**8,726**	**69,819**

Zones A–E are the five embayments designated by the Sarasota Bay Estuary Program. Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.7 Charlotte Harbor

Table A.19: Monthly summary of taxa collected during Charlotte Harbor stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Acanthostracion quadricornis	9	1	4	8	.	17	33	2	1	8	10	2	95
Achirus lineatus	21	26	1	7	2	3	16	18	20	62	21	10	207
Albula sp.	.	.	.	.	.	1	.	.	.	.	.	.	1
Aluterus schoepfii	.	.	.	.	.	.	2	.	.	.	.	.	2
Anarchopterus criniger	2	2	.	.	.	.	50	1	.	10	1	.	66
Anchoa hepsetus	2	.	.	9	.	2,719	1	2	.	.	.	.	2,733
Anchoa mitchilli	627	3,463	3,663	8,472	19	25,278	1,245	3,937	10,273	22,064	56,014	11,022	146,077
Archosargus probatocephalus	**174**	**73**	**47**	**35**	**50**	**90**	**42**	**113**	**45**	**68**	**116**	**83**	**936**
Archosargus rhomboidalis	.	1	2	1	.	.	.	.	.	.	9	2	15
Archosargus spp.	2	1	.	.	.	.	.	1	.	.	.	.	4
Ariopsis felis	16	63	42	53	146	56	119	96	67	70	9	27	764
Atherina harringtonensis	.	1	.	.	.	.	.	.	.	.	.	.	1
Bagre marinus	.	1	1	1	2	4	5	9	11	.	3	.	37
Bairdiella chrysoura	15	19	17	91	96	966	986	388	115	135	75	8	2,911
Bathygobius soporator	48	16	.	2	1	.	.	2	.	1	22	45	137
***Brevoortia* spp.**	**140**	**84**	**3**	**120**	**.**	**14**	**.**	**56**	**.**	**.**	**.**	**.**	**417**
Calamus penna	**.**	**.**	**.**	**1**	**1**	**.**	**24**	**3**	**.**	**.**	**2**	**2**	**33**
***Calamus* spp.**	**2**	**.**	**2**	**5**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**9**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Callinectes ornatus	2	1	.	2	.	.	17	.	2	1	2	5	32
Callinectes sapidus	**190**	**116**	**67**	**153**	**80**	**51**	**146**	**46**	**70**	**41**	**16**	**15**	**991**
Caranx hippos	**3**	**2**	**2**	**3**	**1**	**7**	**.**	**.**	**4**	**3**	**4**	**2**	**31**
Carcharhinus leucas	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**	**1**	**.**	**.**	**3**
Centropomus undecimalis	**104**	**172**	**70**	**72**	**41**	**65**	**23**	**49**	**65**	**68**	**76**	**186**	**991**
Centropristis striata	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Chaetodipterus faber	2	5	.	21	33	88	15	24	100	25	10	.	323
Chasmodes saburrae	.	.	.	4	9	50	63	5	.	44	32	17	224
Chilomycterus schoepfii	65	14	45	35	20	22	59	41	22	33	21	22	399
Chloroscombrus chrysurus	19	.	.	.	1	12	12	.	4	10	.	.	58
Citharichthys macrops	.	.	.	.	.	.	.	.	.	.	.	1	1
Ctenogobius boleosoma	.	1	.	.	.	.	.	1	.	.	.	.	2
Ctenogobius smaragdus	7	3	2	.	1	3	1	1	.	.	8	.	26
Cynoscion arenarius	**13**	**.**	**1**	**24**	**.**	**4**	**48**	**5**	**50**	**28**	**1**	**.**	**174**
Cynoscion nebulosus	**15**	**3**	**12**	**5**	**5**	**69**	**69**	**125**	**59**	**59**	**16**	**2**	**439**
Cyprinodon variegatus	3	3	.	99	.	7	13	1	15	.	119	12	272
Diapterus auratus	67	33	.	5	6	59	24	20	14	6	7	15	256
Diplectrum formosum	**2**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**3**
Diplodus holbrookii	.	.	.	.	1	.	.	.	.	.	.	.	1
Echeneis neucratoides	5	.	.	1	.	.	.	.	.	1	.	.	7
Elops saurus	**11**	**57**	**88**	**27**	**7**	**15**	**7**	**13**	**45**	**11**	**10**	**.**	**291**
Epinephelus itajara	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Epinephelus morio	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Etropus crossotus	8	.	.	.	.	.	1	.	.	3	.	.	12
Eucinostomus gula	223	204	107	450	497	100	848	896	961	1,358	750	800	7,194
Eucinostomus harengulus	345	420	46	761	125	683	299	509	632	569	482	459	5,330
Eucinostomus spp.	4,569	3,178	369	648	150	1,800	3,084	4,691	8,542	8,079	8,646	7,031	50,787
Eugerres plumieri	36	98	.	76	15	208	86	335	315	140	90	52	1,451
Farfantepenaeus duorarum	**108**	**45**	**41**	**41**	**4**	**277**	**202**	**855**	**291**	**252**	**280**	**75**	**2,471**
Floridichthys carpio	46	30	28	103	63	195	278	198	595	60	262	135	1,993
Fundulus confluentus	.	.	.	.	.	.	.	.	.	.	12	.	12
Fundulus grandis	15	95	2	1	.	2	2	5	8	.	199	35	364
Fundulus similis	.	.	.	1	.	.	.	.	.	9	8	4	22
Fundulus xenicus	1	.	.	.	.	.	.	.	1	.	11	.	13
Gambusia holbrooki	24	5	.	.	.	.	.	.	.	11	120	4	164
Gerres cinereus	.	1	.	.	.	.	.	.	.	.	.	.	1
Gobiesox strumosus	1	2	.	7	1	.	1	.	.	.	.	1	13
Gobionellus oceanicus	.	2	.	.	.	.	.	.	.	.	.	.	2
Gobiosoma bosc	1	3	.	3	.	13	.	11	8	15	2	9	65
Gobiosoma longipala	2	.	.	.	.	.	.	.	.	1	.	.	3
Gobiosoma robustum	94	61	27	48	45	67	115	14	6	9	12	35	533
Gobiosoma spp.	24	6	7	6	2	27	49	31	6	34	7	11	210
Gymnura lessae	.	.	.	.	2	.	1	.	.	.	.	.	3
Haemulon plumierii	**.**	**1**	**.**	**.**	**1**	**4**	**7**	**3**	**5**	**23**	**18**	**7**	**69**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Harengula jaguana	.	.	1	2	.	2,342	38	18,316	491	1,178	76	3	22,447
Hemiramphus brasiliensis	.	.	.	.	.	10	.	.	.	.	.	.	10
Hippocampus erectus	1	.	2	7	1	1	3	.	.	7	.	.	22
Hippocampus zosterae	2	.	3	8	6	7	6	5	3	6	2	6	54
Hypanus americanus	1	3	.	6	9	14	3	5	2	19	3	1	66
Hypanus sabinus	7	5	15	1	26	4	2	.	14	13	4	10	101
Hypanus say	.	.	1	2	1	.	.	.	.	.	1	6	11
Hyporhamphus meeki	.	.	.	3	9	7	8	1	.	10	2	2	42
Hyporhamphus spp.	.	.	.	.	.	3	.	.	.	.	.	.	3
Hyporhamphus unifasciatus	.	.	.	1	.	.	.	2	.	.	.	.	3
Hypsoblennius hentz	.	.	.	1	.	2	3	.	.	.	.	.	6
Lagodon rhomboides	442	352	1,017	3,204	3,453	3,044	4,035	5,458	1,128	3,573	4,259	1,837	31,802
Leiostomus xanthurus	**3**	**184**	**8**	**18**	**3**	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**218**
Lepisosteus osseus	2	.	2	.	1	.	.	.	.	.	.	.	5
Lepomis macrochirus	.	.	.	.	.	.	.	1	.	.	.	.	1
Limulus polyphemus	.	.	1	.	2	16	.	.	.	5	.	1	25
Lophogobius cyprinoides	22	5	.	1	.	5	1	24	30	7	9	10	114
Lucania parva	70	223	8	960	341	348	1,159	1,044	803	685	1,886	207	7,734
Lutjanus analis	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**2**	**.**	**4**
Lutjanus griseus	**2**	**11**	**1**	**3**	**7**	**36**	**48**	**59**	**75**	**38**	**33**	**20**	**333**
Lutjanus jocu	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Lutjanus synagris	**2**	**.**	**.**	**2**	**.**	**.**	**8**	**1**	**1**	**71**	**11**	**2**	**98**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Mayaheros urophthalmus	4	.	.	.	.	.	.	.	.	.	137	.	141
Megalops atlanticus	**1**	**.**	**.**	**1**	**.**	**1**	**.**	**1**	**.**	**.**	**.**	**.**	**4**
Membras martinica	.	.	.	51	66	214	.	.	1	.	.	.	332
Menidia spp.	110	139	5	1,962	51	2,394	325	449	640	723	906	172	7,876
***Menippe* spp.**	**54**	**.**	**3**	**1**	**.**	**.**	**21**	**.**	**.**	**28**	**1**	**.**	**108**
Menticirrhus americanus	**13**	**.**	**3**	**88**	**1**	**15**	**2**	**.**	**14**	**121**	**14**	**2**	**273**
Menticirrhus littoralis	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Menticirrhus saxatilis	**.**	**4**	**1**	**6**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**13**
Microgobius gulosus	80	90	39	260	174	522	460	598	158	240	266	219	3,106
Microgobius microlepis	.	.	.	.	.	.	.	.	.	2	.	.	2
Microgobius thalassinus	.	.	.	.	.	.	2	1	.	5	1	2	11
Micropogonias undulatus	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Monacanthus ciliatus	2	.	.	.	.	.	2	1	.	3	.	.	8
Mugil cephalus	**41**	**23**	**36**	**19**	**18**	**4**	**3**	**10**	**3**	**7**	**21**	**44**	**229**
Mugil curema	**.**	**1**	**.**	**25**	**27**	**4**	**3**	**1**	**1**	**10**	**1**	**3**	**76**
Mugil trichodon	**12**	**31**	**29**	**51**	**2**	**32**	**6**	**2**	**4**	**18**	**1,721**	**62**	**1,970**
Mycteroperca microlepis	**.**	**.**	**.**	**.**	**.**	**6**	**8**	**2**	**2**	**4**	**13**	**.**	**35**
Myrophis punctatus	.	.	.	1	.	.	.	.	.	.	.	.	1
Negaprion brevirostris	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**8**	**.**	**.**	**.**	**12**
Ogcocephalus cubifrons	2	.	.	2	.	2	.	.	.	.	.	.	6
Oligoplites saurus	.	.	1	3	8	147	25	59	70	72	2	.	387
Opisthonema oglinum	.	.	31	2	120	337	77	406	90	210	.	5	1,278

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Opsanus beta	3	7	3	6	6	8	65	3	3	30	4	4	142
Oreochromis aureus	.	.	.	.	.	.	.	.	.	.	1	.	1
Oreochromis/Sarotherodon spp.	.	.	.	.	.	4	4	.	.	.	.	.	8
Orthopristis chrysoptera	4	2	106	951	357	116	967	87	16	160	76	47	2,889
Paraclinus marmoratus	.	.	.	.	.	.	6	.	.	1	.	2	9
Paralichthys albigutta	**12**	**3**	**8**	**8**	**8**	**3**	**7**	**6**	**5**	**29**	**9**	**7**	**105**
Poecilia latipinna	17	2	.	.	.	.	.	.	2	.	1,376	71	1,468
Pogonias cromis	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**1**	**4**	**1**	**8**
Portunus spp.	74	24	2	193	.	1	87	1	1	83	.	3	469
Prionotus rubio	2	.	.	1	.	.	.	.	.	.	.	.	3
Prionotus scitulus	65	4	7	17	2	.	115	4	2	152	5	9	382
Prionotus tribulus	25	1	8	5	2	.	1	.	.	9	14	1	66
Pristis pectinata	.	.	2	.	.	.	.	.	.	.	.	.	2
Rachycentron canadum	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Rimapenaeus constrictus	14	.	.	2	.	.	.	.	.	.	.	.	16
Rimapenaeus spp.	27	.	1	.	.	.	6	.	.	4	.	.	38
Sardinella aurita	7	.	.	.	.	18	.	.	.	.	.	.	25
Sarotherodon melanotheron	3	.	.	.	.	.	2	.	6	1	6	1	19
Sciaenops ocellatus	**172**	**96**	**10**	**9**	**14**	**26**	**17**	**7**	**9**	**57**	**434**	**240**	**1,091**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Selene vomer	.	.	.	.	.	1	.	.	6	1	1	.	9
Serraniculus pumilio	.	.	.	1	.	.	1	.	.	2	.	.	4

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122
Sicyonia laevigata	.	.	.	.	.	.	1	.	.	.	.	.	1
Sicyonia typica	.	.	.	.	.	.	1	.	.	.	.	.	1
Sphoeroides nephelus	18	5	17	65	29	16	56	73	34	45	52	60	470
Sphoeroides spengleri	.	.	.	.	.	1	1	.	.	1	2	.	5
Sphyraena barracuda	**5**	**.**	**.**	**.**	**.**	**2**	**.**	**5**	**2**	**3**	**19**	**16**	**52**
Sphyraena borealis	.	.	1	2	.	.	.	.	.	.	.	.	3
Sphyrna tiburo	**.**	**1**	**.**	**3**	**14**	**.**	**2**	**.**	**2**	**3**	**.**	**2**	**27**
Stephanolepis hispida	7	2	1	36	4	19	35	.	.	7	2	12	125
Strongylura marina	2	6	7	.	4	8	1	3	2	3	12	1	49
Strongylura notata	18	19	57	81	66	236	59	118	123	81	130	65	1,053
Strongylura spp.	.	.	.	16	.	2	.	.	.	.	.	.	18
Strongylura timucu	5	3	1	1	3	10	1	4	2	6	2	3	41
Symphurus plagiusa	30	23	6	30	5	.	19	15	19	25	23	1	196
Syngnathus floridae	4	4	5	9	3	10	59	2	1	9	2	10	118
Syngnathus louisianae	9	4	6	20	7	7	23	1	.	33	11	4	125
Syngnathus scovelli	24	9	11	73	59	144	128	34	7	14	30	31	564
Synodus foetens	63	22	9	62	21	9	60	10	8	27	13	9	313
Trachinotus carolinus	**.**	**.**	**.**	**.**	**.**	**1**	**6**	**.**	**2**	**6**	**.**	**.**	**15**
Trachinotus falcatus	**22**	**.**	**.**	**5**	**.**	**8**	**2**	**24**	**22**	**.**	**.**	**6**	**89**
Trinectes maculatus	48	38	4	165	4	2	89	12	318	61	24	25	790
Tylosurus crocodilus	.	1	.	2	4	2	.	.	.	2	.	.	11
Total	**8,619**	**9,659**	**6,177**	**19,855**	**6,365**	**43,147**	**16,069**	**39,367**	**26,483**	**41,226**	**79,128**	**23,381**	**319,476**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=123	E=93	E=57	E=117	E=57	E=93	E=81	E=93	E=99	E=117	E=99	E=93	E=1,122

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.20: Summary by gear and stratum of taxa collected during Charlotte Harbor stratified-random sampling, 2025.

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=125	E=79	E=204	E=310	E=68	E=156	E=48	E=132	E=1,122
Acanthostracion quadricornis	7	.	.	.	.	10	29	49	95
Achirus lineatus	8	19	48	60	17	.	1	54	207
Albula sp.	.	.	1	.	.	.	.	.	1
Aluterus schoepfii	.	.	.	.	.	.	.	2	2
Anarchopterus criniger	2	.	2	.	.	.	.	62	66
Anchoa hepsetus	2	.	3	20	2,705	.	.	3	2,733
Anchoa mitchilli	4,344	117	29,003	50,747	13,799	.	.	48,067	146,077
Archosargus probatocephalus	**23**	**1**	**47**	**54**	**10**	**722**	**79**	**.**	**936**
Archosargus rhomboidalis	.	.	.	.	.	14	1	.	15
Archosargus spp.	.	.	.	.	.	3	1	.	4
Ariopsis felis	5	6	66	11	.	460	152	64	764
Atherina harringtonensis	1	.	.	.	.	.	.	.	1
Bagre marinus	.	.	.	.	.	19	1	17	37
Bairdiella chrysoura	1,530	14	826	111	21	61	49	299	2,911
Bathygobius soporator	.	.	23	22	92	.	.	.	137
***Brevoortia* spp.**	**.**	**.**	**37**	**259**	**65**	**1**	**55**	**.**	**417**
Calamus penna	**2**	**.**	**.**	**.**	**.**	**14**	**17**	**.**	**33**
***Calamus* spp.**	**9**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**9**
Callinectes ornatus	.	1	11	.	.	1	.	19	32
Callinectes sapidus	**42**	**32**	**67**	**124**	**92**	**261**	**54**	**319**	**991**
Caranx hippos	**2**	**.**	**.**	**.**	**.**	**26**	**2**	**1**	**31**
Carcharhinus leucas	**.**	**.**	**.**	**.**	**.**	**2**	**1**	**.**	**3**
Centropomus undecimalis	**.**	**.**	**25**	**254**	**18**	**632**	**62**	**.**	**991**
Centropristis striata	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Chaetodipterus faber	3	.	1	.	.	231	52	36	323
Chasmodes saburrae	119	4	73	5	.	.	.	23	224

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=125	E=79	E=204	E=310	E=68	E=156	E=48	E=132	E=1,122
Chilomycterus schoepfii	35	2	5	2	.	159	87	109	399
Chloroscombrus chrysurus	2	6	2	.	.	14	.	34	58
Citharichthys macrops	.	.	1	.	.	.	.	.	1
Ctenogobius boleosoma	.	.	.	2	.	.	.	.	2
Ctenogobius smaragdus	1	1	12	8	4	.	.	.	26
Cynoscion arenarius	**.**	**.**	**17**	**9**	**6**	**2**	**.**	**140**	**174**
Cynoscion nebulosus	**191**	**23**	**124**	**32**	**2**	**37**	**13**	**17**	**439**
Cyprinodon variegatus	.	.	67	204	1	.	.	.	272
Diapterus auratus	.	.	6	128	4	116	2	.	256
Diplectrum formosum	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**3**	**3**
Diplodus holbrookii	1	.	.	.	.	.	.	.	1
Echeneis neucratoides	.	.	1	.	.	4	1	1	7
Elops saurus	**.**	**.**	**1**	**16**	**.**	**230**	**44**	**.**	**291**
Epinephelus itajara	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Epinephelus morio	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Etropus crossotus	.	.	.	.	.	.	.	12	12
Eucinostomus gula	1,359	200	2,700	1,089	29	951	100	766	7,194
Eucinostomus harengulus	92	70	1,154	2,883	697	322	69	43	5,330
Eucinostomus spp.	7,979	2,724	14,107	20,477	4,723	.	.	777	50,787
Eugerres plumieri	4	16	104	838	270	212	3	4	1,451
Farfantepenaeus duorarum	**430**	**611**	**765**	**365**	**50**	**6**	**1**	**243**	**2,471**
Floridichthys carpio	46	.	1,759	183	4	1	.	.	1,993
Fundulus confluentus	.	.	11	1	.	.	.	.	12
Fundulus grandis	.	.	178	177	9	.	.	.	364
Fundulus similis	.	.	3	1	18	.	.	.	22
Fundulus xenicus	.	.	3	8	2	.	.	.	13
Gambusia holbrooki	.	1	.	157	6	.	.	.	164
Gerres cinereus	.	.	.	.	.	1	.	.	1

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=125	E=79	E=204	E=310	E=68	E=156	E=48	E=132	E=1,122
Gobiesox strumosus	.	.	5	2	6	.	.	.	13
Gobionellus oceanicus	.	.	.	2	.	.	.	.	2
Gobiosoma bosc	.	.	6	50	9	.	.	.	65
Gobiosoma longipala	.	.	.	.	.	.	.	3	3
Gobiosoma robustum	114	28	235	69	5	.	.	82	533
Gobiosoma spp.	18	32	38	59	9	.	.	54	210
Gymnura lessae	.	.	.	.	.	2	.	1	3
Haemulon plumierii	**35**	**.**	**4**	**.**	**.**	**6**	**17**	**7**	**69**
Harengula jaguana	18,670	.	2,871	739	1	28	111	27	22,447
Hemiramphus brasiliensis	.	.	.	.	.	.	10	.	10
Hippocampus erectus	2	4	2	.	.	.	.	14	22
Hippocampus zosterae	24	3	22	.	.	.	.	5	54
Hypanus americanus	.	.	.	.	.	54	10	2	66
Hypanus sabinus	1	.	13	5	1	68	7	6	101
Hypanus say	1	.	.	1	.	3	6	.	11
Hyporhamphus meeki	.	10	.	.	.	4	28	.	42
Hyporhamphus spp.	.	2	.	1	.	.	.	.	3
Hyporhamphus unifasciatus	.	.	.	.	.	.	3	.	3
Hypsoblennius hentz	1	.	.	.	1	.	.	4	6
Lagodon rhomboides	7,221	221	2,005	797	23	17,415	2,781	1,339	31,802
Leiostomus xanthurus	**1**	**.**	**15**	**193**	**.**	**7**	**2**	**.**	**218**
Lepisosteus osseus	.	.	.	.	.	1	.	4	5
Lepomis macrochirus	.	.	.	.	1	.	.	.	1
Limulus polyphemus	1	7	12	2	.	3	.	.	25
Lophogobius cyprinoides	2	.	2	59	51	.	.	.	114
Lucania parva	2,559	141	2,789	2,228	15	.	.	2	7,734
Lutjanus analis	**1**	**.**	**.**	**.**	**.**	**3**	**.**	**.**	**4**
Lutjanus griseus	**42**	**1**	**36**	**38**	**12**	**144**	**57**	**3**	**333**

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=125	E=79	E=204	E=310	E=68	E=156	E=48	E=132	E=1,122
Lutjanus jocu	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Lutjanus synagris	**5**	**.**	**.**	**.**	**.**	**6**	**25**	**62**	**98**
Mayaheros urophthalmus	.	.	.	141	.	.	.	.	141
Megalops atlanticus	**.**	**.**	**.**	**3**	**.**	**.**	**1**	**.**	**4**
Membras martinica	.	.	217	76	39	.	.	.	332
Menidia spp.	36	41	2,967	3,817	1,015	.	.	.	7,876
***Menippe* spp.**	**2**	**.**	**1**	**.**	**.**	**.**	**3**	**102**	**108**
Menticirrhus americanus	**3**	**2**	**9**	**5**	**27**	**2**	**1**	**224**	**273**
Menticirrhus littoralis	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Menticirrhus saxatilis	**1**	**.**	**6**	**.**	**3**	**.**	**.**	**3**	**13**
Microgobius gulosus	294	652	1,191	835	107	.	.	27	3,106
Microgobius microlepis	.	.	1	.	.	.	.	1	2
Microgobius thalassinus	.	1	2	.	.	.	.	8	11
Micropogonias undulatus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Monacanthus ciliatus	.	.	3	.	.	.	.	5	8
Mugil cephalus	**2**	**1**	**17**	**13**	**3**	**146**	**47**	**.**	**229**
Mugil curema	**.**	**.**	**5**	**.**	**.**	**26**	**45**	**.**	**76**
Mugil trichodon	**.**	**.**	**148**	**1,580**	**8**	**185**	**49**	**.**	**1,970**
Mycteroperca microlepis	**.**	**.**	**4**	**.**	**.**	**20**	**9**	**2**	**35**
Myrophis punctatus	.	.	.	.	.	.	.	1	1
Negaprion brevirostris	**.**	**.**	**.**	**.**	**.**	**5**	**7**	**.**	**12**
Ogcocephalus cubifrons	.	.	.	.	.	.	2	4	6
Oligoplites saurus	15	11	150	141	31	35	3	1	387
Opisthonema oglinum	259	2	33	59	292	210	372	51	1,278
Opsanus beta	6	2	8	2	.	33	5	86	142
Oreochromis aureus	.	.	.	1	.	.	.	.	1
Oreochromis/Sarotherodon spp.	.	.	8	.	.	.	.	.	8
Orthopristis chrysoptera	659	6	125	4	.	401	52	1,642	2,889

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=125	E=79	E=204	E=310	E=68	E=156	E=48	E=132	E=1,122
Paraclinus marmoratus	3	.	.	.	.	.	.	6	9
Paralichthys albigutta	**2**	**1**	**4**	**2**	**.**	**53**	**21**	**22**	**105**
Poecilia latipinna	.	.	35	1,424	9	.	.	.	1,468
Pogonias cromis	**.**	**.**	**.**	**.**	**.**	**8**	**.**	**.**	**8**
Portunus spp.	5	.	3	.	.	1	25	435	469
Prionotus rubio	.	.	.	.	.	.	.	3	3
Prionotus scitulus	9	5	9	1	.	24	7	327	382
Prionotus tribulus	4	3	1	3	1	3	8	43	66
Pristis pectinata	.	.	.	.	.	1	1	.	2
Rachycentron canadum	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Rimapenaeus constrictus	.	.	.	.	.	.	.	16	16
Rimapenaeus spp.	.	.	3	.	.	.	.	35	38
Sardinella aurita	.	.	18	.	.	.	.	7	25
Sarotherodon melanotheron	.	.	2	9	5	3	.	.	19
Sciaenops ocellatus	**81**	**36**	**253**	**397**	**185**	**129**	**10**	**.**	**1,091**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Selene vomer	.	.	.	.	.	8	1	.	9
Serraniculus pumilio	.	.	.	.	.	.	.	4	4
Sicyonia laevigata	.	.	.	.	.	.	.	1	1
Sicyonia typica	.	.	.	.	.	.	.	1	1
Sphoeroides nephelus	50	20	51	13	2	186	119	29	470
Sphoeroides spengleri	.	.	1	.	.	2	.	2	5
Sphyraena barracuda	**.**	**.**	**4**	**2**	**.**	**38**	**8**	**.**	**52**
Sphyraena borealis	1	.	.	.	.	.	.	2	3
Sphyrna tiburo	**.**	**.**	**.**	**.**	**.**	**22**	**5**	**.**	**27**
Stephanolepis hispida	17	.	26	1	.	4	3	74	125
Strongylura marina	.	.	.	1	1	7	40	.	49
Strongylura notata	16	18	206	295	31	405	82	.	1,053

Species	Gear and Strata								Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		6.1-m otter trawl	
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover		
	E=125	E=79	E=204	E=310	E=68	E=156	E=48	E=132	E=1,122
Strongylura spp.	.	.	1	13	4	.	.	.	18
Strongylura timucu	.	.	8	19	10	4	.	.	41
Symphurus plagiusa	9	43	37	11	8	1	.	87	196
Syngnathus floridae	38	1	9	.	.	.	.	70	118
Syngnathus louisianae	17	4	15	5	.	.	.	84	125
Syngnathus scovelli	274	13	206	12	7	.	.	52	564
Synodus foetens	45	38	37	14	1	14	10	154	313
Trachinotus carolinus	**.**	**.**	**.**	**.**	**.**	**8**	**7**	**.**	**15**
Trachinotus falcatus	**.**	**.**	**12**	**1**	**.**	**51**	**25**	**.**	**89**
Trinectes maculatus	.	5	30	56	75	5	.	619	790
Tylosurus crocodilus	.	.	.	.	.	1	10	.	11
Total	**46,785**	**5,203**	**65,174**	**91,448**	**24,642**	**24,301**	**4,911**	**57,012**	**319,476**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 21.3-m river seine and 183-m haul seine was stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Sampling with 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.21: Summary by zone of taxa collected during Charlotte Harbor stratified-random sampling, 2025.

Species	Zone							Total
	A	B	C	D	K	M	P	
	E=298	E=258	E=258	E=164	E=36	E=54	E=54	E=1,122
Acanthostracion quadricornis	3	24	41	27	.	.	.	95
Achirus lineatus	64	28	82	8	2	3	20	207
Albula sp.	.	.	1	.	.	.	.	1
Aluterus schoepfii	.	1	.	1	.	.	.	2
Anarchopterus criniger	.	6	2	58	.	.	.	66
Anchoa hepsetus	9	4	3	1	.	2,692	24	2,733
Anchoa mitchilli	29,519	25,111	26,570	127	3,489	56,216	5,045	146,077
Archosargus probatocephalus	**74**	**319**	**107**	**423**	**3**	**7**	**3**	**936**
Archosargus rhomboidalis	.	9	.	6	.	.	.	15
Archosargus spp.	.	1	1	2	.	.	.	4
Ariopsis felis	225	178	257	42	3	9	50	764
Atherina harringtonensis	.	1	.	.	.	.	.	1
Bagre marinus	17	.	6	.	.	4	10	37
Bairdiella chrysoura	246	620	680	1,159	.	117	89	2,911
Bathygobius soporator	25	1	9	2	18	7	75	137
***Brevoortia* spp.**	**64**	**1**	**99**	**75**	**1**	**176**	**1**	**417**
Calamus penna	**4**	**5**	**20**	**4**	**.**	**.**	**.**	**33**
***Calamus* spp.**	**2**	**1**	**5**	**1**	**.**	**.**	**.**	**9**
Callinectes ornatus	.	3	11	18	.	.	.	32
Callinectes sapidus	**174**	**186**	**207**	**111**	**27**	**111**	**175**	**991**
Caranx hippos	**6**	**14**	**4**	**6**	**.**	**1**	**.**	**31**
Carcharhinus leucas	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**3**
Centropomus undecimalis	**171**	**385**	**190**	**194**	**32**	**2**	**17**	**991**
Centropristis striata	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Chaetodipterus faber	76	52	171	22	.	2	.	323
Chasmodes saburrae	13	45	36	130	.	.	.	224
Chilomycterus schoepfii	25	180	89	104	.	1	.	399

Species	Zone							Total
	A	B	C	D	K	M	P	
	E=298	E=258	E=258	E=164	E=36	E=54	E=54	E=1,122
Chloroscombrus chrysurus	18	.	39	1	.	.	.	58
Citharichthys macrops	.	.	.	1	.	.	.	1
Ctenogobius boleosoma	1	1	.	.	.	.	.	2
Ctenogobius smaragdus	5	7	7	3	4	.	.	26
Cynoscion arenarius	**56**	**4**	**4**	**.**	**.**	**32**	**78**	**174**
Cynoscion nebulosus	**53**	**96**	**165**	**97**	**.**	**2**	**26**	**439**
Cyprinodon variegatus	23	204	.	44	.	1	.	272
Diapterus auratus	19	174	50	7	6	.	.	256
Diplectrum formosum	**.**	**2**	**1**	**.**	**.**	**.**	**.**	**3**
Diplodus holbrookii	.	1	.	.	.	.	.	1
Echeneis neucratoides	.	1	.	6	.	.	.	7
Elops saurus	**112**	**28**	**123**	**26**	**.**	**2**	**.**	**291**
Epinephelus itajara	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**1**
Epinephelus morio	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Etropus crossotus	1	4	5	2	.	.	.	12
Eucinostomus gula	851	2,270	1,684	2,335	12	31	11	7,194
Eucinostomus harengulus	1,346	1,125	1,193	268	452	657	289	5,330
Eucinostomus spp.	11,532	13,145	11,848	7,631	4,675	869	1,087	50,787
Eugerres plumieri	289	373	469	27	237	47	9	1,451
Farfantepenaeus duorarum	**989**	**403**	**583**	**290**	**36**	**42**	**128**	**2,471**
Floridichthys carpio	41	350	47	1,551	4	.	.	1,993
Fundulus confluentus	12	.	.	.	.	.	.	12
Fundulus grandis	273	16	3	57	1	5	9	364
Fundulus similis	3	1	.	.	.	8	10	22
Fundulus xenicus	10	.	1	.	.	1	1	13
Gambusia holbrooki	120	5	26	.	5	3	5	164
Gerres cinereus	.	1	.	.	.	.	.	1
Gobiesox strumosus	4	.	1	.	.	2	6	13
Gobionellus oceanicus	.	2	.	.	.	.	.	2

Species	Zone							Total
	A	B	C	D	K	M	P	
	E=298	E=258	E=258	E=164	E=36	E=54	E=54	E=1,122
Gobiosoma bosc	19	1	25	.	3	7	10	65
Gobiosoma longipala	.	1	2	.	.	.	.	3
Gobiosoma robustum	33	151	86	258	4	1	.	533
Gobiosoma spp.	66	26	55	46	6	5	6	210
Gymnura lessae	2	1	.	.	.	.	.	3
Haemulon plumierii	**.**	**20**	**12**	**37**	**.**	**.**	**.**	**69**
Harengula jaguana	9	1,183	3,018	18,237	.	.	.	22,447
Hemiramphus brasiliensis	.	10	.	.	.	.	.	10
Hippocampus erectus	8	4	5	5	.	.	.	22
Hippocampus zosterae	.	14	12	28	.	.	.	54
Hypanus americanus	2	20	29	15	.	.	.	66
Hypanus sabinus	33	9	52	.	.	6	1	101
Hypanus say	2	2	7	.	.	.	.	11
Hyporhamphus meeki	19	10	1	12	.	.	.	42
Hyporhamphus spp.	2	.	.	.	.	1	.	3
Hyporhamphus unifasciatus	1	.	.	2	.	.	.	3
Hypsoblennius hentz	1	.	.	4	1	.	.	6
Lagodon rhomboides	830	15,015	2,619	13,279	1	33	25	31,802
Leiostomus xanthurus	**3**	**195**	**19**	**.**	**.**	**.**	**1**	**218**
Lepisosteus osseus	1	.	.	.	.	1	3	5
Lepomis macrochirus	.	.	.	.	.	1	.	1
Limulus polyphemus	9	.	8	6	.	.	2	25
Lophogobius cyprinoides	17	1	12	.	62	21	1	114
Lucania parva	231	3,788	592	3,104	19	.	.	7,734
Lutjanus analis	**.**	**2**	**.**	**2**	**.**	**.**	**.**	**4**
Lutjanus griseus	**82**	**105**	**53**	**71**	**3**	**10**	**9**	**333**
Lutjanus jocu	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Lutjanus synagris	**4**	**16**	**23**	**55**	**.**	**.**	**.**	**98**
Mayaheros urophthalmus	136	.	.	.	.	5	.	141

Species	Zone							Total
	A	B	C	D	K	M	P	
	E=298	E=258	E=258	E=164	E=36	E=54	E=54	E=1,122
Megalops atlanticus	**1**	**1**	**2**	**.**	**.**	**.**	**.**	**4**
Membras martinica	217	.	.	.	.	84	31	332
Menidia spp.	1,126	2,741	1,739	598	387	829	456	7,876
***Menippe* spp.**	**2**	**58**	**6**	**42**	**.**	**.**	**.**	**108**
Menticirrhus americanus	**196**	**4**	**6**	**.**	**.**	**23**	**44**	**273**
Menticirrhus littoralis	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Menticirrhus saxatilis	**2**	**5**	**2**	**1**	**.**	**.**	**3**	**13**
Microgobius gulosus	1,393	484	781	286	92	29	41	3,106
Microgobius microlepis	1	.	.	1	.	.	.	2
Microgobius thalassinus	8	2	.	.	.	1	.	11
Micropogonias undulatus	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Monacanthus ciliatus	.	3	1	4	.	.	.	8
Mugil cephalus	**56**	**87**	**9**	**70**	**1**	**4**	**2**	**229**
Mugil curema	**1**	**35**	**5**	**35**	**.**	**.**	**.**	**76**
Mugil trichodon	**1,566**	**122**	**199**	**58**	**1**	**17**	**7**	**1,970**
Mycteroperca microlepis	**.**	**12**	**1**	**22**	**.**	**.**	**.**	**35**
Myrophis punctatus	1	.	.	.	.	.	.	1
Negaprion brevirostris	**.**	**1**	**.**	**11**	**.**	**.**	**.**	**12**
Ogcocephalus cubifrons	.	1	3	2	.	.	.	6
Oligoplites saurus	174	54	69	17	14	44	15	387
Opisthonema oglinum	55	254	280	396	.	292	1	1,278
Opsanus beta	4	18	13	107	.	.	.	142
Oreochromis aureus	.	.	.	.	.	.	1	1
Oreochromis/Sarotherodon spp.	.	.	8	.	.	.	.	8
Orthopristis chrysoptera	52	1,615	822	395	.	1	4	2,889
Paraclinus marmoratus	.	1	.	8	.	.	.	9
Paralichthys albigutta	**5**	**47**	**33**	**20**	**.**	**.**	**.**	**105**
Poecilia latipinna	1,360	73	.	18	.	4	13	1,468
Pogonias cromis	**.**	**4**	**4**	**.**	**.**	**.**	**.**	**8**

Species	Zone							Total
	A	B	C	D	K	M	P	
	E=298	E=258	E=258	E=164	E=36	E=54	E=54	E=1,122
Portunus spp.	57	135	170	107	.	.	.	469
Prionotus rubio	1	.	2	.	.	.	.	3
Prionotus scitulus	138	89	132	21	.	2	.	382
Prionotus tribulus	23	13	10	1	1	8	10	66
Pristis pectinata	2	.	.	.	.	.	.	2
Rachycentron canadum	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Rimapenaeus constrictus	5	.	11	.	.	.	.	16
Rimapenaeus spp.	5	6	25	2	.	.	.	38
Sardinella aurita	.	7	18	.	.	.	.	25
Sarotherodon melanotheron	6	.	2	3	8	.	.	19
Sciaenops ocellatus	**488**	**156**	**186**	**38**	**10**	**76**	**137**	**1,091**
Scomberomorus maculatus	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Selene vomer	.	2	7	.	.	.	.	9
Serraniculus pumilio	.	3	.	1	.	.	.	4
Sicyonia laevigata	.	1	.	.	.	.	.	1
Sicyonia typica	1	.	.	.	.	.	.	1
Sphoeroides nephelus	81	125	167	91	.	1	5	470
Sphoeroides spengleri	.	3	1	1	.	.	.	5
Sphyraena barracuda	**.**	**29**	**3**	**20**	**.**	**.**	**.**	**52**
Sphyraena borealis	.	1	1	1	.	.	.	3
Sphyrna tiburo	**16**	**6**	**1**	**4**	**.**	**.**	**.**	**27**
Stephanolepis hispida	1	39	33	52	.	.	.	125
Strongylura marina	14	18	3	13	1	.	.	49
Strongylura notata	243	381	210	136	29	43	11	1,053
Strongylura spp.	2	2	.	.	.	14	.	18
Strongylura timucu	9	5	14	3	4	.	6	41
Symphurus plagiusa	116	11	38	1	1	4	25	196
Syngnathus floridae	1	19	58	39	.	.	1	118
Syngnathus louisianae	42	31	22	24	.	3	3	125

Species	Zone							Total
	A	B	C	D	K	M	P	
	E=298	E=258	E=258	E=164	E=36	E=54	E=54	E=1,122
Syngnathus scovelli	45	96	136	274	5	.	8	564
Synodus foetens	100	85	71	45	.	3	9	313
Trachinotus carolinus	**7**	**6**	**2**	**.**	**.**	**.**	**.**	**15**
Trachinotus falcatus	**.**	**33**	**18**	**38**	**.**	**.**	**.**	**89**
Trinectes maculatus	246	26	59	.	57	86	316	790
Tylosurus crocodilus	4	.	5	2	.	.	.	11
Total	**55,861**	**72,916**	**56,860**	**53,037**	**9,717**	**62,709**	**8,376**	**319,476**

Zones A–D were located in Charlotte Harbor, while Zones K (Alligator Creek), M (Myakka River) and P (Peace River) were tributaries of Charlotte Harbor. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.8 Northeast Florida

Table A.22: Monthly summary of taxa collected during Northeast Florida stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Abudefduf saxatilis	.	.	.	.	2	.	.	.	.	.	.	.	2
Achirus lineatus	6	2	5	2	.	.	.	2	1	6	12	4	40
***Albula* spp.**	**.**	**.**	**.**	**1**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**3**
Alosa aestivalis	.	.	.	.	.	1	.	.	.	.	.	.	1
Alosa mediocris	.	.	.	11	.	.	.	.	.	.	.	.	11
Alosa sapidissima	1	.	.	.	2	1	.	.	.	.	.	1	5
Ameiurus catus	63	107	50	84	29	17	56	37	8	19	54	28	552
Ameiurus nebulosus	2	.	.	.	.	.	.	.	.	.	.	.	2
Anchoa hepsetus	.	.	1	19	7,699	14,491	435	47	5	1	5	9	22,712
Anchoa lyolepis	.	.	.	.	20	8,945	93	30	.	.	.	.	9,088
Anchoa mitchilli	1,832	2,493	765	908	1,406	1,363	3,166	1,437	4,312	2,734	2,292	18,983	41,691
Anchoa spp.	.	.	.	.	.	.	.	.	.	3	.	.	3
Ancylopsetta quadrocellata	.	5	6	4	.	.	.	.	.	.	.	.	15
Anguilla rostrata	.	1	1	1	.	.	.	.	.	.	.	.	3
Archosargus probatocephalus	**11**	**7**	**7**	**6**	**10**	**3**	**19**	**13**	**8**	**15**	**4**	**4**	**107**
Arenaeus cribrarius	.	.	.	.	.	.	.	1	.	.	.	.	1
Ariopsis felis	7	14	54	13	29	13	55	192	104	42	117	15	655
Astroscopus y-graecum	.	1	.	.	.	.	1	.	.	.	.	.	2

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Bagre marinus	.	.	.	.	.	2	11	14	3	3	.	.	33
Bairdiella chrysoura	37	26	13	96	1,290	1,028	159	61	79	123	112	65	3,089
Bathygobius soporator	5	.	2	2	.	1	2	.	1	1	2	.	16
***Brevoortia* spp.**	**6**	**17**	**214**	**34**	**156**	**46**	**595**	**352**	**265**	**620**	**8**	**7**	**2,320**
Callinectes ornatus	.	.	.	.	2	3	1	4	.	.	.	.	10
Callinectes sapidus	**155**	**135**	**153**	**108**	**55**	**68**	**80**	**112**	**66**	**103**	**132**	**130**	**1,297**
Callinectes similis	1	.	4	28	90	65	25	27	55	20	6	22	343
Callinectes spp.	.	.	.	.	1	.	.	1	.	.	.	.	2
Caranx hippos	**1**	**.**	**.**	**1**	**45**	**6**	**3**	**4**	**3**	**6**	**2**	**1**	**72**
Centropomus undecimalis	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**
Centropristis philadelphica	**1**	**.**	**.**	**.**	**.**	**2**	**1**	**4**	**4**	**3**	**2**	**3**	**20**
Centropristis spp.	2	.	.	.	.	.	.	.	.	.	.	.	2
Centropristis striata	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**2**
Chaetodipterus faber	.	.	.	.	4	4	9	8	18	6	1	.	50
Charybdis hellerii	.	.	.	.	.	.	.	.	.	1	.	.	1
Chilomycterus schoepfii	.	.	1	1	2	1	2	1	7	7	5	4	31
Chloroscombrus chrysurus	.	.	.	.	6	9	20	12	9	65	11	71	203
Citharichthys macrops	.	.	.	.	2	.	2	.	1	.	.	.	5
Citharichthys spilopterus	1	4	11	47	76	96	84	36	52	17	5	1	430
Clupeiformes spp.	.	.	1	5	.	.	.	.	1	.	.	.	7
Ctenogobius boleosoma	33	43	7	7	4	28	12	7	10	2	6	49	208
Ctenogobius shufeldti	7	41	37	17	4	.	.	.	1	1	.	1	109

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Ctenogobius smaragdus	.	1	1	.	.	1	.	.	2	3	.	1	9
Ctenogobius stigmaticus	.	.	.	.	.	1	.	.	2	.	.	.	3
Cynoscion complex	**41**	**5**	**19**	**13**	**93**	**47**	**74**	**142**	**136**	**49**	**18**	**9**	**646**
Cynoscion nebulosus	**6**	**4**	**.**	**11**	**11**	**4**	**14**	**15**	**21**	**8**	**8**	**12**	**114**
Cynoscion nothus	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**4**
Cyprinodon variegatus	57	2	.	1	.	.	.	.	.	.	.	10	70
Diapterus auratus	9	.	.	.	1	.	8	7	37	26	36	45	169
Dorosoma cepedianum	5	.	29	2	3	2	42	6	8	10	1	6	114
Dorosoma petenense	28	16	13	3	4	987	3,648	859	5	74	6	470	6,113
Eleotris amblyopsis	1	.	.	.	.	.	.	.	.	.	.	.	1
Elops saurus	**1**	**2**	**15**	**39**	**3**	**7**	**8**	**10**	**11**	**.**	**4**	**.**	**100**
Etropus crossotus	20	11	7	4	6	58	61	39	41	74	102	127	550
Eucinostomus gula	2	.	.	.	.	5	30	25	23	19	31	14	149
Eucinostomus harengulus	30	.	.	.	2	120	206	167	88	96	115	120	944
Eucinostomus spp.	56	.	.	1	38	96	42	35	222	306	907	89	1,792
Farfantepenaeus aztecus	**.**	**.**	**.**	**4**	**201**	**159**	**26**	**3**	**3**	**4**	**.**	**.**	**400**
Farfantepenaeus duorarum	**.**	**1**	**.**	**3**	**.**	**1**	**.**	**.**	**.**	**.**	**2**	**.**	**7**
***Farfantepenaeus* spp.**	**7**	**5**	**2**	**146**	**384**	**448**	**93**	**62**	**154**	**95**	**25**	**18**	**1,439**
Fundulus confluentus	.	.	1	.	.	.	.	.	.	.	.	.	1
Fundulus heteroclitus	3,946	260	46	73	61	459	51	14	216	94	12	52	5,284
Fundulus majalis	39	4	.	1	12	26	19	6	3	1	146	3	260
Fundulus seminolis	12	30	11	7	22	33	132	64	.	22	95	9	437

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Gambusia holbrooki	10	13	55	52	.	.	.	5	.	4	60	1	200
Gobiesox strumosus	.	.	.	.	.	.	.	.	1	.	.	.	1
Gobioides broussonnetii	1	1	.	10	2	5	1	.	2	2	.	.	24
Gobionellus oceanicus	5	5	9	16	2	8	5	.	3	2	5	1	61
Gobiosoma bosc	9	17	2	8	10	7	3	.	3	13	7	3	82
Gobiosoma ginsburgi	.	.	1	3	.	.	1	.	.	.	.	.	5
Gobiosoma robustum	1	.	.	.	.	.	.	.	.	.	.	.	1
Gobiosoma spp.	5	30	4	3	3	7	11	7	18	59	38	41	226
Gymnura lessae	.	.	.	.	3	.	1	1	2	.	1	.	8
Harengula jaguana	.	.	.	3	118	7	59	.	5	.	.	1	193
Hippocampus erectus	.	.	1	.	.	.	.	.	.	1	1	2	5
Histrio histrio	.	.	.	.	1	.	.	.	.	.	.	.	1
Hypanus sabinus	58	26	49	37	20	47	18	30	23	20	41	33	402
Hypanus say	.	.	.	4	1	1	3	1	.	.	1	.	11
Hypleurochilus geminatus	.	1	.	.	.	.	1	.	.	.	.	.	2
Hyporhamphus meeki	.	.	.	.	.	.	.	1	.	.	.	.	1
Hyporhamphus spp.	.	.	.	.	.	.	.	.	3	.	.	.	3
Hypsoblennius hentz	.	.	1	.	.	.	.	.	.	.	2	1	4
Hypsoblennius ionthas	.	1	.	.	.	.	.	.	.	.	.	.	1
Ictalurus punctatus	11	5	20	122	7	1	42	3	8	8	3	5	235
Labidesthes vanhyningi	1	76	2	157	6	12	.	13	.	7	27	3	304
Labrisomus nuchipinnis	.	.	.	.	.	.	.	.	.	1	.	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Lagodon rhomboides	4	2	8	16	19	35	68	17	18	13	9	3	212
Larimus fasciatus	.	.	.	.	.	.	.	.	3	1	1	.	5
Leiostomus xanthurus	**65**	**994**	**1,385**	**1,578**	**478**	**256**	**130**	**74**	**70**	**30**	**58**	**36**	**5,154**
Lepisosteus osseus	2	.	14	1	1	.	2	1	19	5	.	2	47
Lepisosteus platyrhincus	.	.	.	.	.	.	.	2	.	.	.	.	2
Lepomis auritus	13	9	3	33	10	18	1	3	11	6	12	13	132
Lepomis macrochirus	58	39	17	32	42	29	10	3	7	7	14	32	290
Lepomis microlophus	2	5	3	15	2	2	6	1	2	4	4	1	47
Lepomis spp.	.	1	.	.	.	2	.	1	6	2	1	1	14
Limulus polyphemus	.	1	2	.	.	.	.	.	.	2	.	1	6
Litopenaeus setiferus	**188**	**154**	**144**	**70**	**390**	**2,720**	**3,638**	**5,410**	**5,239**	**4,511**	**2,460**	**2,376**	**27,300**
Lobotes surinamensis	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Lucania parva	.	.	.	1	11	35	26	6	.	22	13	2	116
Lutjanus analis	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**.**	**2**
Lutjanus griseus	**.**	**.**	**.**	**.**	**1**	**.**	**2**	**.**	**42**	**2**	**7**	**1**	**55**
Lutjanus synagris	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**3**	**3**	**2**	**9**
Membras martinica	8	1	.	.	.	16	10	172	41	.	3	1	252
Menidia menidia	148	638	334	85	905	6,390	1,014	986	1,118	1,099	573	794	14,084
Menidia spp.	723	507	173	116	320	1,836	3,018	1,821	456	887	824	1,365	12,046
***Menippe* spp.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**2**	**4**	**1**	**9**
Menticirrhus americanus	**2**	**4**	**2**	**.**	**24**	**16**	**25**	**76**	**65**	**45**	**10**	**15**	**284**
Menticirrhus littoralis	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**	**.**	**.**	**.**	**.**	**2**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Menticirrhus saxatilis	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**
Microgobius gulosus	10	7	30	17	24	34	40	14	28	56	73	31	364
Microgobius thalassinus	.	5	.	4	.	17	8	.	8	5	8	5	60
Microphis lineatus	.	.	.	.	.	.	.	.	.	1	.	.	1
Micropogonias undulatus	**1,498**	**960**	**1,680**	**3,167**	**4,070**	**2,340**	**390**	**140**	**74**	**494**	**653**	**827**	**16,293**
Micropterus salmoides	5	2	.	6	55	70	4	1	3	2	1	2	151
Morone chrysops x saxatilis	.	.	.	.	.	5	.	.	.	.	.	.	5
Morone saxatilis	.	.	.	.	.	.	1	.	.	.	.	.	1
Mugil cephalus	**785**	**2,829**	**465**	**472**	**58**	**112**	**116**	**179**	**92**	**58**	**112**	**116**	**5,394**
Mugil curema	**56**	**179**	**29**	**26**	**11**	**40**	**43**	**48**	**15**	**10**	**122**	**58**	**637**
Myrophis punctatus	.	2	.	.	.	1	.	.	.	.	.	.	3
Negaprion brevirostris	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Notemigonus crysoleucas	.	.	.	.	.	26	1	.	.	.	.	.	27
Notropis maculatus	.	.	.	.	.	.	12	1	.	4	.	.	17
Ogcocephalus cubifrons	.	.	.	1	.	.	.	.	1	2	.	1	5
Oligoplites saurus	.	.	.	.	.	5	2	20	64	9	14	4	118
Ophidion marginatum	.	.	1	.	.	.	.	.	.	.	.	.	1
Opisthonema oglinum	.	.	.	23	204	122	166	.	1	21	1	.	538
Opsanus tau	3	4	1	1	1	1	6	1	3	5	2	.	28
Oreochromis complex	.	.	.	1	3	3	1	1	.	1	1	3	14
Oreochromis/Sarotherodon spp.	.	.	.	.	1	15	6	.	.	1	.	.	23
Orthopristis chrysoptera	.	.	.	5	36	25	48	11	11	11	2	.	149

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Paralichthys albigutta	**5**	**1**	**5**	**6**	**3**	**11**	**7**	**.**	**3**	**.**	**1**	**.**	**42**
Paralichthys dentatus	**.**	**.**	**.**	**.**	**1**	**.**	**1**	**.**	**.**	**.**	**.**	**1**	**3**
Paralichthys lethostigma	**20**	**28**	**30**	**33**	**36**	**29**	**26**	**17**	**12**	**11**	**11**	**14**	**267**
Paralichthys squamilentus	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Peprilus paru	.	.	.	.	10	2	.	.	.	.	.	.	12
Peprilus triacanthus	4	1	3	4	1	.	.	.	.	.	.	1	14
Poecilia latipinna	3	.	5	3	17	.	1	.	.	.	2	1	32
Pogonias cromis	**2**	**1**	**.**	**80**	**2**	**1**	**1**	**13**	**17**	**1**	**4**	**15**	**137**
Pomatomus saltatrix	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**2**
Pomoxis nigromaculatus	6	6	6	6	2	.	.	.	1	3	6	1	37
Portunus spp.	.	.	.	.	11	4	17	14	5	24	8	9	92
Prionotus evolans	1	2	36	13	.	2	3	.	1	1	.	2	61
Prionotus scitulus	.	.	.	.	5	4	16	3	1	4	1	.	34
Prionotus tribulus	6	6	1	4	1	.	2	.	5	1	9	9	44
Rhinoptera bonasus	.	.	.	.	.	.	.	.	.	2	.	.	2
Rimapenaeus constrictus	.	.	.	6	2	.	.	.	2	5	.	.	15
Rimapenaeus spp.	4	1	31	30	36	142	25	40	47	222	52	76	706
Sardinella aurita	.	.	.	.	.	112	.	.	.	.	.	.	112
Sciaenidae spp.	1	.	.	.	.	1	.	1	.	.	1	.	4
Sciaenops ocellatus	**20**	**10**	**17**	**53**	**2**	**7**	**6**	**5**	**2**	**16**	**52**	**30**	**220**
Scomberomorus maculatus	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**3**
Selene vomer	.	.	.	.	1	5	7	3	.	.	.	2	18

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Sicyonia laevigata	.	.	.	.	.	.	.	.	.	1	.	.	1
Sphoeroides nephelus	.	.	.	4	16	7	6	3	8	4	2	5	55
Sphoeroides spengleri	.	.	.	.	.	.	1	.	.	.	.	.	1
Sphyraena barracuda	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Sphyrna lewini	.	.	.	.	.	.	1	.	.	.	.	.	1
Sphyrna tiburo	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**.**	**1**	**.**	**.**	**3**
Stellifer lanceolatus	7	3	51	24	25	25	2,252	11	114	372	205	9	3,098
Stephanolepis hispida	.	.	.	.	6	1	.	1	3	12	.	.	23
Stomolophus meleagris	6	64	12	1	.	.	.	.	.	.	.	.	83
Strongylura marina	1	1	2	2	8	14	2	6	1	1	5	1	44
Strongylura spp.	.	.	.	5	13	11	1	1	1	2	.	1	35
Symphurus civitatum	.	.	1	.	.	1	.	.	.	.	.	.	2
Symphurus plagiusa	11	6	24	26	7	77	22	16	70	83	34	23	399
Syngnathus fuscus	.	1	.	.	.	.	.	.	.	.	.	.	1
Syngnathus louisianae	1	.	.	1	3	2	11	6	6	8	6	2	46
Syngnathus scovelli	.	2	2	3	2	2	.	1	1	5	5	1	24
Synodus foetens	.	.	.	.	6	4	11	2	12	2	1	2	40
Trachinotus carolinus	**.**	**.**	**.**	**.**	**9**	**.**	**4**	**.**	**.**	**23**	**.**	**1**	**37**
Trachinotus falcatus	**1**	**.**	**.**	**.**	**18**	**1**	**15**	**9**	**3**	**15**	**2**	**8**	**72**
Trichiurus lepturus	3	.	.	1	.	.	.	.	.	.	3	1	8
Trinectes maculatus	441	90	111	57	70	69	119	110	31	99	144	167	1,508
Tylosurus crocodilus	.	.	.	.	1	.	.	.	.	.	.	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=113	E=1,356
Urophycis floridana	.	8	3	4	.	.	.	.	.	.	.	.	15
Urophycis regia	.	9	3	1	.	.	.	.	.	.	.	.	13
Xiphopenaeus kroyeri	.	.	.	.	.	.	.	.	.	.	3	.	3
Total	**10,649**	**9,997**	**6,254**	**8,156**	**18,933**	**43,449**	**20,784**	**13,169**	**13,798**	**13,040**	**10,016**	**26,550**	**194,795**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.23: Summary by gear and stratum of taxa collected during Northeast Florida stratified-random sampling, 2025.

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Abudefduf saxatilis	2	.	.	2
Achirus lineatus	6	.	34	40
***Albula* spp.**	**1**	**.**	**2**	**3**
Alosa aestivalis	.	.	1	1
Alosa mediocris	11	.	.	11
Alosa sapidissima	3	.	2	5
Ameiurus catus	3	15	534	552
Ameiurus nebulosus	.	.	2	2
Anchoa hepsetus	21,283	.	1,429	22,712
Anchoa lyolepis	8,955	.	133	9,088
Anchoa mitchilli	33,454	.	8,237	41,691
Anchoa spp.	.	.	3	3
Ancylopsetta quadrocellata	.	4	11	15
Anguilla rostrata	1	.	2	3
Archosargus probatocephalus	**23**	**42**	**42**	**107**
Arenaeus cribrarius	1	.	.	1
Ariopsis felis	5	67	583	655
Astroscopus y-graecum	.	1	1	2
Bagre marinus	3	3	27	33
Bairdiella chrysoura	2,417	279	393	3,089
Bathygobius soporator	11	.	5	16
***Brevoortia* spp.**	**1,193**	**1,103**	**24**	**2,320**
Callinectes ornatus	2	4	4	10
Callinectes sapidus	**201**	**36**	**1,060**	**1,297**
Callinectes similis	125	7	211	343
Callinectes spp.	2	.	.	2

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Caranx hippos	**52**	**19**	**1**	**72**
Centropomus undecimalis	**.**	**.**	**2**	**2**
Centropristis philadelphica	**.**	**.**	**20**	**20**
Centropristis spp.	.	.	2	2
Centropristis striata	**.**	**.**	**2**	**2**
Chaetodipterus faber	13	10	27	50
Charybdis hellerii	.	.	1	1
Chilomycterus schoepfii	8	14	9	31
Chloroscombrus chrysurus	12	67	124	203
Citharichthys macrops	2	2	1	5
Citharichthys spilopterus	108	32	290	430
Clupeiformes spp.	5	.	2	7
Ctenogobius boleosoma	189	.	19	208
Ctenogobius shufeldti	51	.	58	109
Ctenogobius smaragdus	8	.	1	9
Ctenogobius stigmaticus	2	.	1	3
Cynoscion complex	**7**	**1**	**638**	**646**
Cynoscion nebulosus	**65**	**34**	**15**	**114**
Cynoscion nothus	**.**	**.**	**4**	**4**
Cyprinodon variegatus	70	.	.	70
Diapterus auratus	59	87	23	169
Dorosoma cepedianum	22	79	13	114
Dorosoma petenense	6,037	16	60	6,113
Eleotris amblyopsis	1	.	.	1
Elops saurus	**57**	**24**	**19**	**100**
Etropus crossotus	63	13	474	550
Eucinostomus gula	72	55	22	149
Eucinostomus harengulus	732	78	134	944

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Eucinostomus spp.	1,612	.	180	1,792
Farfantepenaeus aztecus	**45**	**3**	**352**	**400**
Farfantepenaeus duorarum	**.**	**.**	**7**	**7**
***Farfantepenaeus* spp.**	**515**	**1**	**923**	**1,439**
Fundulus confluentus	1	.	.	1
Fundulus heteroclitus	5,284	.	.	5,284
Fundulus majalis	259	1	.	260
Fundulus seminolis	436	1	.	437
Gambusia holbrooki	200	.	.	200
Gobiesox strumosus	.	.	1	1
Gobioides broussonnetii	.	.	24	24
Gobionellus oceanicus	1	.	60	61
Gobiosoma bosc	64	.	18	82
Gobiosoma ginsburgi	.	.	5	5
Gobiosoma robustum	.	.	1	1
Gobiosoma spp.	194	.	32	226
Gymnura lessae	.	1	7	8
Harengula jaguana	189	3	1	193
Hippocampus erectus	.	.	5	5
Histrio histrio	1	.	.	1
Hypanus sabinus	23	124	255	402
Hypanus say	.	5	6	11
Hypleurochilus geminatus	.	.	2	2
Hyporhamphus meeki	1	.	.	1
Hyporhamphus spp.	3	.	.	3
Hypsoblennius hentz	.	1	3	4
Hypsoblennius ionthas	1	.	.	1
Ictalurus punctatus	.	8	227	235

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Labidesthes vanhyningi	304	.	.	304
Labrisomus nuchipinnis	.	.	1	1
Lagodon rhomboides	86	112	14	212
Larimus fasciatus	.	.	5	5
Leiostomus xanthurus	**4,400**	**224**	**530**	**5,154**
Lepisosteus osseus	2	41	4	47
Lepisosteus platyrhincus	2	.	.	2
Lepomis auritus	112	5	15	132
Lepomis macrochirus	224	19	47	290
Lepomis microlophus	23	9	15	47
Lepomis spp.	14	.	.	14
Limulus polyphemus	.	.	6	6
Litopenaeus setiferus	**13,902**	**403**	**12,995**	**27,300**
Lobotes surinamensis	**.**	**1**	**.**	**1**
Lucania parva	116	.	.	116
Lutjanus analis	**2**	**.**	**.**	**2**
Lutjanus griseus	**52**	**1**	**2**	**55**
Lutjanus synagris	**6**	**.**	**3**	**9**
Membras martinica	247	.	5	252
Menidia menidia	14,084	.	.	14,084
Menidia spp.	12,045	.	1	12,046
***Menippe* spp.**	**1**	**.**	**8**	**9**
Menticirrhus americanus	**59**	**5**	**220**	**284**
Menticirrhus littoralis	**2**	**.**	**.**	**2**
Menticirrhus saxatilis	**2**	**.**	**.**	**2**
Microgobius gulosus	242	.	122	364
Microgobius thalassinus	8	.	52	60
Microphis lineatus	1	.	.	1

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Micropogonias undulatus	**1,196**	**108**	**14,989**	**16,293**
Micropterus salmoides	147	3	1	151
Morone chrysops x saxatilis	5	.	.	5
Morone saxatilis	1	.	.	1
Mugil cephalus	**4,504**	**890**	**.**	**5,394**
Mugil curema	**284**	**353**	**.**	**637**
Myrophis punctatus	1	.	2	3
Negaprion brevirostris	**.**	**1**	**.**	**1**
Notemigonus crysoleucas	27	.	.	27
Notropis maculatus	4	.	13	17
Ogcocephalus cubifrons	.	.	5	5
Oligoplites saurus	106	12	.	118
Ophidion marginatum	.	.	1	1
Opisthonema oglinum	498	32	8	538
Opsanus tau	3	1	24	28
Oreochromis complex	8	3	3	14
Oreochromis/Sarotherodon spp.	23	.	.	23
Orthopristis chrysoptera	64	29	56	149
Paralichthys albigutta	**16**	**9**	**17**	**42**
Paralichthys dentatus	**.**	**.**	**3**	**3**
Paralichthys lethostigma	**51**	**26**	**190**	**267**
Paralichthys squamilentus	**1**	**.**	**.**	**1**
Peprilus paru	10	.	2	12
Peprilus triacanthus	.	2	12	14
Poecilia latipinna	32	.	.	32
Pogonias cromis	**8**	**127**	**2**	**137**
Pomatomus saltatrix	**1**	**1**	**.**	**2**
Pomoxis nigromaculatus	3	.	34	37

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Portunus spp.	8	.	84	92
Prionotus evolans	2	3	56	61
Prionotus scitulus	3	.	31	34
Prionotus tribulus	6	4	34	44
Rhinoptera bonasus	.	2	.	2
Rimapenaeus constrictus	.	.	15	15
Rimapenaeus spp.	3	.	703	706
Sardinella aurita	112	.	.	112
Sciaenidae spp.	.	.	4	4
Sciaenops ocellatus	**85**	**125**	**10**	**220**
Scomberomorus maculatus	**.**	**3**	**.**	**3**
Selene vomer	4	11	3	18
Sicyonia laevigata	.	.	1	1
Sphoeroides nephelus	26	10	19	55
Sphoeroides spengleri	.	.	1	1
Sphyraena barracuda	**1**	**.**	**.**	**1**
Sphyrna lewini	.	.	1	1
Sphyrna tiburo	**.**	**3**	**.**	**3**
Stellifer lanceolatus	.	.	3,098	3,098
Stephanolepis hispida	13	.	10	23
Stomolophus meleagris	5	10	68	83
Strongylura marina	27	16	1	44
Strongylura spp.	35	.	.	35
Symphurus civitatum	.	.	2	2
Symphurus plagiusa	195	.	204	399
Syngnathus fuscus	1	.	.	1
Syngnathus louisianae	28	.	18	46
Syngnathus scovelli	18	.	6	24

Species	Gear			Total
	21.3-m river seine	183-m haul seine	6.1-m otter trawl	
	E=576	E=192	E=588	E=1,356
Synodus foetens	20	2	18	40
Trachinotus carolinus	**37**	**.**	**.**	**37**
Trachinotus falcatus	**44**	**28**	**.**	**72**
Trichiurus lepturus	.	.	8	8
Trinectes maculatus	41	6	1,461	1,508
Tylosurus crocodilus	1	.	.	1
Urophycis floridana	.	.	15	15
Urophycis regia	.	.	13	13
Xiphopenaeus kroyeri	.	.	3	3
Total	**137,810**	**4,880**	**52,105**	**194,795**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline (’Shore’ or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation (’Veg’ or ’Unveg’). Sampling with 21.3-m river seine, 183-m haul seine, and 6.1-m otter trawl was not stratified. Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.24: Summary by zone of taxa collected during Northeast Florida stratified-random sampling, 2025.

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Abudefduf saxatilis	.	.	2	.	.	.	2
Achirus lineatus	6	3	16	13	1	1	40
***Albula* spp.**	**.**	**.**	**3**	**.**	**.**	**.**	**3**
Alosa aestivalis	.	.	.	.	1	.	1
Alosa mediocris	.	.	.	.	.	11	11
Alosa sapidissima	.	.	.	5	.	.	5
Ameiurus catus	6	32	2	74	92	346	552
Ameiurus nebulosus	.	.	.	.	.	2	2
Anchoa hepsetus	15,980	5,344	1,106	277	5	.	22,712
Anchoa lyolepis	8,835	38	215	.	.	.	9,088
Anchoa mitchilli	4,928	4,080	5,359	4,454	11,824	11,046	41,691
Anchoa spp.	.	.	.	3	.	.	3
Ancylopsetta quadrocellata	11	.	4	.	.	.	15
Anguilla rostrata	.	.	.	2	.	1	3
Archosargus probatocephalus	**5**	**12**	**49**	**40**	**1**	**.**	**107**
Arenaeus cribrarius	.	.	1	.	.	.	1
Ariopsis felis	111	167	226	148	3	.	655
Astroscopus y-graecum	.	2	.	.	.	.	2
Bagre marinus	10	12	3	8	.	.	33
Bairdiella chrysoura	1,002	236	1,364	216	234	37	3,089
Bathygobius soporator	.	1	4	11	.	.	16
***Brevoortia* spp.**	**253**	**228**	**1,194**	**624**	**18**	**3**	**2,320**
Callinectes ornatus	2	4	3	.	1	.	10
Callinectes sapidus	**267**	**197**	**246**	**245**	**126**	**216**	**1,297**
Callinectes similis	123	113	102	5	.	.	343
Callinectes spp.	2	.	.	.	.	.	2
Caranx hippos	**3**	**9**	**53**	**7**	**.**	**.**	**72**

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Centropomus undecimalis	**.**	**.**	**2**	**.**	**.**	**.**	**2**
Centropristis philadelphica	**17**	**1**	**2**	**.**	**.**	**.**	**20**
Centropristis spp.	.	2	.	.	.	.	2
Centropristis striata	**.**	**.**	**2**	**.**	**.**	**.**	**2**
Chaetodipterus faber	19	25	6	.	.	.	50
Charybdis hellerii	.	.	1	.	.	.	1
Chilomycterus schoepfii	14	13	4	.	.	.	31
Chloroscombrus chrysurus	45	27	131	.	.	.	203
Citharichthys macrops	2	2	1	.	.	.	5
Citharichthys spilopterus	37	60	150	79	31	73	430
Clupeiformes spp.	.	1	5	1	.	.	7
Ctenogobius boleosoma	15	43	113	34	3	.	208
Ctenogobius shufeldti	7	13	6	54	27	2	109
Ctenogobius smaragdus	3	1	5	.	.	.	9
Ctenogobius stigmaticus	.	2	1	.	.	.	3
Cynoscion complex	**24**	**116**	**42**	**165**	**141**	**158**	**646**
Cynoscion nebulosus	**12**	**35**	**47**	**12**	**8**	**.**	**114**
Cynoscion nothus	**2**	**.**	**2**	**.**	**.**	**.**	**4**
Cyprinodon variegatus	43	22	5	.	.	.	70
Diapterus auratus	13	9	80	47	6	14	169
Dorosoma cepedianum	.	.	5	84	14	11	114
Dorosoma petenense	5	1	38	57	1,032	4,980	6,113
Eleotris amblyopsis	.	.	.	.	1	.	1
Elops saurus	**7**	**20**	**17**	**21**	**16**	**19**	**100**
Etropus crossotus	238	132	148	31	1	.	550
Eucinostomus gula	8	16	105	20	.	.	149
Eucinostomus harengulus	44	79	339	275	188	19	944
Eucinostomus spp.	89	212	1,099	332	54	6	1,792
Farfantepenaeus aztecus	**114**	**115**	**22**	**83**	**66**	**.**	**400**

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Farfantepenaeus duorarum	**4**	**1**	**2**	**.**	**.**	**.**	**7**
***Farfantepenaeus* spp.**	**163**	**497**	**398**	**209**	**172**	**.**	**1,439**
Fundulus confluentus	.	1	.	.	.	.	1
Fundulus heteroclitus	725	3,788	768	3	.	.	5,284
Fundulus majalis	10	81	169	.	.	.	260
Fundulus seminolis	.	.	.	9	60	368	437
Gambusia holbrooki	.	25	7	55	31	82	200
Gobiesox strumosus	.	1	.	.	.	.	1
Gobioides broussonnetii	.	.	5	17	2	.	24
Gobionellus oceanicus	2	2	32	24	1	.	61
Gobiosoma bosc	1	4	14	8	30	25	82
Gobiosoma ginsburgi	1	.	4	.	.	.	5
Gobiosoma robustum	.	1	.	.	.	.	1
Gobiosoma spp.	.	2	1	28	94	101	226
Gymnura lessae	1	5	2	.	.	.	8
Harengula jaguana	29	8	139	17	.	.	193
Hippocampus erectus	3	2	.	.	.	.	5
Histrio histrio	.	.	1	.	.	.	1
Hypanus sabinus	45	52	98	82	31	94	402
Hypanus say	2	7	2	.	.	.	11
Hypleurochilus geminatus	.	1	1	.	.	.	2
Hyporhamphus meeki	1	.	.	.	.	.	1
Hyporhamphus spp.	.	.	3	.	.	.	3
Hypsoblennius hentz	3	1	.	.	.	.	4
Hypsoblennius ionthas	.	1	.	.	.	.	1
Ictalurus punctatus	.	.	.	14	25	196	235
Labidesthes vanhyningi	.	.	.	271	10	23	304
Labrisomus nuchipinnis	.	.	1	.	.	.	1
Lagodon rhomboides	30	23	30	108	11	10	212

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Larimus fasciatus	1	4	.	.	.	.	5
Leiostomus xanthurus	**463**	**774**	**2,393**	**821**	**621**	**82**	**5,154**
Lepisosteus osseus	13	5	1	26	1	1	47
Lepisosteus platyrhincus	.	.	.	.	.	2	2
Lepomis auritus	.	.	.	38	18	76	132
Lepomis macrochirus	.	.	.	136	36	118	290
Lepomis microlophus	.	.	.	34	6	7	47
Lepomis spp.	.	.	.	1	1	12	14
Limulus polyphemus	2	3	1	.	.	.	6
Litopenaeus setiferus	**4,727**	**10,118**	**5,000**	**3,374**	**1,713**	**2,368**	**27,300**
Lobotes surinamensis	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Lucania parva	.	.	.	15	48	53	116
Lutjanus analis	**.**	**2**	**.**	**.**	**.**	**.**	**2**
Lutjanus griseus	**6**	**44**	**3**	**2**	**.**	**.**	**55**
Lutjanus synagris	**4**	**4**	**1**	**.**	**.**	**.**	**9**
Membras martinica	.	.	90	55	18	89	252
Menidia menidia	6,670	3,338	3,921	155	.	.	14,084
Menidia spp.	55	56	35	1,630	1,674	8,596	12,046
***Menippe* spp.**	**5**	**1**	**3**	**.**	**.**	**.**	**9**
Menticirrhus americanus	**54**	**168**	**55**	**7**	**.**	**.**	**284**
Menticirrhus littoralis	**1**	**.**	**1**	**.**	**.**	**.**	**2**
Menticirrhus saxatilis	**2**	**.**	**.**	**.**	**.**	**.**	**2**
Microgobius gulosus	.	.	1	80	78	205	364
Microgobius thalassinus	.	1	49	10	.	.	60
Microphis lineatus	1	.	.	.	.	.	1
Micropogonias undulatus	**604**	**2,181**	**1,105**	**4,385**	**2,295**	**5,723**	**16,293**
Micropterus salmoides	.	.	.	68	68	15	151
Morone chrysops x saxatilis	.	.	.	.	.	5	5
Morone saxatilis	.	.	.	.	.	1	1

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Mugil cephalus	**1,829**	**1,054**	**1,082**	**425**	**226**	**778**	**5,394**
Mugil curema	**216**	**85**	**279**	**52**	**2**	**3**	**637**
Myrophis punctatus	1	1	.	1	.	.	3
Negaprion brevirostris	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Notemigonus crysoleucas	.	.	.	.	25	2	27
Notropis maculatus	.	.	.	13	.	4	17
Ogcocephalus cubifrons	4	.	1	.	.	.	5
Oligoplites saurus	20	50	23	21	4	.	118
Ophidion marginatum	.	.	1	.	.	.	1
Opisthonema oglinum	277	21	237	3	.	.	538
Opsanus tau	6	8	11	3	.	.	28
Oreochromis complex	.	.	.	4	3	7	14
Oreochromis/Sarotherodon spp.	.	.	.	.	19	4	23
Orthopristis chrysoptera	21	25	55	48	.	.	149
Paralichthys albigutta	**9**	**17**	**15**	**1**	**.**	**.**	**42**
Paralichthys dentatus	**2**	**.**	**1**	**.**	**.**	**.**	**3**
Paralichthys lethostigma	**35**	**34**	**53**	**61**	**44**	**40**	**267**
Paralichthys squamilentus	**1**	**.**	**.**	**.**	**.**	**.**	**1**
Peprilus paru	10	1	1	.	.	.	12
Peprilus triacanthus	6	5	3	.	.	.	14
Poecilia latipinna	.	6	3	3	.	20	32
Pogonias cromis	**39**	**7**	**79**	**12**	**.**	**.**	**137**
Pomatomus saltatrix	**1**	**1**	**.**	**.**	**.**	**.**	**2**
Pomoxis nigromaculatus	.	.	.	8	11	18	37
Portunus spp.	73	15	4	.	.	.	92
Prionotus evolans	28	26	6	1	.	.	61
Prionotus scitulus	18	7	9	.	.	.	34
Prionotus tribulus	14	12	17	1	.	.	44
Rhinoptera bonasus	2	.	.	.	.	.	2

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Rimapenaeus constrictus	5	8	2	.	.	.	15
Rimapenaeus spp.	299	308	98	1	.	.	706
Sardinella aurita	112	.	.	.	.	.	112
Sciaenidae spp.	1	3	.	.	.	.	4
Sciaenops ocellatus	**32**	**15**	**98**	**56**	**15**	**4**	**220**
Scomberomorus maculatus	**3**	**.**	**.**	**.**	**.**	**.**	**3**
Selene vomer	5	1	8	4	.	.	18
Sicyonia laevigata	1	.	.	.	.	.	1
Sphoeroides nephelus	11	14	23	7	.	.	55
Sphoeroides spengleri	.	1	.	.	.	.	1
Sphyraena barracuda	**.**	**.**	**1**	**.**	**.**	**.**	**1**
Sphyrna lewini	.	1	.	.	.	.	1
Sphyrna tiburo	**3**	**.**	**.**	**.**	**.**	**.**	**3**
Stellifer lanceolatus	354	2,468	50	226	.	.	3,098
Stephanolepis hispida	3	15	5	.	.	.	23
Stomolophus meleagris	5	1	77	.	.	.	83
Strongylura marina	5	4	20	9	3	3	44
Strongylura spp.	1	3	4	2	10	15	35
Symphurus civitatum	1	1	.	.	.	.	2
Symphurus plagiusa	117	141	101	40	.	.	399
Syngnathus fuscus	.	1	.	.	.	.	1
Syngnathus louisianae	16	15	10	5	.	.	46
Syngnathus scovelli	2	1	3	13	5	.	24
Synodus foetens	14	17	9	.	.	.	40
Trachinotus carolinus	**8**	**23**	**6**	**.**	**.**	**.**	**37**
Trachinotus falcatus	**13**	**23**	**30**	**6**	**.**	**.**	**72**
Trichiurus lepturus	1	4	2	1	.	.	8
Trinectes maculatus	46	180	62	598	411	211	1,508
Tylosurus crocodilus	.	.	1	.	.	.	1

Species	Zone						Total
	A	B	C	D	E	F	
	E=204	E=204	E=276	E=288	E=192	E=192	E=1,356
Urophycis floridana	7	4	4	.	.	.	15
Urophycis regia	7	2	4	.	.	.	13
Xiphopenaeus kroyeri	.	.	.	3	.	.	3
Total	**49,615**	**37,257**	**29,164**	**20,737**	**21,716**	**36,306**	**194,795**

Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.9 Northern Indian River Lagoon

Table A.25: Monthly summary of taxa collected during Northern Indian River Lagoon stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Achirus lineatus	32	43	48	10	11	9	18	15	19	31	35	9	280
***Albula* spp.**	**5**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**1**	**.**	**1**	**.**	**9**
Anchoa cubana	.	.	.	.	.	.	.	.	.	13	18	.	31
Anchoa hepsetus	.	.	.	222	47	1	.	.	.	.	.	.	270
Anchoa lamprotaenia	1	.	.	.	.	.	.	.	.	.	1	.	2
Anchoa lyolepis	.	.	.	.	.	.	.	.	30,261	1	4	166	30,432
Anchoa mitchilli	1,499	4,628	1,965	12,605	21,638	2,649	2,888	3,947	17,559	10,578	16,456	8,137	104,549
Archosargus probatocephalus	**6**	**34**	**8**	**75**	**137**	**112**	**121**	**87**	**36**	**43**	**39**	**71**	**769**
Archosargus rhomboidalis	5	1	.	3	19	24	47	34	31	23	58	42	287
Archosargus sp.	.	.	.	.	.	1	.	.	.	.	.	.	1
Ariopsis felis	264	22	112	159	428	771	227	307	473	263	78	90	3,194
Atherina harringtonensis	.	.	.	.	.	.	.	.	.	.	1	.	1
Bagre marinus	.	.	5	11	2	.	9	20	23	12	4	5	91
Bairdiella chrysoura	168	240	125	416	1,555	472	546	67	429	112	307	3,456	7,893
Bathygobius soporator	.	.	.	2	.	1	.	.	.	.	1	.	4
***Brevoortia* spp.**	**5**	**65**	**66**	**1,236**	**.**	**17**	**1**	**72**	**166**	**99**	**16**	**8**	**1,751**
Calamus penna	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Calamus sp.	.	.	.	.	.	.	.	.	.	.	.	1	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Callinectes bocourti	.	.	.	.	.	.	.	.	.	1	.	.	1
Callinectes ornatus	.	3	.	7	6	.	3	1	.	.	.	.	20
Callinectes sapidus	**36**	**13**	**13**	**52**	**31**	**24**	**25**	**10**	**11**	**11**	**31**	**10**	**267**
Callinectes similis	2	.	.	4	2	11	2	.	2	.	.	.	23
Callinectes spp.	.	10	.	1	.	.	.	.	.	.	.	.	11
Caranx crysos	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**2**
Caranx hippos	**2**	**5**	**4**	**26**	**10**	**16**	**4**	**23**	**9**	**21**	**15**	**12**	**147**
Caranx latus	.	.	.	.	1	.	.	.	1	.	1	.	3
Carcharhinus leucas	**.**	**.**	**.**	**1**	**1**	**.**	**5**	**.**	**2**	**2**	**.**	**.**	**11**
Centropomus pectinatus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Centropomus undecimalis	**103**	**28**	**10**	**26**	**34**	**49**	**62**	**61**	**36**	**27**	**113**	**52**	**601**
Chaetodipterus faber	.	.	.	.	5	12	22	116	71	9	6	5	246
Charybdis hellerii	.	.	.	.	.	1	.	.	.	.	.	.	1
Chasmodes saburrae	8	3	4	9	29	12	10	3	9	3	4	2	96
Chilomycterus schoepfii	29	20	13	15	45	9	20	8	23	9	22	26	239
Chloroscombrus chrysurus	.	.	1	1	116	11	10	2	11	80	112	212	556
Citharichthys spilopterus	13	13	.	32	1	7	2	2	5	.	.	.	75
Clupeiformes spp.	5	.	.	19	.	.	.	.	.	.	.	.	24
Corvula sanctaeluciae	.	.	.	.	.	66	.	.	6	.	.	.	72
Ctenogobius boleosoma	.	.	1	3	1	.	.	.	.	.	.	1	6
Ctenogobius shufeldti	.	.	.	.	.	.	.	.	.	.	4	.	4
Ctenogobius smaragdus	.	.	.	1	.	.	.	.	.	1	6	.	8

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Ctenogobius sp.	.	.	.	.	.	.	.	.	.	.	.	1	1
Cynoscion complex	**.**	**.**	**.**	**1**	**2**	**14**	**2**	**.**	**2**	**2**	**8**	**.**	**31**
Cynoscion nebulosus	**5**	**25**	**6**	**8**	**26**	**69**	**80**	**71**	**203**	**48**	**103**	**33**	**677**
Cyprinodon variegatus	7	.	.	.	2	22	179	.	.	.	.	54	264
Dajaus monticola	.	.	.	.	.	.	.	.	.	2	.	.	2
Dasyatidae spp.	.	.	.	.	.	.	1	.	.	.	1	1	3
Diapterus auratus	593	219	12	118	419	866	59	1,281	1,627	385	1,101	192	6,872
Diapterus rhombeus	1	.	.	56	4	4	40	10	7	36	1,745	88	1,991
Diplodus holbrookii	.	.	.	.	.	.	2	.	.	.	.	.	2
Dormitator maculatus	.	7	.	.	.	.	.	1	.	.	1	.	9
Echeneis naucrates	.	.	.	1	.	.	1	.	.	1	.	.	3
Eleotris amblyopsis	.	1	.	.	.	.	.	.	.	.	.	.	1
Elops saurus	**14**	**3**	**29**	**20**	**25**	**19**	**18**	**38**	**110**	**85**	**19**	**16**	**396**
Elops sp.	.	1	.	.	.	.	.	.	.	.	.	.	1
Enneacanthus gloriosus	.	.	.	.	.	.	.	.	.	.	1	.	1
Eucinostomus gula	23	71	34	154	583	751	299	152	353	482	80	39	3,021
Eucinostomus harengulus	135	88	46	349	434	552	183	213	89	150	147	63	2,449
Eucinostomus jonesii	2	2	5	.	.	2	.	6	.	7	1	.	25
Eucinostomus melanopterus	.	.	.	.	.	1	.	.	2	.	.	.	3
Eucinostomus spp.	1,642	602	26	353	126	1,106	831	1,790	1,158	331	2,282	551	10,798
Eugerres plumieri	47	15	.	33	2	95	28	276	207	97	201	81	1,082
Evorthodus lyricus	6	2	.	1	.	.	.	1	1	1	2	1	15

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Farfantepenaeus aztecus	**1**	**2**	**.**	**14**	**22**	**8**	**12**	**.**	**.**	**.**	**2**	**2**	**63**
Farfantepenaeus duorarum	**3**	**3**	**.**	**9**	**5**	**2**	**.**	**1**	**.**	**.**	**11**	**5**	**39**
***Farfantepenaeus* spp.**	**21**	**44**	**11**	**400**	**111**	**267**	**83**	**75**	**58**	**31**	**54**	**30**	**1,185**
Floridichthys carpio	18	14	8	107	100	86	571	37	40	57	129	237	1,404
Fundulus chrysotus	.	.	.	.	.	1	.	.	.	.	.	.	1
Fundulus grandis	.	.	.	.	2	.	1	.	.	.	1	4	8
Gambusia holbrooki	347	31	1	16	.	130	.	.	.	7	84	79	695
Gerres cinereus	8	10	.	3	9	8	6	4	.	15	4	2	69
Gobiesox strumosus	2	.	.	.	.	.	.	.	.	.	.	.	2
Gobiomorus dormitor	.	1	.	.	.	.	.	.	.	.	.	.	1
Gobionellus oceanicus	.	.	.	14	.	.	.	.	.	.	4	.	18
Gobiosoma bosc	11	2	.	5	.	2	.	2	.	.	.	2	24
Gobiosoma robustum	20	56	55	22	146	120	38	55	21	5	22	56	616
Gobiosoma spp.	25	41	22	19	11	164	13	34	86	44	46	22	527
Gymnura lessae	1	.	.	1	1	1	1	.	.	1	3	.	9
Haemulon parra	**.**	**.**	**.**	**.**	**.**	**24**	**.**	**1**	**2**	**.**	**1**	**.**	**28**
Haemulon plumierii	**.**	**.**	**.**	**.**	**.**	**9**	**.**	**1**	**4**	**.**	**.**	**.**	**14**
Halichoeres bivittatus	.	.	.	.	.	1	.	.	.	.	.	.	1
Halichoeres poeyi	.	.	.	.	.	1	.	.	.	.	.	.	1
Harengula jaguana	.	.	6	33	2	2	97	267	30,547	672	14	2	31,642
Harengula spp.	.	.	.	.	.	.	.	22	.	.	.	.	22
Hemichromis letourneuxi	6	.	.	.	.	.	.	.	.	.	3	.	9

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Heterandria formosa	.	.	.	.	.	2	.	.	.	.	.	.	2
Hippocampus erectus	.	1	.	.	2	2	.	.	.	.	1	.	6
Hippocampus zosterae	.	1	.	.	.	.	.	.	.	.	.	.	1
Hypanus americanus	.	.	.	1	.	.	.	.	.	.	2	.	3
Hypanus sabinus	79	148	153	112	131	72	82	32	53	44	48	17	971
Hypanus say	7	7	11	22	37	11	38	10	37	25	34	176	415
Hyporhamphus meeki	.	.	1	.	.	.	.	.	7	.	3	.	11
Hyporhamphus spp.	.	1	.	.	.	1	.	.	.	.	.	.	2
Labidesthes vanhyningi	.	11	.	.	.	.	.	.	11	14	17	4	57
Lactophrys trigonus	1	.	.	.	.	1	.	.	.	.	2	.	4
Lagodon rhomboides	30	15	106	96	162	769	1,645	1,345	1,184	2,710	670	120	8,852
Leiostomus xanthurus	**72**	**323**	**1,279**	**231**	**338**	**175**	**251**	**18**	**30**	**347**	**106**	**1**	**3,171**
Lepisosteus platyrhincus	1	.	.	.	.	.	.	.	.	.	2	.	3
Lepomis auritus	.	.	.	.	.	.	.	.	.	.	.	1	1
Lepomis gulosus	1	.	.	.	.	.	.	.	.	.	.	1	2
Lepomis macrochirus	22	4	.	.	.	.	.	.	.	1	16	5	48
Lepomis microlophus	.	.	.	.	.	.	.	.	.	.	7	.	7
Lepomis punctatus	.	.	.	.	.	.	.	.	.	.	.	1	1
Lepomis spp.	5	.	.	.	.	.	.	.	.	.	.	.	5
Limulus polyphemus	2	.	3	1	.	.	.	2	1	.	.	2	11
Litopenaeus setiferus	**6**	**5**	**.**	**4**	**.**	**.**	**.**	**.**	**694**	**61**	**29**	**6**	**805**
Lobotes surinamensis	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Lophogobius cyprinoides	10	18	.	5	1	33	.	15	8	5	31	13	139
Lucania goodei	1	.	.	4	.	4	.	.	.	.	4	.	13
Lucania parva	117	16	27	285	209	24	947	663	112	.	483	20	2,903
Lutjanus analis	**.**	**.**	**.**	**1**	**.**	**2**	**.**	**2**	**3**	**9**	**7**	**.**	**24**
Lutjanus griseus	**4**	**1**	**.**	**17**	**26**	**14**	**11**	**33**	**29**	**4**	**2**	**2**	**143**
Lutjanus jocu	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Lutjanus synagris	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**2**	**.**	**3**
Mayaheros urophthalmus	22	1	1	1	.	4	1	4	.	16	2	1	53
Megalops atlanticus	**.**	**.**	**1**	**2**	**.**	**3**	**.**	**3**	**1**	**.**	**.**	**.**	**10**
Membras martinica	.	.	.	.	.	13	.	14	.	29	5	21	82
Menidia spp.	56	253	28	84	675	301	367	487	48	128	40	494	2,961
Menticirrhus americanus	**3**	**.**	**4**	**4**	**4**	**8**	**14**	**17**	**24**	**72**	**10**	**5**	**165**
Microgobius gulosus	38	50	62	23	121	415	137	162	116	96	129	186	1,535
Microgobius microlepis	.	1	.	.	.	.	6	.	.	1	3	.	11
Microgobius thalassinus	.	.	2	1	.	.	.	.	.	.	.	.	3
Microphis lineatus	.	.	.	.	.	.	.	.	.	.	1	1	2
Micropogonias undulatus	**522**	**56**	**1,434**	**19**	**.**	**58**	**52**	**19**	**33**	**25**	**4**	**47**	**2,269**
Micropterus salmoides	.	.	.	1	.	.	.	.	.	.	1	.	2
Mugil cephalus	**272**	**1,674**	**300**	**66**	**112**	**93**	**43**	**140**	**75**	**145**	**232**	**42**	**3,194**
Mugil curema	**231**	**307**	**219**	**206**	**447**	**225**	**123**	**87**	**52**	**2,404**	**1,894**	**61**	**6,256**
Mugil rubrioculus	**1**	**.**	**.**	**.**	**2**	**.**	**1**	**3**	**.**	**1**	**9**	**20**	**37**
Mugil sp.	1	.	.	.	.	.	.	.	.	.	.	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Mugil trichodon	**2**	.	.	.	.	.	.	.	.	.	.	.	**2**
Nicholsina usta	.	.	.	.	.	.	.	.	1	.	.	.	1
Ocyurus chrysurus	.	.	.	.	.	**1**	.	.	**1**	.	.	.	**2**
Oligoplites saurus	1	11	9	4	13	67	39	84	175	60	63	19	545
Opisthonema oglinum	.	2	34	463	35	24	56	244	8,008	335	25	.	9,226
Opsanus tau	1	4	.	.	9	2	5	.	1	1	.	1	24
Oreochromis/Sarotherodon spp.	.	.	.	.	.	.	1	1	.	.	.	1	3
Orthopristis chrysoptera	.	.	79	52	27	187	97	190	149	695	34	28	1,538
Panulirus argus	.	.	.	.	.	.	.	**1**	.	.	.	.	**1**
Paralichthys albigutta	**1**	.	**2**	**6**	**4**	**3**	**3**	**2**	.	**3**	**5**	**2**	**31**
Paralichthys lethostigma	.	.	**1**	.	.	.	.	.	.	.	.	.	**1**
Poecilia latipinna	29	.	.	2	.	33	4	.	.	2	16	.	86
Pogonias cromis	**11**	**9**	**3**	**13**	**25**	**55**	.	**48**	**34**	**11**	**21**	**11**	**241**
Pomatomus saltatrix	.	.	.	.	.	.	.	.	.	.	**1**	.	**1**
Portunus spp.	.	.	.	.	.	.	3	2	.	.	.	.	5
Prionotus scitulus	.	.	.	.	4	4	.	.	3	1	.	.	12
Prionotus tribulus	2	1	2	2	.	.	.	.	.	.	.	1	8
Sarotherodon melanotheron	.	.	.	.	.	.	1	1	.	.	3	.	5
Sciaenops ocellatus	**212**	**28**	**62**	**54**	**39**	**37**	**17**	**34**	**19**	**30**	**57**	**46**	**635**
Scomberomorus maculatus	.	.	.	.	.	.	.	.	.	**3**	.	.	**3**
Scorpaena grandicornis	.	.	.	.	.	1	1	.	.	.	.	.	2
Selene vomer	.	1	.	1	2	12	.	6	2	10	12	5	51

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=57	E=57	E=47	E=57	E=47	E=57	E=47	E=57	E=57	E=57	E=57	E=57	E=654
Sphoeroides nephelus	57	72	82	207	97	82	24	32	17	58	37	61	826
Sphoeroides spengleri	.	.	.	.	.	.	.	.	.	1	.	2	3
Sphoeroides testudineus	7	20	8	11	7	3	2	18	12	14	3	7	112
Sphyraena barracuda	**1**	**.**	**.**	**.**	**1**	**.**	**3**	**6**	**10**	**5**	**4**	**3**	**33**
Sphyrna tiburo	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**1**
Strongylura marina	.	.	2	.	3	3	.	.	.	.	1	4	13
Strongylura notata	5	7	2	.	8	12	36	15	66	68	4	4	227
Strongylura spp.	.	.	1	1	2	.	.	.	.	.	.	.	4
Strongylura timucu	.	.	.	.	.	.	.	.	.	.	4	.	4
Symphurus plagiusa	.	.	.	4	.	.	1	.	.	.	3	1	9
Syngnathus louisianae	.	1	1	.	1	1	5	1	3	1	16	1	31
Syngnathus scovelli	43	52	6	25	46	20	33	3	19	14	45	10	316
Synodus foetens	.	.	.	1	.	.	1	1	3	.	.	1	7
Trachinotus carolinus	**.**	**.**	**.**	**1**	**.**	**2**	**.**	**.**	**.**	**.**	**.**	**2**	**5**
Trachinotus falcatus	**1**	**.**	**3**	**.**	**3**	**16**	**6**	**6**	**13**	**4**	**5**	**.**	**57**
Trinectes maculatus	20	6	.	7	.	1	.	1	1	1	5	9	51
Tylosurus crocodilus	.	.	.	.	.	.	.	.	2	.	.	.	2
Total	**7,018**	**9,475**	**6,564**	**18,713**	**28,744**	**11,399**	**10,623**	**12,869**	**94,759**	**21,253**	**27,566**	**15,332**	**264,315**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.26: Summary by gear and stratum of taxa collected during Northern Indian River Lagoon stratified-random sampling, 2025.

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Achirus lineatus	39	31	60	9	1	85	55	280
***Albula* spp.**	**.**	**.**	**2**	**5**	**.**	**2**	**.**	**9**
Anchoa cubana	.	.	31	.	.	.	.	31
Anchoa hepsetus	24	45	199	.	2	.	.	270
Anchoa lamprotaenia	.	.	1	1	.	.	.	2
Anchoa lyolepis	.	.	17,056	.	13,376	.	.	30,432
Anchoa mitchilli	4,462	6,723	76,363	11,427	5,574	.	.	104,549
Archosargus probatocephalus	**23**	**30**	**156**	**23**	**6**	**491**	**40**	**769**
Archosargus rhomboidalis	10	.	8	.	.	258	11	287
Archosargus sp.	.	.	.	.	.	1	.	1
Ariopsis felis	136	111	65	2	.	2,528	352	3,194
Atherina harringtonensis	.	.	1	.	.	.	.	1
Bagre marinus	.	17	1	.	.	63	10	91
Bairdiella chrysoura	1,730	344	4,775	.	.	724	320	7,893
Bathygobius soporator	.	.	3	1	.	.	.	4
***Brevoortia* spp.**	**34**	**4**	**303**	**1,024**	**28**	**346**	**12**	**1,751**
Calamus penna	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Calamus sp.	1	.	.	.	.	.	.	1
Callinectes bocourti	.	.	.	1	.	.	.	1
Callinectes ornatus	3	1	5	.	.	8	3	20
Callinectes sapidus	**7**	**23**	**47**	**31**	**3**	**109**	**47**	**267**
Callinectes similis	1	.	6	.	1	5	10	23
Callinectes spp.	.	.	2	.	.	9	.	11
Caranx crysos	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**2**
Caranx hippos	**.**	**1**	**5**	**.**	**.**	**118**	**23**	**147**
Caranx latus	.	.	1	.	.	2	.	3

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Carcharhinus leucas	**1**	**.**	**1**	**.**	**.**	**7**	**2**	**11**
Centropomus pectinatus	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**1**
Centropomus undecimalis	**.**	**1**	**12**	**197**	**89**	**283**	**19**	**601**
Chaetodipterus faber	4	3	3	.	.	212	24	246
Charybdis hellerii	.	.	.	.	.	1	.	1
Chasmodes saburrae	34	3	49	.	.	7	3	96
Chilomycterus schoepfii	7	.	6	.	.	150	76	239
Chloroscombrus chrysurus	.	2	7	.	.	249	298	556
Citharichthys spilopterus	2	.	40	4	9	18	2	75
Clupeiformes spp.	.	4	20	.	.	.	.	24
Corvula sanctaeluciae	66	.	6	.	.	.	.	72
Ctenogobius boleosoma	1	1	4	.	.	.	.	6
Ctenogobius shufeldti	.	.	.	4	.	.	.	4
Ctenogobius smaragdus	2	.	5	1	.	.	.	8
Ctenogobius sp.	.	.	.	1	.	.	.	1
Cynoscion complex	**1**	**.**	**13**	**.**	**.**	**17**	**.**	**31**
Cynoscion nebulosus	**211**	**25**	**229**	**4**	**5**	**165**	**38**	**677**
Cyprinodon variegatus	.	.	264	.	.	.	.	264
Dajaus monticola	.	.	.	2	.	.	.	2
Dasyatidae spp.	.	.	.	.	.	2	1	3
Diapterus auratus	5	13	228	1,056	1,101	3,880	589	6,872
Diapterus rhombeus	8	34	477	86	.	1,369	17	1,991
Diplodus holbrookii	.	.	.	.	.	1	1	2
Dormitator maculatus	.	.	.	8	1	.	.	9
Echeneis naucrates	.	.	.	.	.	2	1	3
Eleotris amblyopsis	.	.	.	1	.	.	.	1
Elops saurus	**.**	**2**	**5**	**1**	**1**	**350**	**37**	**396**
Elops sp.	.	.	1	.	.	.	.	1

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Enneacanthus gloriosus	.	.	.	.	1	.	.	1
Eucinostomus gula	104	96	754	13	43	1,216	795	3,021
Eucinostomus harengulus	70	19	339	424	213	808	576	2,449
Eucinostomus jonesii	.	1	21	.	.	2	1	25
Eucinostomus melanopterus	.	.	2	.	.	.	1	3
Eucinostomus spp.	1,274	140	5,090	3,323	971	.	.	10,798
Eugerres plumieri	12	.	261	574	61	125	49	1,082
Evorthodus lyricus	.	.	2	13	.	.	.	15
Farfantepenaeus aztecus	**.**	**5**	**12**	**1**	**.**	**14**	**31**	**63**
Farfantepenaeus duorarum	**11**	**1**	**5**	**.**	**.**	**18**	**4**	**39**
***Farfantepenaeus* spp.**	**90**	**33**	**961**	**48**	**51**	**2**	**.**	**1,185**
Floridichthys carpio	267	1	1,135	.	.	1	.	1,404
Fundulus chrysotus	.	.	.	.	1	.	.	1
Fundulus grandis	.	.	8	.	.	.	.	8
Gambusia holbrooki	1	.	1	139	554	.	.	695
Gerres cinereus	.	.	1	25	1	36	6	69
Gobiesox strumosus	.	.	1	.	1	.	.	2
Gobiomorus dormitor	.	.	.	1	.	.	.	1
Gobionellus oceanicus	.	1	17	.	.	.	.	18
Gobiosoma bosc	.	.	1	15	8	.	.	24
Gobiosoma robustum	359	41	216	.	.	.	.	616
Gobiosoma spp.	188	87	224	26	2	.	.	527
Gymnura lessae	.	.	.	.	.	6	3	9
Haemulon parra	**22**	**.**	**4**	**.**	**.**	**2**	**.**	**28**
Haemulon plumierii	**9**	**.**	**4**	**.**	**.**	**1**	**.**	**14**
Halichoeres bivittatus	1	.	.	.	.	.	.	1
Halichoeres poeyi	1	.	.	.	.	.	.	1
Harengula jaguana	.	187	7,697	2	23,518	117	121	31,642

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Harengula spp.	.	.	.	22	.	.	.	22
Hemichromis letourneuxi	.	.	.	2	7	.	.	9
Heterandria formosa	.	.	.	.	2	.	.	2
Hippocampus erectus	1	.	.	.	.	3	2	6
Hippocampus zosterae	.	.	1	.	.	.	.	1
Hypanus americanus	.	.	.	.	.	3	.	3
Hypanus sabinus	9	42	48	3	.	627	242	971
Hypanus say	2	17	8	.	.	346	42	415
Hyporhamphus meeki	.	.	.	.	.	11	.	11
Hyporhamphus spp.	1	.	.	.	.	.	1	2
Labidesthes vanhyningi	.	.	.	48	9	.	.	57
Lactophrys trigonus	.	.	.	.	.	3	1	4
Lagodon rhomboides	98	13	432	10	.	6,762	1,537	8,852
Leiostomus xanthurus	**10**	**12**	**1,556**	**136**	**28**	**818**	**611**	**3,171**
Lepisosteus platyrhincus	.	.	.	2	1	.	.	3
Lepomis auritus	.	.	.	1	.	.	.	1
Lepomis gulosus	.	.	.	1	1	.	.	2
Lepomis macrochirus	.	.	.	24	24	.	.	48
Lepomis microlophus	.	.	.	1	6	.	.	7
Lepomis punctatus	.	.	.	1	.	.	.	1
Lepomis spp.	.	.	.	.	5	.	.	5
Limulus polyphemus	.	.	.	.	.	9	2	11
Litopenaeus setiferus	**5**	**61**	**715**	**15**	**.**	**5**	**4**	**805**
Lobotes surinamensis	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Lophogobius cyprinoides	3	9	2	109	16	.	.	139
Lucania goodei	.	.	.	4	9	.	.	13
Lucania parva	1,398	.	1,494	2	9	.	.	2,903
Lutjanus analis	**3**	**.**	**.**	**.**	**.**	**21**	**.**	**24**

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Lutjanus griseus	**4**	**.**	**34**	**11**	**1**	**87**	**6**	**143**
Lutjanus jocu	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**1**
Lutjanus synagris	**3**	**.**	**.**	**.**	**.**	**.**	**.**	**3**
Mayaheros urophthalmus	.	.	.	22	27	3	1	53
Megalops atlanticus	**.**	**.**	**.**	**.**	**.**	**10**	**.**	**10**
Membras martinica	3	1	78	.	.	.	.	82
Menidia spp.	282	19	2,359	230	71	.	.	2,961
Menticirrhus americanus	**6**	**6**	**32**	**.**	**.**	**112**	**9**	**165**
Microgobius gulosus	832	32	607	22	42	.	.	1,535
Microgobius microlepis	7	.	4	.	.	.	.	11
Microgobius thalassinus	.	3	.	.	.	.	.	3
Microphis lineatus	.	.	.	1	1	.	.	2
Micropogonias undulatus	**5**	**8**	**1,770**	**163**	**150**	**168**	**5**	**2,269**
Micropterus salmoides	.	.	.	1	1	.	.	2
Mugil cephalus	**4**	**1**	**1,893**	**165**	**65**	**695**	**371**	**3,194**
Mugil curema	**1**	**1**	**42**	**9**	**7**	**2,784**	**3,412**	**6,256**
Mugil rubrioculus	**.**	**.**	**2**	**.**	**.**	**11**	**24**	**37**
Mugil sp.	.	.	1	.	.	.	.	1
Mugil trichodon	**.**	**.**	**2**	**.**	**.**	**.**	**.**	**2**
Nicholsina usta	.	.	1	.	.	.	.	1
Ocyurus chrysurus	**1**	**.**	**.**	**.**	**.**	**1**	**.**	**2**
Oligoplites saurus	32	12	172	2	1	216	110	545
Opisthonema oglinum	314	2	188	412	7,603	652	55	9,226
Opsanus tau	.	3	4	.	.	9	8	24
Oreochromis/Sarotherodon spp.	.	.	1	2	.	.	.	3
Orthopristis chrysoptera	281	37	107	.	.	1,060	53	1,538
Panulirus argus	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Paralichthys albigutta	**2**	**.**	**5**	**.**	**.**	**15**	**9**	**31**

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Paralichthys lethostigma	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Poecilia latipinna	10	.	9	.	67	.	.	86
Pogonias cromis	**1**	**2**	**3**	**.**	**.**	**213**	**22**	**241**
Pomatomus saltatrix	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Portunus spp.	.	.	5	.	.	.	.	5
Prionotus scitulus	.	.	1	.	.	6	5	12
Prionotus tribulus	1	1	2	.	.	3	1	8
Sarotherodon melanotheron	.	.	.	.	.	3	2	5
Sciaenops ocellatus	**7**	**1**	**223**	**81**	**21**	**256**	**46**	**635**
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**.**	**3**	**.**	**3**
Scorpaena grandicornis	.	.	1	.	.	.	1	2
Selene vomer	.	.	1	.	.	50	.	51
Sphoeroides nephelus	20	7	16	.	.	594	189	826
Sphoeroides spengleri	2	.	.	.	.	.	1	3
Sphoeroides testudineus	1	.	20	2	5	66	18	112
Sphyraena barracuda	**3**	**.**	**3**	**2**	**2**	**22**	**1**	**33**
Sphyrna tiburo	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**1**
Strongylura marina	.	.	1	.	.	5	7	13
Strongylura notata	1	25	139	1	2	54	5	227
Strongylura spp.	1	.	3	.	.	.	.	4
Strongylura timucu	.	.	.	3	1	.	.	4
Symphurus plagiusa	.	.	5	.	.	1	3	9
Syngnathus louisianae	13	6	3	.	.	.	9	31
Syngnathus scovelli	180	16	120	.	.	.	.	316
Synodus foetens	.	1	2	.	.	4	.	7
Trachinotus carolinus	**.**	**.**	**.**	**.**	**.**	**5**	**.**	**5**
Trachinotus falcatus	**.**	**1**	**11**	**.**	**.**	**29**	**16**	**57**
Trinectes maculatus	.	.	.	45	5	1	.	51

Species	Gear and Strata							Total
	21.3-m bay seine			21.3-m river seine		183-m haul seine		
	Veg	Unveg	Shore	Over	Nonover	Over	Nonover	
	E=81	E=63	E=192	E=70	E=20	E=183	E=45	E=654
Tylosurus crocodilus	.	.	1	.	.	1	.	2
Total	**12,768**	**8,369**	**129,343**	**20,050**	**53,811**	**29,563**	**10,411**	**264,315**

Sampling with 21.3-m bay seine was stratified by the presence or absence of a shoreline ('Shore' or offshore) within 5-m. Offshore sets were further stratified by the presence or absence of bottom vegetation ('Veg' or 'Unveg'). Sampling with 21.3-m river seine was not stratified. Sampling with 183-m haul seine was stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.27: Summary by zone of taxa collected during Northern Indian River Lagoon stratified-random sampling, 2025.

Species	Zone					Total
	C	D	E	H	F	
	E=168	E=168	E=48	E=180	E=90	E=654
Achirus lineatus	183	32	23	32	10	280
***Albula* spp.**	**.**	**.**	**.**	**4**	**5**	**9**
Anchoa cubana	17	.	.	14	.	31
Anchoa hepsetus	17	1	.	250	2	270
Anchoa lamprotaenia	.	.	.	1	1	2
Anchoa lyolepis	169	.	.	16,887	13,376	30,432
Anchoa mitchilli	54,653	7,098	.	25,797	17,001	104,549
Archosargus probatocephalus	**181**	**183**	**14**	**362**	**29**	**769**
Archosargus rhomboidalis	12	3	7	265	.	287
Archosargus sp.	.	.	.	1	.	1
Ariopsis felis	994	765	1,039	394	2	3,194
Atherina harringtonensis	.	.	.	1	.	1
Bagre marinus	37	13	14	27	.	91
Bairdiella chrysoura	7,152	290	275	176	.	7,893
Bathygobius soporator	.	.	.	3	1	4
***Brevoortia* spp.**	**323**	**80**	**102**	**194**	**1,052**	**1,751**
Calamus penna	**.**	**.**	**.**	**1**	**.**	**1**
Calamus sp.	.	.	.	1	.	1
Callinectes bocourti	.	.	.	.	1	1
Callinectes ornatus	.	.	.	20	.	20
Callinectes sapidus	**81**	**3**	**1**	**148**	**34**	**267**
Callinectes similis	5	.	.	17	1	23
Callinectes spp.	9	.	.	2	.	11
Caranx crysos	**.**	**.**	**.**	**2**	**.**	**2**
Caranx hippos	**37**	**29**	**7**	**74**	**.**	**147**
Caranx latus	.	.	.	3	.	3
Carcharhinus leucas	**2**	**6**	**1**	**2**	**.**	**11**

Species	Zone					Total
	C	D	E	H	F	
	E=168	E=168	E=48	E=180	E=90	E=654
Centropomus pectinatus	**.**	**.**	**.**	**.**	**1**	**1**
Centropomus undecimalis	**42**	**53**	**7**	**213**	**286**	**601**
Chaetodipterus faber	59	24	47	116	.	246
Charybdis hellerii	.	.	.	1	.	1
Chasmodes saburrae	49	36	6	5	.	96
Chilomycterus schoepfii	97	18	29	95	.	239
Chloroscombrus chrysurus	158	6	376	16	.	556
Citharichthys spilopterus	11	.	.	51	13	75
Clupeiformes spp.	23	.	.	1	.	24
Corvula sanctaeluciae	.	.	.	72	.	72
Ctenogobius boleosoma	.	.	.	6	.	6
Ctenogobius shufeldti	.	.	.	.	4	4
Ctenogobius smaragdus	.	.	.	7	1	8
Ctenogobius sp.	.	.	.	.	1	1
Cynoscion complex	**29**	**.**	**2**	**.**	**.**	**31**
Cynoscion nebulosus	**276**	**192**	**18**	**182**	**9**	**677**
Cyprinodon variegatus	.	264	.	.	.	264
Dajaus monticola	.	.	.	.	2	2
Dasyatidae spp.	1	.	.	2	.	3
Diapterus auratus	2,122	205	779	1,609	2,157	6,872
Diapterus rhombeus	1,780	3	.	122	86	1,991
Diplodus holbrookii	.	.	.	2	.	2
Dormitator maculatus	.	.	.	.	9	9
Echeneis naucrates	.	2	.	1	.	3
Eleotris amblyopsis	.	.	.	.	1	1
Elops saurus	**111**	**92**	**119**	**72**	**2**	**396**
Elops sp.	.	1	.	.	.	1
Enneacanthus gloriosus	.	.	.	.	1	1
Eucinostomus gula	482	30	510	1,943	56	3,021

Species	Zone					Total
	C	D	E	H	F	
	E=168	E=168	E=48	E=180	E=90	E=654
Eucinostomus harengulus	372	155	534	751	637	2,449
Eucinostomus jonesii	2	.	.	23	.	25
Eucinostomus melanopterus	.	.	.	3	.	3
Eucinostomus spp.	330	31	.	6,143	4,294	10,798
Eugerres plumieri	357	8	28	54	635	1,082
Evorthodus lyricus	.	.	.	2	13	15
Farfantepenaeus aztecus	**44**	**.**	**3**	**15**	**1**	**63**
Farfantepenaeus duorarum	**24**	**.**	**2**	**13**	**.**	**39**
***Farfantepenaeus* spp.**	**43**	**3**	**.**	**1,040**	**99**	**1,185**
Floridichthys carpio	41	1,361	1	1	.	1,404
Fundulus chrysotus	.	.	.	.	1	1
Fundulus grandis	.	8	.	.	.	8
Gambusia holbrooki	1	1	.	.	693	695
Gerres cinereus	2	.	1	40	26	69
Gobiesox strumosus	.	1	.	.	1	2
Gobiomorus dormitor	.	.	.	.	1	1
Gobionellus oceanicus	1	.	.	17	.	18
Gobiosoma bosc	.	1	.	.	23	24
Gobiosoma robustum	182	327	.	107	.	616
Gobiosoma spp.	112	227	.	160	28	527
Gymnura lessae	4	1	1	3	.	9
Haemulon parra	**.**	**.**	**.**	**28**	**.**	**28**
Haemulon plumierii	**.**	**.**	**.**	**14**	**.**	**14**
Halichoeres bivittatus	.	.	.	1	.	1
Halichoeres poeyi	.	.	.	1	.	1
Harengula jaguana	385	9	11	7,717	23,520	31,642
Harengula spp.	.	.	.	.	22	22
Hemichromis letourneuxi	.	.	.	.	9	9
Heterandria formosa	.	.	.	.	2	2

Species	Zone					Total
	C	D	E	H	F	
	E=168	E=168	E=48	E=180	E=90	E=654
Hippocampus erectus	5	.	.	1	.	6
Hippocampus zosterae	.	.	.	1	.	1
Hypanus americanus	.	.	.	3	.	3
Hypanus sabinus	417	182	136	233	3	971
Hypanus say	68	28	69	250	.	415
Hyporhamphus meeki	1	1	.	9	.	11
Hyporhamphus spp.	.	1	.	1	.	2
Labidesthes vanhyningi	.	.	.	.	57	57
Lactophrys trigonus	1	.	.	3	.	4
Lagodon rhomboides	511	256	1,844	6,231	10	8,852
Leiostomus xanthurus	**1,917**	**140**	**70**	**880**	**164**	**3,171**
Lepisosteus platyrhincus	.	.	.	.	3	3
Lepomis auritus	.	.	.	.	1	1
Lepomis gulosus	.	.	.	.	2	2
Lepomis macrochirus	.	.	.	.	48	48
Lepomis microlophus	.	.	.	.	7	7
Lepomis punctatus	.	.	.	.	1	1
Lepomis spp.	.	.	.	.	5	5
Limulus polyphemus	2	2	7	.	.	11
Litopenaeus setiferus	**36**	**1**	**.**	**753**	**15**	**805**
Lobotes surinamensis	**1**	**.**	**.**	**.**	**.**	**1**
Lophogobius cyprinoides	.	.	.	14	125	139
Lucania goodei	.	.	.	.	13	13
Lucania parva	25	2,866	.	1	11	2,903
Lutjanus analis	**.**	**.**	**.**	**24**	**.**	**24**
Lutjanus griseus	**7**	**1**	**1**	**122**	**12**	**143**
Lutjanus jocu	**.**	**.**	**.**	**.**	**1**	**1**
Lutjanus synagris	**.**	**.**	**.**	**3**	**.**	**3**
Mayaheros urophthalmus	2	1	.	1	49	53

Species	Zone					Total
	C	D	E	H	F	
	E=168	E=168	E=48	E=180	E=90	E=654
Megalops atlanticus	**1**	**9**	**.**	**.**	**.**	**10**
Membras martinica	78	2	.	2	.	82
Menidia spp.	802	1,855	.	3	301	2,961
Menticirrhus americanus	**97**	**8**	**31**	**29**	**.**	**165**
Microgobius gulosus	29	1,241	.	201	64	1,535
Microgobius microlepis	.	.	.	11	.	11
Microgobius thalassinus	.	.	.	3	.	3
Microphis lineatus	.	.	.	.	2	2
Micropogonias undulatus	**1,508**	**23**	**127**	**298**	**313**	**2,269**
Micropterus salmoides	.	.	.	.	2	2
Mugil cephalus	**2,115**	**424**	**52**	**373**	**230**	**3,194**
Mugil curema	**2,104**	**776**	**503**	**2,857**	**16**	**6,256**
Mugil rubrioculus	**25**	**.**	**.**	**12**	**.**	**37**
Mugil sp.	1	.	.	.	.	1
Mugil trichodon	**.**	**.**	**.**	**2**	**.**	**2**
Nicholsina usta	.	.	.	1	.	1
Ocyurus chrysurus	**.**	**.**	**.**	**2**	**.**	**2**
Oligoplites saurus	197	84	91	170	3	545
Opisthonema oglinum	543	135	415	118	8,015	9,226
Opsanus tau	17	2	1	4	.	24
Oreochromis/Sarotherodon spp.	.	1	.	.	2	3
Orthopristis chrysoptera	168	1	73	1,296	.	1,538
Panulirus argus	**.**	**.**	**.**	**1**	**.**	**1**
Paralichthys albigutta	**.**	**.**	**1**	**30**	**.**	**31**
Paralichthys lethostigma	**.**	**.**	**.**	**1**	**.**	**1**
Poecilia latipinna	.	19	.	.	67	86
Pogonias cromis	**21**	**160**	**2**	**58**	**.**	**241**
Pomatomus saltatrix	**.**	**.**	**.**	**1**	**.**	**1**
Portunus spp.	.	.	.	5	.	5

Species	Zone					Total
	C	D	E	H	F	
	E=168	E=168	E=48	E=180	E=90	E=654
Prionotus scitulus	5	.	6	1	.	12
Prionotus tribulus	1	.	.	7	.	8
Sarotherodon melanotheron	2	2	.	1	.	5
Sciaenops ocellatus	**109**	**173**	**15**	**236**	**102**	**635**
Scomberomorus maculatus	**.**	**.**	**.**	**3**	**.**	**3**
Scorpaena grandicornis	.	.	.	2	.	2
Selene vomer	8	.	.	43	.	51
Sphoeroides nephelus	59	702	35	30	.	826
Sphoeroides spengleri	.	.	.	3	.	3
Sphoeroides testudineus	2	.	.	103	7	112
Sphyraena barracuda	**.**	**.**	**.**	**29**	**4**	**33**
Sphyrna tiburo	**.**	**.**	**.**	**1**	**.**	**1**
Strongylura marina	5	2	.	6	.	13
Strongylura notata	100	56	3	65	3	227
Strongylura spp.	.	4	.	.	.	4
Strongylura timucu	.	.	.	.	4	4
Symphurus plagiusa	4	.	.	5	.	9
Syngnathus louisianae	23	4	.	4	.	31
Syngnathus scovelli	150	125	.	41	.	316
Synodus foetens	.	.	.	7	.	7
Trachinotus carolinus	**2**	**.**	**.**	**3**	**.**	**5**
Trachinotus falcatus	**19**	**.**	**.**	**38**	**.**	**57**
Trinectes maculatus	1	.	.	.	50	51
Tylosurus crocodilus	2	.	.	.	.	2
Total	**82,203**	**20,849**	**7,439**	**79,963**	**73,861**	**264,315**

Zones C and H were located in the Northern Indian River Lagoon; Zones D—E encompassed the Banana River; Zone F encompassed the lower Sebastian River and Turkey Creek. Effort, or the total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

A.10 Southern Indian River Lagoon

Table A.28: Monthly summary of taxa collected during Southern Indian River Lagoon stratified-random sampling, 2025.

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Abudefduf saxatilis	.	.	.	.	.	.	.	.	1	.	.	.	1
Acanthostracion quadricornis	.	2	.	.	3	1	.	.	.	.	.	2	8
Achirus lineatus	15	7	1	13	2	3	3	6	4	7	8	11	80
***Albula* spp.**	**14**	**15**	**9**	**3**	**2**	**4**	**.**	**.**	**12**	**.**	**.**	**1**	**60**
Aluterus scriptus	.	.	.	.	.	.	.	.	2	.	.	.	2
Anchoa hepsetus	.	.	.	14	.	1	.	.	.	.	.	.	15
Anchoa lyolepis	.	.	.	8	.	.	.	.	.	.	.	.	8
Anchoa mitchilli	322	230	.	2,672	.	720	.	30	45	179	543	4,604	9,345
Anguilla rostrata	.	.	.	.	.	.	.	.	.	.	.	1	1
Archosargus probatocephalus	**37**	**25**	**26**	**64**	**23**	**63**	**70**	**54**	**59**	**141**	**8**	**30**	**600**
Archosargus rhomboidalis	36	111	2	79	41	5	25	132	78	732	134	10	1,385
Archosargus spp.	.	.	.	.	.	.	.	1	.	.	1	1	3
Ariopsis felis	34	57	27	85	210	74	381	37	139	57	17	27	1,145
Astroscopus y-graecum	.	.	1	.	.	.	.	.	.	.	.	.	1
Bagre marinus	.	2	1	3	6	2	1	.	7	1	.	6	29
Bairdiella chrysoura	3	432	.	5	5	.	.	.	.	12	.	2	459
Bathygobius soporator	1	2	.	2	.	.	.	.	.	.	.	.	5
Belonidae sp.	.	.	.	.	.	.	.	.	.	1	.	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
***Brevoortia* spp.**	54	847	.	564	.	483	7	8	.	6	.	352	2,321
Calamus arctifrons	.	.	.	.	.	4	.	.	.	.	.	.	4
Callinectes ornatus	1	3	1	7	5	46	5	1	1	4	3	5	82
Callinectes sapidus	54	32	3	16	14	32	12	13	15	15	17	31	254
Callinectes similis	.	.	.	.	1	5	14	4	3	.	.	10	37
Callinectes spp.	1	1	.	1	.	5	.	.	.	.	.	4	12
Caranx crysos	.	.	.	1	1	.	.	.	5	2	17	.	26
Caranx hippos	13	38	7	12	11	13	6	.	6	7	10	15	138
Caranx latus	.	.	.	.	.	1	.	3	1	4	4	2	15
Carcharhinus leucas	.	.	.	.	.	.	.	.	1	2	.	.	3
Centropomus ensiferus	2	.	.	.	.	.	.	.	.	.	.	.	2
Centropomus parallelus	2	.	.	1	.	35	.	.	.	1	.	3	42
Centropomus undecimalis	81	56	42	61	58	100	61	49	77	104	177	72	938
Chaetodipterus faber	4	1	.	.	.	1	5	.	1	.	.	2	14
Charybdis hellerii	1	.	.	.	1	1	.	.	.	.	.	.	3
Chilomycterus schoepfii	2	1	1	.	3	4	1	.	.	6	1	2	21
Chloroscombrus chrysurus	.	.	.	.	.	.	.	.	.	.	204	3	207
Citharichthys spilopterus	23	9	1	105	10	42	10	11	7	.	.	1	219
Clupeiformes sp.	.	1	.	.	.	.	.	.	.	.	.	.	1
Ctenogobius boleosoma	17	6	.	4	.	9	.	.	.	.	3	.	39
Ctenogobius smaragdus	1	.	.	1	.	1	.	2	.	.	22	.	27
Ctenogobius spp.	20	.	.	.	.	.	.	.	.	.	.	.	20

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Ctenogobius stigmaturus	6	.	.	.	.	.	.	.	.	.	.	.	6
Cynoscion complex	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Cynoscion nebulosus	**6**	**2**	**.**	**.**	**.**	**.**	**9**	**1**	**.**	**4**	**2**	**.**	**24**
Dajaus monticola	.	.	.	.	.	.	.	.	2	.	.	1	3
Dasyatidae spp.	4	1	1	.	.	.	.	.	.	.	.	.	6
Diapterus auratus	452	1,130	1,113	596	1,025	353	1,042	295	154	259	319	849	7,587
Diapterus rhombeus	.	11	.	2	1	.	.	.	.	.	13	3	30
Diplectrum formosum	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Diplodus holbrookii	.	.	.	.	.	1	.	.	.	.	.	.	1
Dormitator maculatus	.	.	.	1	.	1	.	6	.	9	.	.	17
Dorosoma cepedianum	4	1	.	.	.	.	.	.	.	.	.	.	5
Dorosoma petenense	.	.	.	.	.	13	.	.	.	.	.	.	13
Echeneis sp.	.	.	.	.	.	.	.	.	.	1	.	.	1
Eleotris amblyopsis	.	.	.	1	.	1	.	.	.	.	.	.	2
Elops saurus	**325**	**18**	**102**	**15**	**2**	**5**	**13**	**2**	**4**	**5**	**21**	**25**	**537**
Epinephelus itajara	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**1**
Erotelis smaragdus	1	.	.	.	.	.	.	.	.	.	.	.	1
Eucinostomus argenteus	.	5	.	.	.	.	.	.	3	.	.	.	8
Eucinostomus gula	29	401	57	285	45	493	93	81	48	89	18	46	1,685
Eucinostomus harengulus	79	178	4	205	18	196	9	44	66	30	30	100	959
Eucinostomus jonesii	10	155	.	.	1	3	.	.	1	.	.	1	171
Eucinostomus melanopterus	3	1	2	.	1	2	4	2	1	.	1	.	17

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Eucinostomus spp.	653	1,045	.	427	.	760	.	563	407	169	154	262	4,440
Eugerres plumieri	39	27	3	68	2	60	2	16	12	3	28	30	290
Evorthodus lyricus	2	1	.	6	.	21	.	10	2	2	61	5	110
Farfantepenaeus aztecus	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**2**
***Farfantepenaeus* spp.**	**56**	**64**	**.**	**149**	**.**	**100**	**.**	**62**	**82**	**16**	**13**	**24**	**566**
Fundulus chrysotus	.	.	.	.	.	.	.	.	.	.	1	.	1
Gambusia holbrooki	32	12	.	38	.	1	.	52	1	9	57	26	228
Gerres cinereus	74	64	18	23	9	19	7	18	22	18	146	21	439
Ginglymostoma cirratum	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Gobioides broussonnetii	9	.	.	.	.	.	.	.	.	.	.	.	9
Gobiomorus dormitor	2	3	.	.	.	.	.	.	.	.	.	.	5
Gobionellus oceanicus	28	11	.	1	.	15	.	.	1	14	72	10	152
Gobiosoma bosc	18	18	.	3	.	7	.	2	1	.	.	17	66
Gobiosoma robustum	.	.	.	.	.	.	.	.	.	.	.	1	1
Gobiosoma spp.	2	1	.	14	.	22	.	12	2	1	2	9	65
Gymnura lessae	.	.	1	.	2	.	1	.	1	.	.	.	5
Haemulon aurolineatum	**.**	**.**	**.**	**.**	**.**	**7**	**.**	**.**	**.**	**.**	**.**	**6**	**13**
Haemulon parra	**.**	**.**	**.**	**.**	**1**	**9**	**89**	**.**	**.**	**32**	**2**	**.**	**133**
Haemulon plumierii	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**4**	**.**	**.**	**4**
Haemulon sciurus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**5**	**.**	**.**	**5**
Haemulon spp.	.	.	.	.	.	9	.	.	.	.	.	.	9
Harengula humeralis	.	.	.	1,705	.	.	.	.	.	.	.	.	1,705

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Harengula jaguana	11	2	13	19	4	39	10	.	9	598	358	.	1,063
Harengula sp.	.	.	.	.	.	.	.	.	1	.	.	.	1
Hippocampus erectus	1	1	.	.	1	.	1	.	.	.	.	1	5
Hypanus americanus	1	.	.	.	.	.	.	.	.	.	1	.	2
Hypanus sabinus	2	11	2	4	2	2	13	3	2	.	2	4	47
Hypanus say	3	12	4	6	4	33	39	6	7	3	1	2	120
Hyporhamphus meeki	.	.	.	.	.	.	2	.	.	.	.	.	2
Labidesthes vanhyningi	15	28	.	8	.	4	.	1	5	46	24	15	146
Lachnolaimus maximus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**5**	**.**	**.**	**5**
Lactophrys trigonus	1	3	4	2	.	.	.	.	5	.	2	2	19
Lagodon rhomboides	119	73	2	106	263	592	217	1,641	135	2,337	334	56	5,875
Leiostomus xanthurus	**1**	**138**	**.**	**2**	**93**	**5**	**1**	**.**	**1**	**1**	**4**	**20**	**266**
Lepisosteus osseus	.	.	1	.	.	.	1	.	.	.	.	.	2
Lepisosteus platyrhincus	.	.	.	.	.	1	.	.	1	.	1	.	3
Lepomis macrochirus	2	4	.	1	.	.	.	2	.	.	12	.	21
Lepomis spp.	.	.	.	.	.	.	.	3	.	.	.	.	3
Limulus polyphemus	2	.	.	.	.	.	.	.	.	.	.	.	2
Litopenaeus setiferus	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**5**	**7**	**6**	**20**
Lobotes surinamensis	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Lophogobius cyprinoides	1	11	.	8	.	57	.	14	3	2	58	2	156
Lutjanus analis	**18**	**13**	**5**	**7**	**5**	**17**	**15**	**3**	**3**	**31**	**9**	**23**	**149**
Lutjanus apodus	**.**	**.**	**.**	**.**	**2**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**3**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Lutjanus cyanopterus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**2**
Lutjanus griseus	**.**	**5**	**.**	**4**	**2**	**22**	**20**	**19**	**3**	**13**	**4**	**17**	**109**
Lutjanus synagris	**1**	**.**	**.**	**3**	**.**	**23**	**2**	**2**	**3**	**8**	**5**	**23**	**70**
Mayaheros urophthalmus	15	2	.	2	.	.	.	25	.	.	1	3	48
Megalops atlanticus	**.**	**.**	**.**	**4**	**.**	**.**	**.**	**.**	**2**	**.**	**.**	**.**	**6**
Menidia spp.	40	221	.	235	.	380	.	105	142	197	107	10	1,437
Menippe sp.	.	.	.	.	.	.	.	.	.	1	.	.	1
Menticirrhus americanus	**.**	**.**	**1**	**.**	**1**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**3**
Microgobius gulosus	37	9	.	6	.	53	.	47	15	3	19	22	211
Microgobius thalassinus	.	.	.	.	.	5	.	1	.	.	.	.	6
Microphis lineatus	.	.	.	2	.	.	.	.	1	.	2	3	8
Micropogonias undulatus	**123**	**24**	**4**	**21**	**65**	**22**	**53**	**1**	**4**	**6**	**4**	**201**	**528**
Micropterus salmoides	.	2	.	.	.	.	.	.	.	.	.	.	2
Monacanthus ciliatus	.	.	.	.	.	.	.	.	.	2	.	.	2
Mugil cephalus	**59**	**1,065**	**21**	**44**	**37**	**48**	**14**	**20**	**15**	**53**	**20**	**37**	**1,433**
Mugil curema	**204**	**76**	**329**	**154**	**55**	**101**	**18**	**28**	**36**	**77**	**351**	**87**	**1,516**
Mugil rubrioculus	**.**	**.**	**.**	**.**	**.**	**8**	**.**	**.**	**.**	**.**	**1**	**3**	**12**
Mugil spp.	27	.	.	.	.	2	.	.	.	.	.	12	41
Myliobatis freminvillii	.	2	1	.	.	.	.	.	.	.	.	.	3
Narcine bancroftii	.	1	.	.	.	.	.	.	.	.	.	.	1
Negaprion brevirostris	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Nicholsina usta	.	.	.	.	.	.	.	.	.	1	.	.	1

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Ocyurus chrysurus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**1**
Oligoplites saurus	27	9	5	.	.	6	.	.	33	17	35	23	155
Opisthonema oglinum	1	.	.	976	.	.	.	.	1	.	998	18	1,994
Opsanus tau	.	.	.	.	1	.	.	.	.	2	.	.	3
Oreochromis complex	1	3	.	.	.	.	.	.	.	2	.	1	7
Oreochromis/Sarotherodon spp.	1	.	.	.	.	1	.	1	.	5	3	5	16
Orthopristis chrysoptera	.	1	.	3	1	38	54	165	7	106	37	3	415
Panulirus argus	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**1**
Paralichthys albigutta	**.**	**.**	**.**	**.**	**.**	**5**	**.**	**2**	**.**	**2**	**5**	**.**	**14**
Paralichthys lethostigma	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**1**
Pelmatolapia mariae	1	.	.	.	.	.	.	.	.	.	.	2	3
Penaeus monodon	.	.	.	.	.	.	.	.	.	.	1	.	1
Poecilia latipinna	.	.	.	.	.	.	.	.	.	.	2	.	2
Pogonias cromis	**.**	**20**	**1**	**.**	**.**	**1**	**4**	**6**	**4**	**2**	**1**	**8**	**47**
Pomatomus saltatrix	**1**	**1**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**.**	**2**	**2**	**7**
Portunus spp.	.	.	1	.	.	1	.	.	7	.	.	.	9
Prionotus tribulus	.	1	.	1	3	2	.	.	2	1	.	.	10
Pristis pectinata	.	.	.	.	.	.	.	.	.	1	.	.	1
Pterois sp.	.	.	.	.	1	.	.	.	.	.	.	.	1
Pterygoplichthys disjunctivus	1	.	.	.	.	.	.	.	.	.	.	1	2
Sarotherodon melanotheron	.	.	.	.	.	.	.	1	.	.	.	.	1
Sciaenops ocellatus	**3**	**5**	**1**	**.**	**3**	**.**	**.**	**2**	**.**	**.**	**.**	**14**	**28**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Scomberomorus maculatus	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**1**	**7**	**1**	**.**	**9**
Scomberomorus regalis	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**.**	**5**	**.**	**5**
Scorpaena grandicornis	.	.	.	2	.	.	1	.	.	.	.	.	3
Selene setapinnis	.	.	.	.	15	4	.	.	.	.	.	.	19
Selene vomer	17	19	29	11	118	232	18	5	9	20	5	10	493
Sparisoma chrysopterum	.	.	.	.	.	.	.	.	.	1	.	.	1
Sparisoma radians	.	.	.	.	.	2	.	.	.	.	.	.	2
Sphoeroides nephelus	1	.	1	1	1	3	.	2	3	7	3	6	28
Sphoeroides spengleri	.	5	.	.	.	1	.	.	.	2	1	.	9
Sphoeroides sp.	.	.	.	.	.	.	.	.	.	.	.	1	1
Sphoeroides testudineus	45	32	16	39	20	44	8	22	25	25	7	30	313
Sphyraena barracuda	**8**	**8**	**27**	**15**	**9**	**15**	**18**	**30**	**48**	**57**	**79**	**29**	**343**
Sphyrna tiburo	**.**	**.**	**.**	**4**	**.**	**1**	**.**	**.**	**.**	**.**	**.**	**.**	**5**
Stephanolepis hispida	.	.	.	.	.	5	.	.	.	1	1	.	7
Strongylura notata	5	1	2	.	.	7	1	9	.	11	14	2	52
Strongylura sp.	.	.	.	1	.	.	.	.	.	.	.	.	1
Strongylura timucu	1	.	.	1	.	.	.	.	.	.	.	.	2
Symphurus plagiusa	1	.	.	.	.	1	.	1	.	.	1	.	4
Syngnathus louisianae	.	.	.	1	.	1	.	1	1	1	.	1	6
Syngnathus scovelli	1	1	.	.	.	1	.	.	.	.	1	1	5
Synodus foetens	.	2	.	5	.	2	1	2	1	2	1	8	24
Trachinotus carolinus	**8**	**.**	**.**	**.**	**.**	**.**	**1**	**.**	**.**	**3**	**1**	**2**	**15**

Species	Month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	E=35	E=35	E=12	E=35	E=12	E=35	E=12	E=35	E=35	E=35	E=35	E=35	E=351
Trachinotus falcatus	**3**	**1**	**.**	**9**	**2**	**7**	**.**	**16**	**6**	**6**	**29**	**3**	**82**
Trichiurus lepturus	.	.	3	.	.	.	.	.	.	.	.	.	3
Trinectes maculatus	21	9	.	14	9	5	.	.	2	.	2	6	68
Urobatis jamaicensis	1	.	.	.	.	.	.	.	.	.	.	.	1
Total	**3,405**	**6,849**	**1,896**	**8,981**	**2,221**	**5,554**	**2,384**	**3,704**	**1,819**	**5,625**	**4,671**	**7,361**	**54,470**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.29: Summary by gear and stratum of taxa collected during Southern Indian River Lagoon stratified-random sampling, 2025.

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Abudefduf saxatilis	.	1	.	.	1
Acanthostracion quadricornis	.	.	7	1	8
Achirus lineatus	54	8	14	4	80
***Albula* spp.**	**16**	**.**	**31**	**13**	**60**
Aluterus scriptus	.	2	.	.	2
Anchoa hepsetus	10	5	.	.	15
Anchoa lyolepis	8	.	.	.	8
Anchoa mitchilli	7,398	1,947	.	.	9,345
Anguilla rostrata	1	.	.	.	1
Archosargus probatocephalus	**40**	**8**	**460**	**92**	**600**
Archosargus rhomboidalis	.	.	1,369	16	1,385
Archosargus spp.	.	.	3	.	3
Ariopsis felis	3	13	1,073	56	1,145
Astroscopus y-graecum	.	.	.	1	1
Bagre marinus	.	.	23	6	29
Bairdiella chrysoura	.	.	455	4	459
Bathygobius soporator	4	1	.	.	5
Belonidae sp.	.	.	1	.	1
***Brevoortia* spp.**	**2,111**	**188**	**22**	**.**	**2,321**
Calamus arctifrons	**.**	**.**	**4**	**.**	**4**
Callinectes ornatus	7	46	19	10	82
Callinectes sapidus	**136**	**24**	**76**	**18**	**254**
Callinectes similis	3	6	28	.	37
Callinectes spp.	5	7	.	.	12
Caranx crysos	**.**	**.**	**26**	**.**	**26**
Caranx hippos	**2**	**3**	**113**	**20**	**138**

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Caranx latus	1	1	13	.	15
Carcharhinus leucas	**.**	**.**	**2**	**1**	**3**
Centropomus ensiferus	**2**	**.**	**.**	**.**	**2**
Centropomus parallelus	**40**	**.**	**2**	**.**	**42**
Centropomus undecimalis	**396**	**112**	**351**	**79**	**938**
Chaetodipterus faber	.	.	14	.	14
Charybdis hellerii	.	1	2	.	3
Chilomycterus schoepfii	.	1	16	4	21
Chloroscombrus chrysurus	.	.	207	.	207
Citharichthys spilopterus	152	32	22	13	219
Clupeiformes sp.	1	.	.	.	1
Ctenogobius boleosoma	14	25	.	.	39
Ctenogobius smaragdus	26	1	.	.	27
Ctenogobius spp.	.	20	.	.	20
Ctenogobius stigmaturus	.	6	.	.	6
Cynoscion complex	**.**	**.**	**1**	**.**	**1**
Cynoscion nebulosus	**.**	**.**	**24**	**.**	**24**
Dajaus monticola	2	1	.	.	3
Dasyatidae spp.	.	.	3	3	6
Diapterus auratus	365	406	6,070	746	7,587
Diapterus rhombeus	21	6	3	.	30
Diplectrum formosum	**.**	**.**	**1**	**.**	**1**
Diplodus holbrookii	.	.	1	.	1
Dormitator maculatus	9	8	.	.	17
Dorosoma cepedianum	.	1	3	1	5
Dorosoma petenense	13	.	.	.	13
Echeneis sp.	.	.	1	.	1
Eleotris amblyopsis	2	.	.	.	2

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Elops saurus	**6**	**2**	**425**	**104**	**537**
Epinephelus itajara	**.**	**.**	**1**	**.**	**1**
Erotelis smaragdus	1	.	.	.	1
Eucinostomus argenteus	5	3	.	.	8
Eucinostomus gula	217	61	871	536	1,685
Eucinostomus harengulus	713	161	60	25	959
Eucinostomus jonesii	156	.	7	8	171
Eucinostomus melanopterus	.	.	16	1	17
Eucinostomus spp.	3,009	1,431	.	.	4,440
Eugerres plumieri	216	39	24	11	290
Evorthodus lyricus	101	9	.	.	110
Farfantepenaeus aztecus	**1**	**1**	**.**	**.**	**2**
***Farfantepenaeus* spp.**	**390**	**176**	**.**	**.**	**566**
Fundulus chrysotus	.	1	.	.	1
Gambusia holbrooki	190	38	.	.	228
Gerres cinereus	35	10	347	47	439
Ginglymostoma cirratum	**.**	**.**	**1**	**.**	**1**
Gobioides broussonnetii	9	.	.	.	9
Gobiomorus dormitor	2	3	.	.	5
Gobionellus oceanicus	141	11	.	.	152
Gobiosoma bosc	39	27	.	.	66
Gobiosoma robustum	1	.	.	.	1
Gobiosoma spp.	55	10	.	.	65
Gymnura lessae	.	.	5	.	5
Haemulon aurolineatum	**.**	**.**	**6**	**7**	**13**
Haemulon parra	**.**	**.**	**126**	**7**	**133**
Haemulon plumierii	**.**	**.**	**4**	**.**	**4**
Haemulon sciurus	**.**	**.**	**5**	**.**	**5**

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Haemulon spp.	.	.	.	9	9
Harengula humeralis	1,705	.	.	.	1,705
Harengula jaguana	.	39	996	28	1,063
Harengula sp.	1	.	.	.	1
Hippocampus erectus	.	.	3	2	5
Hypanus americanus	.	.	2	.	2
Hypanus sabinus	2	1	39	5	47
Hypanus say	.	.	83	37	120
Hyporhamphus meeki	.	.	2	.	2
Labidesthes vanhyningi	76	70	.	.	146
Lachnolaimus maximus	**.**	**.**	**5**	**.**	**5**
Lactophrys trigonus	.	.	14	5	19
Lagodon rhomboides	93	19	5,474	289	5,875
Leiostomus xanthurus	**132**	**1**	**124**	**9**	**266**
Lepisosteus osseus	.	.	2	.	2
Lepisosteus platyrhincus	3	.	.	.	3
Lepomis macrochirus	14	7	.	.	21
Lepomis spp.	3	.	.	.	3
Limulus polyphemus	.	.	.	2	2
Litopenaeus setiferus	**15**	**4**	**1**	**.**	**20**
Lobotes surinamensis	**.**	**.**	**1**	**.**	**1**
Lophogobius cyprinoides	144	12	.	.	156
Lutjanus analis	**.**	**.**	**133**	**16**	**149**
Lutjanus apodus	**.**	**.**	**3**	**.**	**3**
Lutjanus cyanopterus	**1**	**1**	**.**	**.**	**2**
Lutjanus griseus	**12**	**1**	**81**	**15**	**109**
Lutjanus synagris	**1**	**2**	**45**	**22**	**70**
Mayaheros urophthalmus	47	1	.	.	48

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Megalops atlanticus	**.**	**.**	**4**	**2**	**6**
Menidia spp.	986	451	.	.	1,437
Menippe sp.	.	.	1	.	1
Menticirrhus americanus	**.**	**.**	**2**	**1**	**3**
Microgobius gulosus	154	57	.	.	211
Microgobius thalassinus	1	5	.	.	6
Microphis lineatus	5	3	.	.	8
Micropogonias undulatus	**248**	**77**	**189**	**14**	**528**
Micropterus salmoides	.	2	.	.	2
Monacanthus ciliatus	.	.	2	.	2
Mugil cephalus	**1,023**	**10**	**327**	**73**	**1,433**
Mugil curema	**17**	**15**	**1,151**	**333**	**1,516**
Mugil rubrioculus	**8**	**.**	**4**	**.**	**12**
Mugil spp.	2	39	.	.	41
Myliobatis freminvillii	.	.	1	2	3
Narcine bancroftii	.	.	1	.	1
Negaprion brevirostris	**.**	**.**	**1**	**.**	**1**
Nicholsina usta	.	.	1	.	1
Ocyurus chrysurus	**.**	**.**	**1**	**.**	**1**
Oligoplites saurus	9	21	105	20	155
Opisthonema oglinum	975	.	1,019	.	1,994
Opsanus tau	.	.	3	.	3
Oreochromis complex	4	3	.	.	7
Oreochromis/Sarotherodon spp.	10	6	.	.	16
Orthopristis chrysoptera	3	.	373	39	415
Panulirus argus	**.**	**.**	**.**	**1**	**1**
Paralichthys albigutta	**.**	**.**	**12**	**2**	**14**
Paralichthys lethostigma	**1**	**.**	**.**	**.**	**1**

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Pelmatolapia mariae	3	.	.	.	3
Penaeus monodon	1	.	.	.	1
Poecilia latipinna	1	1	.	.	2
Pogonias cromis	**.**	**.**	**27**	**20**	**47**
Pomatomus saltatrix	**.**	**.**	**7**	**.**	**7**
Portunus spp.	.	8	1	.	9
Prionotus tribulus	2	1	5	2	10
Pristis pectinata	1	.	.	.	1
Pterois sp.	.	.	1	.	1
Pterygoplichthys disjunctivus	2	.	.	.	2
Sarotherodon melanotheron	1	.	.	.	1
Sciaenops ocellatus	**9**	**13**	**5**	**1**	**28**
Scomberomorus maculatus	**.**	**.**	**9**	**.**	**9**
Scomberomorus regalis	**.**	**.**	**5**	**.**	**5**
Scorpaena grandicornis	2	.	1	.	3
Selene setapinnis	.	.	15	4	19
Selene vomer	.	1	252	240	493
Sparisoma chrysopterum	.	.	1	.	1
Sparisoma radians	.	.	.	2	2
Sphoeroides nephelus	1	.	25	2	28
Sphoeroides spengleri	.	.	5	4	9
Sphoeroides sp.	1	.	.	.	1
Sphoeroides testudineus	60	22	176	55	313
Sphyraena barracuda	**10**	**7**	**297**	**29**	**343**
Sphyrna tiburo	**.**	**.**	**4**	**1**	**5**
Stephanolepis hispida	.	.	3	4	7
Strongylura notata	8	2	32	10	52
Strongylura sp.	1	.	.	.	1

Species	Gear and Strata				Total
	21.3-m river seine		183-m haul seine		
	Over	Nonover	Over	Nonover	
	E=147	E=60	E=115	E=29	E=351
Strongylura timucu	1	1	.	.	2
Symphurus plagiusa	2	2	.	.	4
Syngnathus louisianae	3	3	.	.	6
Syngnathus scovelli	2	2	1	.	5
Synodus foetens	8	2	14	.	24
Trachinotus carolinus	**.**	**.**	**15**	**.**	**15**
Trachinotus falcatus	**9**	**11**	**61**	**1**	**82**
Trichiurus lepturus	.	.	3	.	3
Trinectes maculatus	51	2	1	14	68
Urobatis jamaicensis	.	1	.	.	1
Total	**22,003**	**5,789**	**23,529**	**3,149**	**54,470**

Sampling with 21.3-m river seine was not stratified. Sampling with 183-m haul seine was stratified by the presence or absence of overhanging vegetation ('Over' or 'Nonover'). Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

Table A.30: Summary by zone of taxa collected during Southern Indian River Lagoon stratified-random sampling, 2025.

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Abudefduf saxatilis	.	.	1	.	1
Acanthostracion quadricornis	1	7	.	.	8
Achirus lineatus	2	11	17	50	80
***Albula* spp.**	**8**	**36**	**16**	**.**	**60**
Aluterus scriptus	.	.	2	.	2
Anchoa hepsetus	.	.	.	15	15
Anchoa lyolepis	.	.	.	8	8
Anchoa mitchilli	.	.	706	8,639	9,345
Anguilla rostrata	.	.	.	1	1
Archosargus probatocephalus	**352**	**74**	**7**	**167**	**600**
Archosargus rhomboidalis	1,229	156	.	.	1,385
Archosargus spp.	2	1	.	.	3
Ariopsis felis	564	415	8	158	1,145
Astroscopus y-graecum	.	1	.	.	1
Bagre marinus	21	4	.	4	29
Bairdiella chrysoura	450	5	.	4	459
Bathygobius soporator	.	.	2	3	5
Belonidae sp.	1	.	.	.	1
***Brevoortia* spp.**	**2**	**20**	**697**	**1,602**	**2,321**
Calamus arctifrons	**4**	**.**	**.**	**.**	**4**
Callinectes ornatus	14	11	2	55	82
Callinectes sapidus	**46**	**15**	**32**	**161**	**254**
Callinectes similis	12	16	2	7	37
Callinectes spp.	.	.	5	7	12
Caranx crysos	**1**	**22**	**.**	**3**	**26**
Caranx hippos	**78**	**41**	**1**	**18**	**138**
Caranx latus	5	5	.	5	15

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Carcharhinus leucas	**.**	**.**	**.**	**3**	**3**
Centropomus ensiferus	**.**	**.**	**.**	**2**	**2**
Centropomus parallelus	**1**	**.**	**.**	**41**	**42**
Centropomus undecimalis	**254**	**109**	**122**	**453**	**938**
Chaetodipterus faber	13	1	.	.	14
Charybdis hellerii	1	1	.	1	3
Chilomycterus schoepfii	12	8	.	1	21
Chloroscombrus chrysurus	3	204	.	.	207
Citharichthys spilopterus	5	11	29	174	219
Clupeiformes sp.	.	.	1	.	1
Ctenogobius boleosoma	.	.	19	20	39
Ctenogobius smaragdus	.	.	26	1	27
Ctenogobius spp.	.	.	20	.	20
Ctenogobius stigmaturus	.	.	6	.	6
Cynoscion complex	**1**	**.**	**.**	**.**	**1**
Cynoscion nebulosus	**9**	**15**	**.**	**.**	**24**
Dajaus monticola	.	.	1	2	3
Dasyatidae spp.	2	4	.	.	6
Diapterus auratus	3,661	2,899	153	874	7,587
Diapterus rhombeus	.	3	19	8	30
Diplectrum formosum	**.**	**1**	**.**	**.**	**1**
Diplodus holbrookii	1	.	.	.	1
Dormitator maculatus	.	.	.	17	17
Dorosoma cepedianum	.	.	.	5	5
Dorosoma petenense	.	.	.	13	13
Echeneis sp.	.	.	.	1	1
Eleotris amblyopsis	.	.	.	2	2
Elops saurus	**67**	**444**	**1**	**25**	**537**
Epinephelus itajara	**1**	**.**	**.**	**.**	**1**

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Erotelis smaragdus	.	.	1	.	1
Eucinostomus argenteus	.	.	5	3	8
Eucinostomus gula	1,209	192	205	79	1,685
Eucinostomus harengulus	39	43	327	550	959
Eucinostomus jonesii	1	14	155	1	171
Eucinostomus melanopterus	4	6	.	7	17
Eucinostomus spp.	.	.	2,996	1,444	4,440
Eugerres plumieri	7	3	106	174	290
Evorthodus lyricus	.	.	65	45	110
Farfantepenaeus aztecus	**.**	**.**	**.**	**2**	**2**
***Farfantepenaeus* spp.**	**.**	**.**	**170**	**396**	**566**
Fundulus chrysotus	.	.	.	1	1
Gambusia holbrooki	.	.	8	220	228
Gerres cinereus	181	185	36	37	439
Ginglymostoma cirratum	**.**	**1**	**.**	**.**	**1**
Gobioides broussonnetii	.	.	.	9	9
Gobiomorus dormitor	.	.	.	5	5
Gobionellus oceanicus	.	.	69	83	152
Gobiosoma bosc	.	.	1	65	66
Gobiosoma robustum	.	.	.	1	1
Gobiosoma spp.	.	.	5	60	65
Gymnura lessae	.	5	.	.	5
Haemulon aurolineatum	**7**	**6**	**.**	**.**	**13**
Haemulon parra	**128**	**5**	**.**	**.**	**133**
Haemulon plumierii	**4**	**.**	**.**	**.**	**4**
Haemulon sciurus	**2**	**3**	**.**	**.**	**5**
Haemulon spp.	9	.	.	.	9
Harengula humeralis	.	.	.	1,705	1,705
Harengula jaguana	572	429	.	62	1,063

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Harengula sp.	.	.	.	1	1
Hippocampus erectus	1	3	.	1	5
Hypanus americanus	1	.	.	1	2
Hypanus sabinus	22	13	2	10	47
Hypanus say	66	49	.	5	120
Hyporhamphus meeki	2	.	.	.	2
Labidesthes vanhyningi	.	.	.	146	146
Lachnolaimus maximus	**2**	**3**	**.**	**.**	**5**
Lactophrys trigonus	3	16	.	.	19
Lagodon rhomboides	5,025	737	49	64	5,875
Leiostomus xanthurus	**34**	**90**	**133**	**9**	**266**
Lepisosteus osseus	.	.	.	2	2
Lepisosteus platyrhincus	.	.	1	2	3
Lepomis macrochirus	.	.	1	20	21
Lepomis spp.	.	.	.	3	3
Limulus polyphemus	2	.	.	.	2
Litopenaeus setiferus	**.**	**1**	**.**	**19**	**20**
Lobotes surinamensis	**1**	**.**	**.**	**.**	**1**
Lophogobius cyprinoides	.	.	119	37	156
Lutjanus analis	**93**	**53**	**.**	**3**	**149**
Lutjanus apodus	**.**	**3**	**.**	**.**	**3**
Lutjanus cyanopterus	**.**	**.**	**.**	**2**	**2**
Lutjanus griseus	**62**	**26**	**8**	**13**	**109**
Lutjanus synagris	**33**	**33**	**1**	**3**	**70**
Mayaheros urophthalmus	.	.	3	45	48
Megalops atlanticus	**.**	**.**	**.**	**6**	**6**
Menidia spp.	.	.	57	1,380	1,437
Menippe sp.	1	.	.	.	1
Menticirrhus americanus	**1**	**1**	**.**	**1**	**3**

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Microgobius gulosus	.	.	40	171	211
Microgobius thalassinus	.	.	2	4	6
Microphis lineatus	.	.	1	7	8
Micropogonias undulatus	**39**	**92**	**8**	**389**	**528**
Micropterus salmoides	.	.	.	2	2
Monacanthus ciliatus	.	2	.	.	2
Mugil cephalus	**170**	**140**	**2**	**1,121**	**1,433**
Mugil curema	**614**	**550**	**3**	**349**	**1,516**
Mugil rubrioculus	**2**	**2**	**.**	**8**	**12**
Mugil spp.	.	.	27	14	41
Myliobatis freminvillii	2	1	.	.	3
Narcine bancroftii	1	.	.	.	1
Negaprion brevirostris	**.**	**1**	**.**	**.**	**1**
Nicholsina usta	.	1	.	.	1
Ocyurus chrysurus	**.**	**1**	**.**	**.**	**1**
Oligoplites saurus	42	82	19	12	155
Opisthonema oglinum	19	1,000	.	975	1,994
Opsanus tau	2	1	.	.	3
Oreochromis complex	.	.	5	2	7
Oreochromis/Sarotherodon spp.	.	.	10	6	16
Orthopristis chrysoptera	356	56	1	2	415
Panulirus argus	**1**	**.**	**.**	**.**	**1**
Paralichthys albigutta	**12**	**2**	**.**	**.**	**14**
Paralichthys lethostigma	**.**	**.**	**1**	**.**	**1**
Pelmatolapia mariae	.	.	2	1	3
Penaeus monodon	.	.	.	1	1
Poecilia latipinna	.	.	.	2	2
Pogonias cromis	**12**	**13**	**.**	**22**	**47**
Pomatomus saltatrix	**2**	**3**	**.**	**2**	**7**

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Portunus spp.	.	1	7	1	9
Prionotus tribulus	2	5	1	2	10
Pristis pectinata	.	.	.	1	1
Pterois sp.	.	1	.	.	1
Pterygoplichthys disjunctivus	.	.	.	2	2
Sarotherodon melanotheron	.	.	.	1	1
Sciaenops ocellatus	**1**	**5**	**2**	**20**	**28**
Scomberomorus maculatus	**2**	**7**	**.**	**.**	**9**
Scomberomorus regalis	**5**	**.**	**.**	**.**	**5**
Scorpaena grandicornis	.	1	2	.	3
Selene setapinnis	4	15	.	.	19
Selene vomer	292	192	1	8	493
Sparisoma chrysopterum	.	1	.	.	1
Sparisoma radians	2	.	.	.	2
Sphoeroides nephelus	16	11	.	1	28
Sphoeroides spengleri	1	7	.	1	9
Sphoeroides sp.	.	.	1	.	1
Sphoeroides testudineus	99	72	63	79	313
Sphyraena barracuda	**121**	**200**	**12**	**10**	**343**
Sphyrna tiburo	**5**	**.**	**.**	**.**	**5**
Stephanolepis hispida	5	2	.	.	7
Strongylura notata	31	11	8	2	52
Strongylura sp.	.	.	.	1	1
Strongylura timucu	.	.	2	.	2
Symphurus plagiusa	.	.	.	4	4
Syngnathus louisianae	.	.	1	5	6
Syngnathus scovelli	1	.	2	2	5
Synodus foetens	11	2	2	9	24
Trachinotus carolinus	**9**	**6**	**.**	**.**	**15**

Species	Zone				Total
	I	J	L	T	
	E=48	E=48	E=45	E=210	E=351
Trachinotus falcatus	**7**	**31**	**4**	**40**	**82**
Trichiurus lepturus	3	.	.	.	3
Trinectes maculatus	5	.	3	60	68
Urobatis jamaicensis	.	.	1	.	1
Total	**16,231**	**8,977**	**6,651**	**22,611**	**54,470**

Zones I and J were located in the southern portion of the Indian River Lagoon, and Zone L and T encompassed the St. Lucie and Loxahatchee rivers, respectively. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically. Selected taxa are highlighted in bold.

B Fisheries-Independent Monitoring Polyhaline Seagrass Sampling Appendix Tables

Table B.1: Summary of all species collected in 6.1-m otter trawl polyhaline seagrass sampling in all estuaries in June-November, 2025.

Species	6.1-m otter trawl							Total
	SR	CB	SA	AP	BB	TB	CH	
	E=16	E=18	E=72	E=96	E=180	E=144	E=120	E=646
Acanthostracion quadricornis	4	.	79	18	24	248	172	545
Achirus lineatus	6	10	22	4	2	12	16	72
Aluterus schoepfii	2	.	40	7	32	7	10	98
Anarchopterus criniger	2	.	.	3	120	33	311	469
Anchoa hepsetus	1	2	.	66	.	.	.	69
Anchoa mitchilli	.	286	.	210	.	25	36	557
Anchoa spp.	.	.	.	2	.	.	.	2
Ancylopsetta quadrocellata	.	.	.	4	.	.	.	4
Archosargus probatocephalus	**.**	**.**	**.**	**12**	**1**	**117**	**66**	**196**
Archosargus rhomboidalis	.	.	.	.	.	.	1	1
Argopecten irradians	1	.	35	17	448	18	.	519
Ariopsis felis	4	1	1	32	3	37	5	83
Astroscopus y-graecum	.	.	.	1	.	.	.	1
Bairdiella chrysoura	673	1,344	860	4,035	1,751	3,374	2,852	14,889
Brevoortia spp.	.	.	.	2	.	.	.	2
Calamus arctifrons	.	.	1	1	136	.	.	138
Calamus penna	.	.	.	.	.	5	6	11
Calamus proridens	.	.	.	.	.	.	1	1
Calamus spp.	.	.	.	.	3	.	.	3
Callinectes ornatus	.	.	2	.	.	.	82	84

Species	6.1-m otter trawl							Total
	SR	CB	SA	AP	BB	TB	CH	
	E=16	E=18	E=72	E=96	E=180	E=144	E=120	E=646
Callinectes sapidus	261	273	441	592	19	574	547	2,707
Callinectes similis	.	5	5	2	.	.	.	12
Caranx crysos	.	.	1	.	.	.	.	1
Caranx hippos	.	.	.	1	.	.	.	1
Centropristis striata	**.**	**.**	**4**	**147**	**599**	**29**	**.**	**779**
Chaetodipterus faber	1	1	3	7	4	11	62	89
Chaetodon capistratus	.	.	.	.	.	1	.	1
Chasmodes saburrae	64	51	18	67	57	40	161	458
Chilomycterus schoepfii	24	42	90	134	80	617	688	1,675
Citharichthys macrops	.	.	6	.	.	.	.	6
Citharichthys spilopterus	.	1	.	.	.	.	.	1
Clupeiformes spp.	.	.	.	2	.	1	.	3
Cosmocampus albirostris	.	.	2	.	.	.	.	2
Ctenogobius boleosoma	.	3	5	14	.	.	.	22
Cynoscion nebulosus	**66**	**244**	**50**	**321**	**77**	**326**	**97**	**1,181**
Diplectrum bivittatum	.	.	.	2	.	.	.	2
Diplectrum formosum	.	.	24	21	3	.	.	48
Diplectrum spp.	.	.	.	3	.	.	.	3
Diplodus holbrookii	.	.	1	68	949	33	1	1,052
Epinephelus morio	**.**	**.**	**.**	**.**	**.**	**4**	**22**	**26**
Erotelis smaragdus	.	1	.	.	.	.	.	1
Etropus crossotus	.	.	.	55	13	.	.	68
Etropus cyclosquamus	.	.	1	1	.	.	.	2
Etropus microstomus	.	.	.	.	1	.	.	1
Eucinostomus argenteus	12	15	8	10	.	.	.	45
Eucinostomus gula	8	47	135	194	191	743	1,983	3,301
Eucinostomus harengulus	.	8	10	12	3	5	7	45
Eucinostomus spp.	51	274	1,316	1,427	681	4,989	5,069	13,807
Farfantepenaeus aztecus	.	5	.	8	.	.	.	13

Species	6.1-m otter trawl							Total
	SR	CB	SA	AP	BB	TB	CH	
	E=16	E=18	E=72	E=96	E=180	E=144	E=120	E=646
Farfantepenaeus duorarum	90	43	45	41	67	583	546	1,415
Farfantepenaeus spp.	153	63	133	967	98	.	.	1,414
Gobiosoma bosc	.	.	.	.	8	.	.	8
Gobiosoma longipala	.	.	.	2	.	.	.	2
Gobiosoma robustum	11	27	14	72	28	326	420	898
Gobiosoma spp.	11	35	8	22	46	169	170	461
Gymnothorax saxicola	.	.	.	.	2	.	.	2
Gymnura lessae	.	.	.	1	.	.	.	1
Haemulon aurolineatum	.	.	5	.	16	.	.	21
Haemulon plumierii	**.**	**.**	**.**	**6**	**909**	**99**	**266**	**1,280**
Halichoeres bivittatus	.	.	60	9	3	.	.	72
Harengula jaguana	7	12	17	23	20	50	70	199
Hemicaranx amblyrhynchus	.	.	1	.	.	.	.	1
Hippocampus erectus	2	.	12	2	.	4	39	59
Hippocampus zosterae	1	1	4	2	8	7	86	109
Hypanus americanus	.	.	.	.	.	1	.	1
Hypanus sabinus	.	5	5	36	2	20	.	68
Hypanus say	.	1	4	6	1	9	1	22
Hypleurochilus caudovittatus	.	.	.	2	1	.	1	4
Hypsoblennius hentz	.	.	.	35	6	2	14	57
Lachnolaimus maximus	**.**	**.**	**1**	**2**	**26**	**.**	**.**	**29**
Lactophrys trigonus	.	.	5	2	.	1	1	9
Lagodon rhomboides	7,122	5,590	21,668	14,331	12,881	22,332	16,065	99,989
Leiostomus xanthurus	8	290	37	90	7	17	.	449
Lindapecten muscosus	.	.	1	.	.	.	.	1
Litopenaeus setiferus	.	1	.	10	.	.	.	11
Lucania parva	.	.	9	.	232	208	696	1,145
Lutjanus analis	.	.	.	.	.	.	1	1
Lutjanus griseus	**1**	**2**	**50**	**19**	**21**	**107**	**198**	**398**

Species	6.1-m otter trawl							Total
	SR	CB	SA	AP	BB	TB	CH	
	E=16	E=18	E=72	E=96	E=180	E=144	E=120	E=646
Lutjanus synagris	**.**	**.**	**110**	**110**	**140**	**13**	**225**	**598**
Menidia spp.	4	.	.	.	5	.	.	9
Menippe spp.	.	.	1	61	22	29	64	177
Menticirrhus americanus	.	.	.	1	.	.	.	1
Microgobius gulosus	3	13	4	1	.	69	14	104
Microgobius microlepis	.	.	.	.	.	.	1	1
Microgobius thalassinus	.	.	.	1	.	.	.	1
Micropogonias undulatus	.	.	1	7	.	.	.	8
Monacanthus ciliatus	.	.	2	26	996	7	67	1,098
Mugil cephalus	.	.	.	1	.	.	.	1
Mycteroperca microlepis	**.**	**.**	**3**	**10**	**7**	**72**	**118**	**210**
Myrophis punctatus	1	.	.	.	.	.	.	1
Nicholsina usta	.	.	166	1	9	2	2	180
No fish	.	.	.	.	.	.	.	.
Ocyurus chrysurus	.	.	.	.	.	.	1	1
Ogcocephalus cubifrons	.	.	.	4	1	1	1	7
Oligoplites saurus	.	2	.	.	.	.	1	3
Ophichthus gomesii	.	.	.	.	1	.	.	1
Ophidion holbrookii	.	.	.	1	1	.	.	2
Opisthonema oglinum	1	1	.	3	.	3	8	16
Opistognathus robinsi	.	.	1	.	.	.	.	1
Opsanus beta	38	7	112	323	723	152	273	1,628
Opsanus beta (red morph)	.	.	1	1	6	.	.	8
Orthopristis chrysoptera	620	455	4,094	7,292	1,296	1,957	3,472	19,186
Panulirus argus	.	.	.	.	.	.	1	1
Parablennius marmoreus	.	.	1	.	.	.	.	1
Paraclinus fasciatus	.	.	.	.	184	.	.	184
Paraclinus marmoratus	.	.	.	1	13	21	166	201
Paralichthys albigutta	41	109	254	382	103	223	71	1,183

Species	6.1-m otter trawl							Total
	SR	CB	SA	AP	BB	TB	CH	
	E=16	E=18	E=72	E=96	E=180	E=144	E=120	E=646
Paralichthys lethostigma	.	.	.	1	.	.	.	1
Pogonias cromis	.	.	.	1	.	.	.	1
Portunus spp.	.	.	133	20	13	50	77	293
Prionotus martis	1	.	.	.	.	.	.	1
Prionotus scitulus	7	5	13	20	2	52	29	128
Prionotus tribulus	.	3	1	4	.	1	.	9
Rimapenaeus spp.	.	.	.	2	1	.	1	4
Scarus iseri	.	.	1	.	.	.	.	1
Sciaenops ocellatus	**1**	**2**	**.**	**4**	**.**	**1**	**.**	**8**
Scorpaena brasiliensis	.	.	37	7	2	10	4	60
Selene vomer	.	.	.	1	1	.	1	3
Serraniculus pumilio	.	.	.	14	.	.	.	14
Serranus subligarius	.	.	5	14	5	2	.	26
Sicyonia laevigata	.	.	1	.	.	1	4	6
Sicyonia sp.	.	.	.	.	.	1	.	1
Sparisoma chrysopterum	.	.	5	.	.	.	.	5
Sparisoma radians	.	.	4	.	.	.	.	4
Sphoeroides nephelus	7	8	11	78	52	85	185	426
Sphoeroides spengleri	.	.	1	5	.	12	34	52
Sphoeroides spp.	.	.	.	3	.	.	.	3
Sphyraena borealis	.	2	2	.	.	.	.	4
Stephanolepis hispida	8	22	1,253	578	416	87	353	2,717
Symphurus plagiusa	2	14	2	24	1	8	.	51
Syngnathus floridae	216	102	608	547	1,540	250	756	4,019
Syngnathus louisianae	7	37	7	103	8	45	74	281
Syngnathus scovelli	122	128	177	734	27	604	1,379	3,171
Syngnathus spp.	.	.	.	.	.	3	.	3
Syngnathus springeri	.	.	4	.	.	.	.	4
Synodus foetens	7	35	66	130	38	73	94	443

Species	6.1-m otter trawl							Total
	SR	CB	SA	AP	BB	TB	CH	
	E=16	E=18	E=72	E=96	E=180	E=144	E=120	E=646
Tigrigobius macrodon	.	.	.	.	1	.	.	1
Trinectes maculatus	.	38	.	77	4	7	5	131
Urophycis floridana	.	.	.	.	1	.	.	1
Xyrichtys novacula	.	.	4	.	.	.	.	4
Total	**9,672**	**9,666**	**32,324**	**33,775**	**25,198**	**39,025**	**38,250**	**187,910**

Effort, or total number of hauls, is labeled ’E’. Taxa are arranged alphabetically. Species of interest are highlighted in bold.