

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Marine Resources

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Striped Bass Cooperative Angler Program

2021 Season Newsletter

NYS DEC Diadromous Fish Unit, Marine Resources

March, 2022

Fellow Cooperative Anglers,

We want to welcome the new participants who joined this year and to thank all of you for being a part of this program. Without your help, we would be missing an integral part of data on the New York striped bass recreational fishery. The information you provide as cooperative anglers goes a long way in assessing the health of striped bass stocks along the coast.

As some of you may know, Atlantic striped bass (*Marone saxatilis*) are the official New York State marine fish. Its mild white flesh and exhilarating fight have made the striped bass an important fish for commercial and recreational fisheries up and down the eastern seaboard. When populations started to drastically decline in the 1980's, the U.S. Government passed the Atlantic Striped Bass Conservation Act of 1984. This empowered the Atlantic State Marine Fisheries Commission (ASMFC) to enforce The Atlantic Coast Striped Bass Interstate Fisheries Management Plan. One of the requirements for states with large recreational fisheries (such as New York) is to supply catch composition data and catch-effort information. Hence, the creation of the Striped Bass Cooperative Angler Program (SBCA). Since 1985, the SBCA has been recruiting volunteer anglers to log their fishing efforts and collect size information on striped bass. The information that is provided, including the number of fishing trips, hours spent fishing, and the number of fish caught, allows us to determine catch per unit effort (CPUE=fish caught / hours spent fishing) or fishing success for striped

bass in New York's marine waters. Additionally, scale samples and the associated length information is used to create length-at-age keys which are incorporated in striped bass population assessments and ultimately help guide fishery management decisions. Consequently, the data you send helps us monitor the striped bass population and gives you an active role in striped bass conservation and management.

To date, the SBCA program has had over 1500 anglers join and a combination of 177 anglers report within the past 5 years. What have anglers reported this year? Let's look at some of the numbers below.

The Numbers

In 2021 we had 47 new anglers join, 10 of which participated. In total there were 30 out of 438 active anglers who submitted fishing logs and/or striped bass scale samples for 2021. We also had 49 new anglers join in 2022 so far and look forward to their cooperation in the upcoming fishing season.

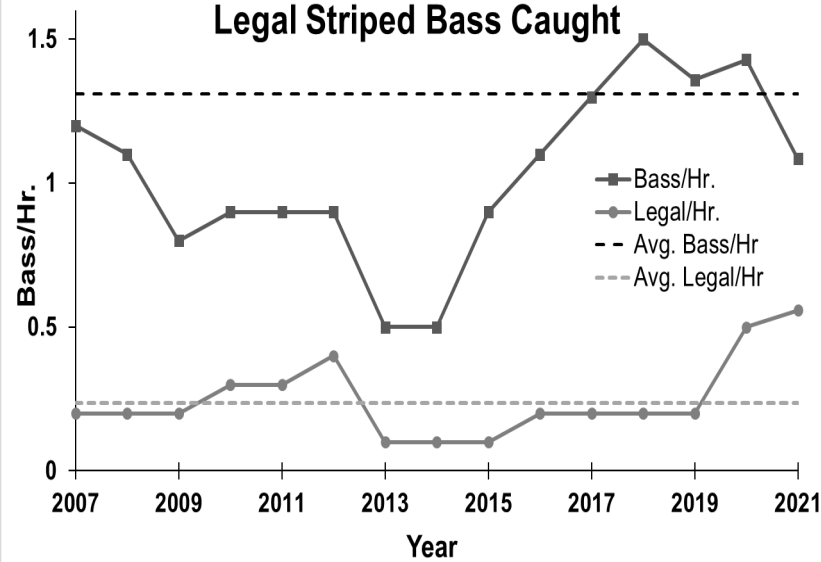
Since the end of the 2021 fishing season we have been entering all of your fishing logs and aging the 64 scale samples that have been provided to us. Collectively, you spent at least 1055 hours fishing in 2021 (some of the trips in your logbooks didn't include the number of hours spent fishing, so this number is lower than what actually occurred), averaging about 3 hours per trip. A total of 1144 striped bass were caught with 588 of them being legal (28"-35"), making your CPUE (Catch Per Unit



Department of
Environmental
Conservation

Effort= total bass caught/ total hours fished) 1.09 bass/hr and 0.56 legal/hr respectively (Fig.1).

Fig. 1 CPUE for Striped Bass Caught and Legal Striped Bass Caught



Out of the 588 legal bass, 64 (11%) were kept for all zones. Overall, the CPUE in 2021 was less than what it was in 2020 and was at its lowest since 2016 and is below the program average of 1.3 bass/hr. In only zones 1-5, out of the 330 legal bass, 64 (19%) were kept. Overall, the CPUE for zones 1-5 for 2021 was at its lowest since 2014 with a CPUE of 0.83 bass/hr and 0.36 legal/hr. This is significantly below the program average for zones 1-5 (1.23 bass/hr).

Fishing Methods

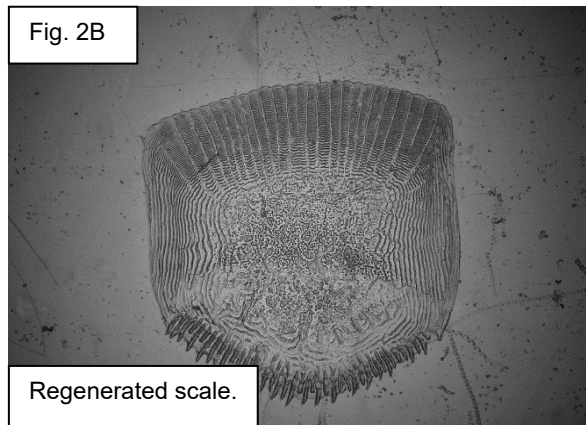
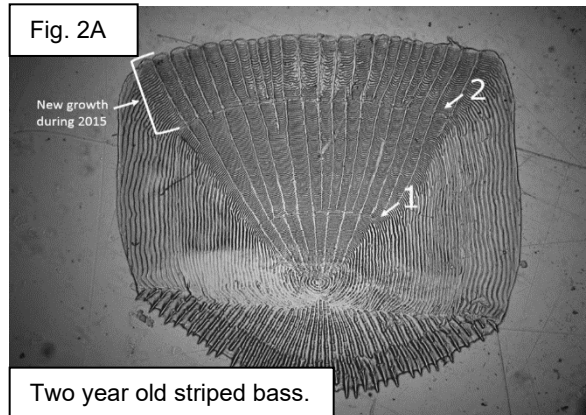
Overall, 2021 saw 80% of striped bass taken by boat, 19% by shore, and 2% unknown. The most popular bait used by anglers was live bait at 39%, 26% artificial bait, 2% dead/real bait, umbrella rigs was 1%, MOJOs were 1 %, 3 % unknown and the rest were different combos of all the choices above. However, when looking only at zones 1-5 (Zone 6 is outside NY area) 69% of bass were taken by boat, 28% by shore and 3% unknown. The most popular bait used for Zones 1-5 was artificial at 42%, live bait at 34%, dead/real at 2%, umbrella rigs at 1%, MOJOs at 2%, 15% as a combination of the choices above and the rest as unknown. Lastly, 90% of legal

striped bass were caught from a boat and 56% of legal bass were caught using live bait in zones 1-6. In Zones 1-5 84% of legal striped bass were caught from a boat and 51% were caught using live bait.

Characteristic of the striped bass migration, fish move from south to north in the spring and from north to south in the fall. Consequently, the greatest number of fish caught in 2021 were in the months of April and November. The majority of fishing effort and bass caught were in Zone 1 (South of the George Washington Bridge to Rockaway Inlet). A decent number of striped bass were also caught in Zone 6 which is considered outside of NY waters. Most of these were right outside the NY line in NJ, right by Zone 1.

Age/Size Information

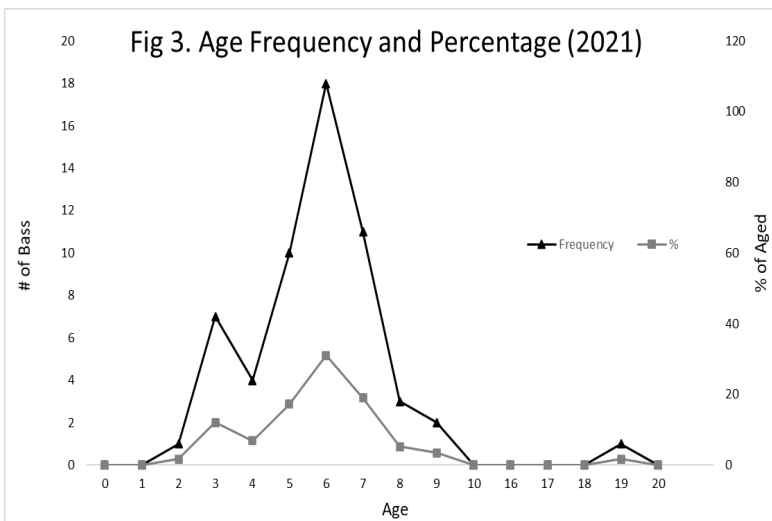
From the 64 scale samples that you have provided, we were able to age 58 of them. We age the scales by first pressing them into acetate and then counting the annuli (rings) on the scale, in the same way one would count rings on a tree (Fig. 2A).



Sometimes scales are not able to be aged due to poor scale quality or regeneration (Fig. 2B).

When a scale falls off a fish, it begins to grow back; during this regeneration time the growth pattern that was previously on the scale is not recognizable. Therefore, it is **important to collect multiple scales** (10-20) from a single fish. Some scale envelopes only had 1 scale in them or not enough information about the fish on the envelope. Without multiple scales and the proper information about the fish we are unable to accurately age the fish.

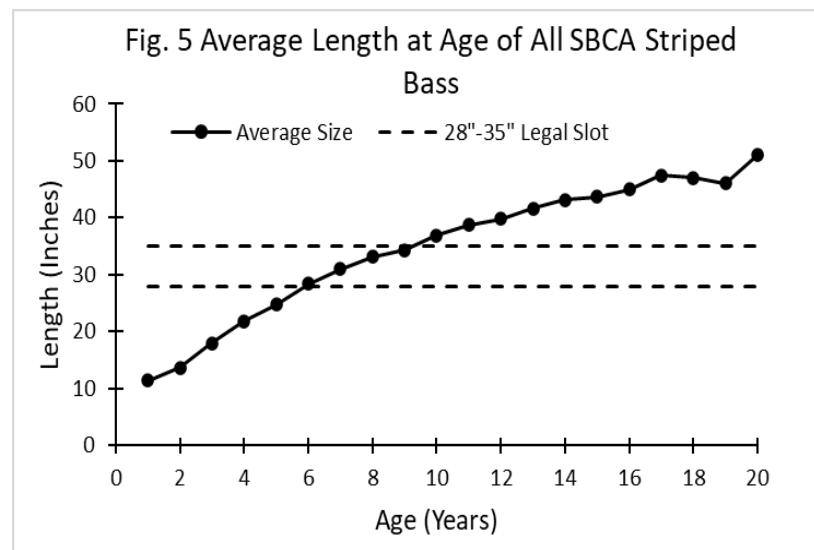
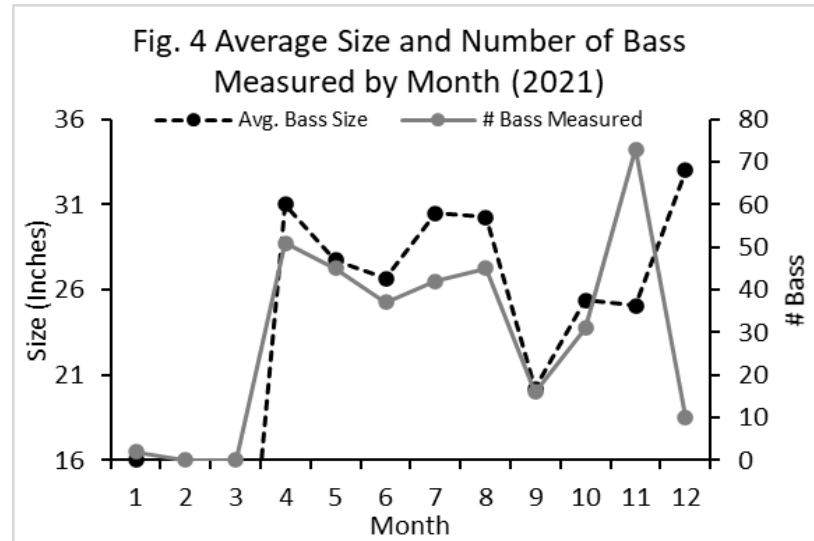
From the 58 scales that we were able to age, the 2014, 2015, 2016 year classes were most abundant (Fig. 3). This correlates with the strong recruitment numbers from those years. Because environmental and biological factors change from year to year, spawning success rates vary causing some year classes to be more abundant than others.



Many anglers reported over the last few years that there were a great number of smaller striped bass in the stock. From the 1144 fish caught in 2021, a total of 562 measurements were taken and 356 of them were in zones 1-5 and the average size of these fish were plotted by month. If you look at Fig. 4. you can see the average size of striped bass for each month for zones 1-5 (Zone 6 was deselected because it is not NY waters).

Overall, the average size of all the striped bass caught in zones 1-5 was 28 inches. In zones 1-

6 the average size bass was 31 inches. The smallest fish caught was 12 inches, and the largest was a 52.5 inches. When we have both age and length information, we can create length-at-age keys (Fig.5). From this key we can see that the average age of a fish in the legal slot size is about 6 to 9 years old.

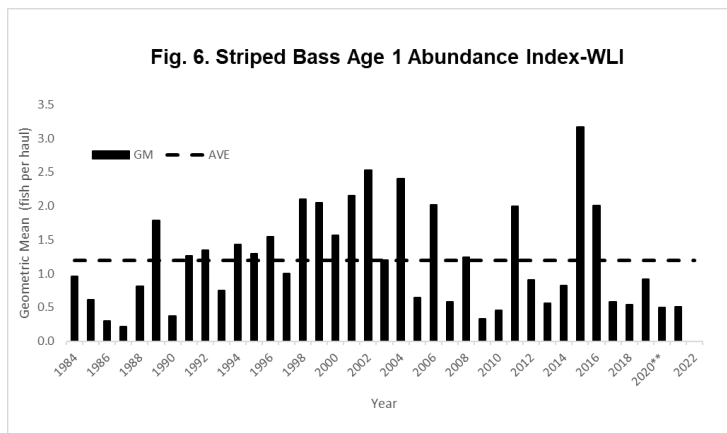


These keys help scientists estimate growth rates and the abundance of particular year classes over time. Length-at-age also becomes an important contributor to adjusting regulations, particularly when the sexual maturity of a species is based on age, and therefore size. For example, if the data showed that anglers are catching legal sized bass,

but their ages are below the age of when they mature, regulations would have to be changed so the fish could have the opportunity to spawn before being removed from the population. Striped bass grow and mature at different rates from year to year due to a variety of factors including fishing pressure, and genetic and environmental influences. In general, female striped bass mature between 4-8 years old and males between 2-4 years old. *Thus, the information you provide plays an important role in monitoring and managing striped bass!*

NYS DEC Sampling

In addition to this program, the DEC also conducts a survey for juvenile striped bass on the Hudson River and in the western bays on Long Island. These surveys are used to create an index of abundance for young striped bass helping us to assess striped bass spawning success. Our unit runs the survey on Long Island which is geared towards catching age 1 fish and we sample in Little Neck Bay, Manhasset Bay, Hempstead Harbor, Oyster Bay, and Jamaica Bay. In each bay, we set a beach seine at fixed stations from May-October. All of the fish we capture in our seine are counted, measured, and released. When we catch striped bass, we measure, weigh, and take scales from them to age them. Additionally, if the bass is 6" or greater, we tag it. You may occasionally catch a striper with a tag. A variety of different agencies tag them and if you catch a fish with a tag, please report it to the appropriate agency as these tags help us understand striped bass migration patterns and survival rates.



We wanted to share some of our findings with you from our 2021 sampling season. We tagged 452 bass and caught a total of 474 striped bass ranging in size from 1.6" to 37.3". The abundance index for age one striped bass on Long Island in 2021 was below the time series average (Fig.6). It has not been above average since 2016.

Complaints, Concerns, and Public Participation in Fisheries Management

With the Covid-19 pandemic and people working from home, it seemed like a lot more people were out fishing but we received less data from our members. Many of you let me know that life just got crazy, but you want to continue to try and help the program. **Please continue to log and collect scale samples as much as you can!** Reporting is easy, fast, and simple with the ArcGIS Survey 123 app. Even if you only go fishing once during the season, one log is better than no log! No catch logs are just as important as catch logs! Please have your friends join the program as well! All are welcome!

We had multiple cooperative anglers donate a few striped bass heads to us this year. The heads are collected to get the otolith (ear bones) out of the fish. We use these to more accurately age the striped bass compared to the scale samples. The only downfall to this method is the fish must be sacrificed. We primarily age scale samples because taking scale samples doesn't hurt the fish. But if you intend on keeping a legal size fish and can save the head for us, we would greatly appreciate your contribution!

A few of our Survey123 anglers checked off that they collected scale samples, but we never received them. Please make sure to send your scale samples to us as soon as you can!

Suggestions were made over the years, included making a video on how to take scale samples and safe handling techniques. Please keep an eye out on the DEC YouTube page for this video coming soon! A lot of new members were very interested in the online reporting system through our

Survey 123 app and have been using the application more and more over the last few years.

Regulations

The current 2022 striped bass regulations in marine waters is 1 fish at 28"-35" from April 15-December 15. This means you can only keep one striped bass per day, per person, that is between 28" and 35". For information on other regulations check the NYS DEC website (www.dec.ny.gov).

The NYS DEC participates in marine fishery councils, boards and a commission that in with cooperation of fisherman, other states, management agencies and the federal government. To see when the next Marine Resources Advisory Council (MRAC) and Atlantic States Marine Fisheries Commission public comment hearings are being held please visit: (www.dec.ny.gov/outdoor/568.html)

Please remember to sign up for the no cost recreational fishing license registry (<https://decals.dec.ny.gov/DECALSCitizenWeb/citizenhome.htm>) before heading out to fish.

Important Reminders

- Please send in your logbooks and scale samples for the season no later than the end of January 2023.
- Remember to take **multiple scales** (10-20) when collecting scale samples.
- Only put scales from a **single** fish in an envelope, **if scales are mixed we cannot use the data.**
- Report **all** your trips, even when you catch nothing. **Zero catch trips are just as important as trips when you catch fish.** Take the time to fill in as much information as you can provide in the logbook or on a scale envelope. Without the correct and full information we cannot enter and analyze it properly.
- Fill in the "hours fished" in your logbook and/or on the scale envelopes.

- If you would like to receive updates via email and haven't already supplied us with one, please consider contacting us stating you would like to become paperless.
- We updated the gear use section in the logbook to get a better sense of what fisherman are using on Long Island to catch Striped Bass.
- Please request a new logbook if you are using older versions or ran out of space in your current one.
- If you need a new logbook or more scale envelopes, email sbcaprogram@dec.ny.gov or contact Megan directly.
- NYS DEC Marine Resources moved in July 2021 and has a new address!

Closing Remarks

We would like to thank all of you for putting in the time and effort to collect data for the program. We understand that when the fishing is fast and furious it may become a burden to stop and take lengths and/or scale samples from every fish you catch. We want to remind you that **any** information you provide us with is information we otherwise wouldn't have; however, try and be as accurate as possible when recording this into your logs.

We hope that you enjoyed this newsletter. As always, feel free to contact us with comments, ideas, suggestions, or stories. If you are receiving this via email, please find an attached PDF of the graphs and tables summarizing the years' data. You may have noticed our letters contain your Angler ID#. This is so you can reference your contributions to the SBCA program in the PDF. If you are receiving this by mail and are interested in obtaining the PDF, please contact us using the information below.

Wishing you tight lines in the 2022 season!

-The Diadromous Fish Unit



Contact Information:

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****Take Note of Our New Address****

Striped Bass Cooperative Angler Fishing Zones

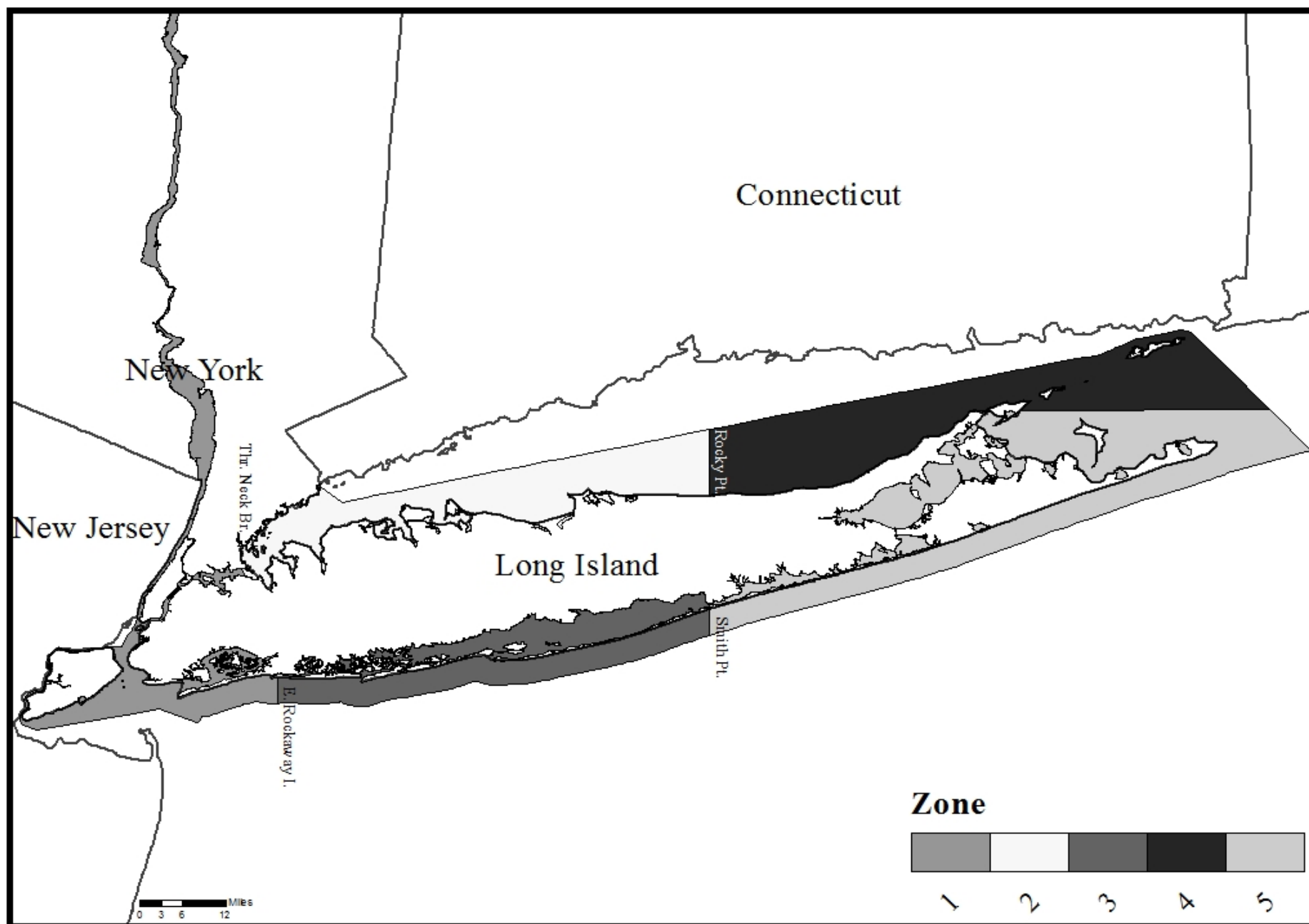
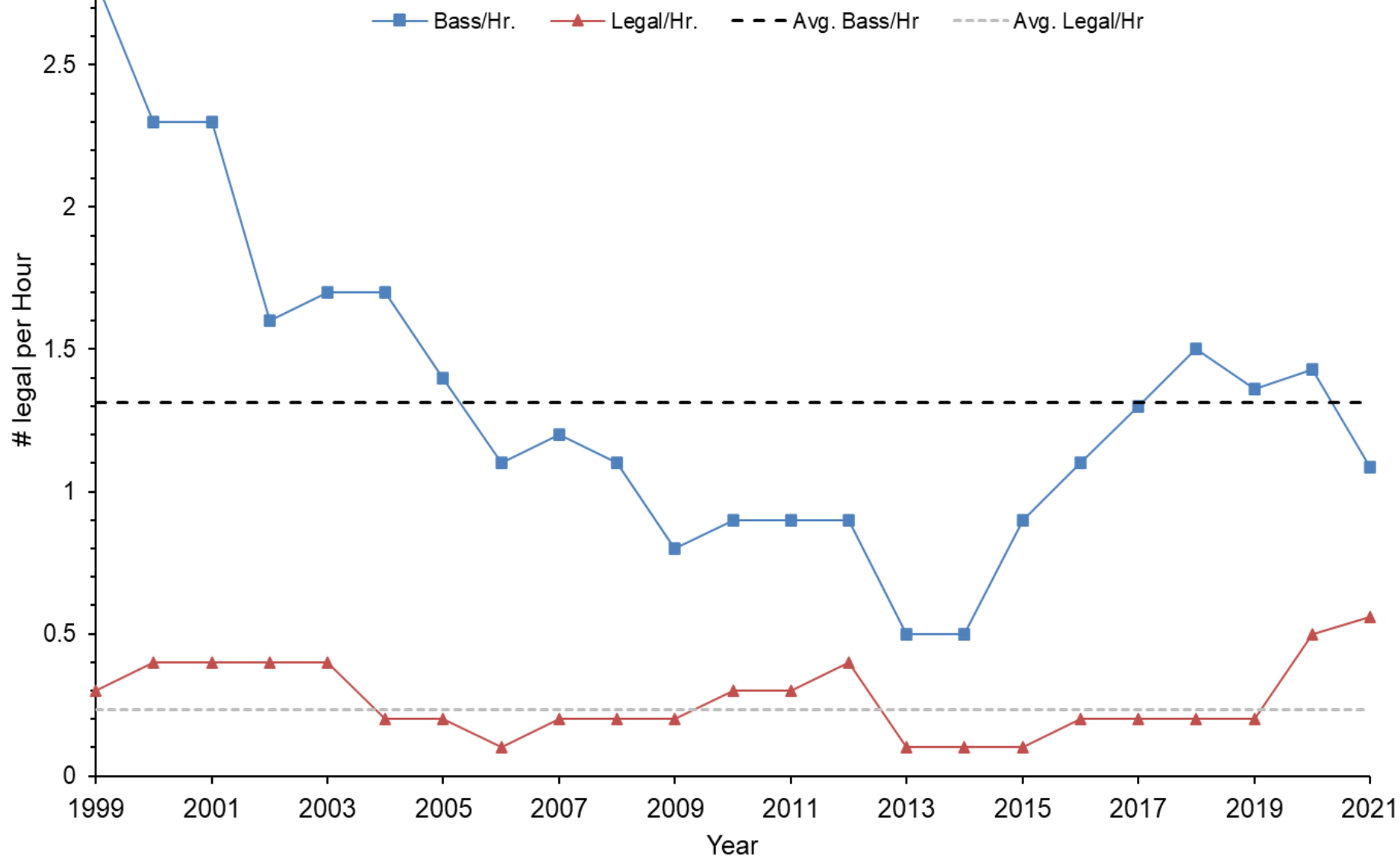


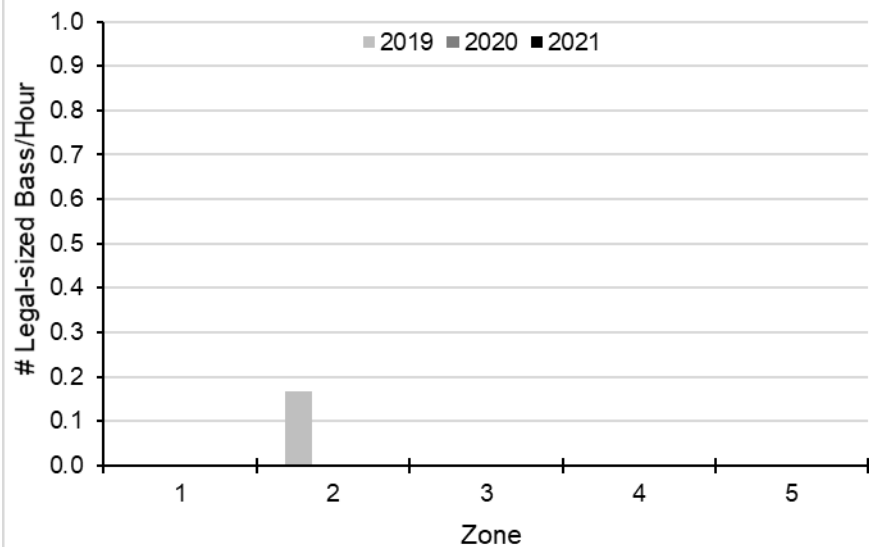
Table 1		SBCA Trip and Catch per Unit Effort (CPUE) Data 2017-2021.													
Year	Zone	Fishing Trips	Hours Fished	Bass	Legal Bass	Kept	% of Legal	% Legal	% Kept	Bass / HR	Bass / Trip	Legal / HR	Legal / Trip	HRS / Trip	
2021	1	41	174	313	218	16	37.1	69.6	7.3	1.8	7.6	1.3	5.3	4.2	
	2	19	52	66	6	5	1.0	9.1	83.3	1.3	3.5	0.1	0.3	2.7	
	3	189	457	269	70	36	11.9	26.0	51.4	0.6	1.4	0.2	0.4	2.4	
	4	1	3	1	0	0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	3.0	
	5	79	225	105	36	7	6.1	34.3	19.4	0.5	1.3	0.2	0.5	2.8	
	6	25	143	390	258	0	43.9	66.2	0.0	2.7	15.6	1.8	10.3	5.7	
	Total	354	1054	1144	588	64	100.00	51.40	10.88	1.09	3.2	0.56	1.66	2.98	
Year	Zone	Fishing Trips	Hours Fished	Bass	Legal Bass	Kept	% of Legal	% Legal	% Kept	Bass / HR	Bass / Trip	Legal / HR	Legal / Trip	HRS / Trip	
2020	1	74	219.5	286	192	7	47.2	67.1	3.6	1.3	3.9	0.9	2.6	3.0	
	2	22	61.0	77	15	12	3.7	19.5	80.0	1.3	3.5	0.2	0.7	2.8	
	3	112	341.9	474	21	10	5.2	4.4	47.6	1.4	4.2	0.1	0.2	3.1	
	4	3	7.5	2	1	1	0.2	50.0	0.0	0.3	0.7	0.1	0.3	2.5	
	5	45	113.3	250	45	11	11.1	18.0	24.4	2.2	5.6	0.4	1.0	2.5	
	6	22	149.0	186	133	2	32.7	71.5	1.5	1.2	8.5	0.9	6.0	6.8	
	Total	278	892.2	1275	407	43	100.0	31.9	10.6	1.429	4.6	0.5	1.5	3.2	
Year	Zone	Fishing Trips	Hours Fished	Bass	Legal Bass	Kept	% of Legal	% Legal	% Kept	Bass / HR	Bass / Trip	Legal / HR	Legal / Trip	HRS / Trip	
2019	1	79	269.95	218	51	31	20.4	23.4	60.8	0.8	2.8	0.2	0.6	3.4	
	2	78	231.29	240	19	11	7.6	7.9	57.9	1.0	3.1	0.1	0.2	3.0	
	3	182	621.65	1070	125	57	50.0	11.7	45.6	1.7	5.9	0.2	0.7	3.4	
	4	3	6	4	0	0	0.0	0.0	0.0	0.7	1.3	0.0	0.0	2.0	
	5	221	501.5	687	42	5	16.8	6.1	11.9	1.4	3.1	0.1	0.2	2.3	
	6	14	31.75	40	13	12	5.2	32.5	92.3	1.3	2.9	0.4	0.9	2.3	
	Total	577	1662.1	2259	250	116	100.0	11.1	46.4	1.36	3.9	0.2	0.4	2.9	
Year	Zone	Fishing Trips	Hours Fished	Bass	Legal Bass	Kept	% of Legal	% Legal	% Kept	Bass / HR	Bass / Trip	Legal / HR	Legal / Trip	HRS / Trip	
2018	1	45	109.8	109	5	3	1.6	4.6	60.0	1.0	2.4	0.0	0.1	2.4	
	2	113	308.3	613	30	15	9.8	4.9	50.0	2.0	5.4	0.1	0.3	2.7	
	3	129	417.5	576	104	32	34.1	18.1	30.8	1.4	4.5	0.2	0.8	3.2	
	4	22	60.5	92	1	0	0.3	1.1	0.0	1.5	4.2	0.0	0.0	2.8	
	5	114	339.8	403	129	59	42.3	32.0	45.7	1.2	3.5	0.4	1.1	3.0	
	6	9	46.5	81	36	3	11.8	44.4	8.3	1.7	9.0	0.8	4.0	5.2	
	Total	432	1282.2	1874	305	112	100.0	16.3	36.7	1.5	4.3	0.2	0.7	3.0	
Year	Zone	Fishing Trips	Hours Fished	Bass	Legal Bass	Kept	% of Legal	% Legal	% Kept	Bass / HR	Bass / Trip	Legal / HR	Legal / Trip	HRS / Trip	
2017	1	107	302.0	258	53	28	22.9	20.5	52.8	0.9	2.4	0.2	0.5	2.8	
	2	90	221.6	356	17	14	7.4	4.8	82.4	1.6	4.0	0.1	0.2	2.5	
	3	172	486.5	692	48	31	20.8	6.9	64.6	1.4	4.0	0.1	0.3	2.8	
	4	25	59.3	134	13	2	5.6	9.7	15.4	2.3	5.4	0.2	0.5	2.4	
	5	189	418.8	516	96	38	41.6	18.6	39.6	1.2	2.7	0.2	0.5	2.2	
	6	6	20.5	20	4	4	1.7	20.0	100.0	1.0	3.3	0.2	0.7	3.4	
	Total	589	1508.7	1976	231	117	100.0	11.7	50.6	1.3	3.4	0.2	0.4	2.6	

Catch Per Unit Effort (CPUE) for SBCA Striped Bass Caught and Legal Striped Bass Caught

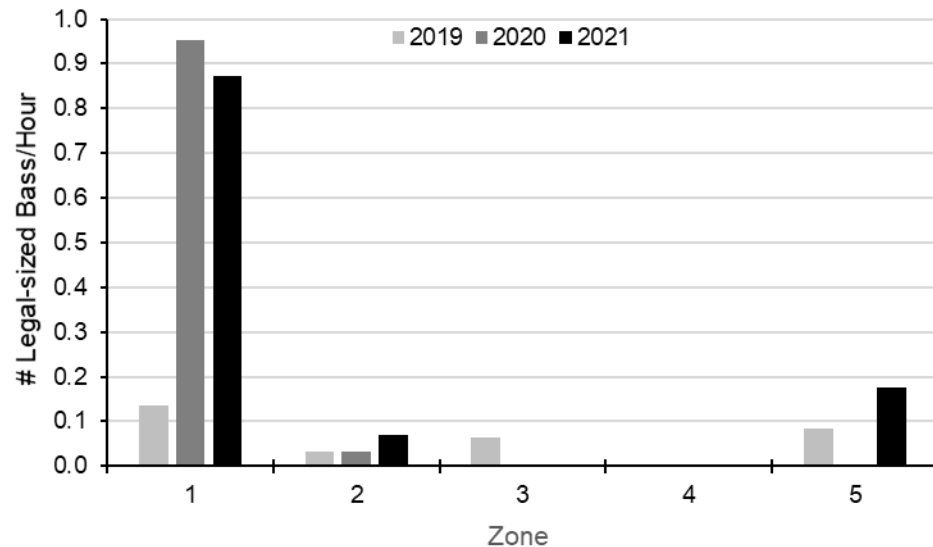


2019-2021 Catch Effort for Legal-sized SBCA Striped Bass, by Season

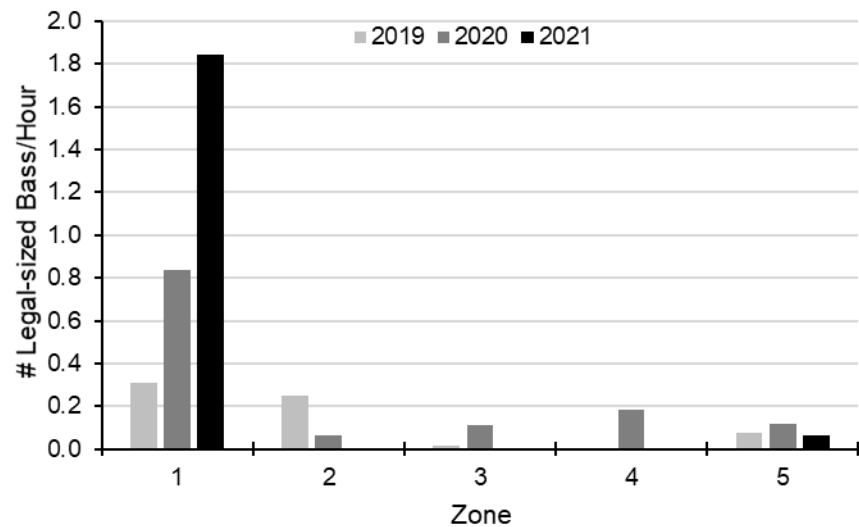
Winter Legal Bass CPUE (Jan-Mar)



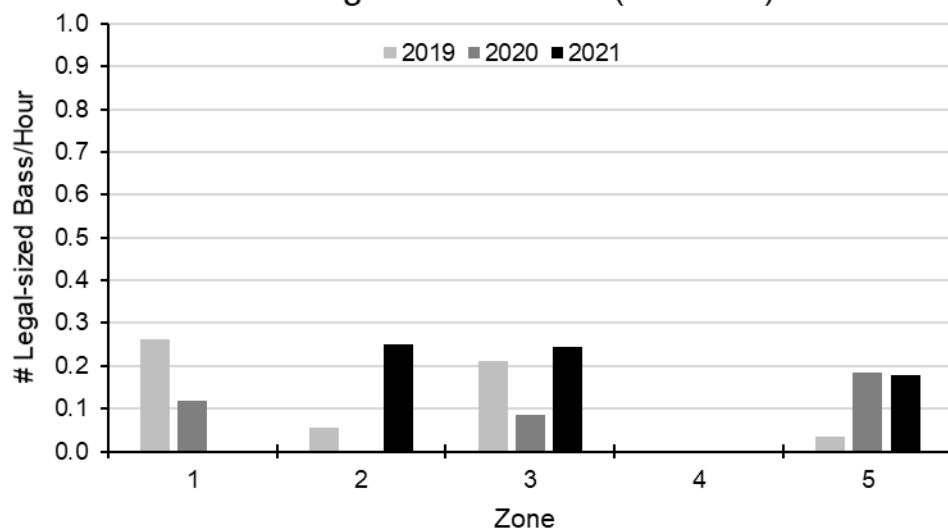
Spring Legal Bass CPUE (Apr-Jun)



Summer Legal Bass CPUE (Jul-Sep)

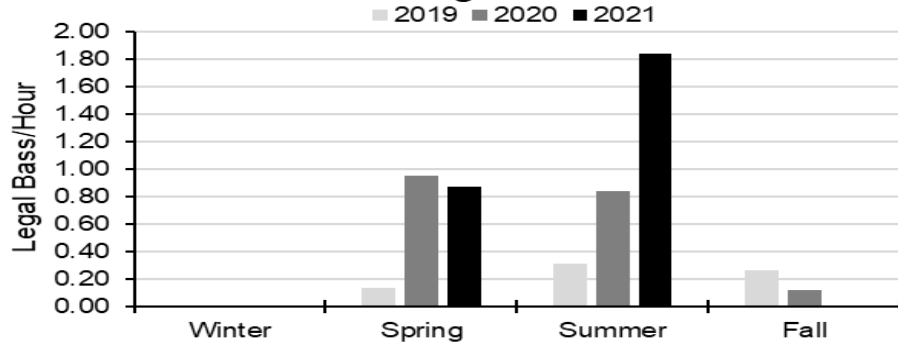


Fall Legal Bass CPUE (Oct-Dec)

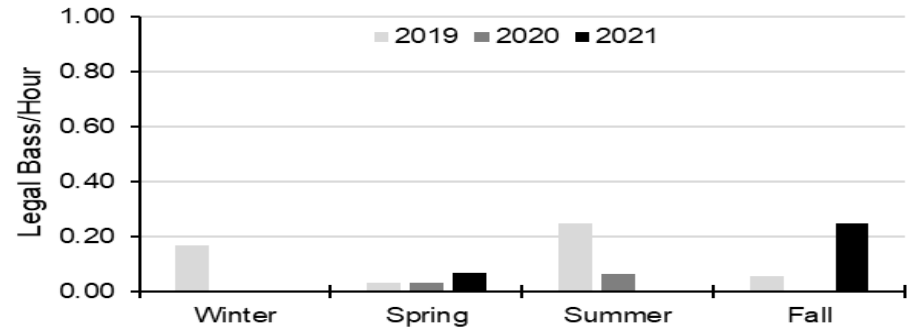


2019-2021 Catch Effort for SBCA Legal-Sized Bass, by Zone

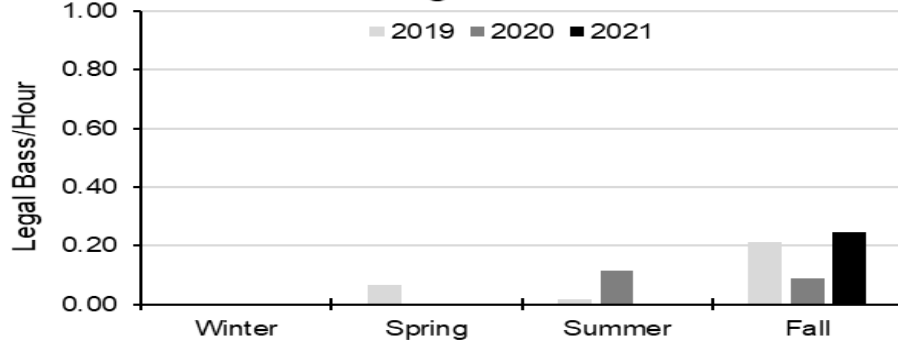
Zone 1 Legal Bass CPUE



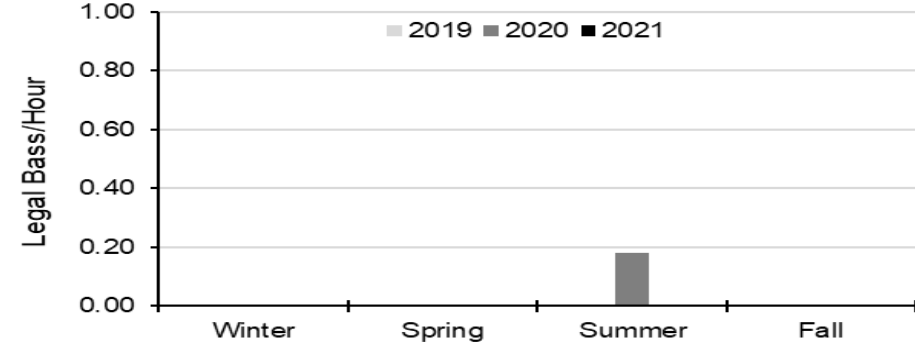
Zone 2 Legal Bass CPUE



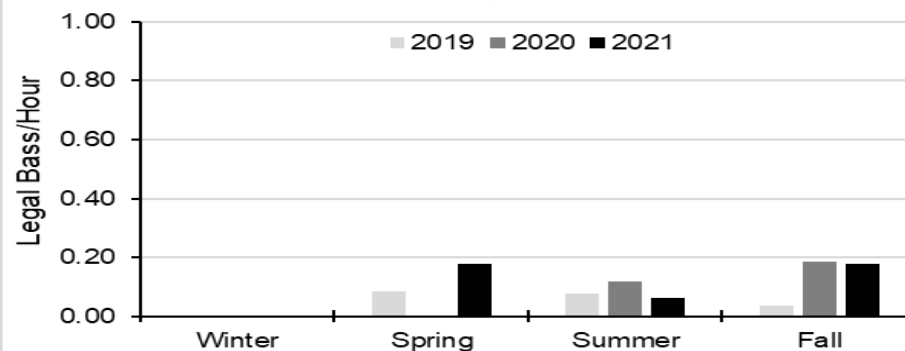
Zone 3 Legal Bass CPUE



Zone 4 Legal Bass CPUE



Zone 5 Legal Bass CPUE



Number of Striped Bass Caught, Legal-sized Striped Bass Caught, Hours Fished and Striped Bass Kept by Month and Zone, 2021

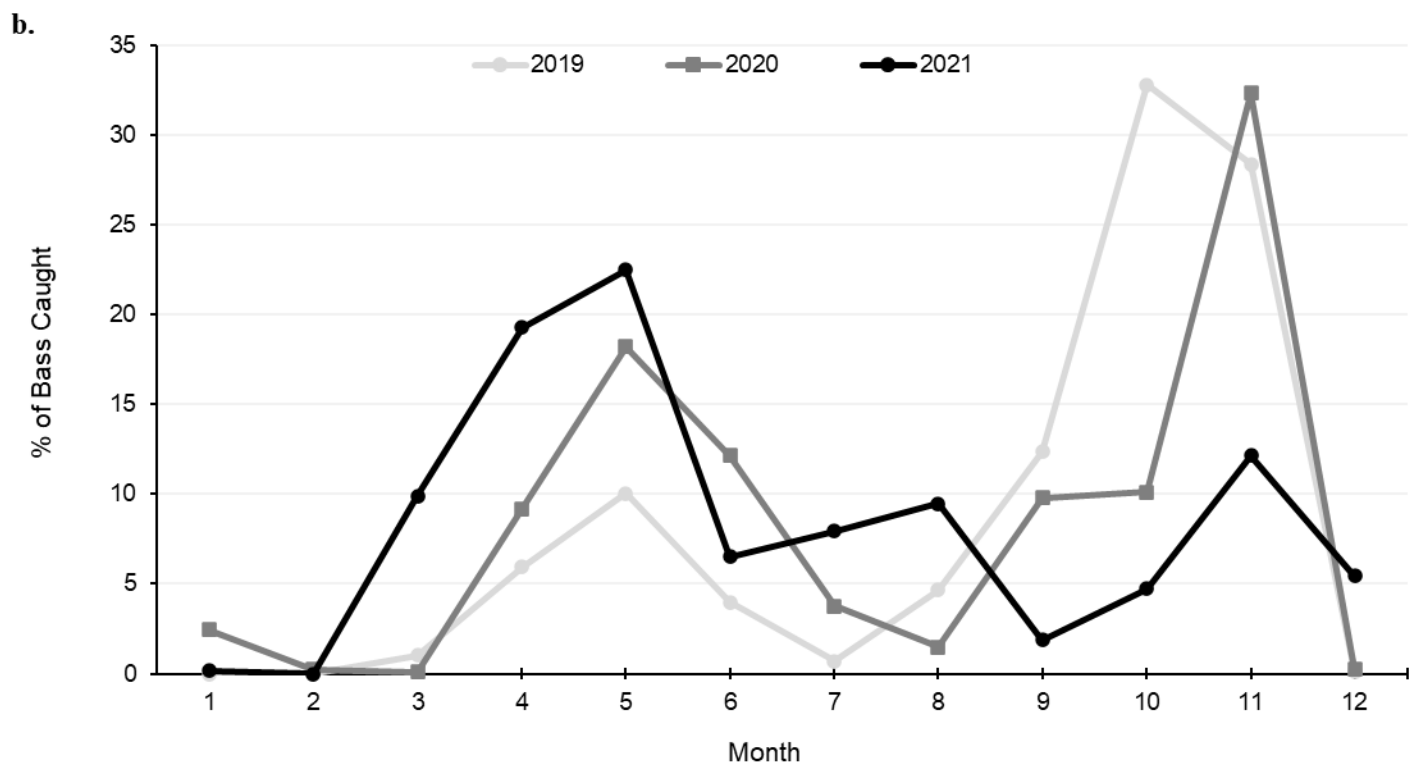
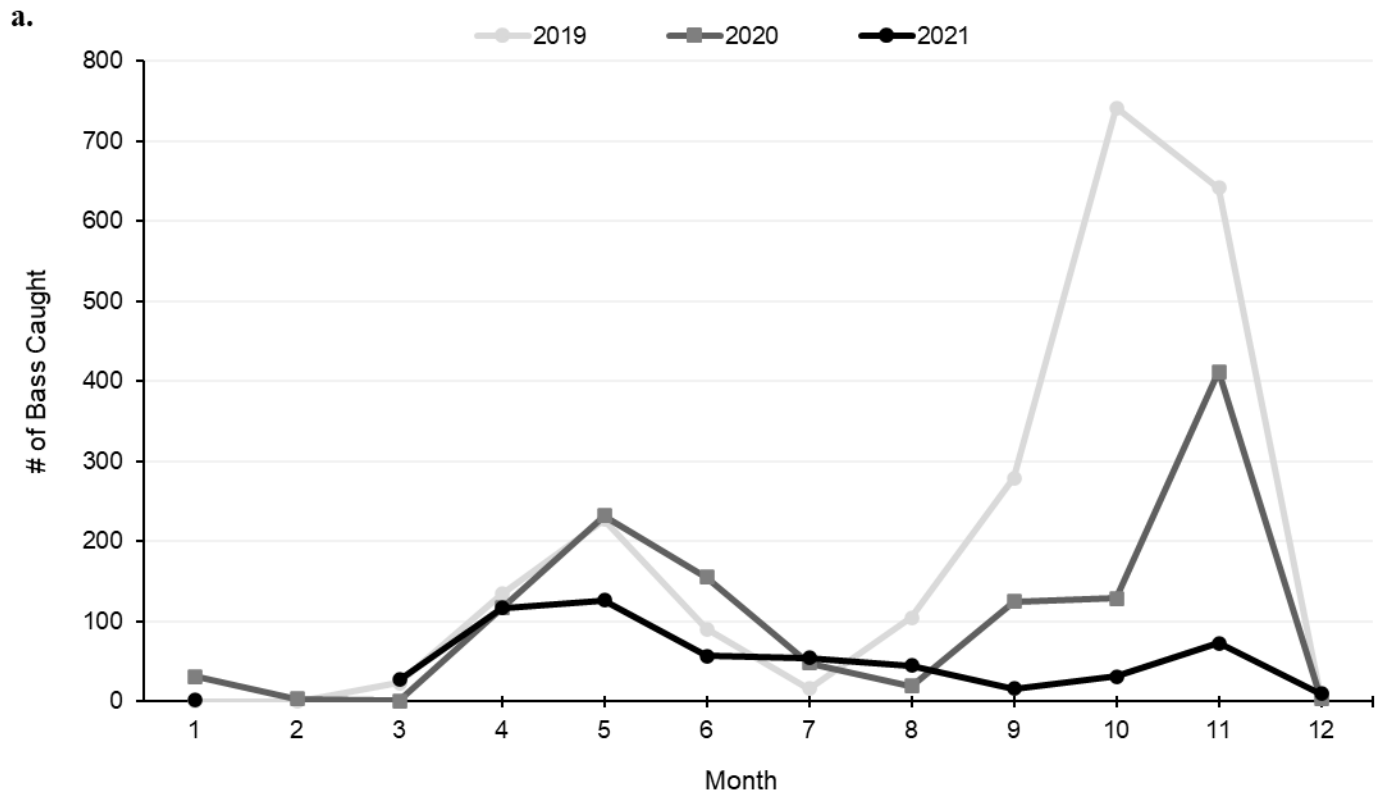
Striped Bass Caught							
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total
January	2						2
February							0
March						111	111
April	83	22	6		1	104	216
May	44	37	4		40	127	252
June	16	3	8		20	26	73
July	64		3			22	89
August	104				2		106
September		2	1		18		21
October		1	44	1	16		62
November		1	142		8		151
December			61				61
Total	313	66	269	1	105	390	1144

Legal-sized Striped Bass Caught							
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total
January							0
February							0
March						37	37
April	53	1				60	114
May	40	2			25	127	194
June	12	2			2	26	42
July	55					8	63
August	58						58
September					2		2
October		1	10		5		16
November			24		2		26
December			36				36
Total	218	6	70	0	36	258	588

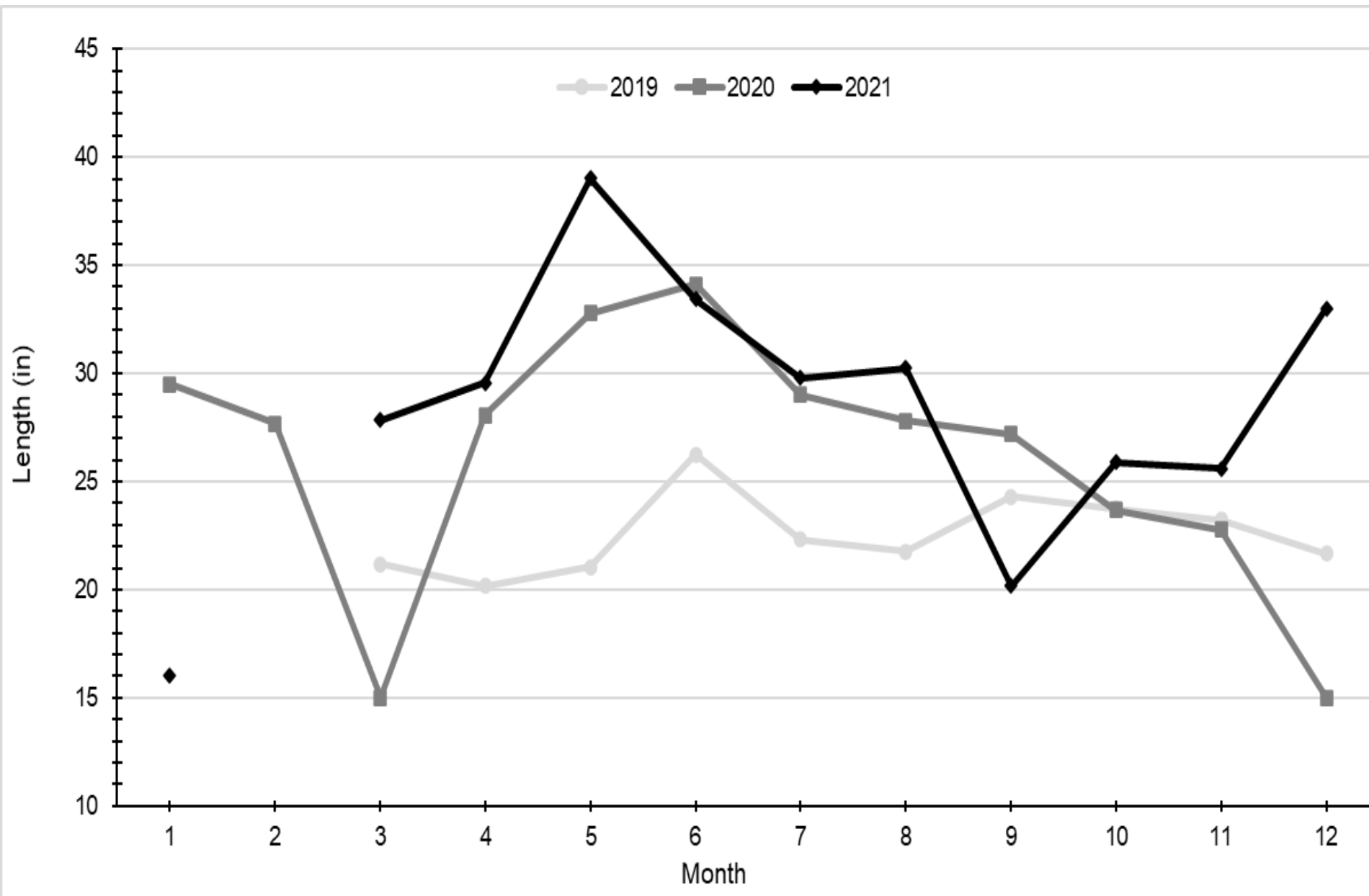
Number of Hours Spent Fishing							
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total
January	4						4
February							0
March		3				27	30
April	74	14	18		15	45	165
May	26	25	23		73	43	189
June	21	4	37		66	24	152
July	26	1	31			4	62
August	24		28		5		57
September		1	33		28		61
October		2	126	3	24		154
November		2	137		16		154
December			25				25
Total	174	52	457	3	225	143	1053

Number of Striped Bass Kept							
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total
January							0
February							0
March							0
April	5						5
May		2					2
June	2	2			2		6
July							0
August	9						9
September							0
October		1	8		3		12
November			17		2		21
December			9				9
Total	16	5	34	0	7	0	64

(a.) Number of SBCA Striped Bass Caught by Month
and (b.) The Percent of Striped Bass Caught by
Month, 2019-2021



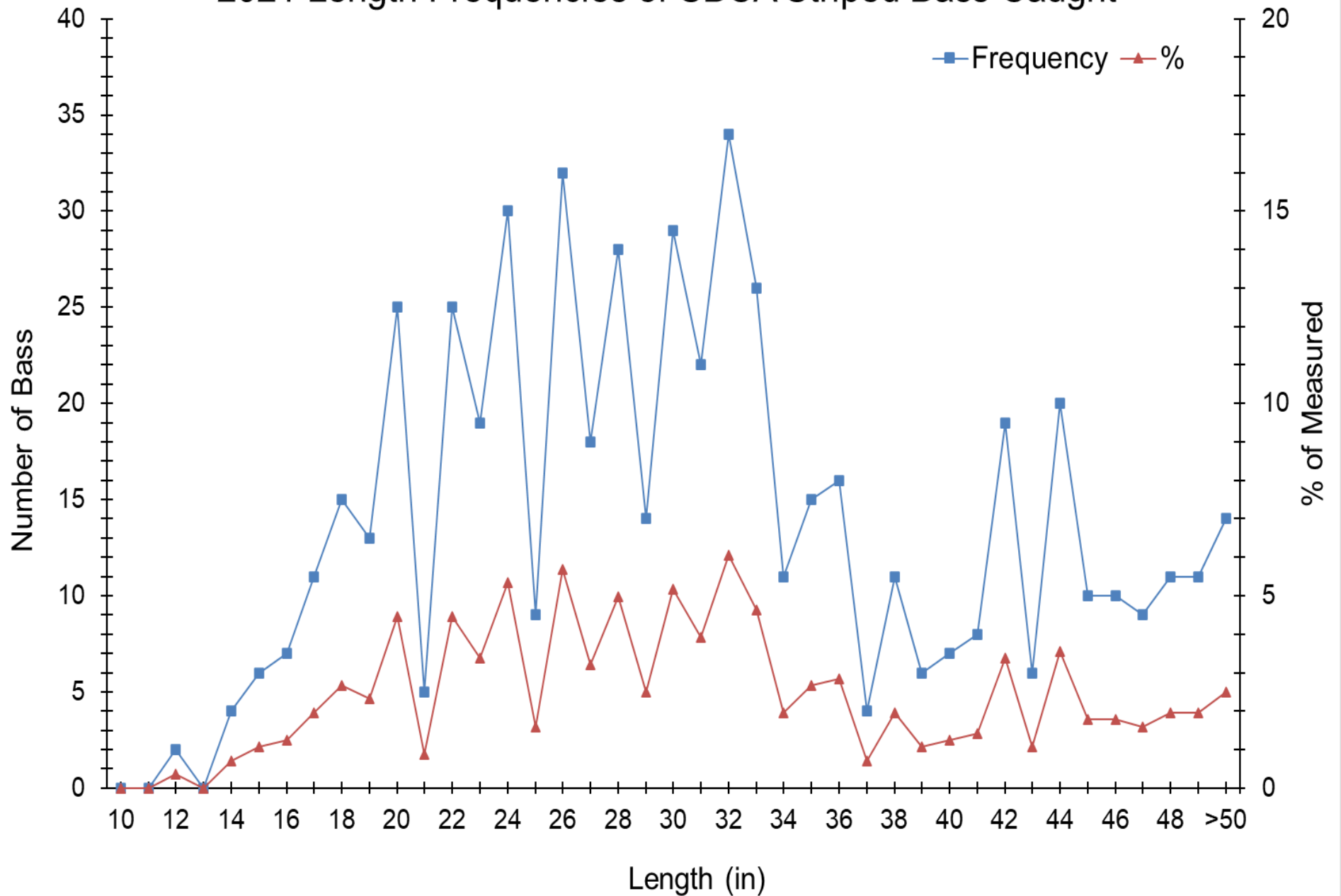
Average Length of SBCA Striped Bass Caught by Month, 2019 - 2021



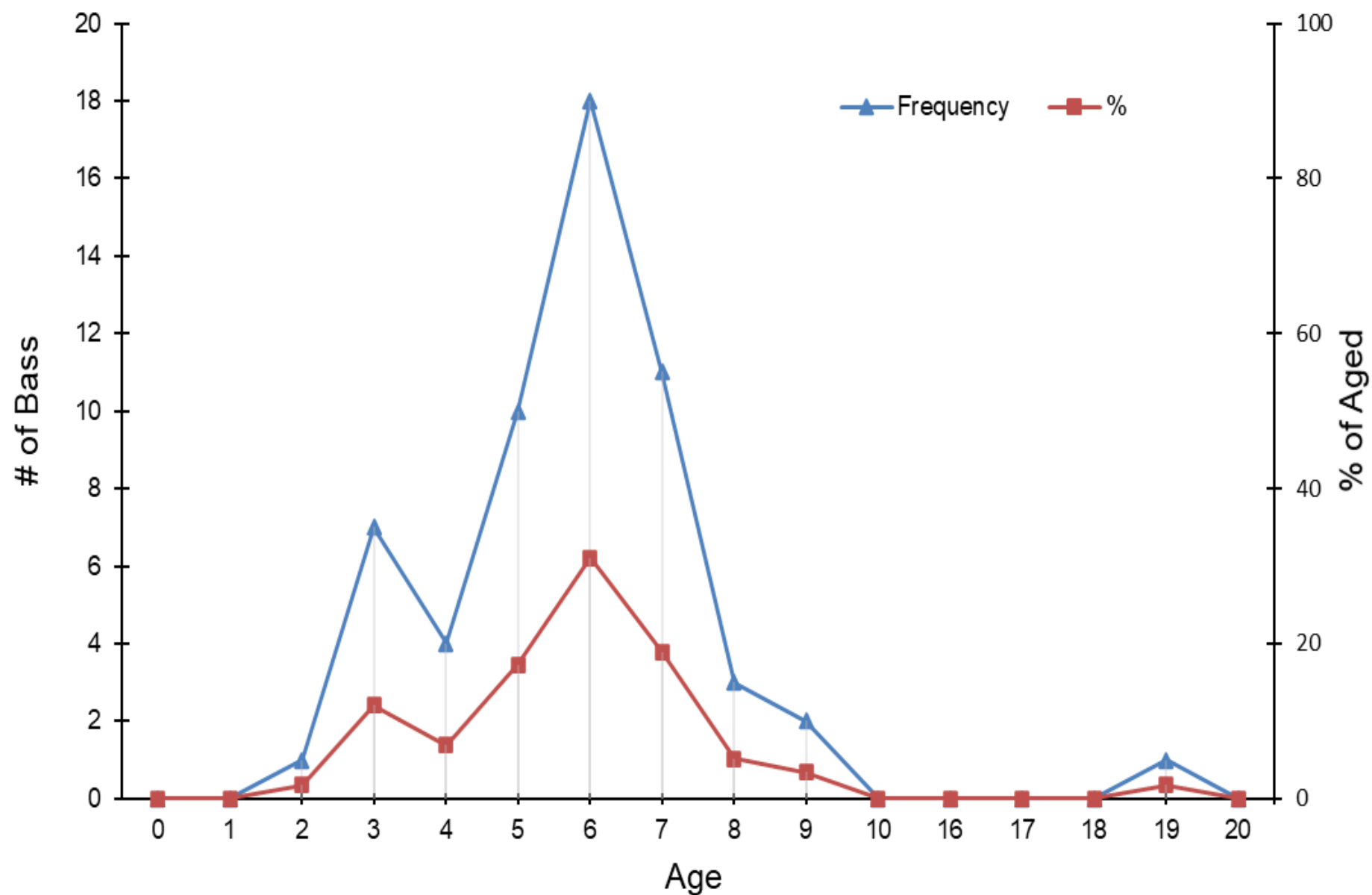
Total Count and Percentage of Striped Bass and Legal Striped Bass Caught by Zone and Technique, 2021

Total Striped Bass Caught								1144	754
		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total	Total (1-5)
Mode	Boat	287	23	191	0	19	390	910	520
	Shore	10	41	78	1	83	0	215	213
	Unknown	14	2	0	0	3	0	19	19
Bait	Artificial	3	65	155	1	95	0	296	319
	Live	179	1	73	0	0	180	433	253
	Dead/Real	15	0	0	0	0	12	27	15
	Umbrella Rig	0	0	0	0	6	0	6	6
	MOJO	14	0	1	0	1	0	16	16
	Combo Total	72	0	39	0	0	198	309	111
	Unknown	30	0	2	0	3	0	35	35
Bait	Artificial, Live, Dead/Real	0	0	3	0	0	102	105	3
Combo	Artificial, Live	0	0	30	0	0	32	62	30
Breakdown	Artificial, Dead/Real	0	0	0	0	0	55	55	0
	Artificial, Umbrella Rig	0	0	3	0	0	0	3	3
	Artificial, MOJO	0	0	2	0	0	0	2	2
	Artificial, Gulp	0	0	1	0	0	0	1	1
	Live, Dead/Real	72	0	0	0	0	9	81	72
Legal-sized Striped Bass								588	330
		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total	Total (1-5)
Mode	Boat	203	2	67	0	4	258	534	276
	Shore	5	2	3	0	31	0	41	41
	Unknown	10	2	0	0	1	0	13	13
Bait	Artificial	2	5	31	0	33	0	71	71
	Live	149	1	17	0	0	163	330	167
	Dead/Real	4	0	0	0	0	6	10	4
	Umbrella Rig	0	0	0	0	1	0	1	1
	MOJO	8	0	0	0	1	0	9	9
	Combo Total	46	0	21	0	0	89	156	67
	Unknown	9	0	1	0	1	0	11	11
Bait	Artificial, Live, Dead/Real	0	0	0	0	0	47	47	0
Combo	Artificial, Live	0	0	19	0	0	13	32	19
Breakdown	Artificial, Dead/Real	0	0	0	0	0	24	24	0
	Artificial, Umbrella Rig	0	0	0	0	0	0	0	0
	Artificial, MOJO	0	0	2	0	0	0	2	2
	Artificial, Gulp	0	0	0	0	0	0	0	0
	Live, Dead/Real	46	0	0	0	0	5	51	46
Total Striped Bass Percentage									
		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total %	Total % (1-5)
Mode	Boat	25.1	2.0	16.7	0.0	1.7	34.1	79.5	69.0
	Shore	0.9	3.6	6.8	0.1	7.3	0.0	18.8	28.2
	Unknown	1.2	0.2	0.0	0.0	0.3	0.0	1.7	2.5
Bait	Artificial	0.3	5.8	11.8	0.1	8.5	0.0	26.4	42.3
	Live	16.0	0.1	6.5	0.0	0.0	16.1	38.7	33.6
	Dead/Real	1.3	0.0	0.0	0.0	0.0	1.1	2.4	2.0
	Umbrella Rig	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.8
	MOJO	1.3	0.0	0.1	0.0	0.1	0.0	1.4	2.1
	Combo Total	6.4	0.0	3.5	0.0	0.0	17.7	27.6	14.7
	Unknown	2.7	0.0	0.2	0.0	0.3	0.0	3.1	4.6
Bait	Artificial, Live, Dead/Real	0.0	0.0	0.3	0.0	0.0	8.9	9.2	0.4
combo	Artificial, Live	0.0	0.0	2.6	0.0	0.0	2.8	5.4	4.0
breakdown	Artificial, Dead/Real	0.0	0.0	0.0	0.0	0.0	4.8	4.8	0.0
	Artificial, Umbrella Rig	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.4
	Artificial, MOJO	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.3
	Artificial, Gulp	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
	Live, Dead/Real	6.3	0.0	0.0	0.0	0.0	0.8	7.1	9.5
Legal-sized Striped Bass Percentage									
		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total %	Total % (1-5)
Mode	Boat	34.5	0.3	11.4	0.0	0.7	43.9	90.8	83.6
	Shore	0.9	0.3	0.5	0.0	5.3	0.0	7.0	12.4
	Unknown	1.7	0.3	0.0	0.0	0.2	0.0	2.2	3.9
Bait	Artificial	0.3	0.9	5.3	0.0	5.6	0.0	12.1	21.5
	Live	25.3	0.2	2.9	0.0	0.0	27.7	56.1	50.6
	Dead/Real	0.7	0.0	0.0	0.0	0.0	1.0	1.7	1.2
	Umbrella Rig	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.3
	MOJO	1.4	0.0	0.0	0.0	0.2	0.0	1.5	2.7
	Combo Total	7.8	0.0	3.6	0.0	0.0	15.1	26.5	20.3
	Unknown	1.5	0.0	0.2	0.0	0.2	0.0	1.9	3.3
Bait	Artificial, Live, Dead/Real	0.0	0.0	0.0	0.0	0.0	8.0	8.0	0.0
combo	Artificial, Live	0.0	0.0	3.2	0.0	0.0	2.2	5.4	5.8
breakdown	Artificial, Dead/Real	0.0	0.0	0.0	0.0	0.0	4.1	4.1	0.0
	Artificial, Umbrella Rig	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Artificial, MOJO	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.6
	Artificial, Gulp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Live, Dead/Real	7.8	0.0	0.0	0.0	0.0	0.9	8.7	13.9

2021 Length Frequencies of SBCA Striped Bass Caught



Age Frequency and Percentage of SBCA Aged Striped Bass, 2021



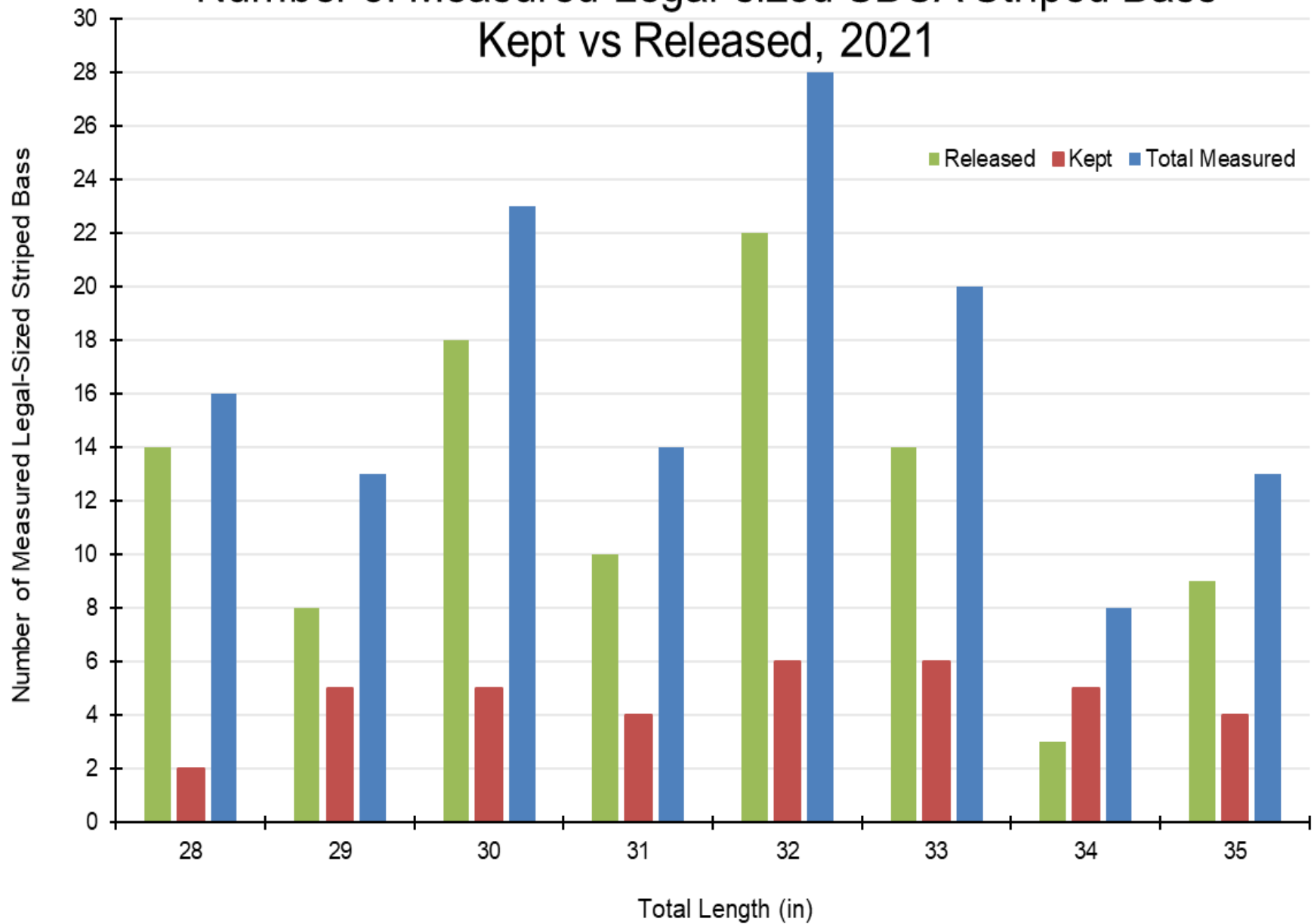
(Season1) January- June 2021
SBCA Striped Bass Length-at-Age Frequency

	Age												
Length	2	3	4	5	6	7	8	9	12	19	No Good	No Scale Sample	Grand Total
12												1	1
13													0
14												3	3
15		1									1	3	5
16	1	1										5	7
17		1										4	5
18												4	4
19												1	1
20			2								1	8	11
21				1									1
22		1	1		1							14	17
23			1	2	1	1						4	9
24				2	3						1	12	18
25				1	1							3	5
26					5							13	18
27				1	1							7	9
28							1					12	13
29							1						1
30						1						6	7
31						1						11	12
32					1	1						9	11
33						1						13	14
34					1							3	4
35						1						8	9
36												9	9
37												4	4
38												9	9
39												6	6
40												5	5
41												6	6
42												17	17
43												6	6
44												18	18
45												10	10
46												10	10
47												9	9
48												11	11
49												11	11
50												6	6
51												5	5
52												2	2
53													0
Total	1	4	4	7	14	6	2				3	288	329

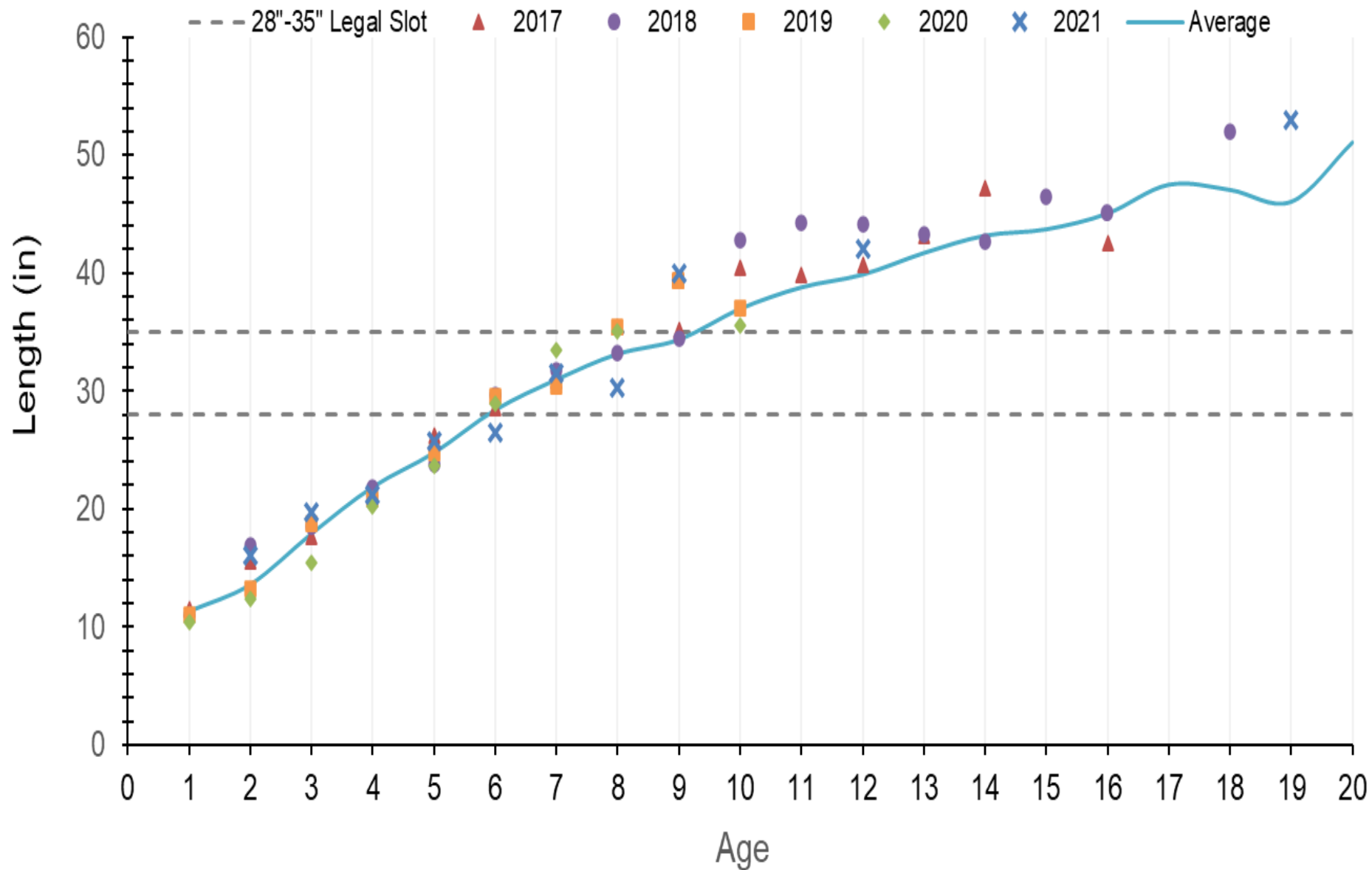
(Season 2) July- December 2021
SBCA Striped Bass Length-at-Age Frequency

Length	Age												Grand Total
	2	3	4	5	6	7	8	9	12	19	No Good	No Scale Sample	
12												1	1
13													0
14												1	1
15												1	1
16													0
17												6	6
18												11	11
19		1										11	12
20		1										13	14
21												4	4
22												8	8
23					1							9	10
24												12	12
25												4	4
26												14	14
27												9	9
28					1							14	15
29		1		1	1							10	13
30				1		1						20	22
31				1								9	10
32					1							22	23
33						3						9	12
34						1	1					5	7
35												6	6
36												7	7
37													0
38												2	2
39													0
40								2					2
41												2	2
42									1			1	2
43													
44												2	2
45													0
46													0
47													0
48													0
49													0
50													0
51													0
52													0
53										1			1
Total		3		3	4	5	1	2	1	1		213	233

Number of Measured Legal-sized SBCA Striped Bass Kept vs Released, 2021



Average Length at Age of SBCA Measured Striped Bass 2017 - 2021



2021 Samples (Lengths, Weights, and/or Scales) Collected by Cooperative Anglers by Zone

Angler ID	1	2	3	4	5	6	Total
2		1					1
90					1		1
407		4	2	1	13		20
829			3				3
977			10				10
1063			7		18		25
1095			13				13
1117		1				2	3
1130		1					1
1135		1					1
1138			5				5
1238					1		1
1265			12				12
1269		1					1
1277					3		3
1441	17					23	40
1453	4						4
1455					43		43
1456		6					6
1470	10						10
1471	3						3
1480		3	3				6
1484	5	1					6
1490	2						2
1492			125				125
1497			1				1
1499			4				4
1503			4				4
Grand Total	41	19	189	1	79	25	354

Striped Bass >=35" Caught by Cooperative Anglers in 2021

Angler ID	Month	Zone	Length	Weight	Age	Angler ID	Month	Zone	Length	Weight	Age
1063	10	3	35		*	1441	4	1	38		*
1441	4	1	35	25	*	1441	4	1	38		*
1441	4	1	35		*	1441	8	1	38	24	*
1441	4	1	35		*	1441	4	1	39		*
1441	4	1	35		*	1503	10	3	39.5	19	9
1441	7	1	35		*	829	11	3	40	36	9
1441	8	1	35		*	1441	4	1	40	35	*
1441	8	1	35		*	1441	4	1	40		*
1441	8	1	35		*	1063	11	3	41		*
1441	4	1	35		*	1441	8	1	41	29	*
1456	6	1	35	16	7	829	11	3	41.5	38	12
1441	8	1	36		*	1441	4	1	42	42	*
1441	4	1	36		*	1441	8	1	42	29	*
1441	4	1	36		*	1441	4	1	42		*
1441	4	1	36		*	1441	5	1	43	40	*
1441	6	1	36		*	1441	5	1	43	39	*
1441	7	1	36		*	1265	11	3	44		*
1441	7	1	36		*	1265	11	3	44		*
1441	7	1	36		*	1441	5	1	44	42	*
1441	7	1	36		*	1441	5	1	44	42	*
1441	8	1	36		*	1441	6	1	44	32	*
1441	8	1	36		*	1441	5	1	45	43	*
1441	4	1	36		*	1441	5	1	45	42	*
1441	4	1	37	28	*	1441	5	1	48	46	*
1441	4	1	37		*	1441	5	1	48	46	*
1441	4	1	37		*	1441	5	1	49	48	*
1441	4	1	37		*	1441	5	1	49	48	*
829	11	3	37.5	31	*	1441	5	1	51	49	*
1441	4	1	38		*	1503	11	3	52.5		19