

The State of the Bays



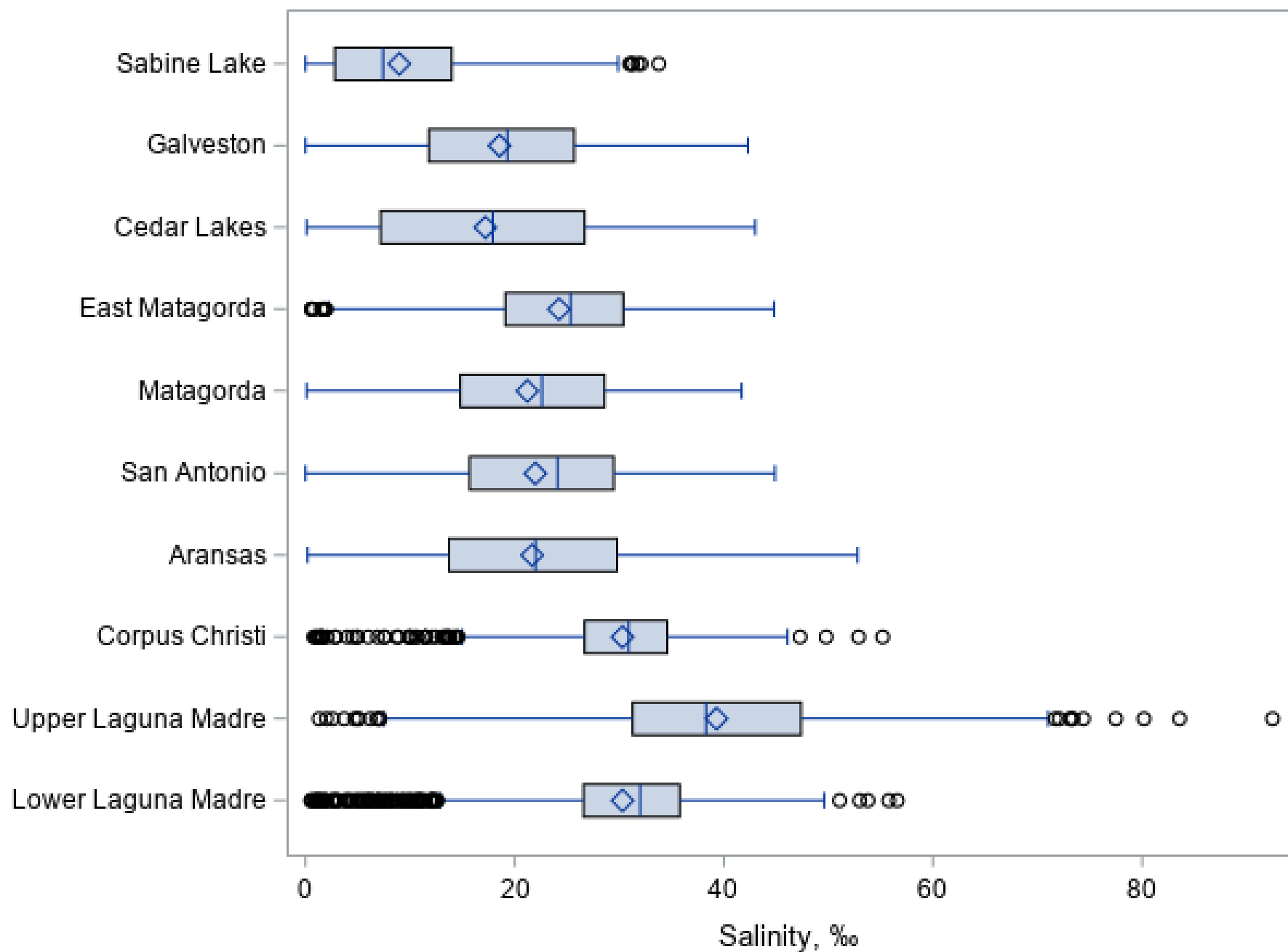
Mark R. Fisher, Ph.D.

Science Director

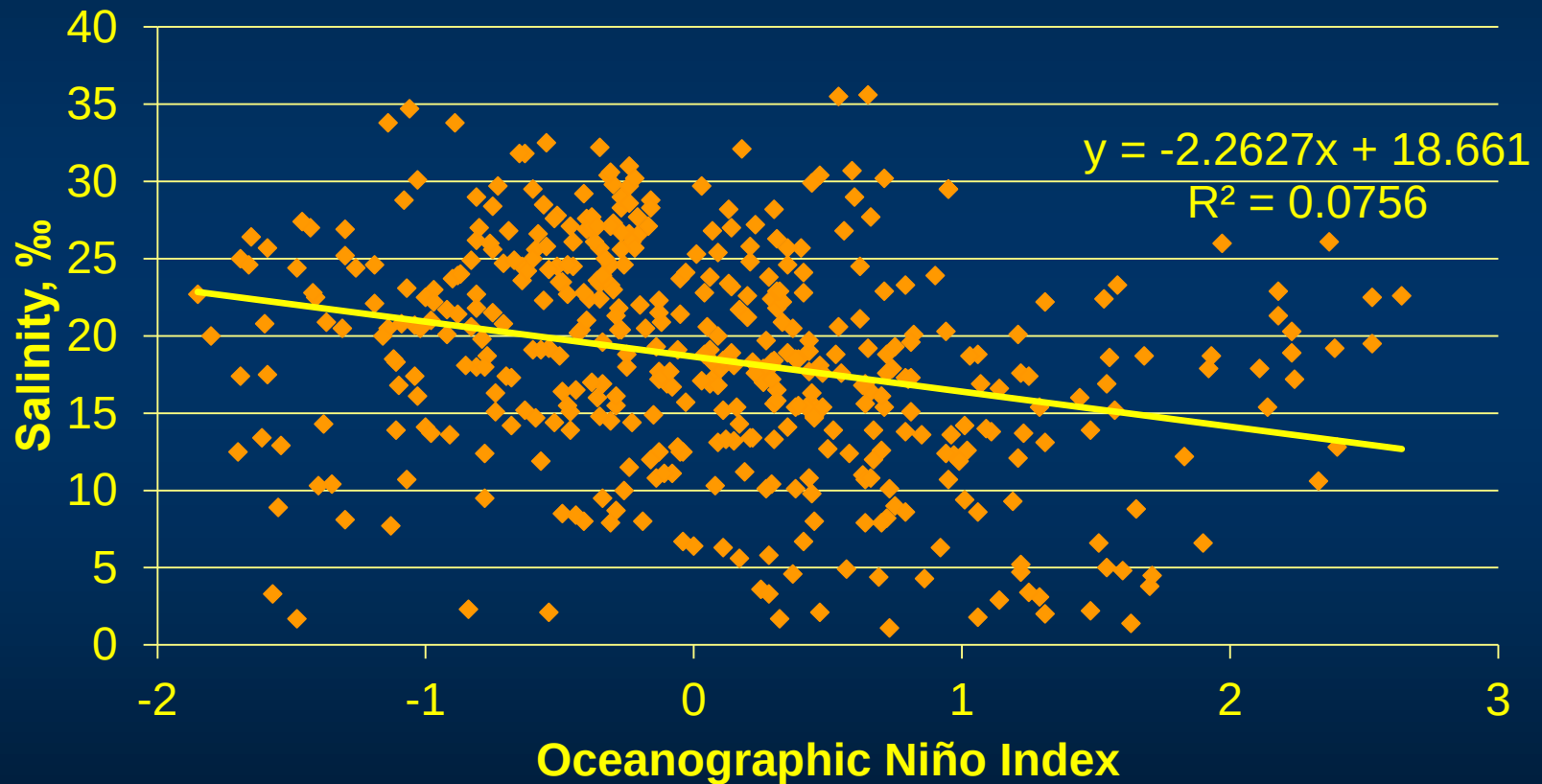
Salinity and Temperature

Observed Salinity from TPWD Bag Seine Samples, 2010-2019

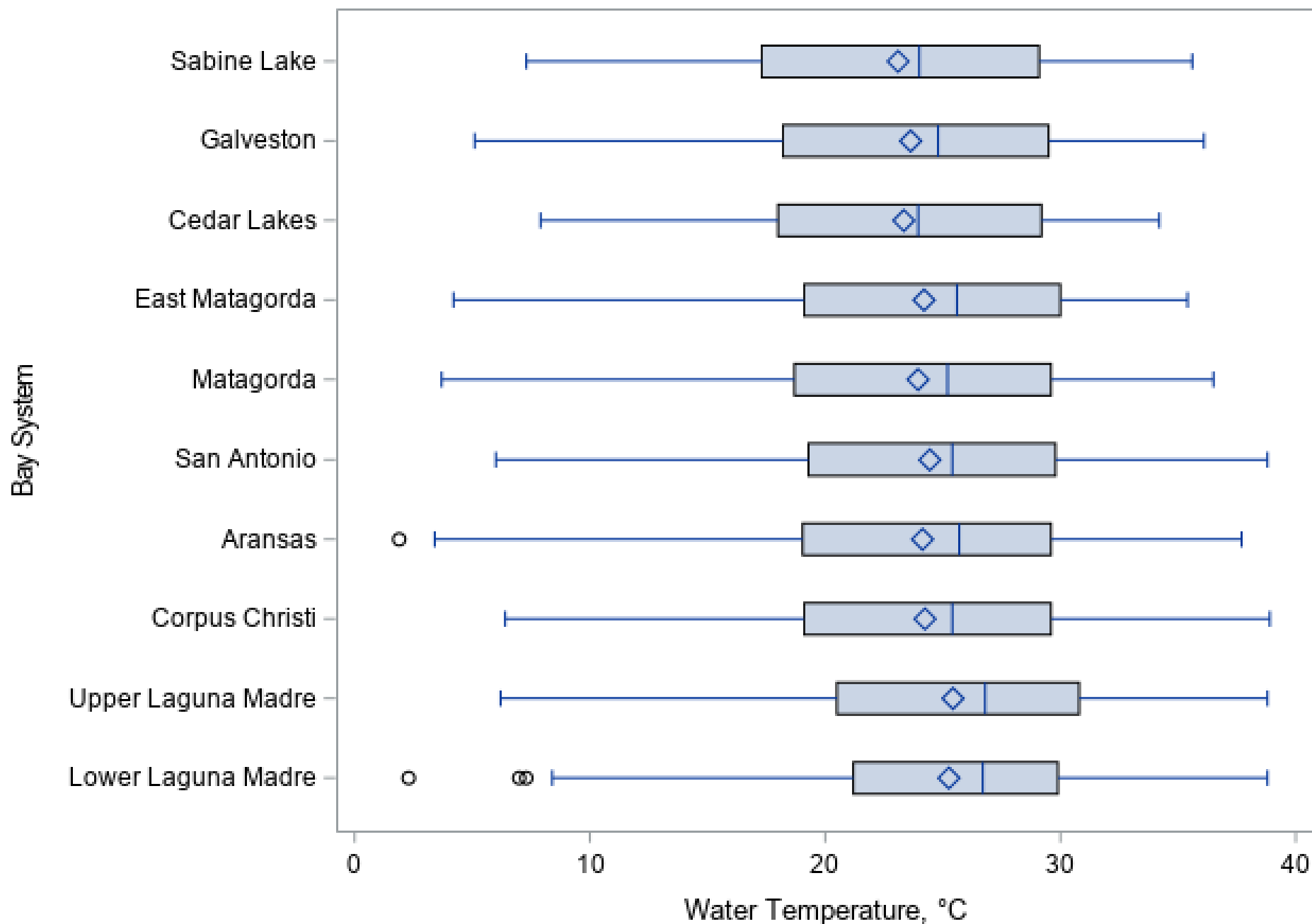
Bay System



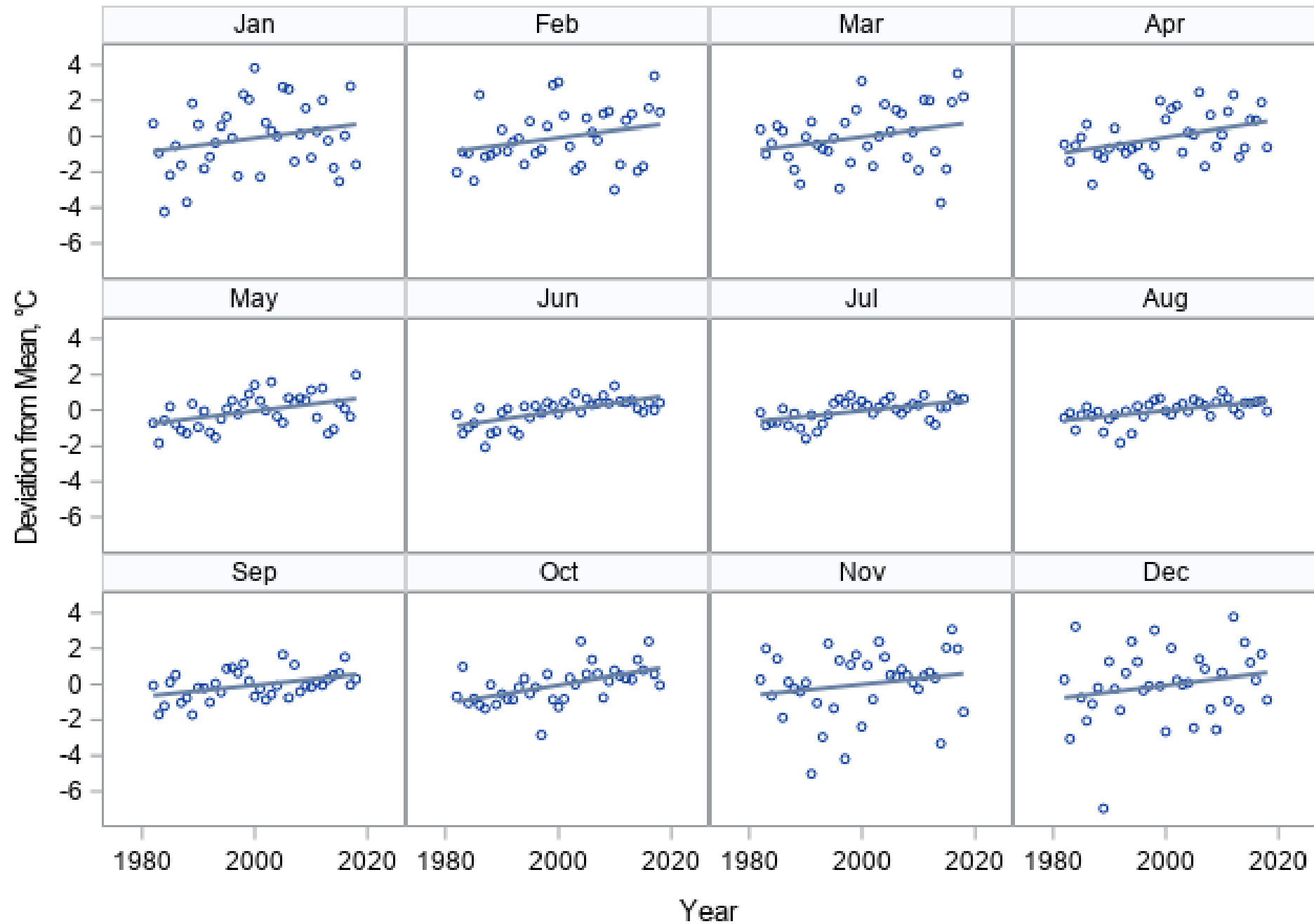
El Niño and Mean Monthly San Antonio Bay Salinity



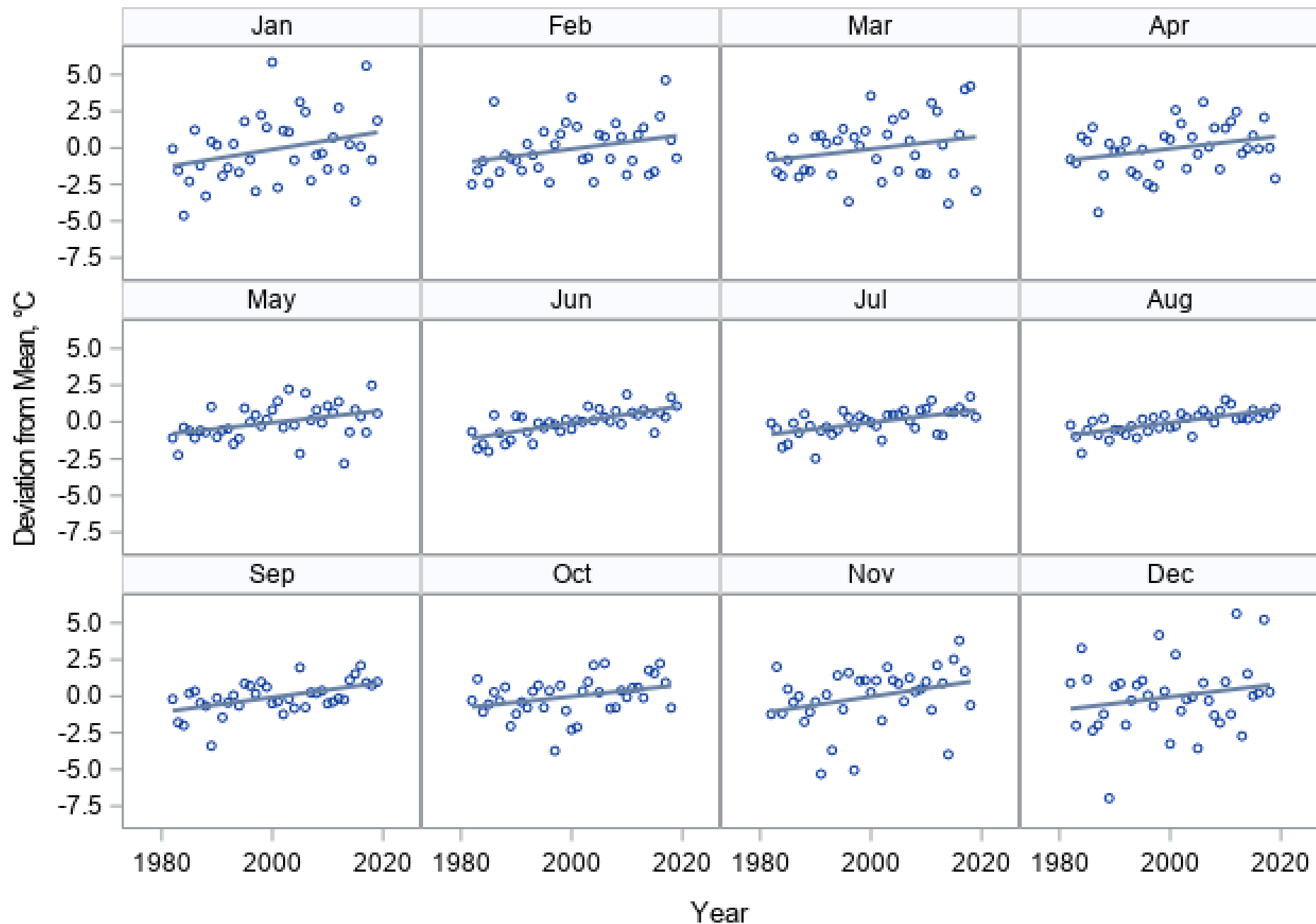
Observed Temperature from TPWD Bag Seine Samples, 2010-2019



Coastwide Water Temperature by Month and Year

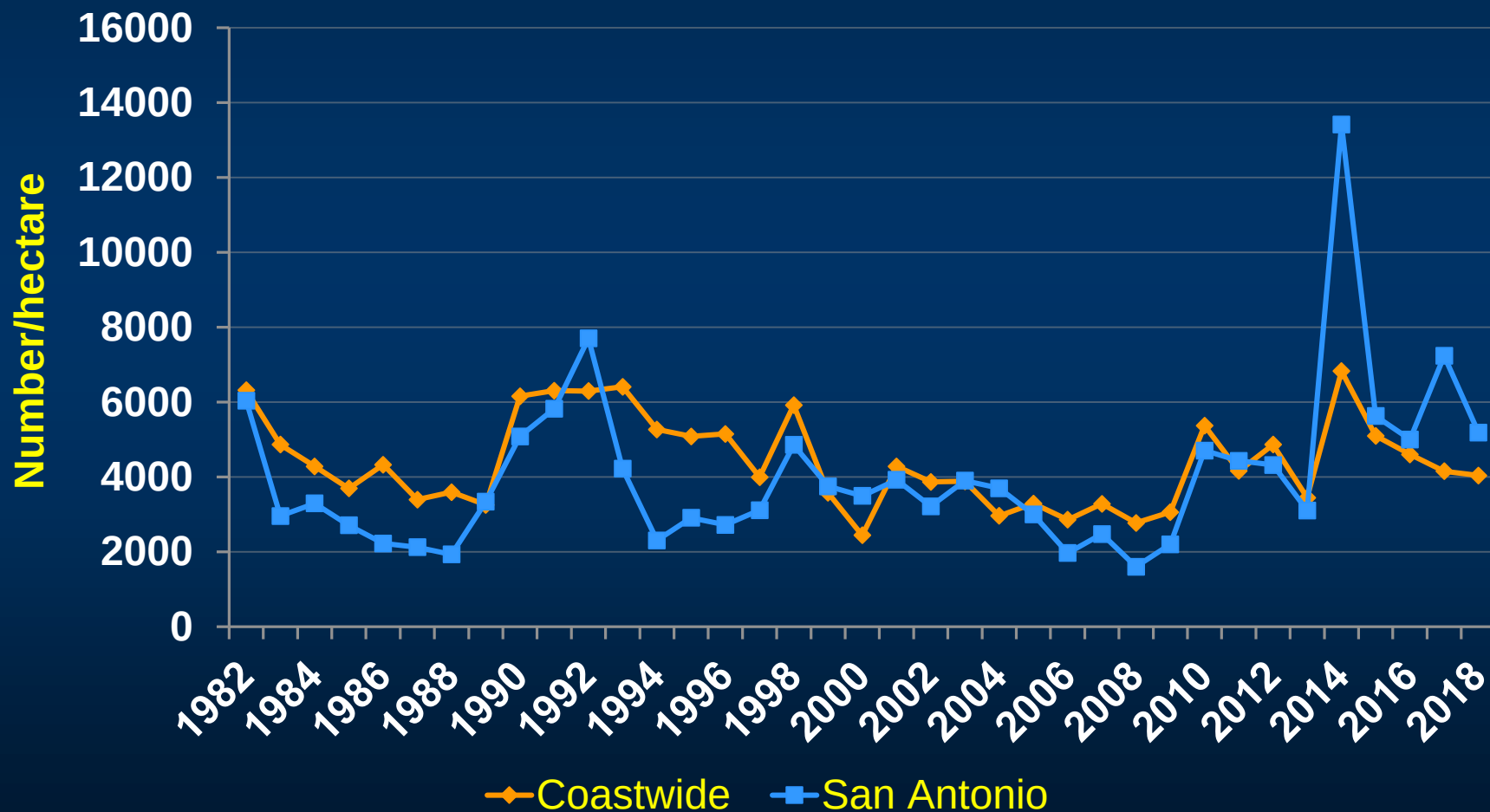


San Antonio Water Temperature by Month and Year

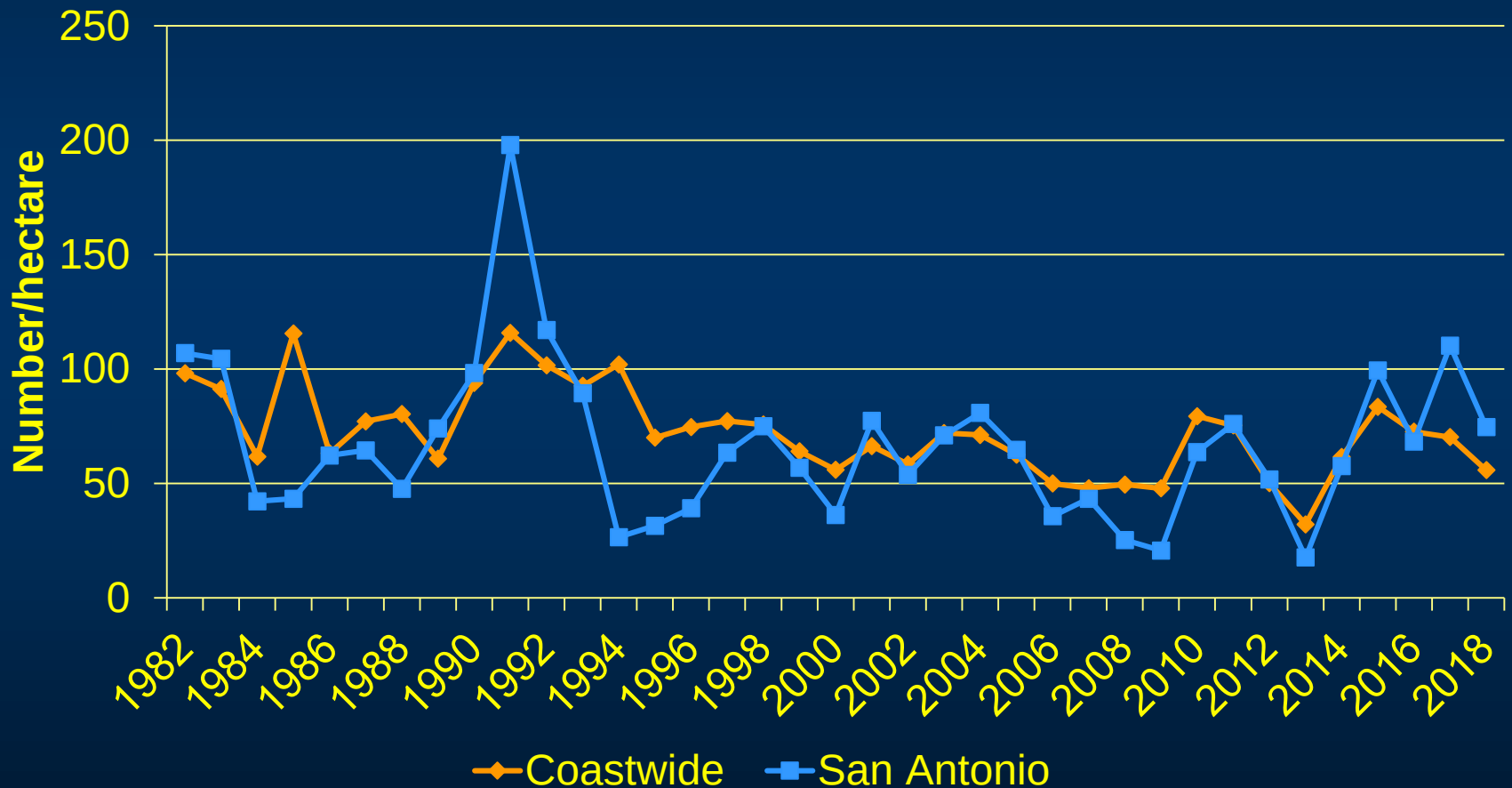


Species Abundance and Diversity

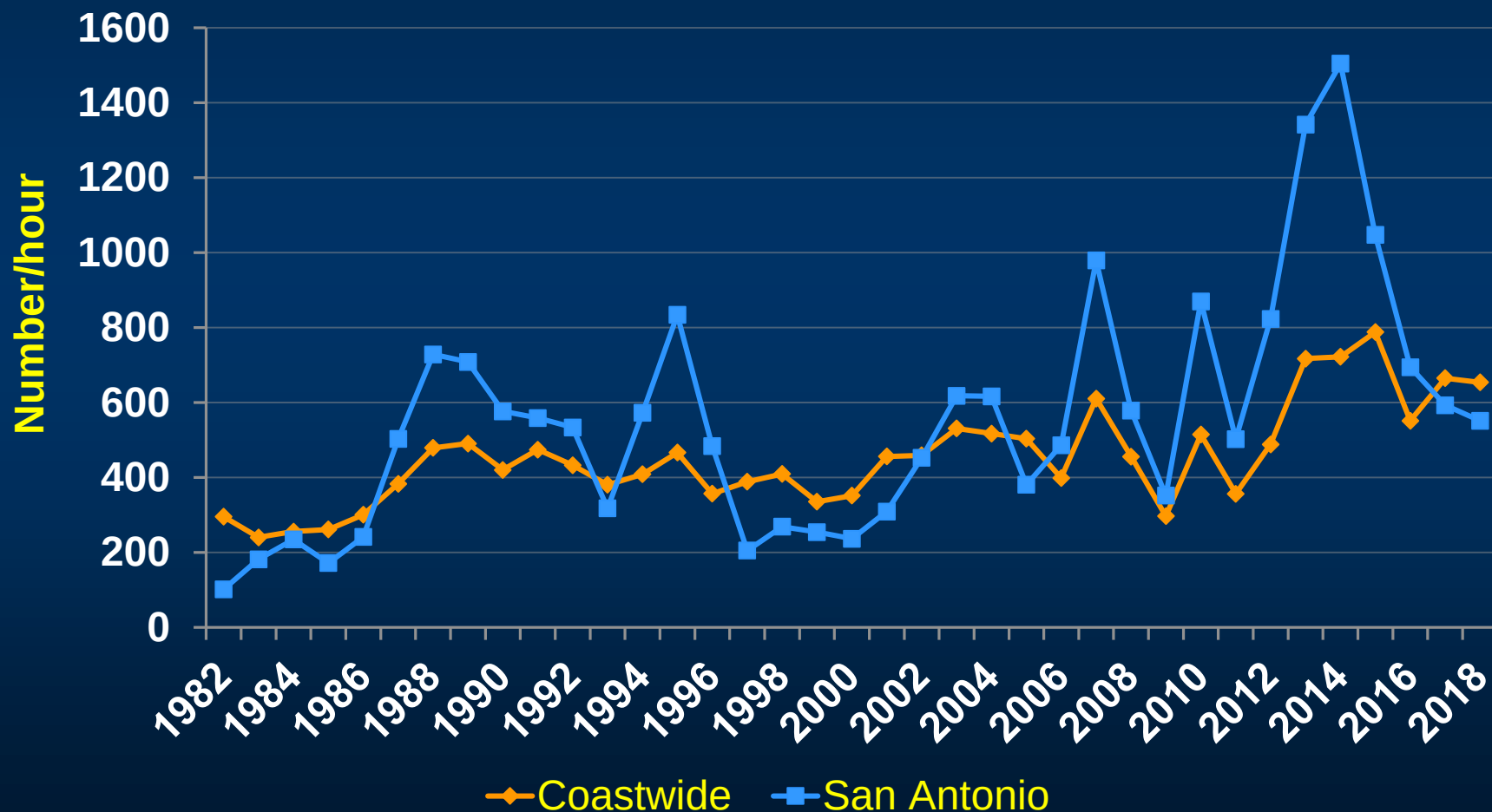
Bag Seine Total Catch All Species Combined



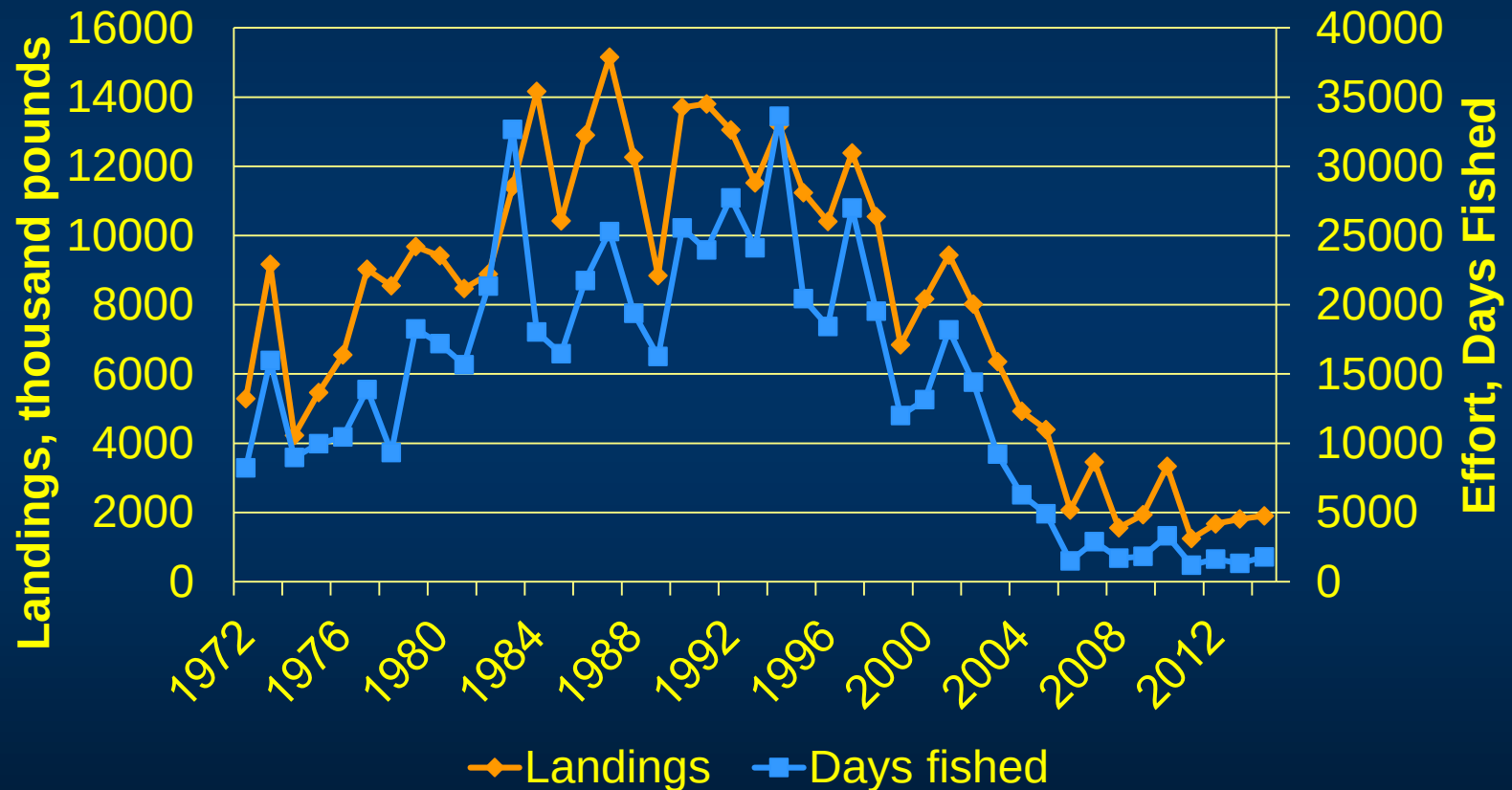
Blue Crab Bag Seine CPUE



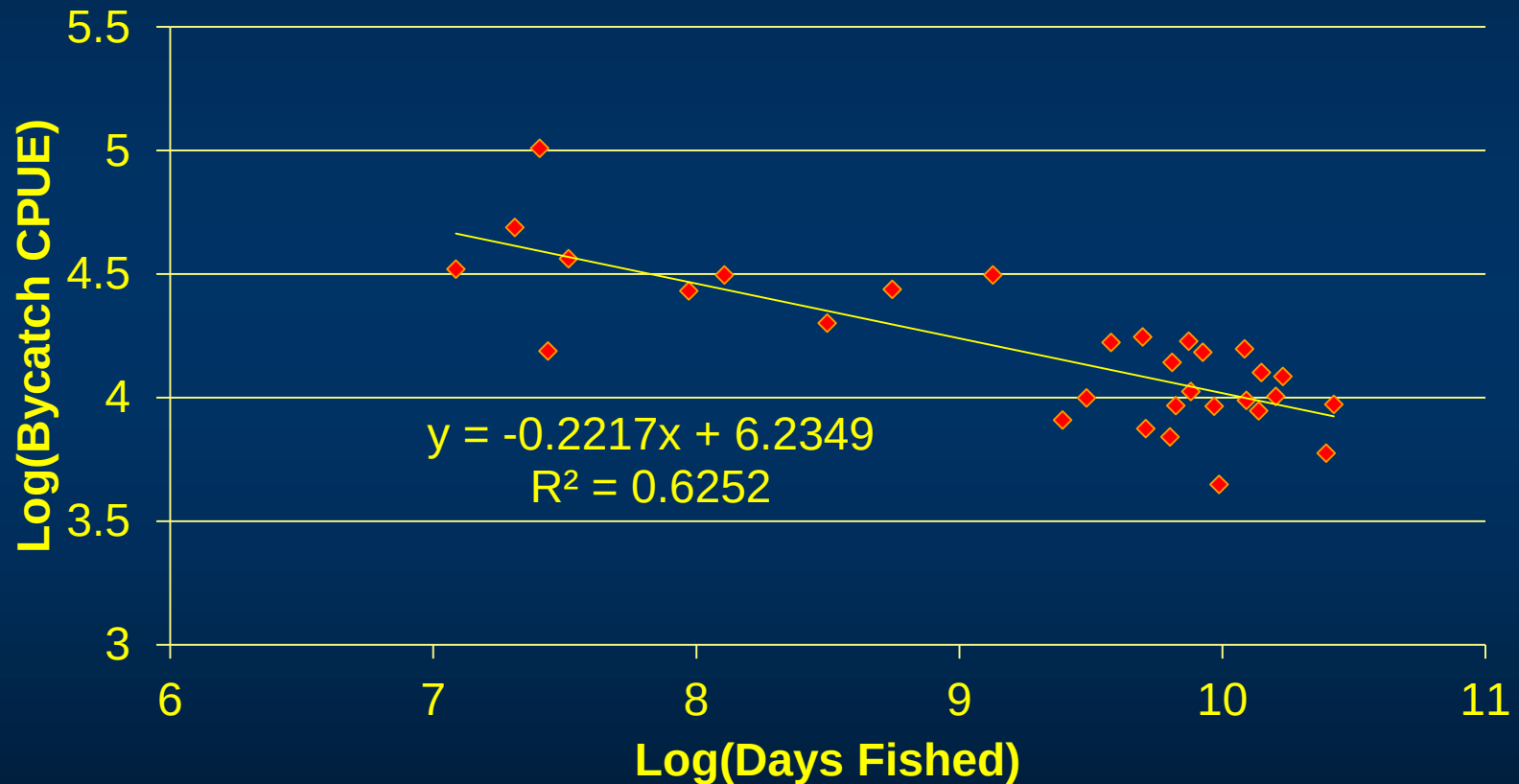
Bay Trawl Total Catch All Species Combined



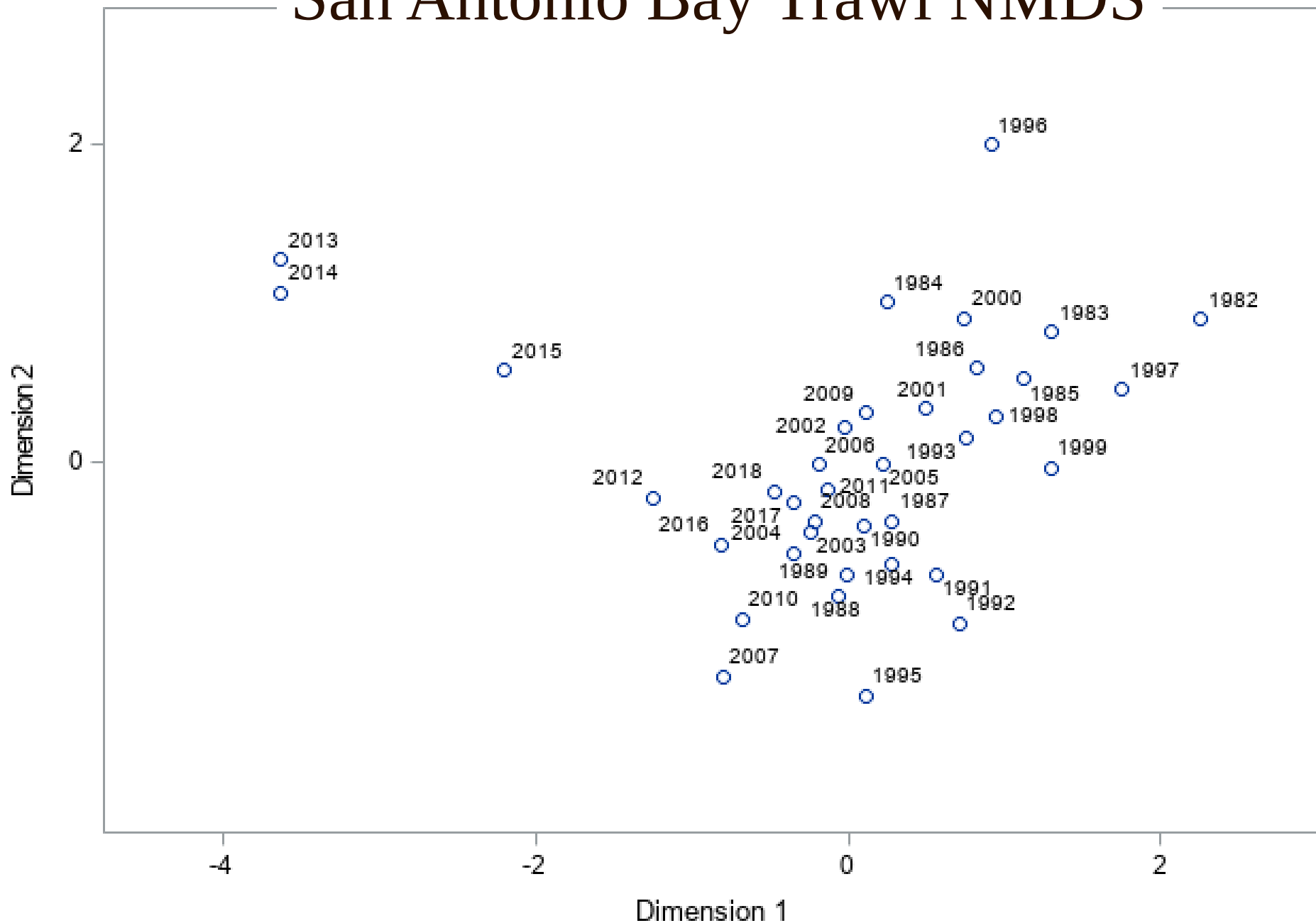
Texas Commercial Bay Shrimp Landings and Effort



Bycatch Species CPUE vs Commercial Shrimping Effort



San Antonio Bay Trawl NMDS



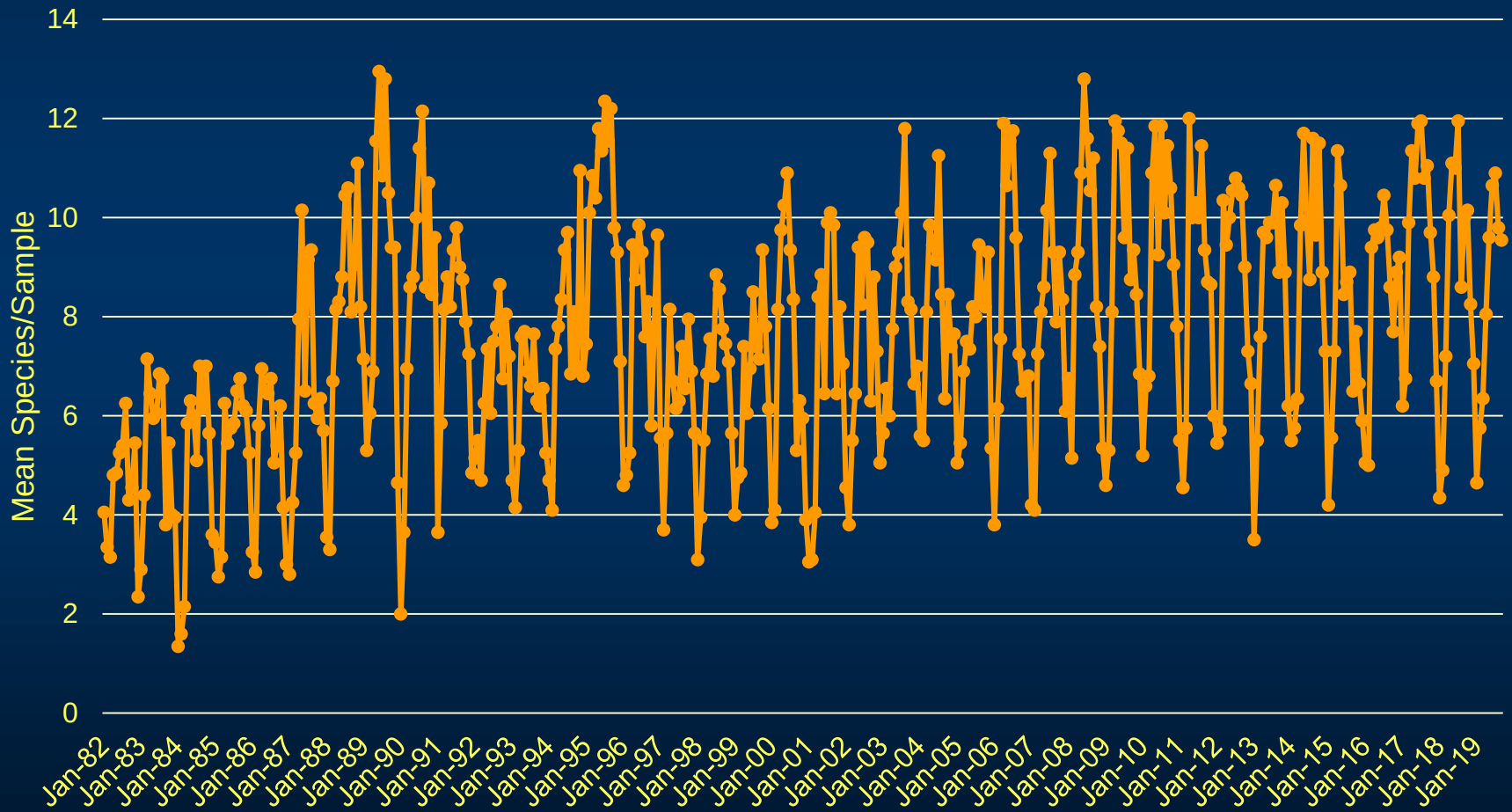
San Antonio Top 10 Species

Bay Trawls

1982		2014	
Total	Species	Total	Species
1010	Brown Shrimp	2686	Atlantic Croaker
993	Blue Crab	1916	Brown Shrimp
864	White Shrimp	1618	Gulf Menhaden
681	Gulf Menhaden	1579	Spot
585	Atlantic Croaker	1278	Pinfish
302	Pinfish	1259	Sea Wasp
276	Cabbagehead Jellyfish	705	Bay Anchovy
273	Spot	500	Sea Cucumber
172	Gafftopsail Catfish	437	Pink Shrimp
159	Atlantic Brief Squid	379	Atlantic Brief Squid

San Antonio Bay Species Diversity

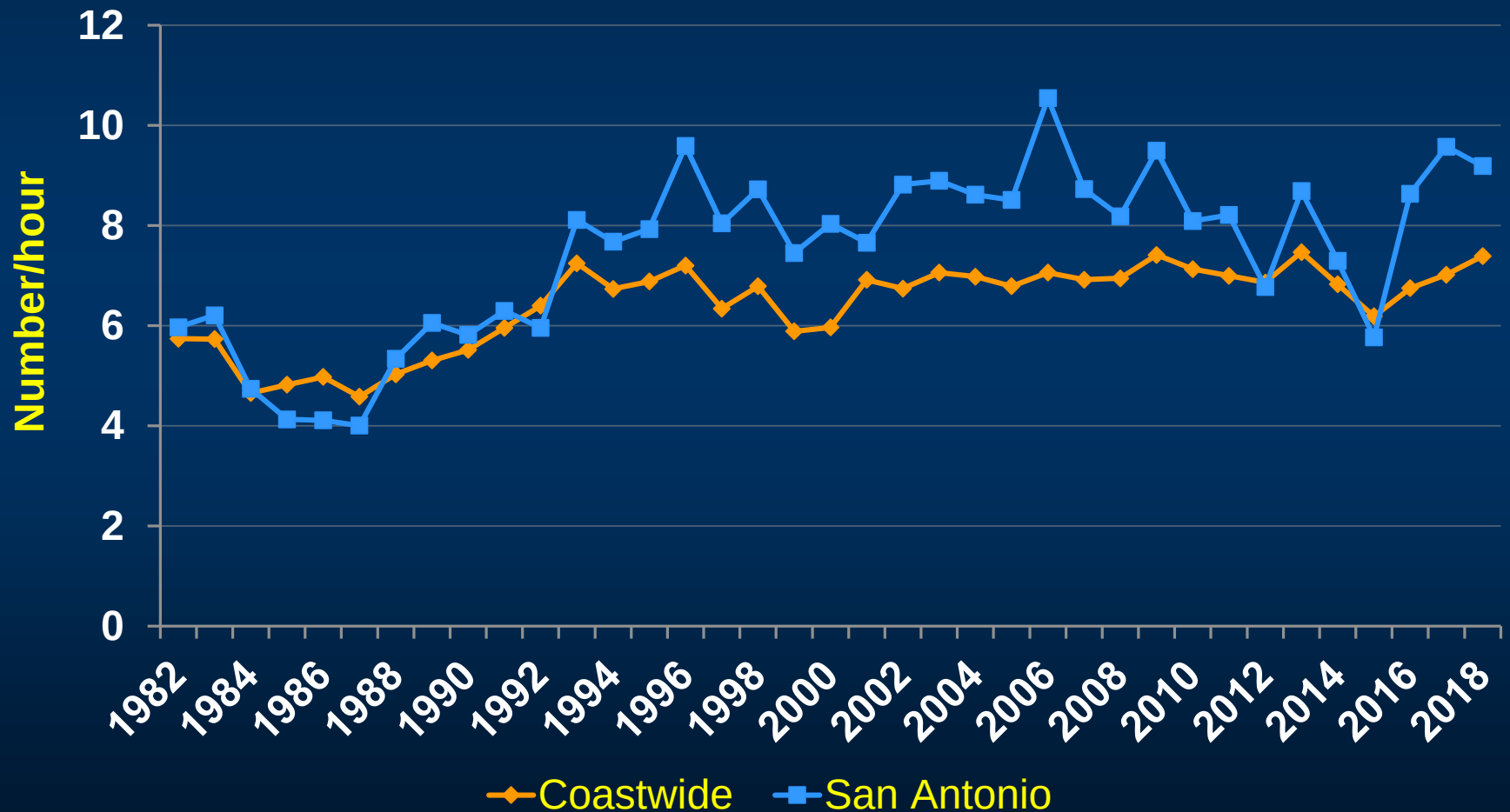
Monthly Bay Trawls



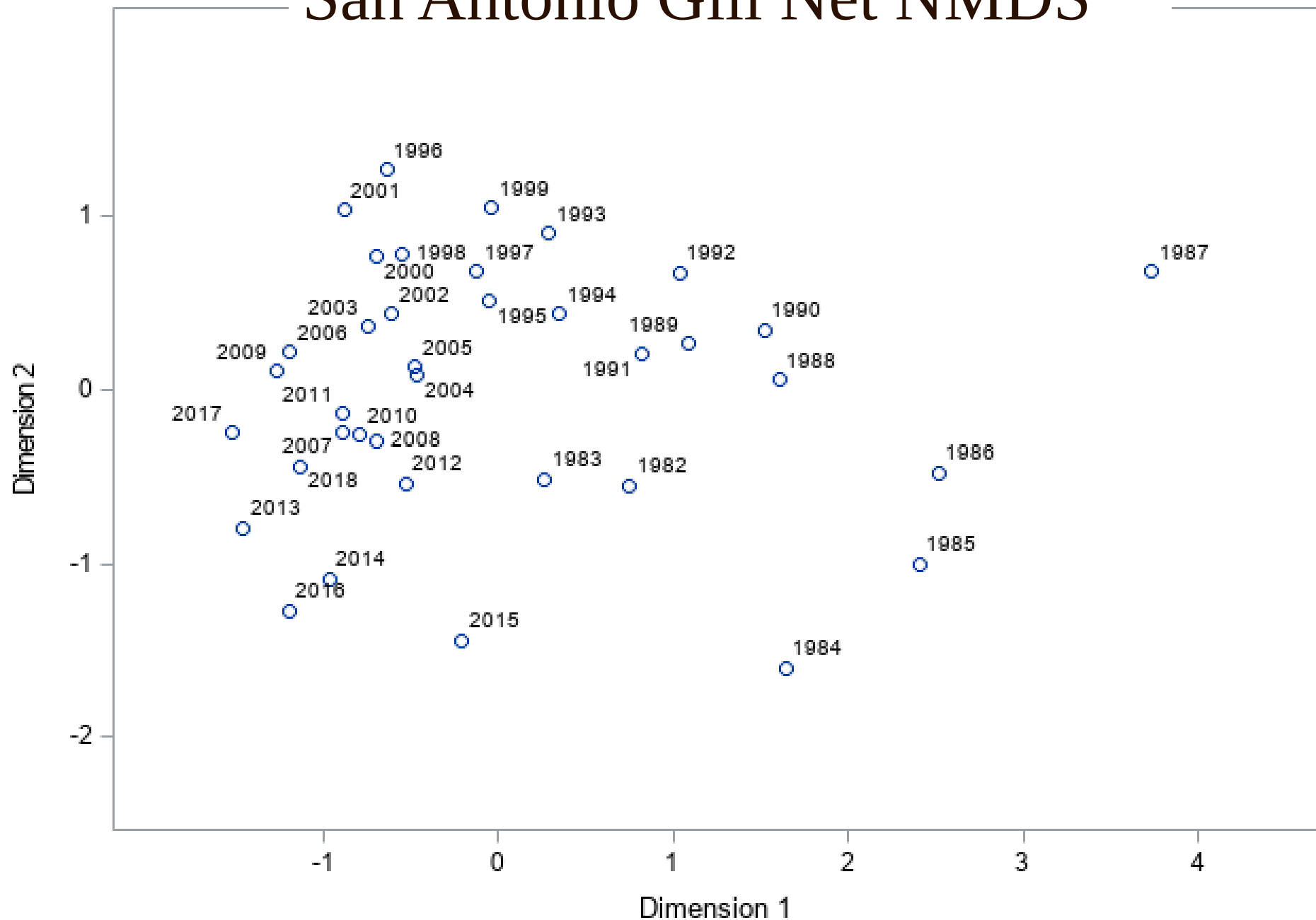
279 Species Encountered

Gill Net Catch

All Finfish Species Combined



San Antonio Gill Net NMDS

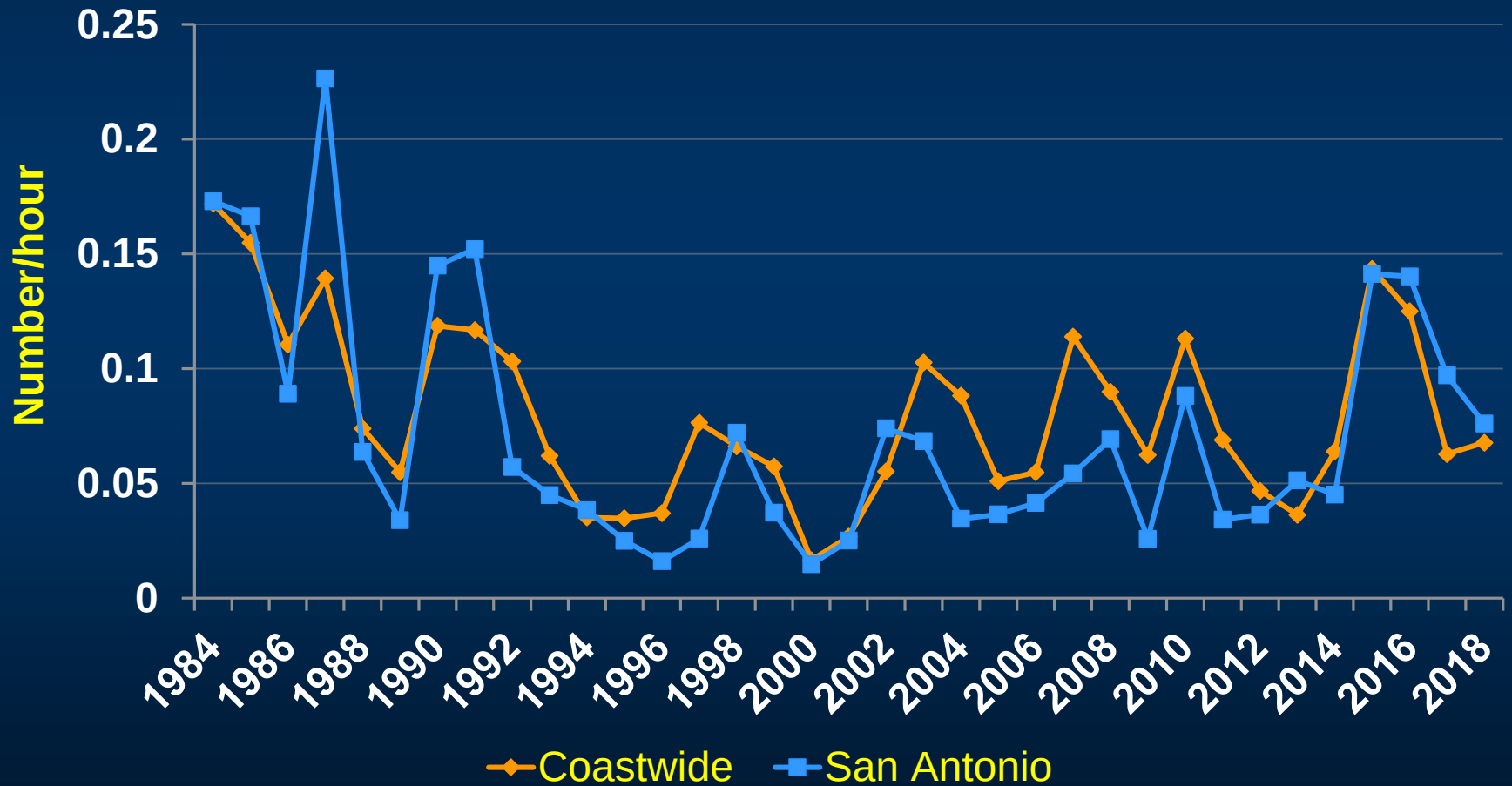


San Antonio Top 10 Species

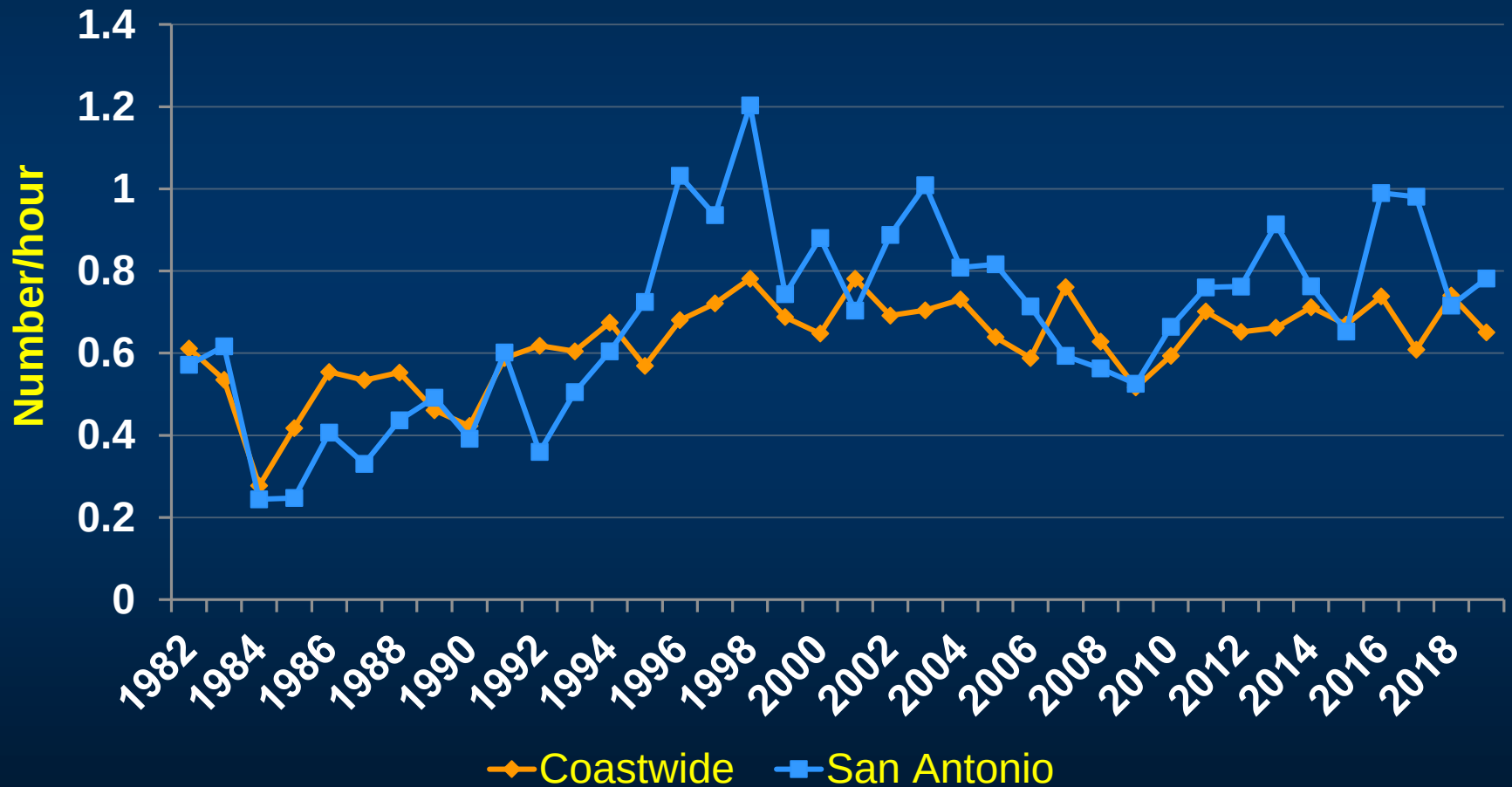
Gill Nets

1987		2017	
Total	Species	Total	Species
1054	Hardhead Catfish	2030	Black Drum
1027	Red Drum	1435	Gafftopsail Catfish
868	Striped Mullet	1363	Hardhead Catfish
396	Spotted Seatrout	1304	Gizzard Shad
309	Black Drum	1261	Red Drum
181	Gizzard Shad	1174	Spotted Seatrout
178	Blue Catfish	654	Blue Catfish
144	Common Carp	481	Alligator Gar
131	Southern Flounder	308	Ladyfish
99	Alligator Gar	284	Striped Mullet

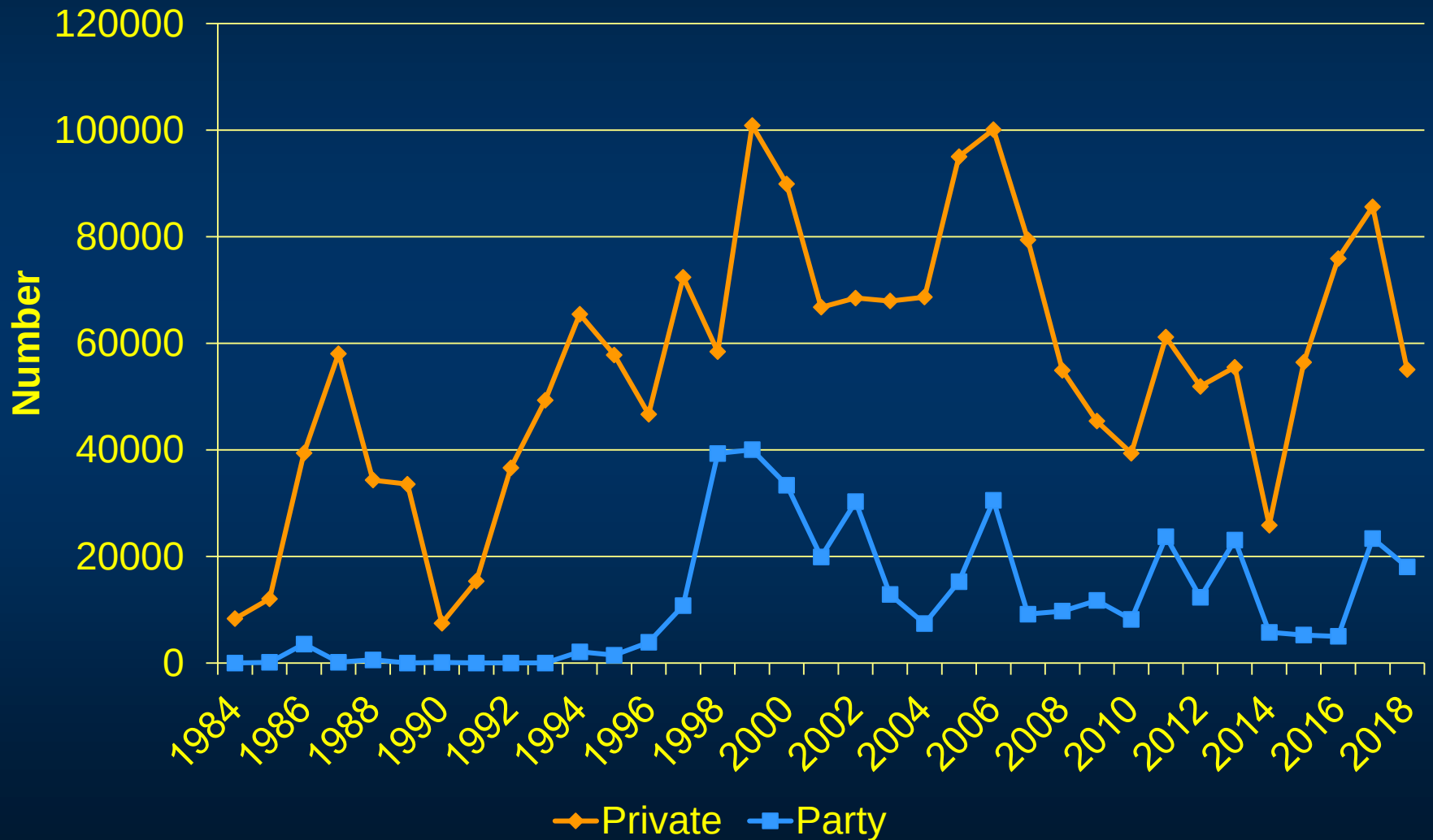
Blue Crab Gill Net CPUE



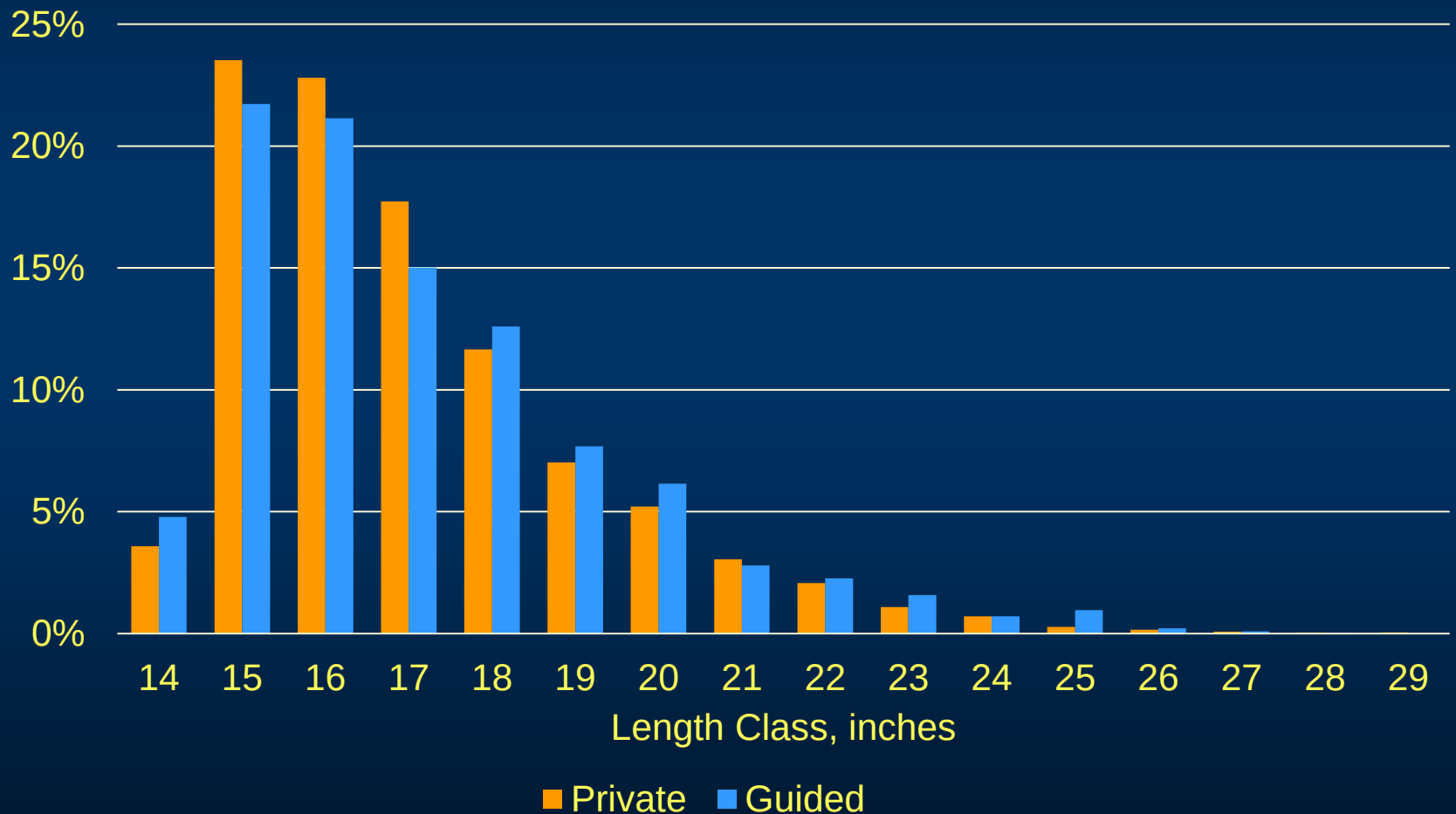
Spotted Seatrout Gill Net CPUE



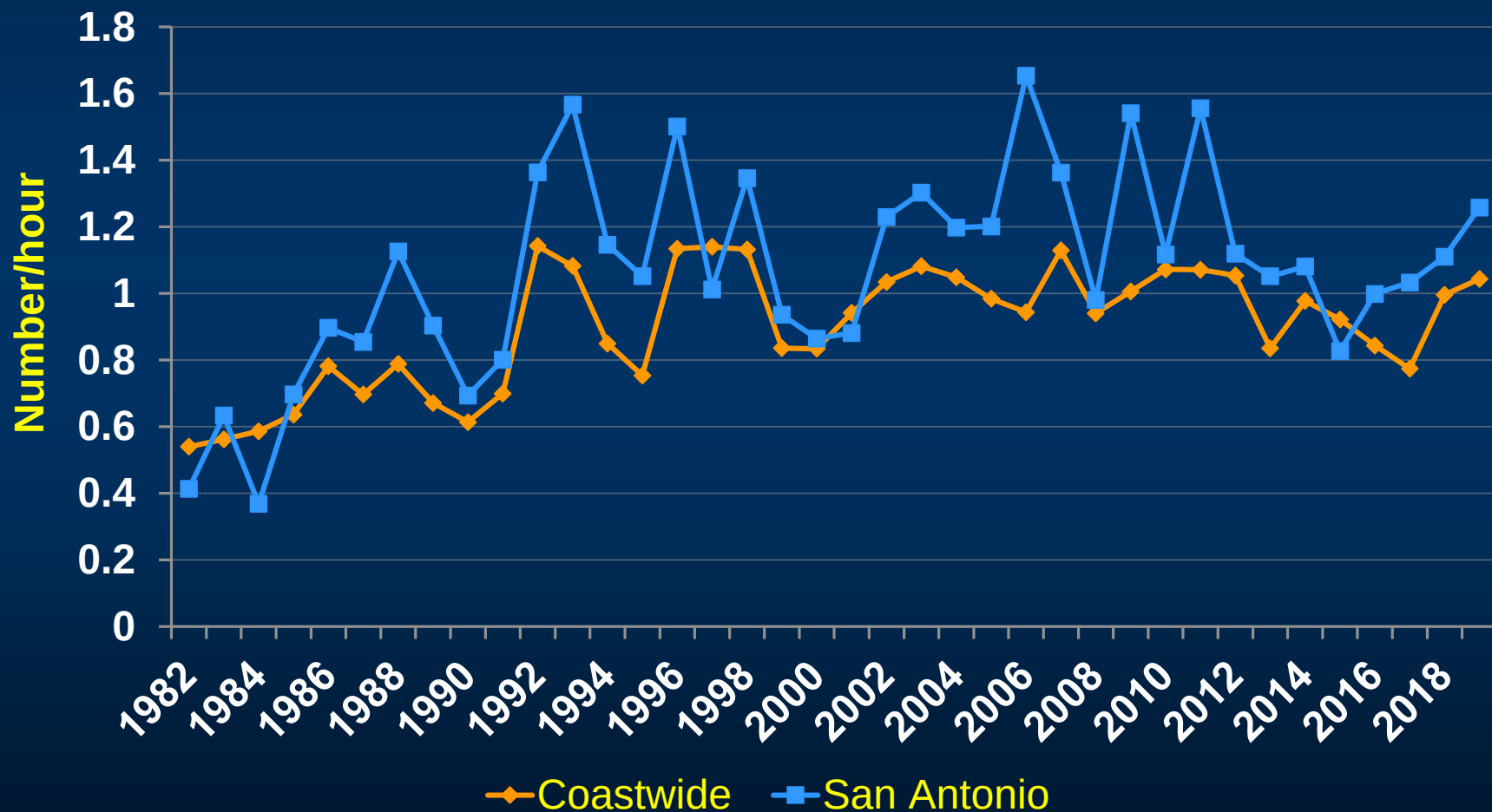
San Antonio Bay Landings Spotted Seatrout



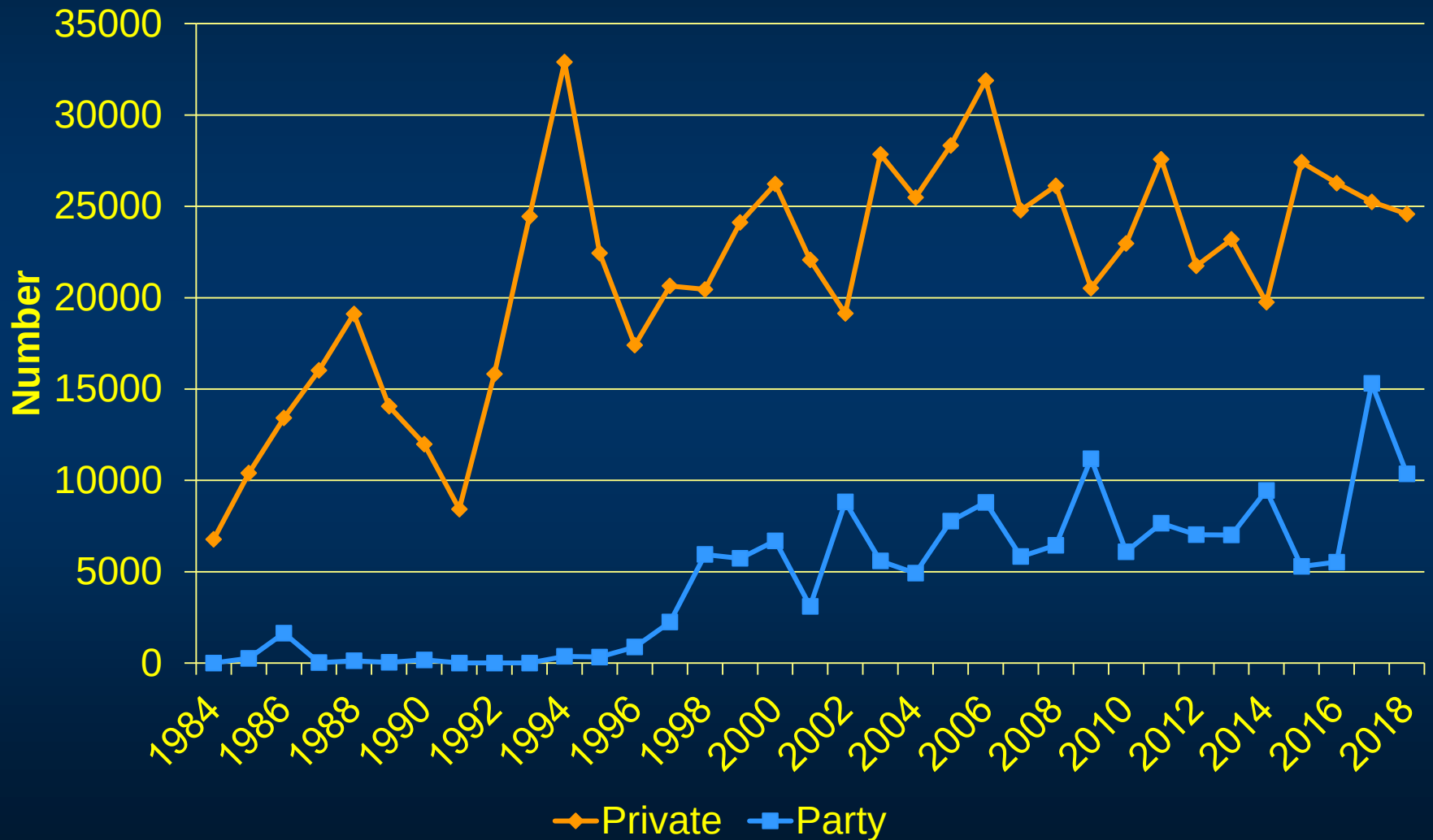
San Antonio 2019 Recreational Spotted Seatrout Length-Frequency



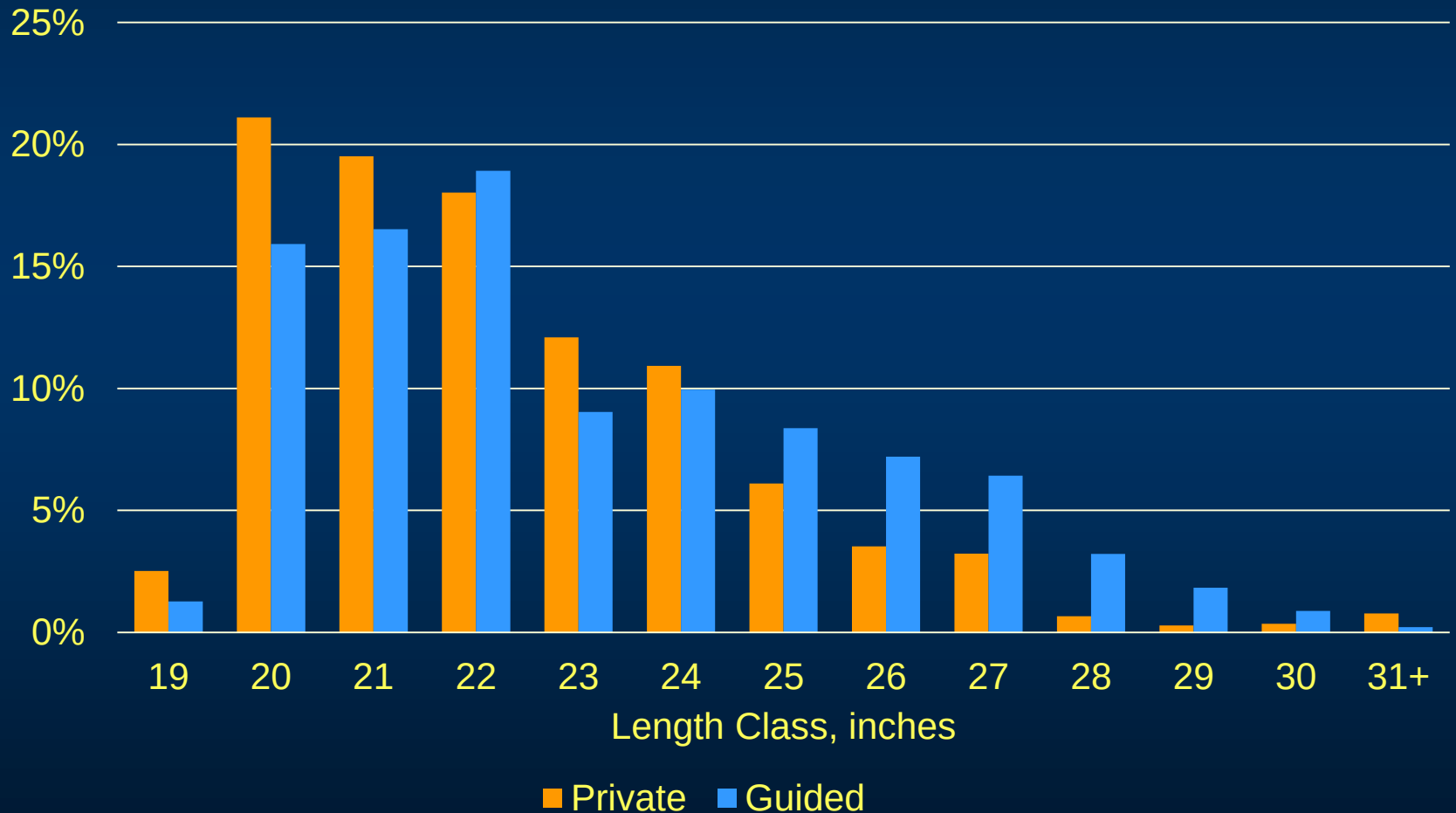
Red Drum Gill Net CPUE



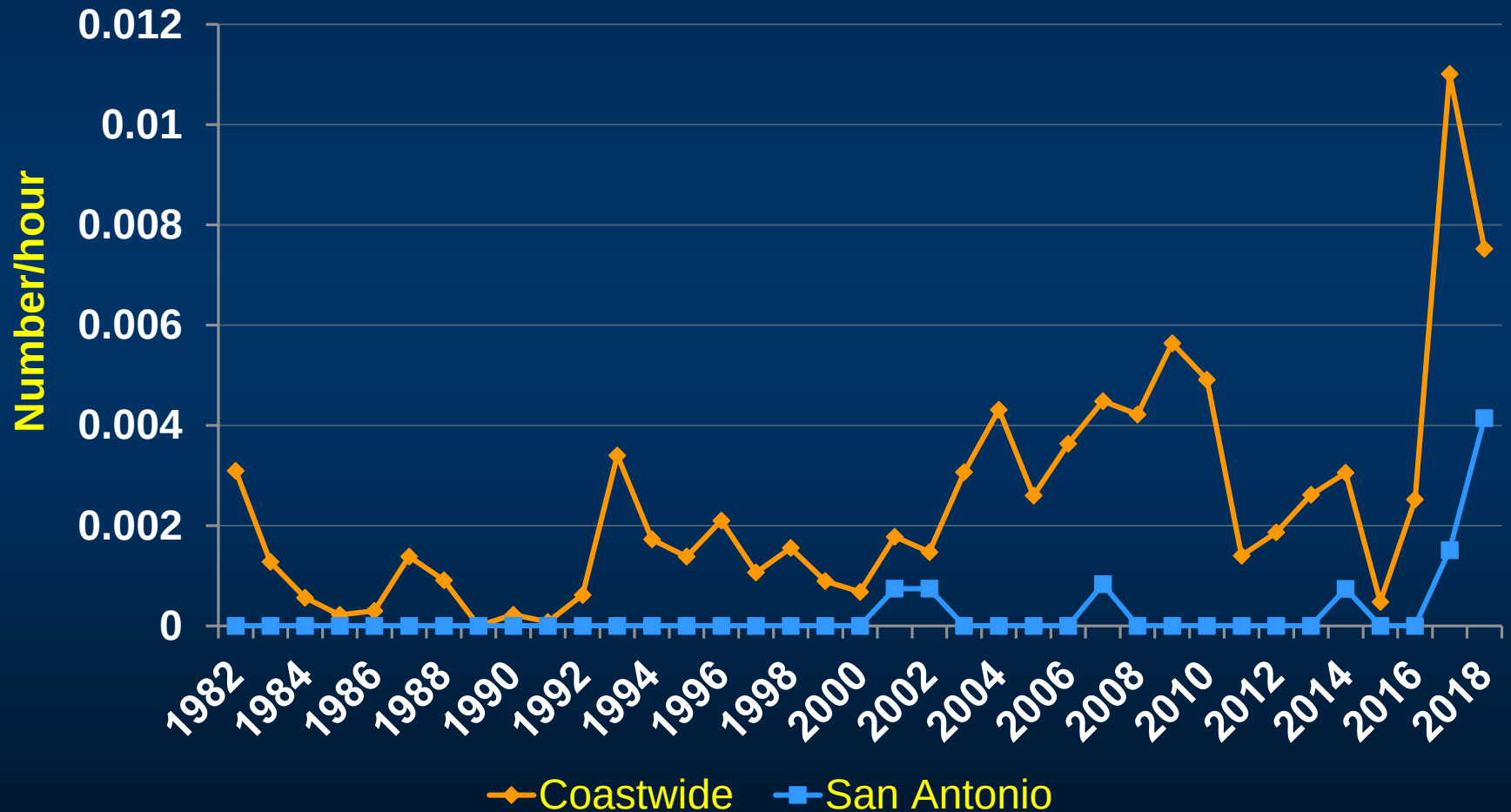
San Antonio Bay Landings Red Drum



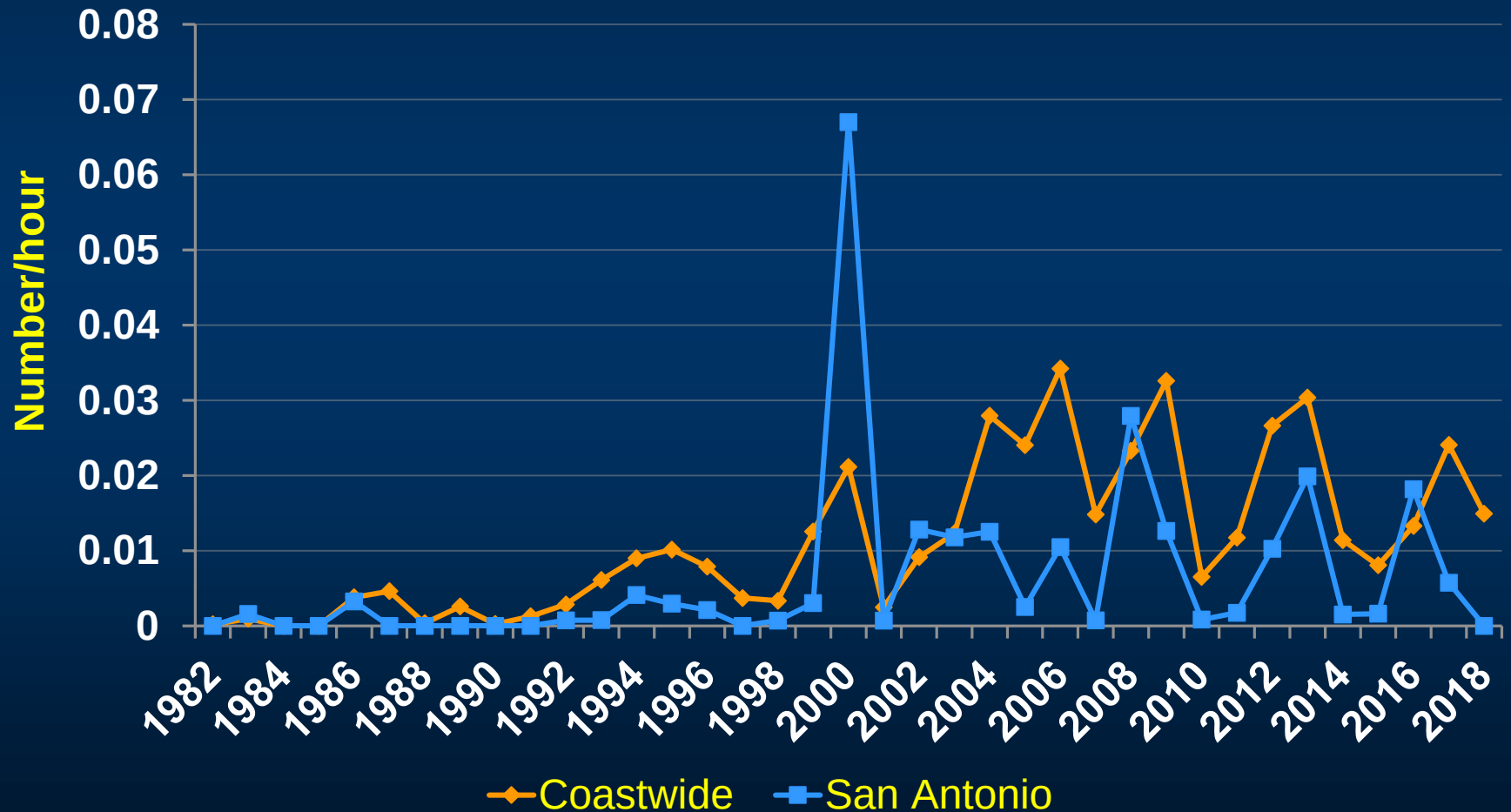
San Antonio 2019 Recreational Red Drum Length-Frequency



Common Snook Gill Net CPUE

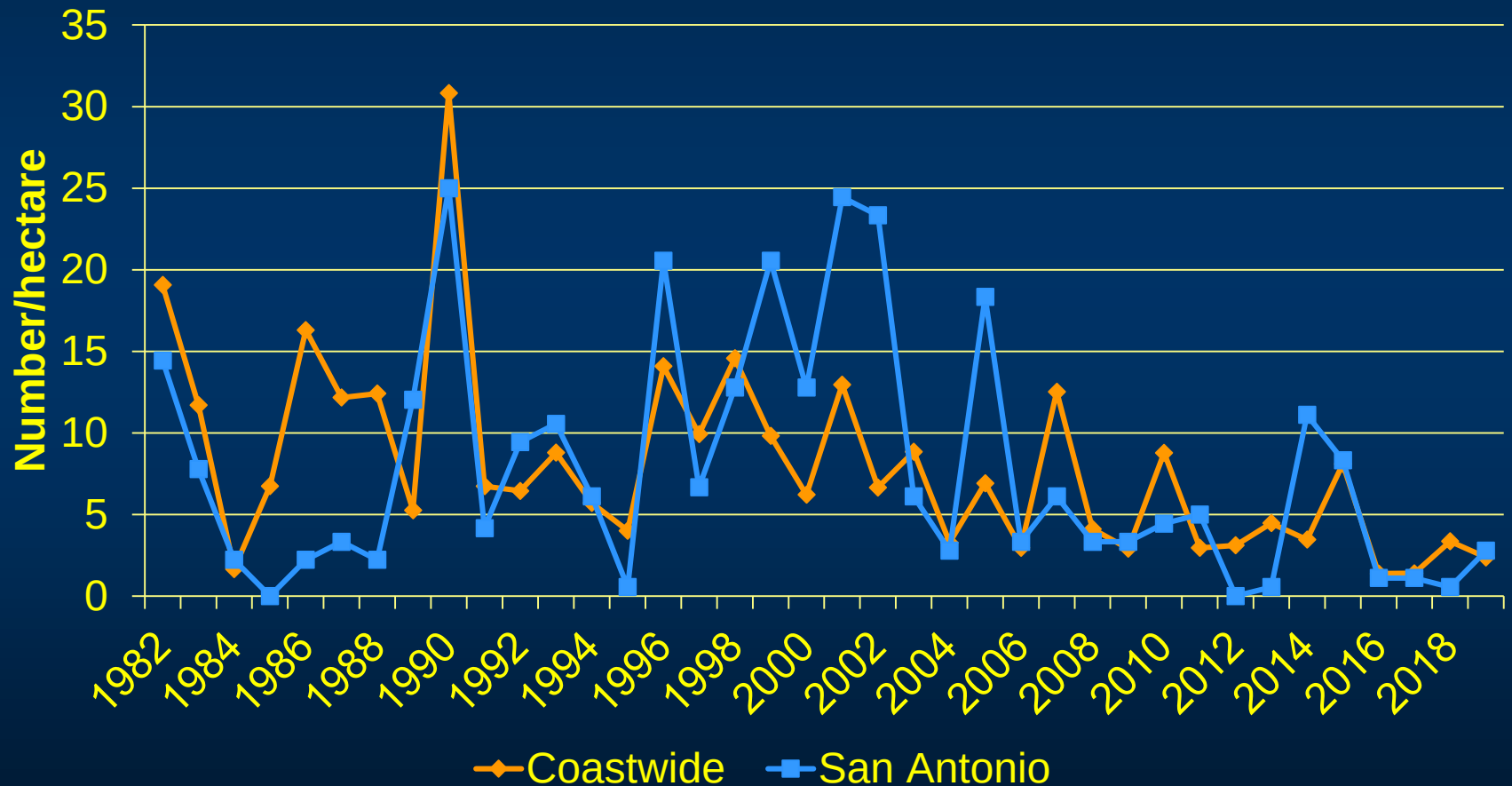


Gray Snapper Gill Net CPUE



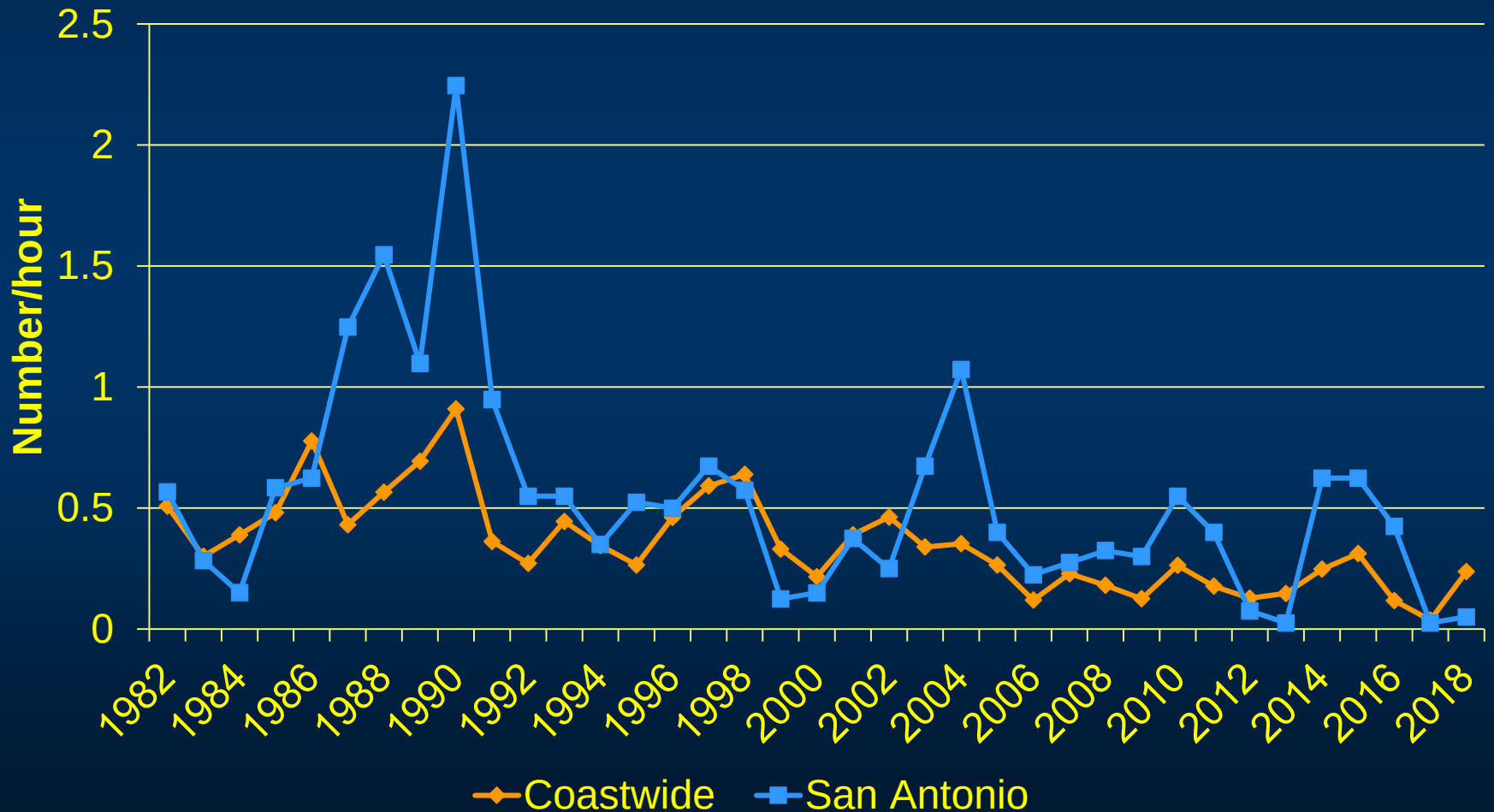
SOUTHERN FLOUNDER

Coastwide Seasonal Bag Seine CPUE, Southern Flounder



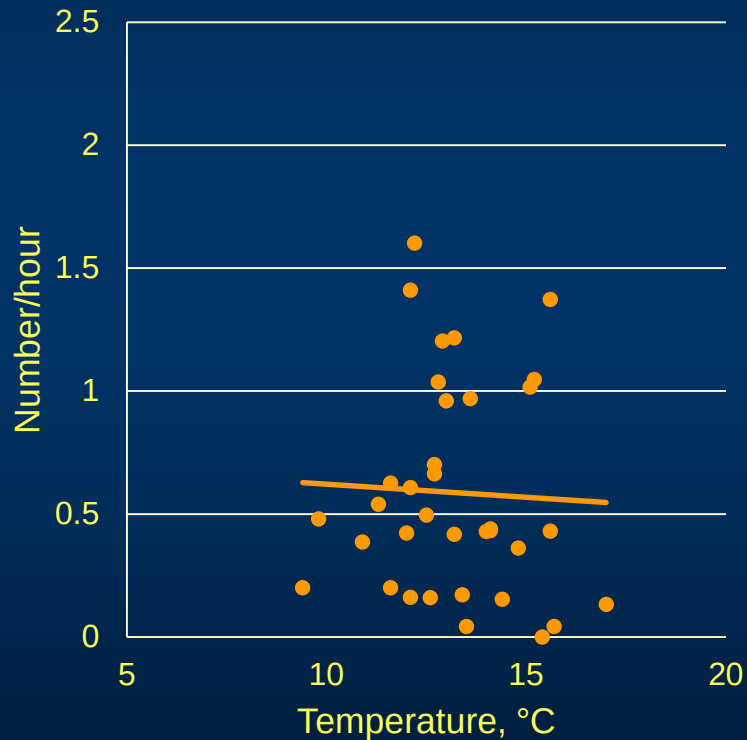
Jan-Mar

Coastwide Bay Trawl CPUE, Southern Flounder

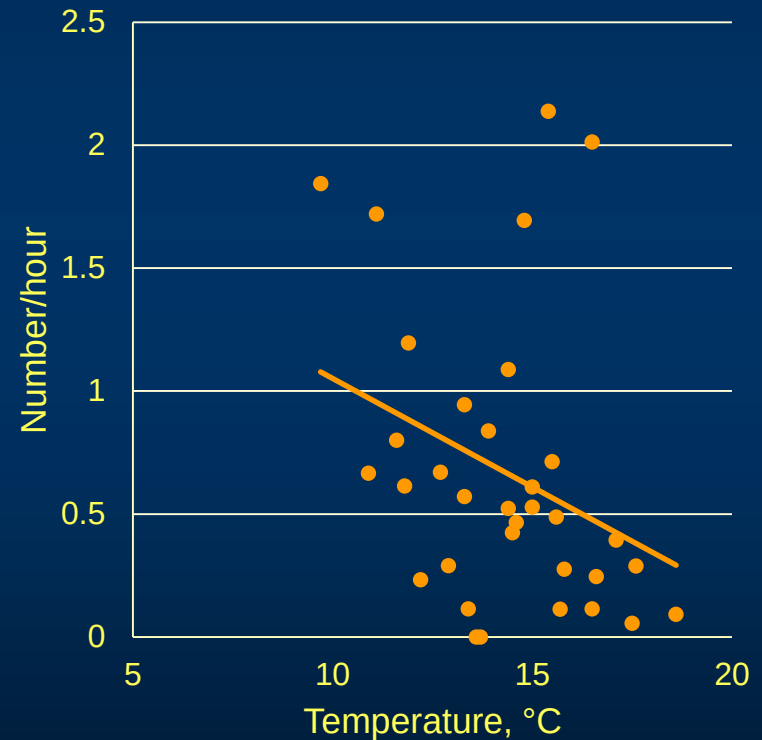


June Trawl CPUE vs January Water Temperature

Upper Coast



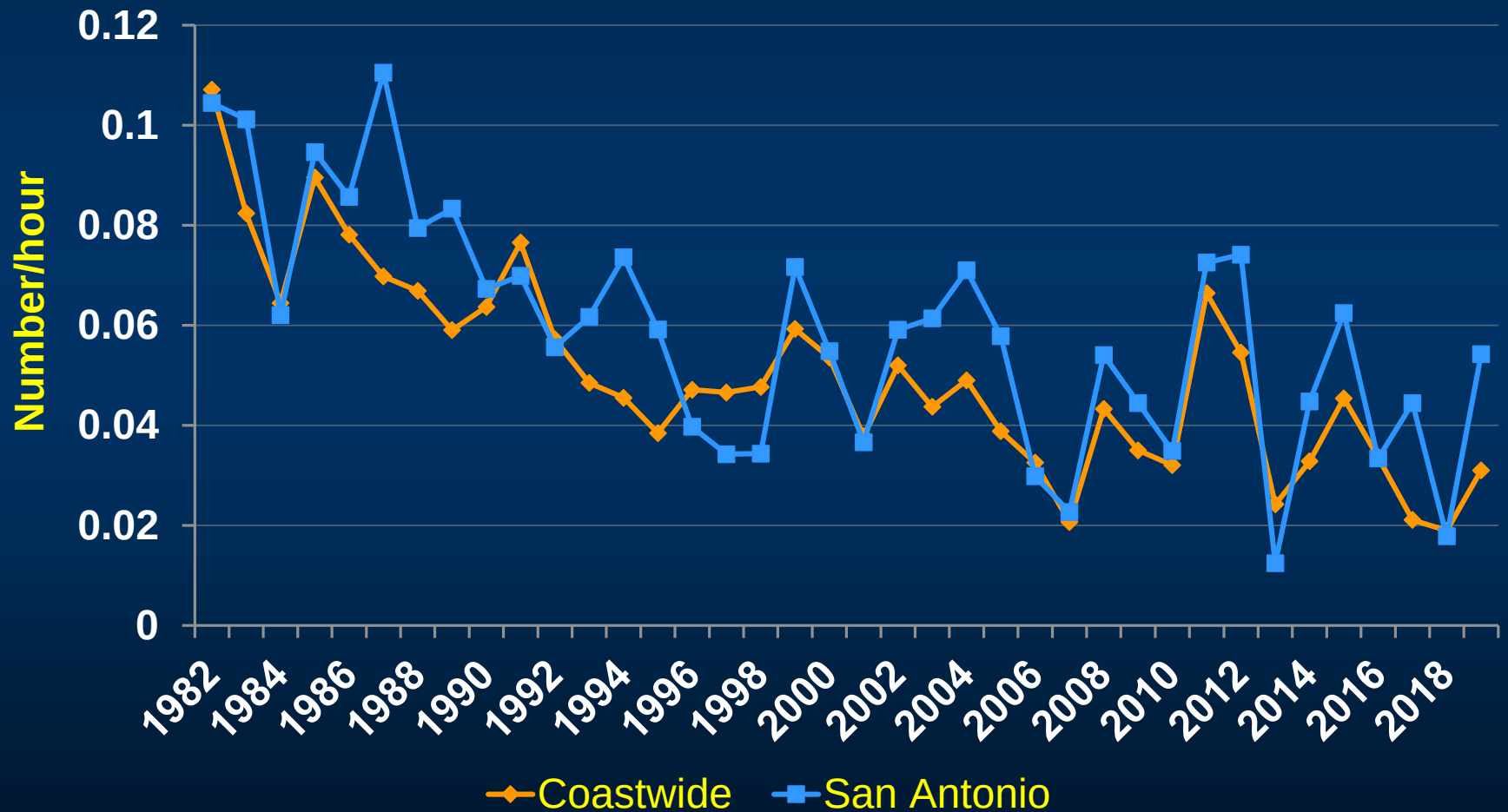
Lower Coast



Southern Flounder

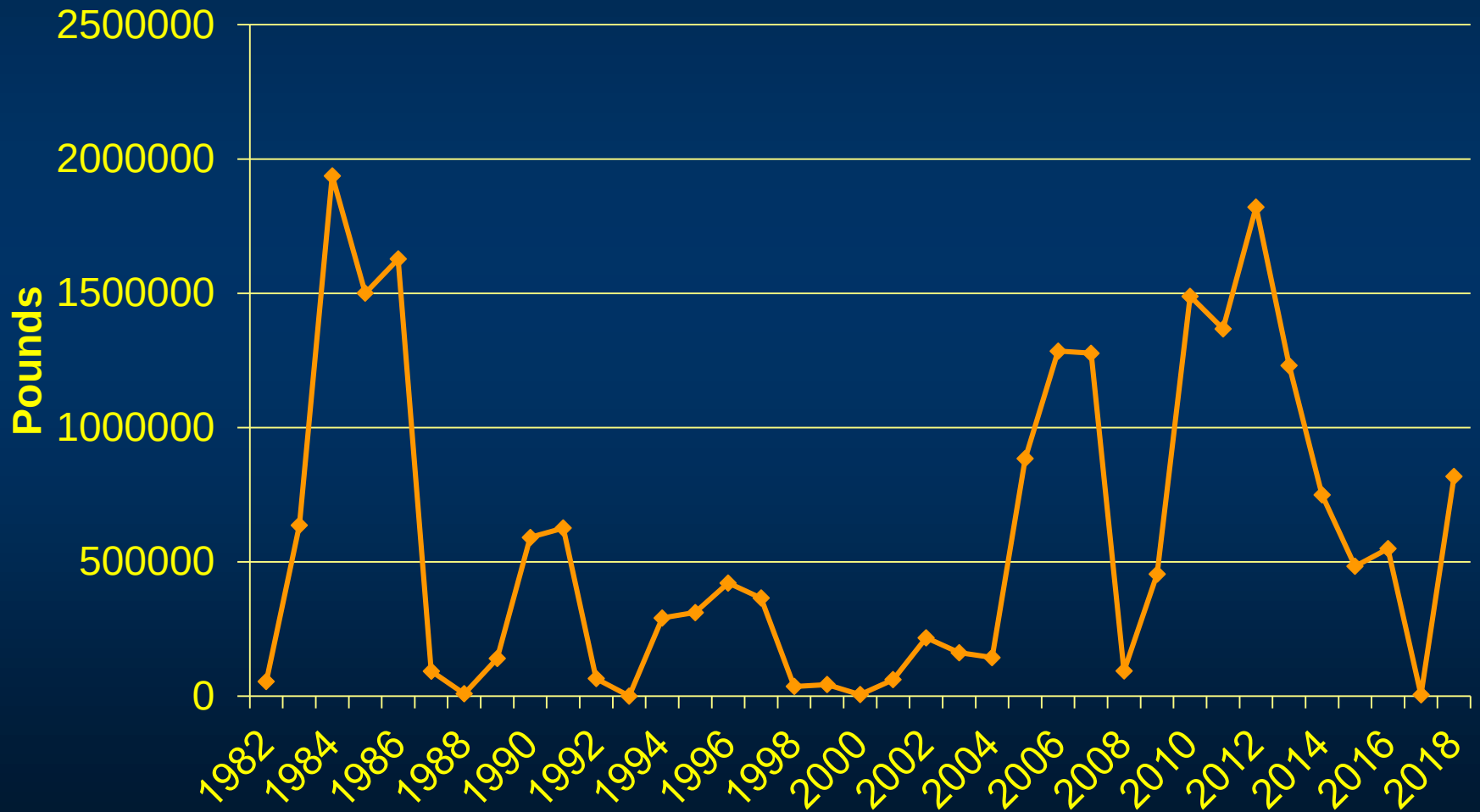
UTMSI reports 18°C as optimal for larval survival; only a very narrow range ($\pm 2^{\circ}\text{C}$) is tolerated for the first three weeks after hatching.

Southern Flounder Gill Net CPUE

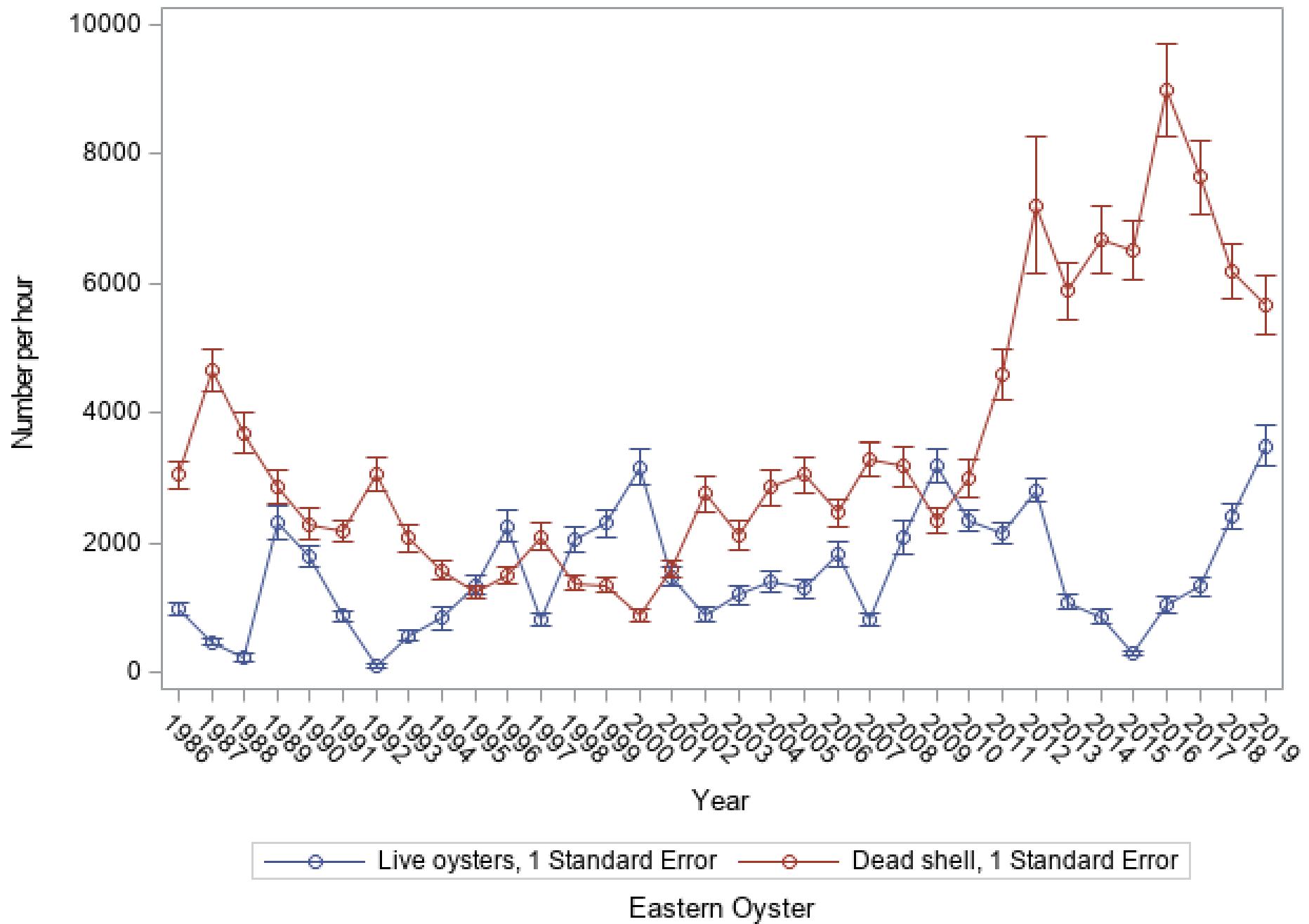


EASTERN OYSTER

Eastern Oyster Landings, San Antonio Bay



San Antonio Oyster Dredge Catch Rate

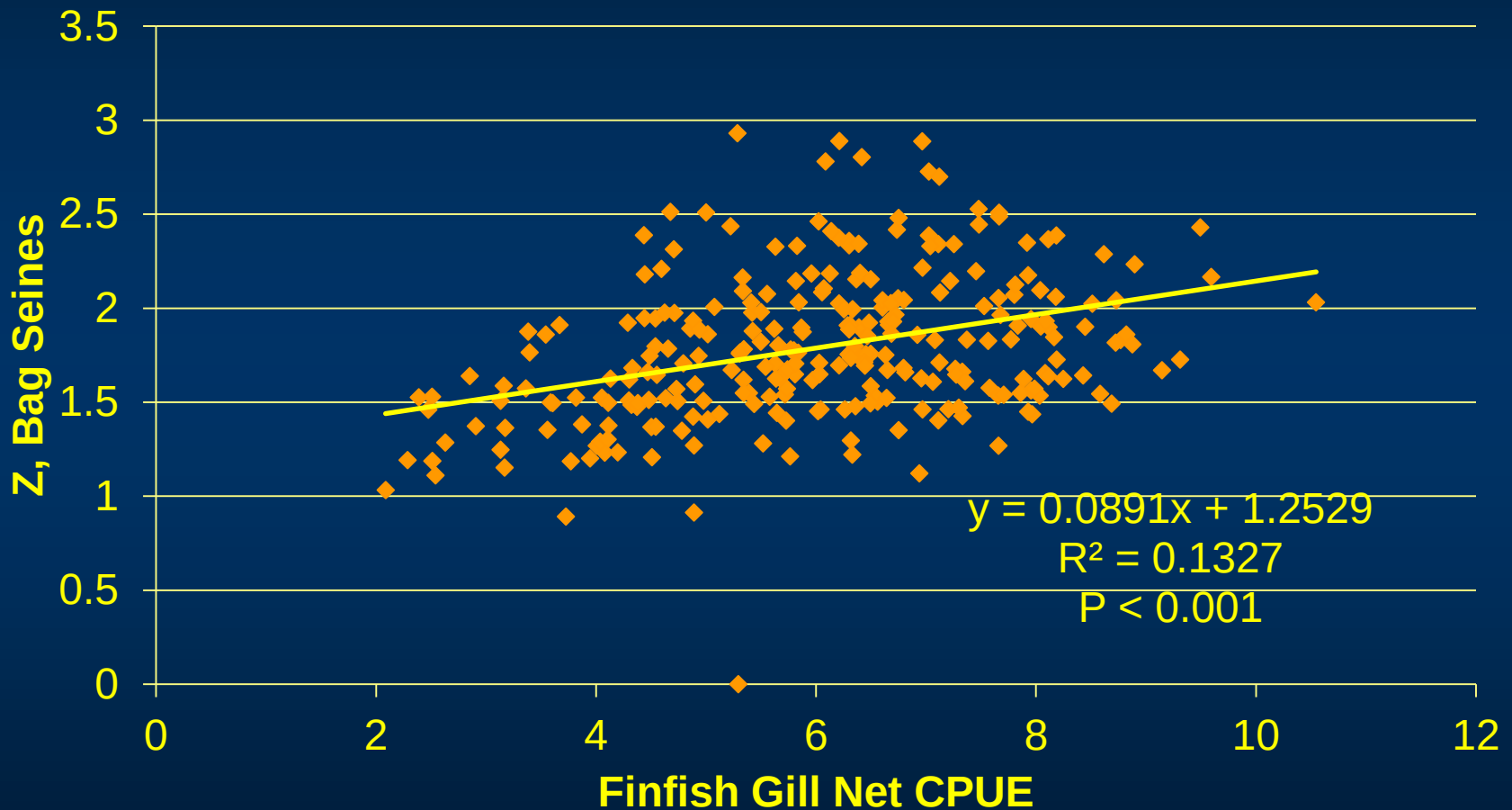


TEXAS

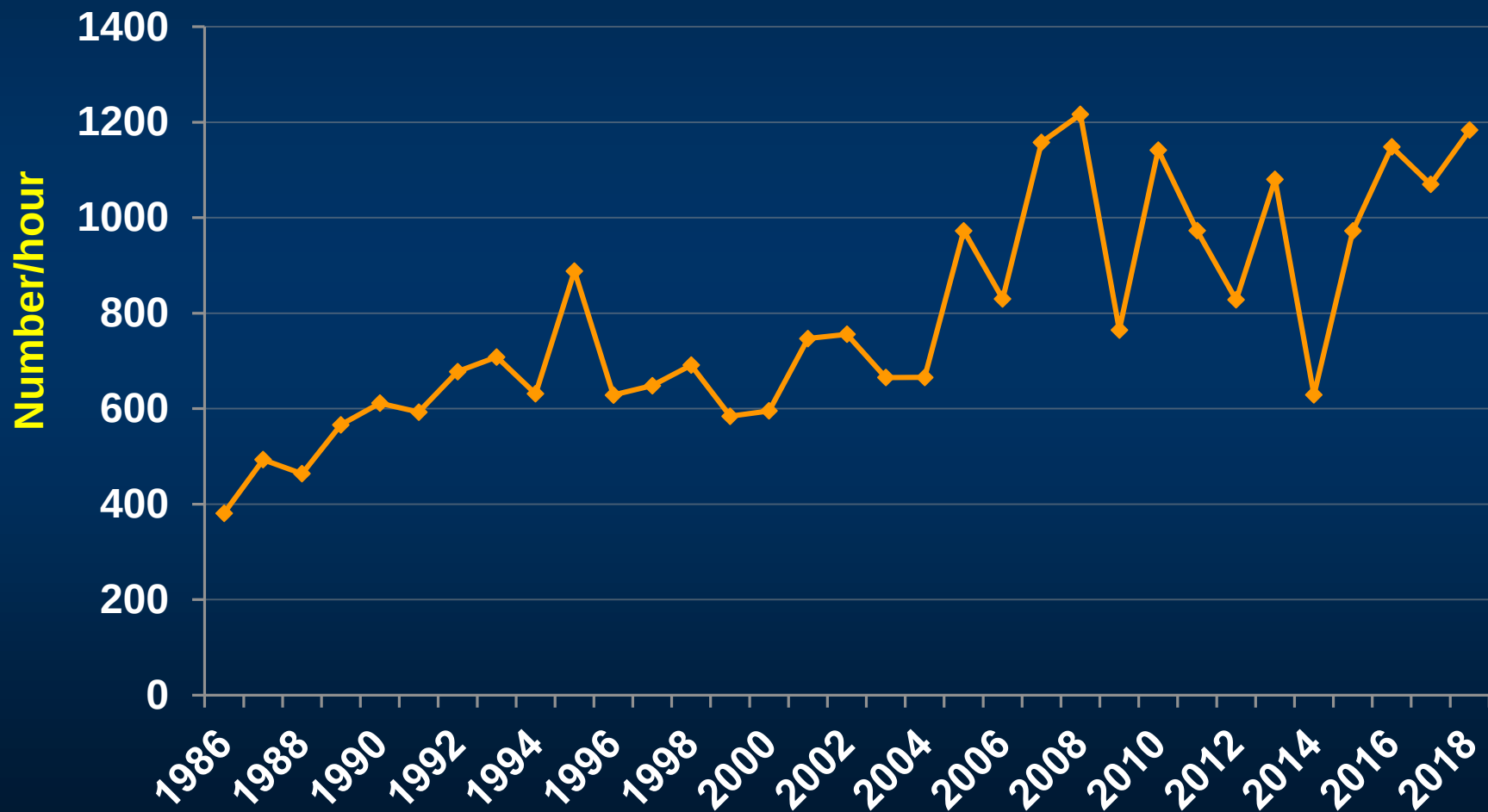
PARKS &

WILDLIFE

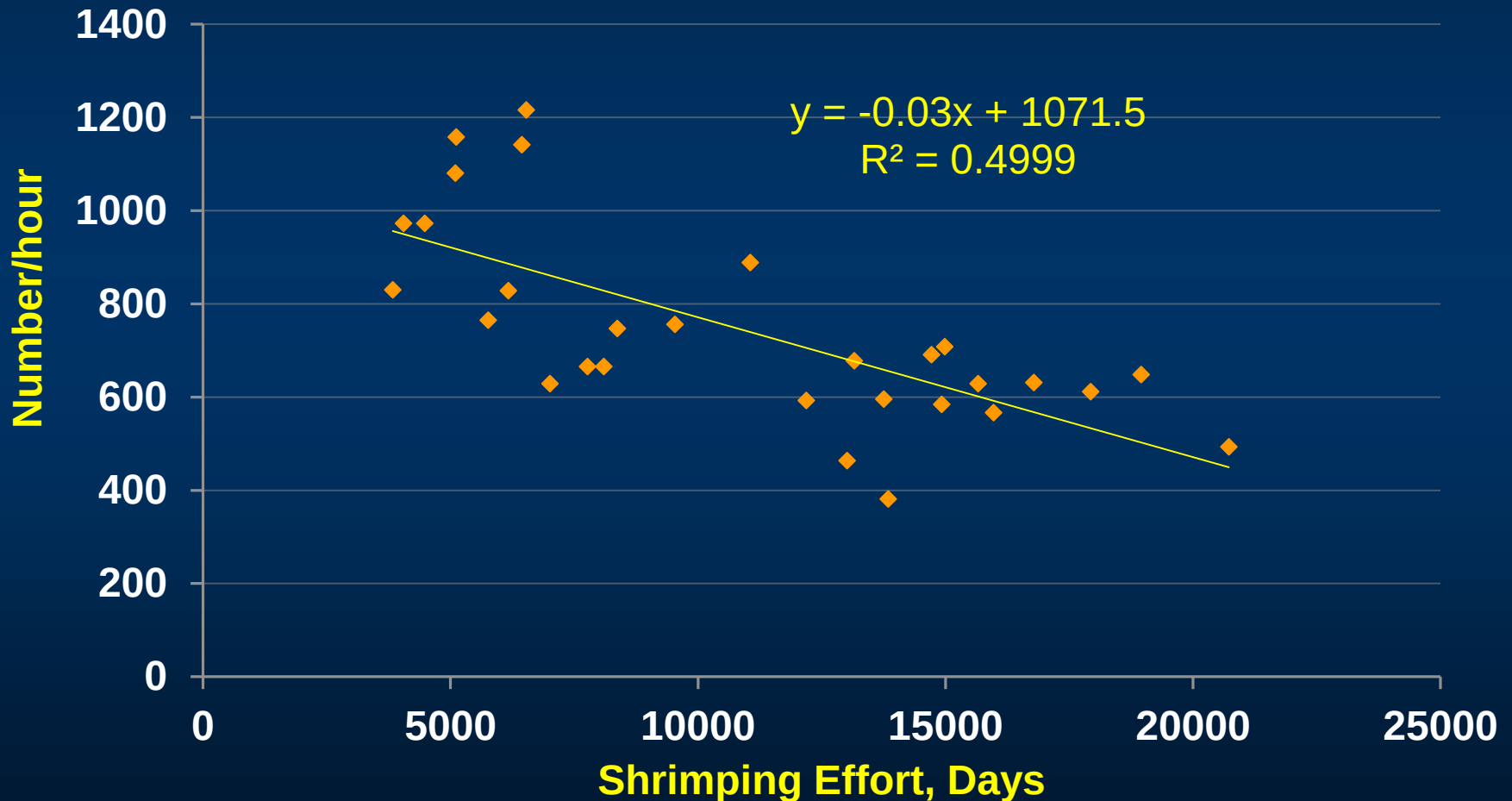
Blue Crab Mortality Estimates vs Finfish Abundance



Coastwide Gulf Trawls Total Catch



Total Gulf Trawl Catch vs TTS Commercial Shrimp Effort



Number of Inshore Shrimp Boat Licenses

