

CalCOFI Tow Plotting

Zack Gold

2024-06-18

Map of All Stations

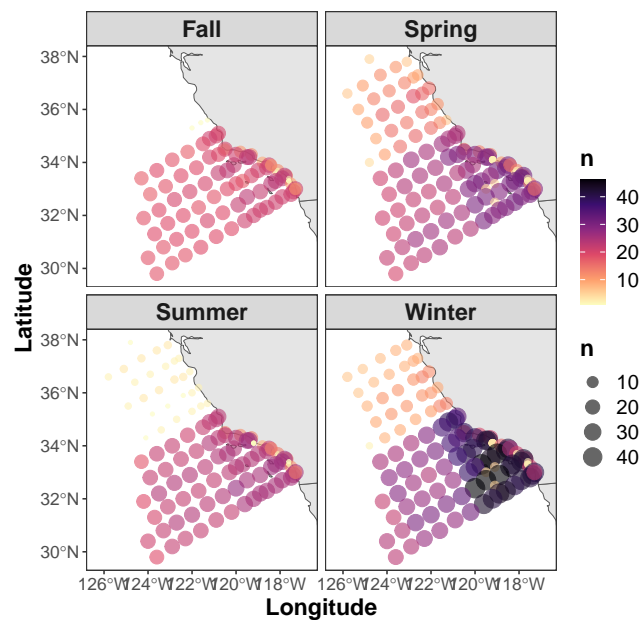
General Statistics

Unique Samples, Cruises, and Sites:

n_distinct(cruise)	n_distinct(site)	n_distinct(year_season_site)
109	129	7031

This is an optimistic number based on the event records for formalin preserved net tows. Likely not all of these samples exist.

Map of All Stations



Spring and Winter sampling is more consistent and extends further north. Spring, at least for ichthyoplankton, is the time of the highest observed diversity coinciding with peak spawning for many species.

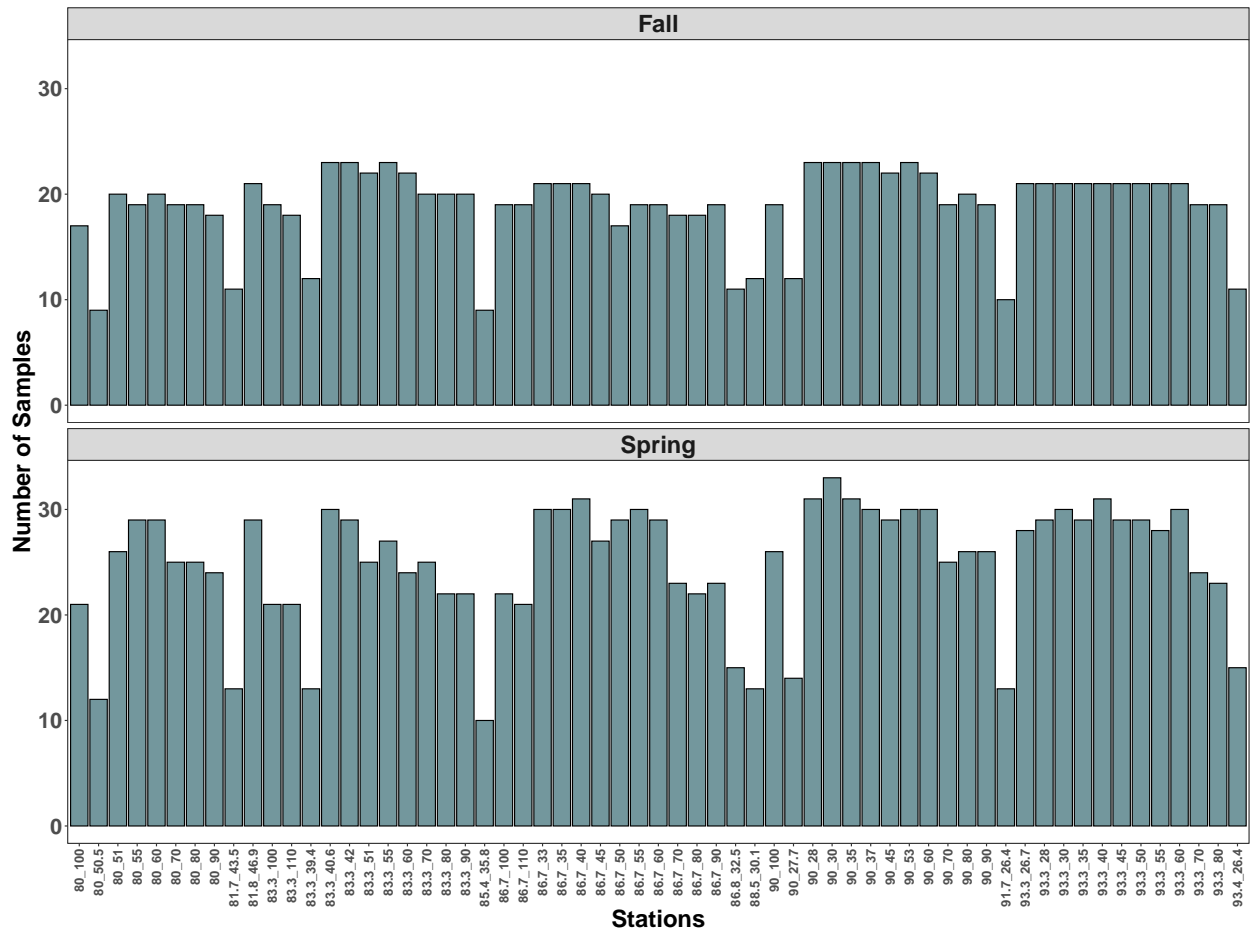
Focus on Southern California Bight Spring & Fall

General Statistics

Unique Samples, Cruises, and Sites:

n_distinct(year_site)	n_distinct(cruise)	n_distinct(site)	n_distinct(year_season_site)
1420	49	61	2389

Sampling Distribution of Samples:



Zack's Selected Priority Sampling - Coastal Focus 1996-2023

n=1212 tows x2 seasons

Main Target: Southern California Bight Coastal Eutrophication Driven Hypoxia

The focus is on the coastal grid capturing areas inside and outside the reoccurring hypoxic eddy centered south of Santa Catalina Island. Capturing 25 years of sampling including multiple El Niño and La Niñas, marine heat waves, and documented regime shifts in ichthyoplankton (notably tropicalization of southern mesopelagic species).

Secondary Targets: National Marine Sanctuaries & Wind Lease Areas

Capturing Spring data from further North provides baseline data inside and outside of the Channel Islands NMS, proposed Chumash Heritage NMS, and the Morro Bay Wind Lease Area. This also captures inshore state waters supporting OPC, CDFW, and SCCOOS priorities.

There is a diminished focus on the offshore stations, but hopefully still enough spatial and temporal scale to provide regional resolution.

This set up also lends itself to systematic partitioning of the work. On average there are ~27 jars per cruise and so can process 3-4 jars per batch. Can also focus on all Spring samples first and then decide to expand to Fall sampling as a second set.

Summary Table

n_distinct(year_season_site)	n_distinct(year_site)	n_distinct(cruise)	n_distinct(site)
1212	770	51	38

Average Samples per Cruise

mean(n)	max(n)	min(n)
27.17647	56	5

Map of Selected Sites

