

# OCNMS exploratory plots

*Ole Shelton*

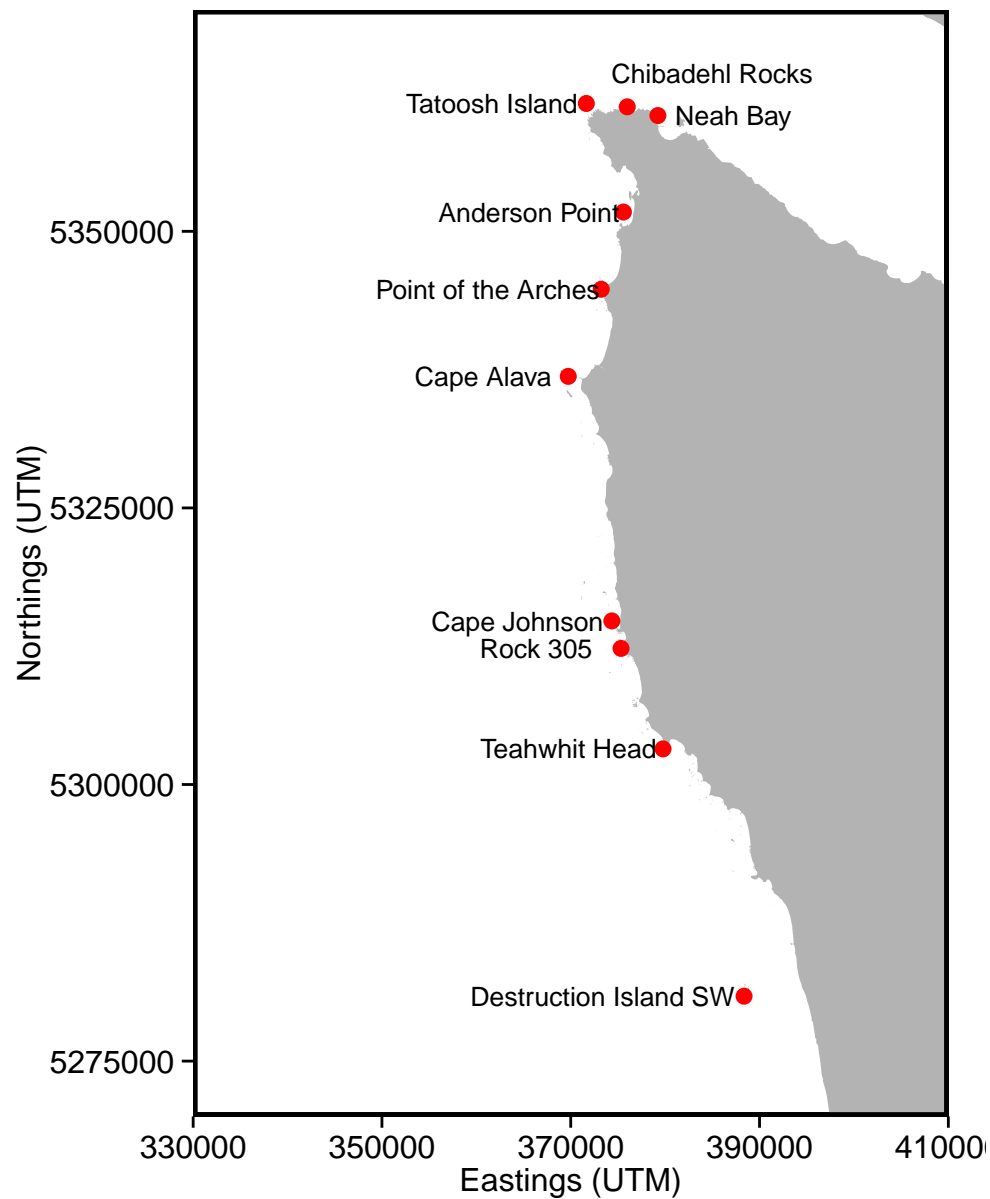
*November 30, 2015*

This is a basic file for processing and providing basic plots for the 2015 Olympic Coast National Marine Sanctuary Dive Surveys.

All surveys were conducted on these dates:

## [1] "8/3/15" "8/4/15" "8/5/15" "8/6/15" "8/7/15"

Here is a map showing the approximate locations of the sites



## Methods

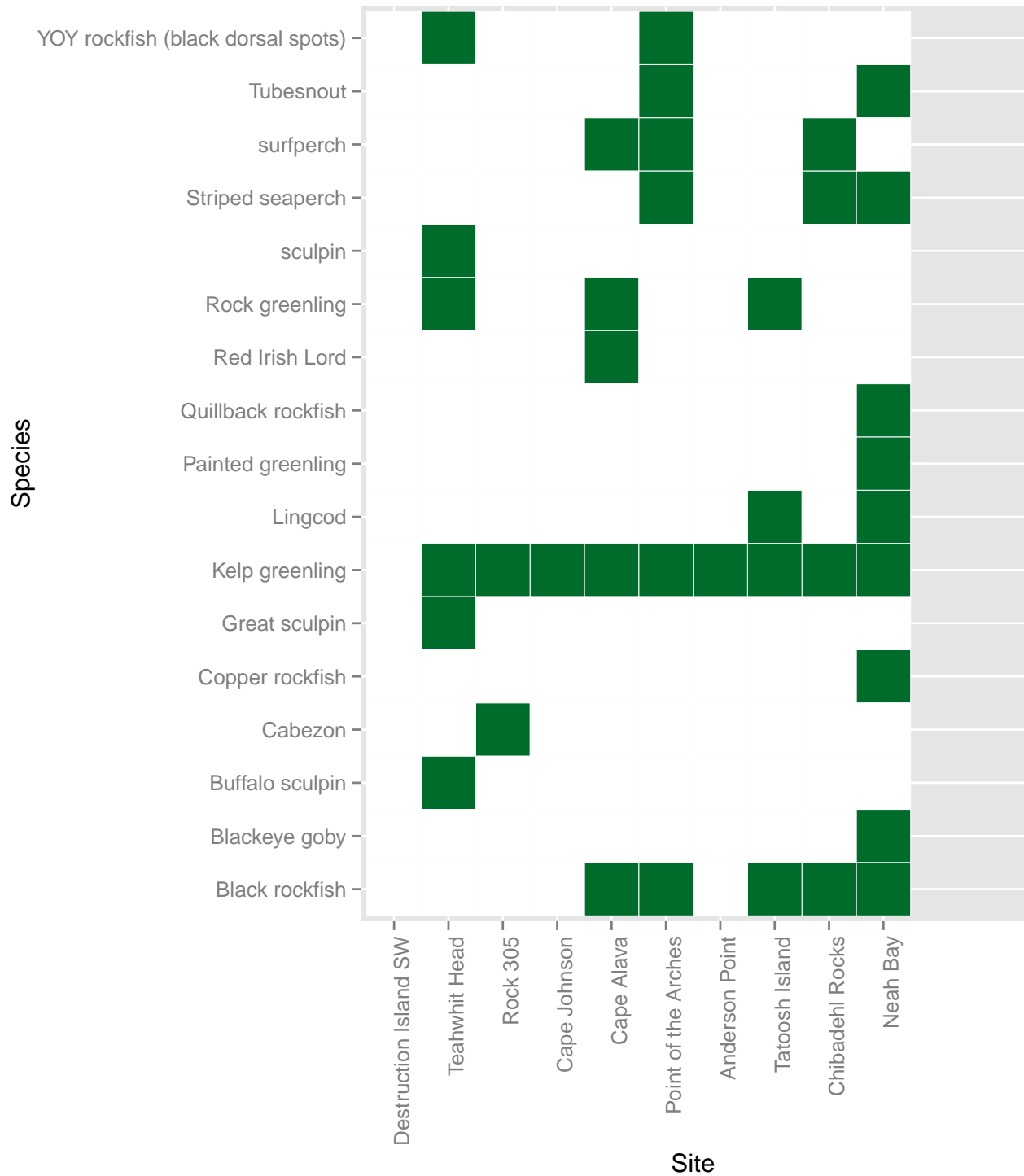
Four divers conducted dive surveys at each site (two teams of two). Each diver pair surveyed two 30m long transects. All dives in 2015 were conducted at about 6-8m depth.

I've focused on summarizing the species observed in at each site (for the quadrats, invertebrate transects, and fish transects)

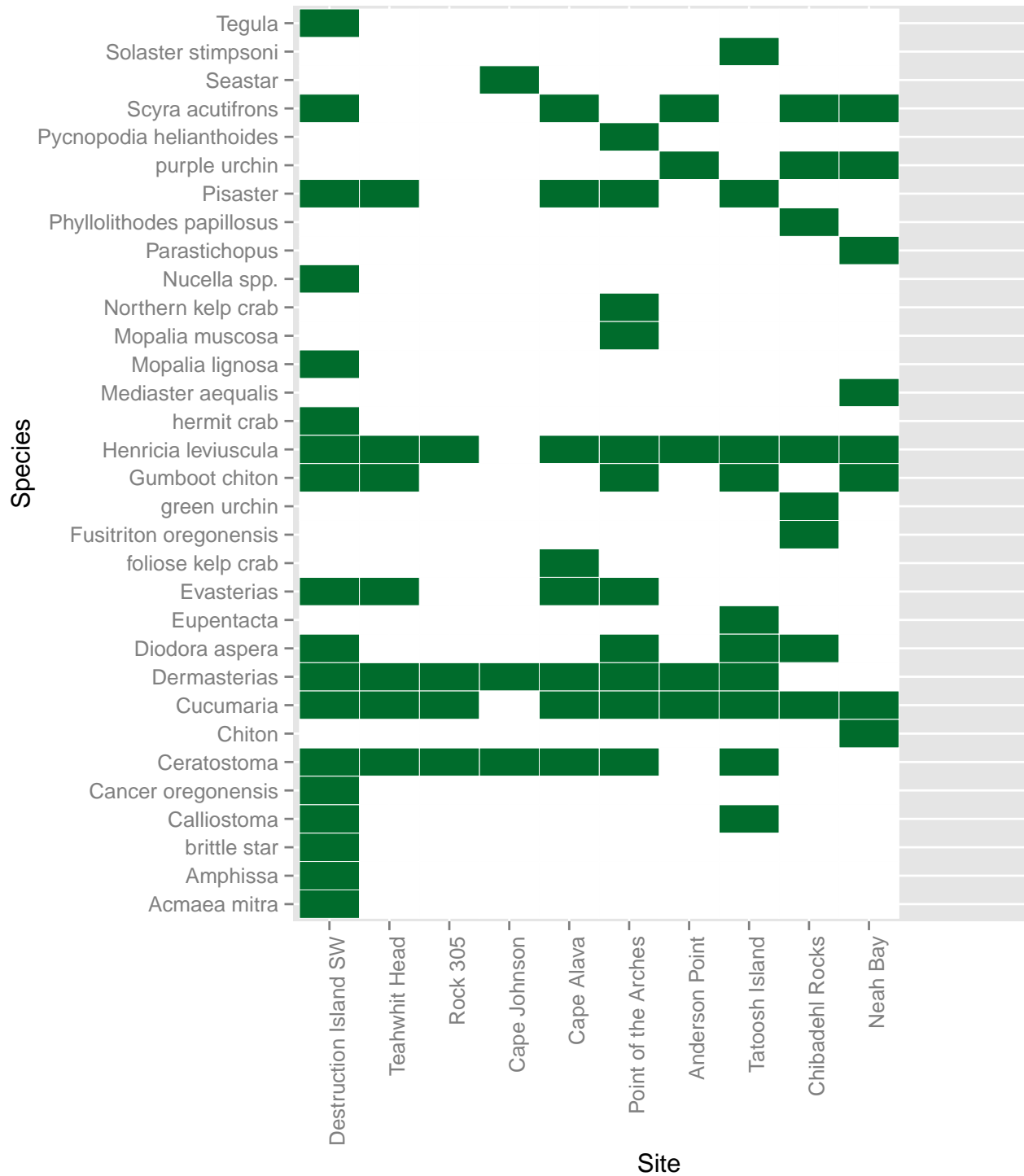
Sessile creatures (and some benthic categories)



## Fish species on transects



## Mobile invertebrate species on transects

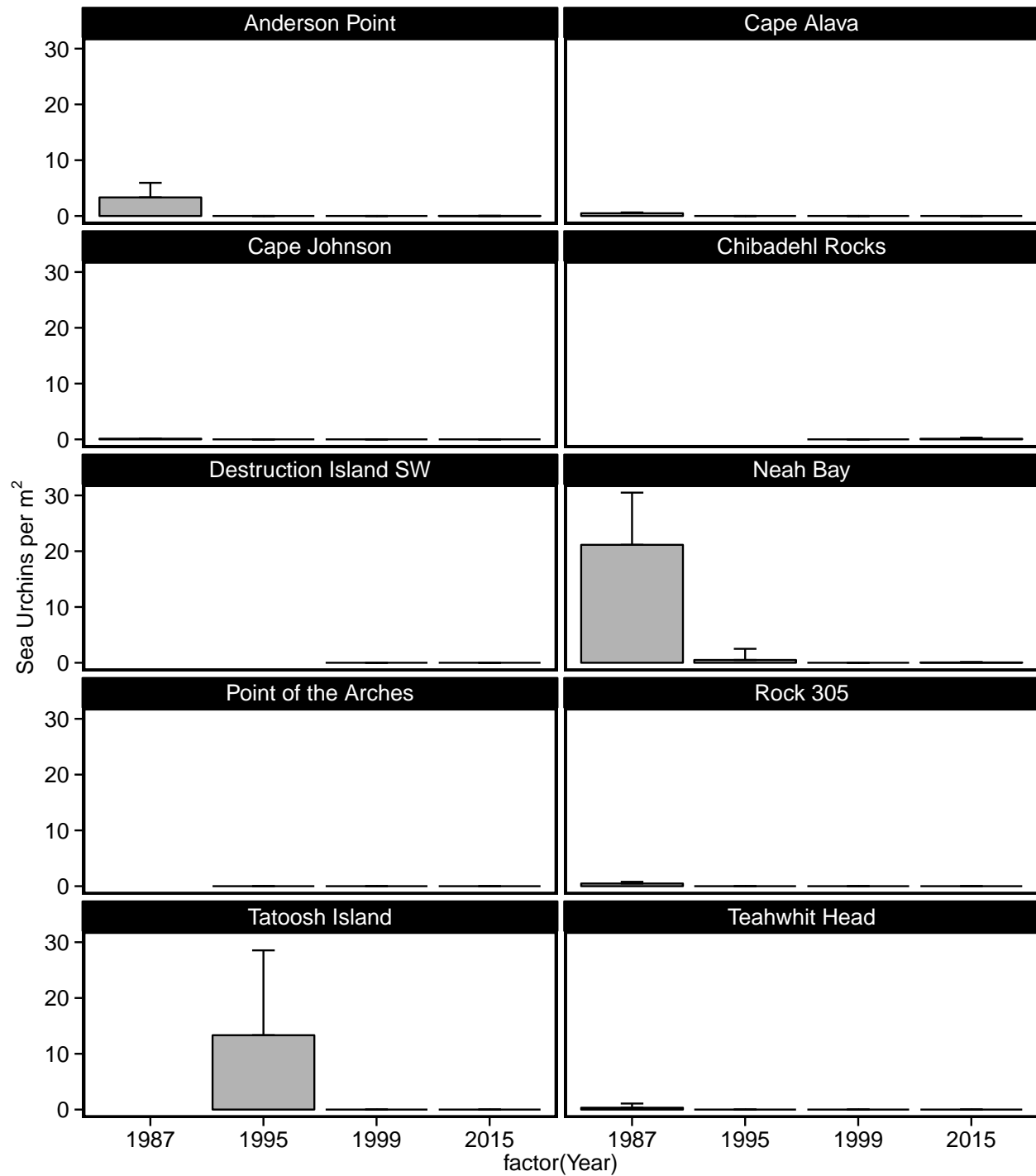


## Comparing mobile invertebrates

Data from all sites in all years. I include only data from 6m and shallower from historical data.

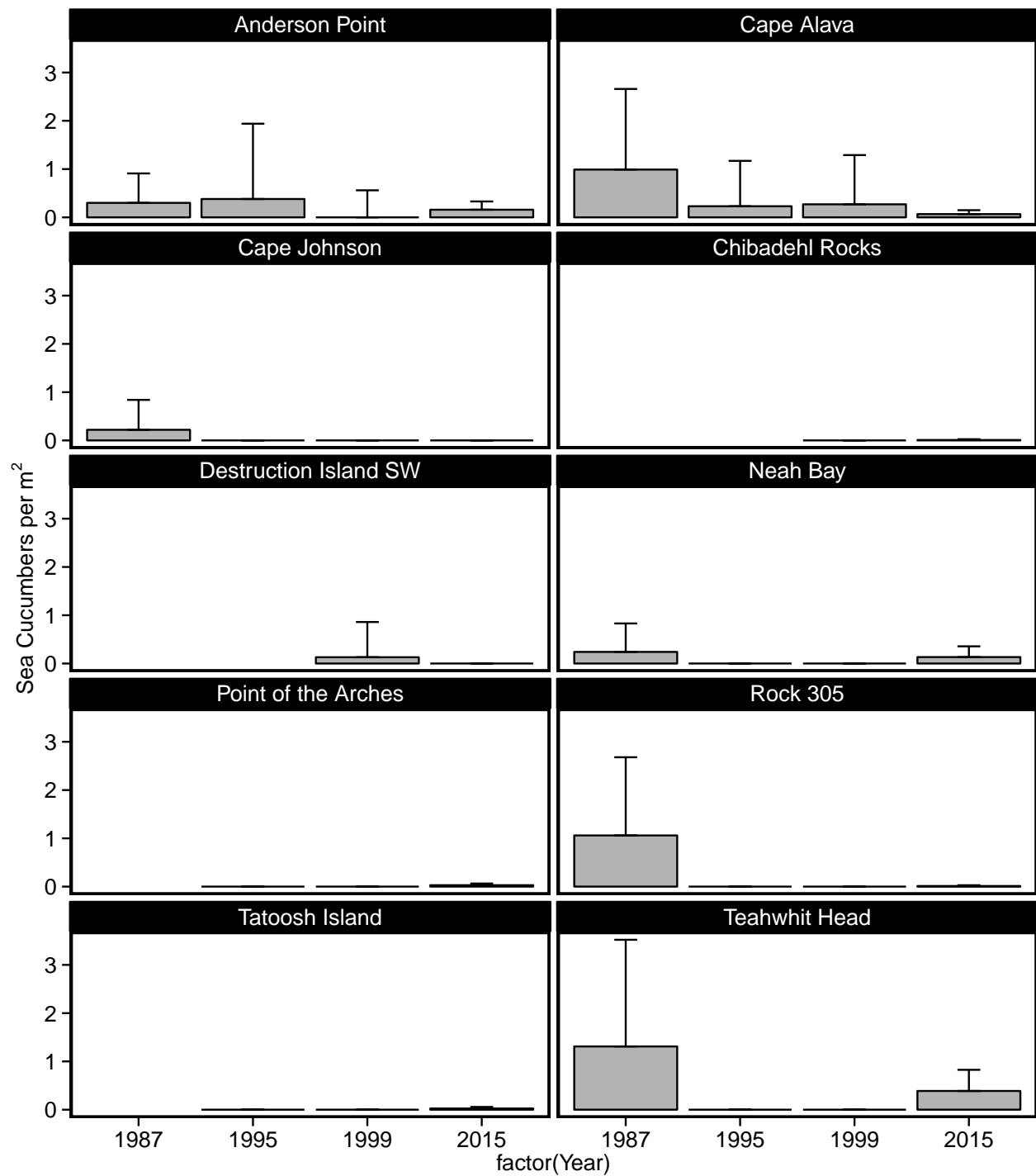
Urchins (Mean  $\pm$  SD).

Zeros shown as thin lines, missing data shown as blank



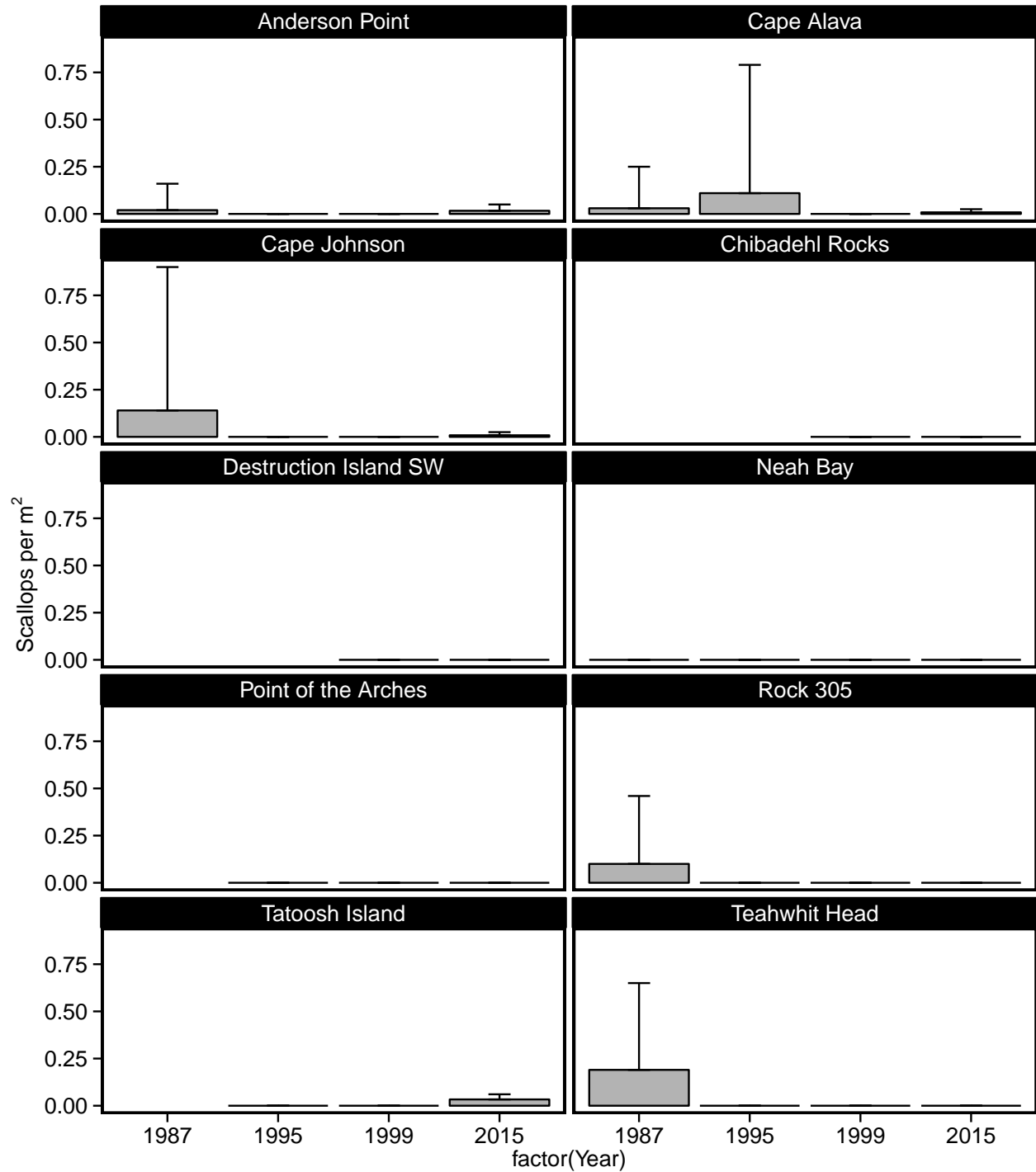
# Sea Cucumbers (Mean $\pm$ SD).

Zeros shown as thin lines, missing data shown as blank



Scallops (Mean  $\pm$  SD).

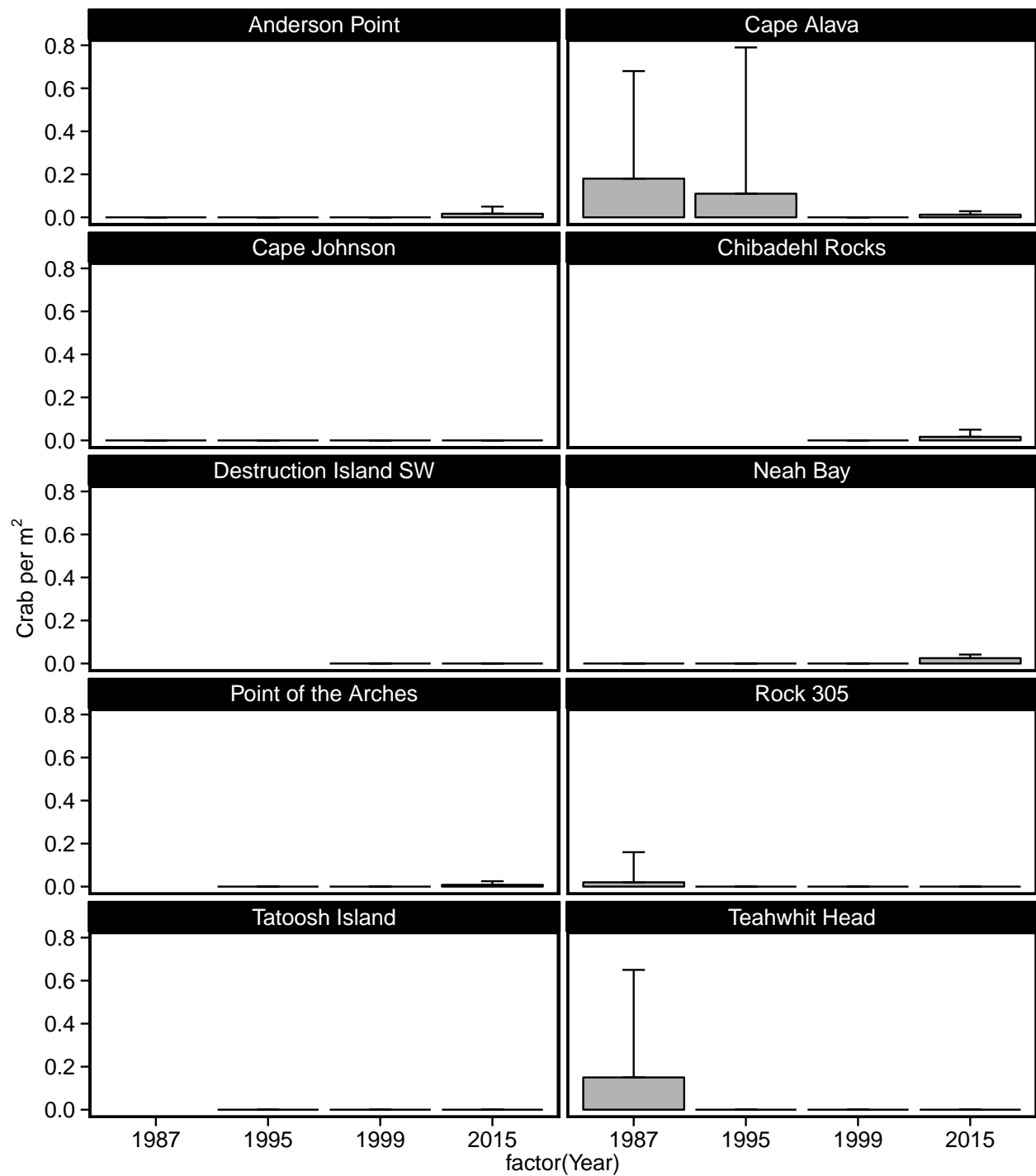
Zeros shown as thin lines, missing data shown as blank





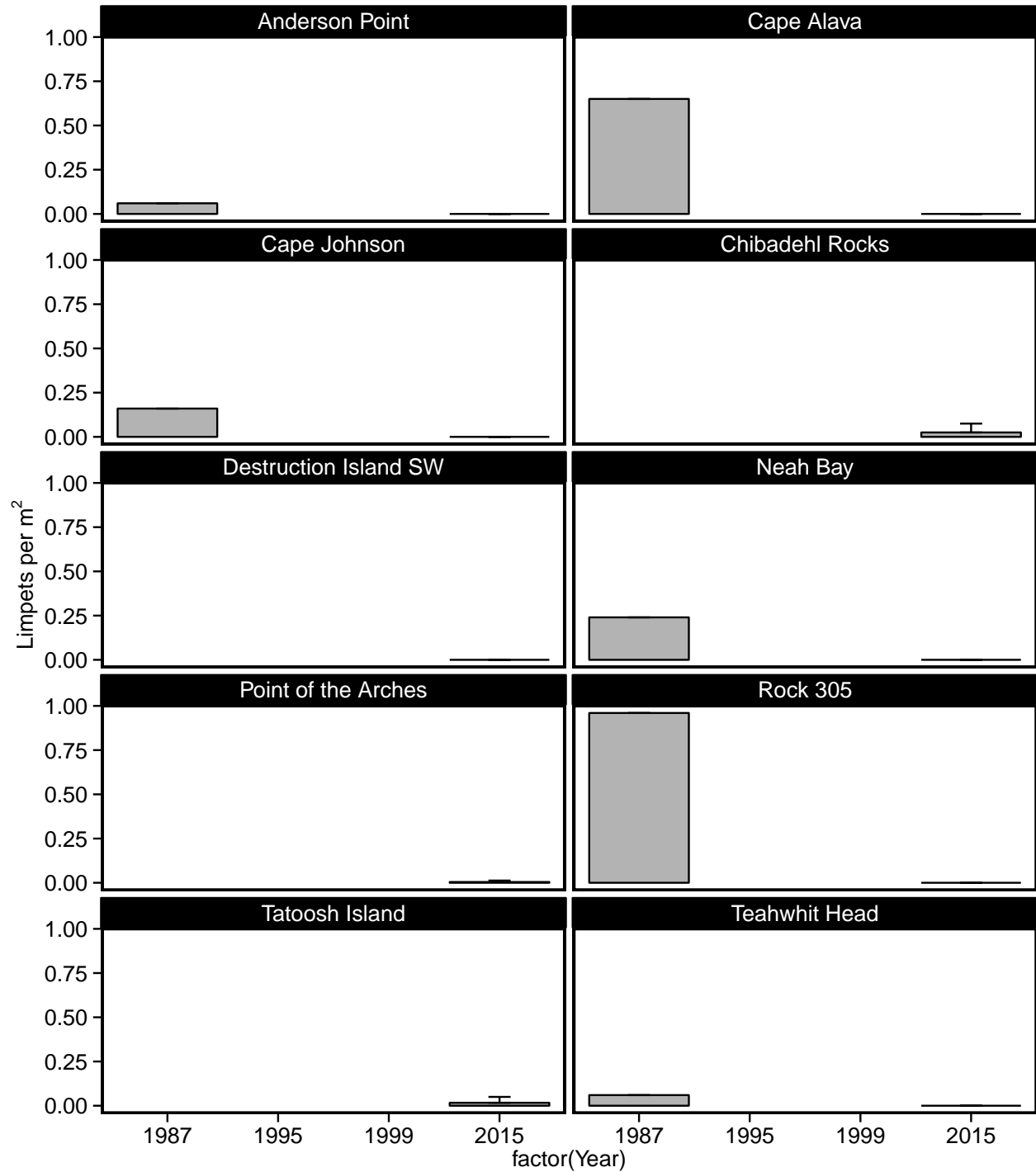
Crabs (Mean  $\pm$  SD).

Zeros shown as thin lines, missing data shown as blank



Limpets (Mean  $\pm$  SD).

Zeros shown as thin lines, missing data shown as blank



### Non-Limpet Gastropods (Mean $\pm$ SD).

Zeros shown as thin lines, missing data shown as blank

