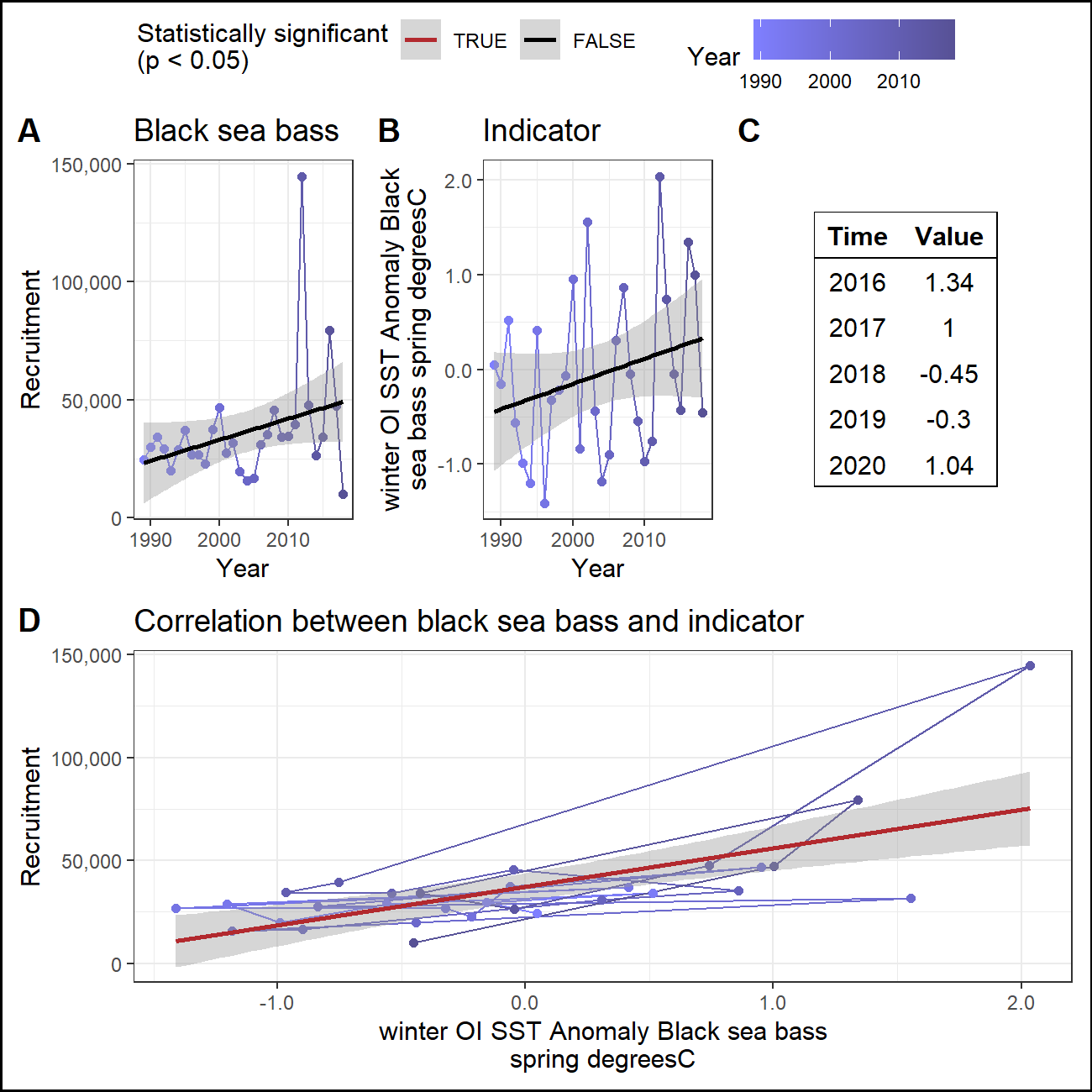
Black sea bass indicator analysis

Abigail Tyrell

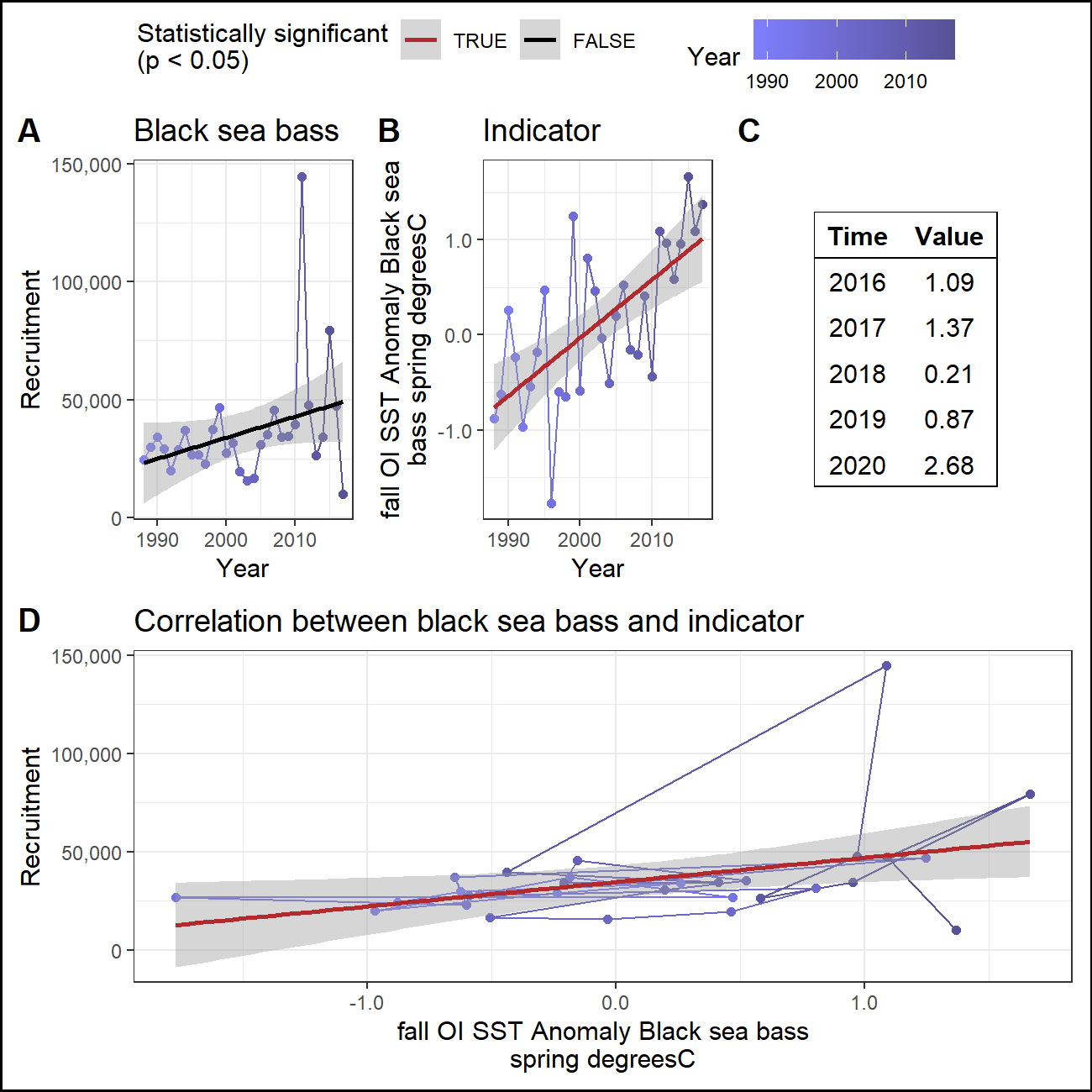
23 Apr 2021

## Recruitment

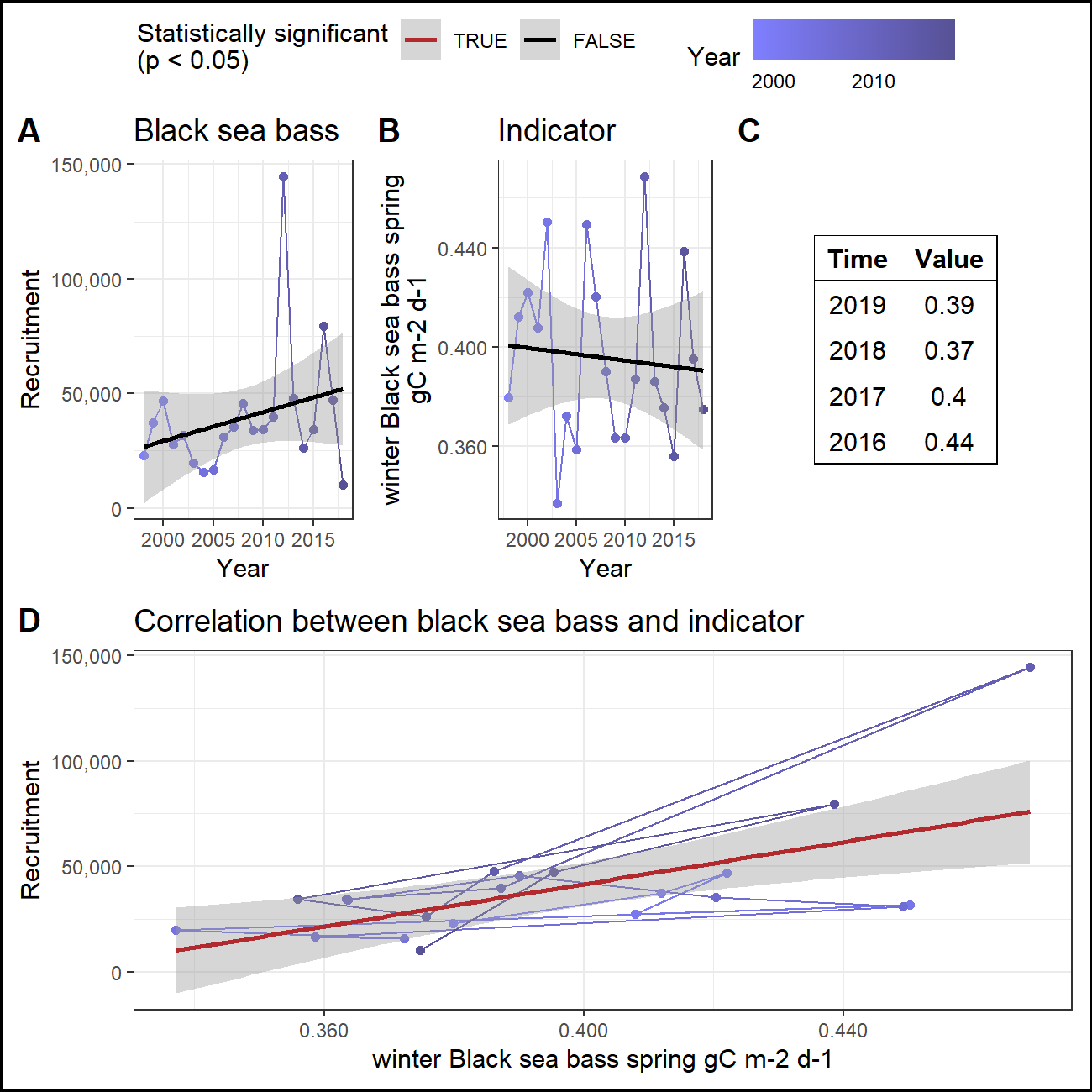
### Winter SST anomaly



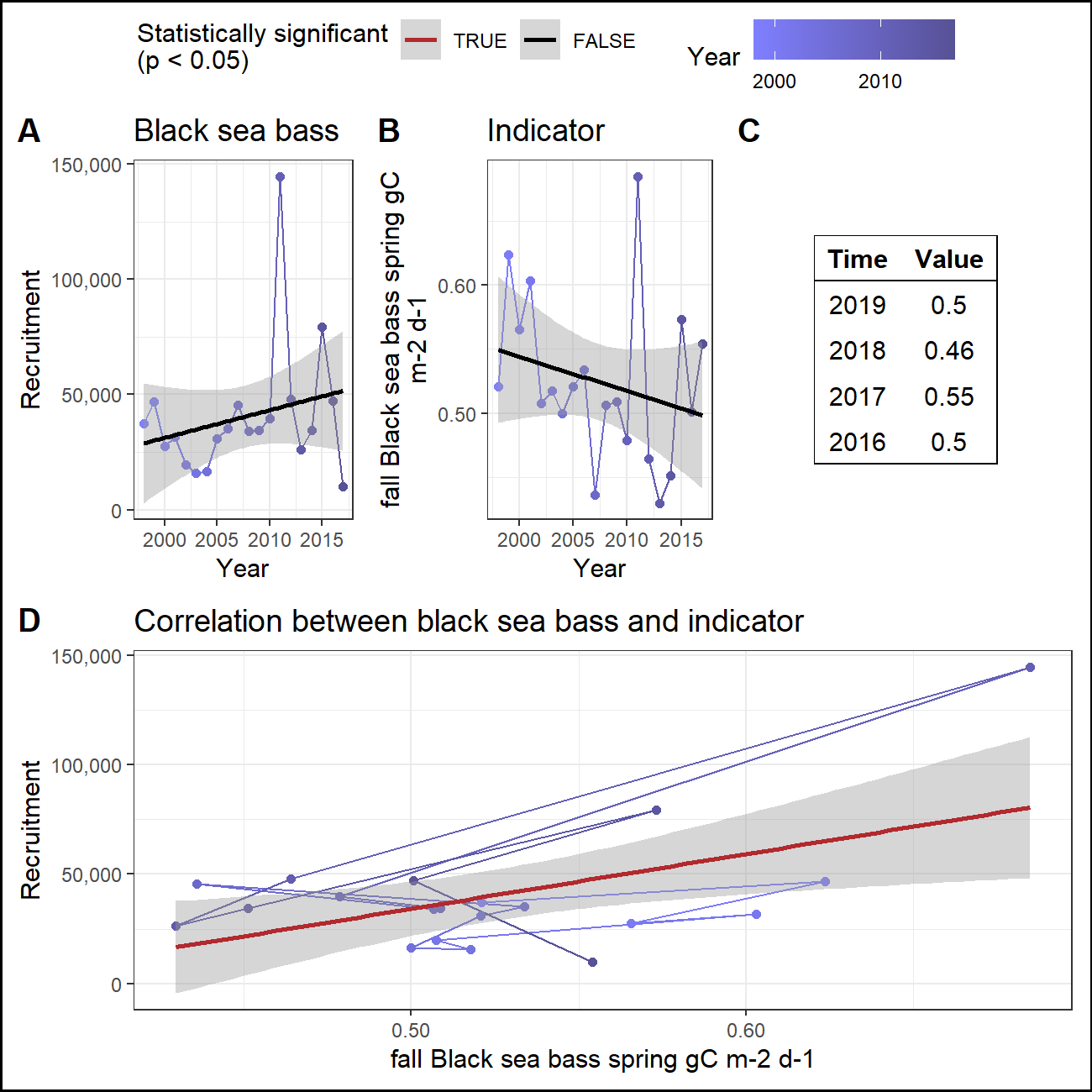
### Fall SST anomaly (prior year)



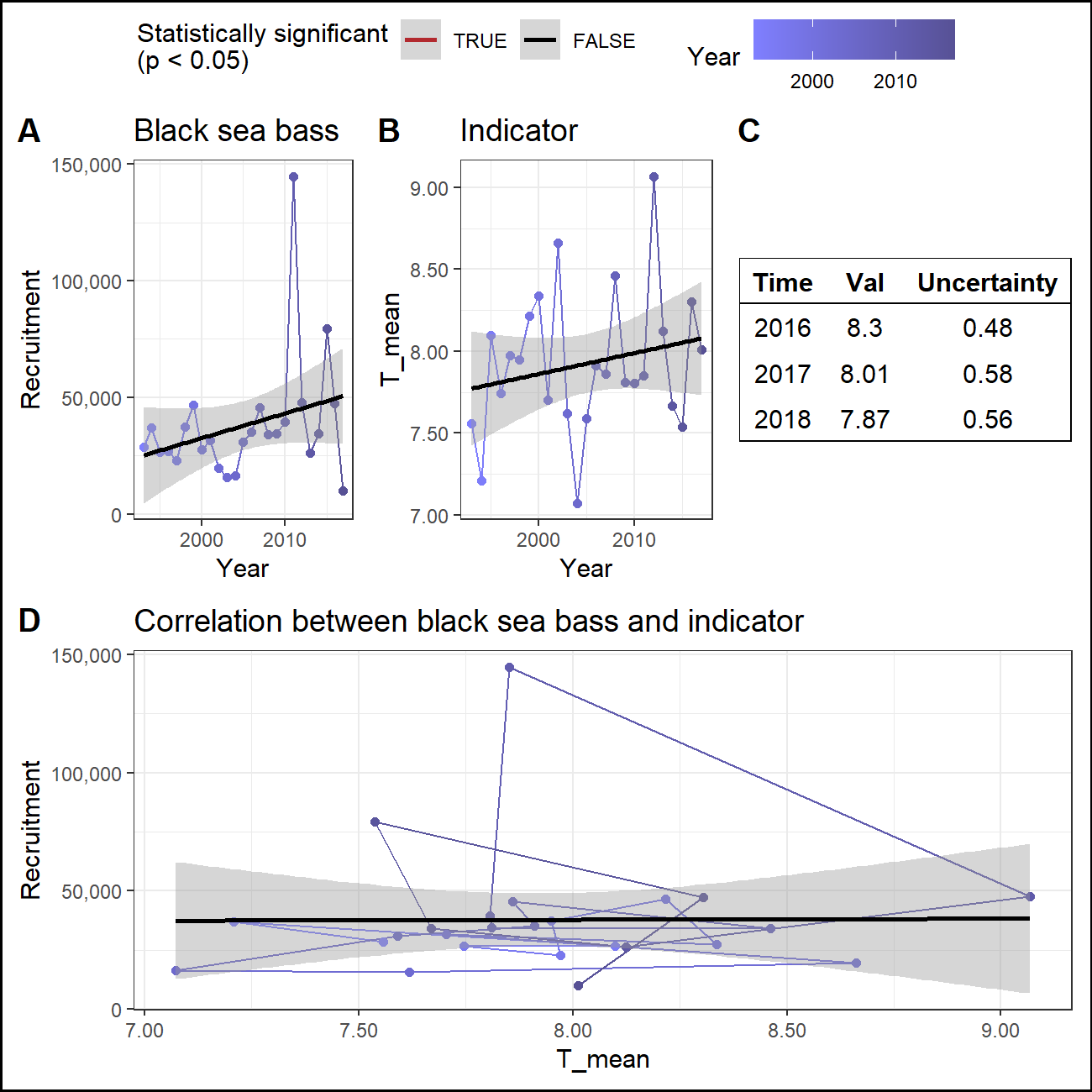
### Winter primary production

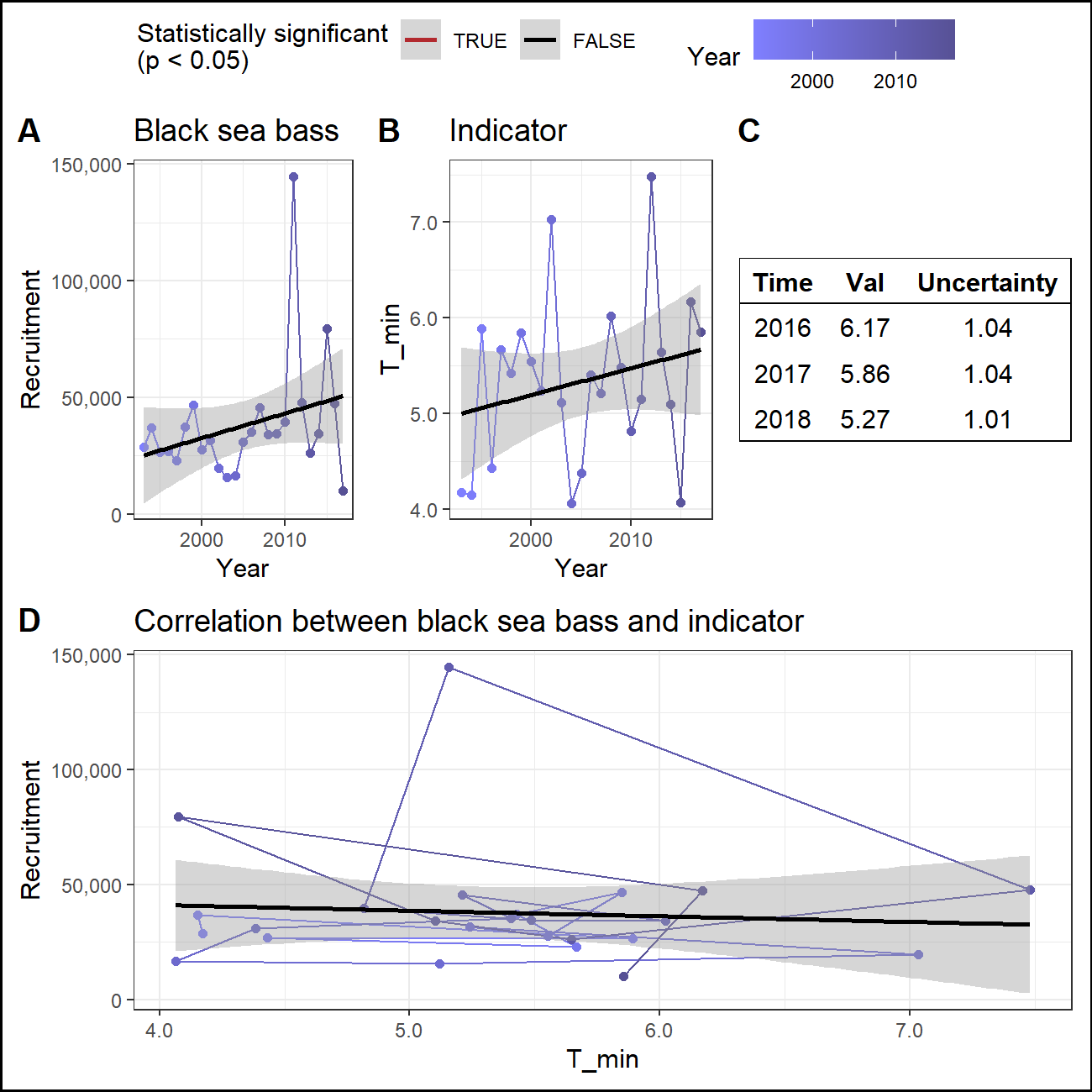


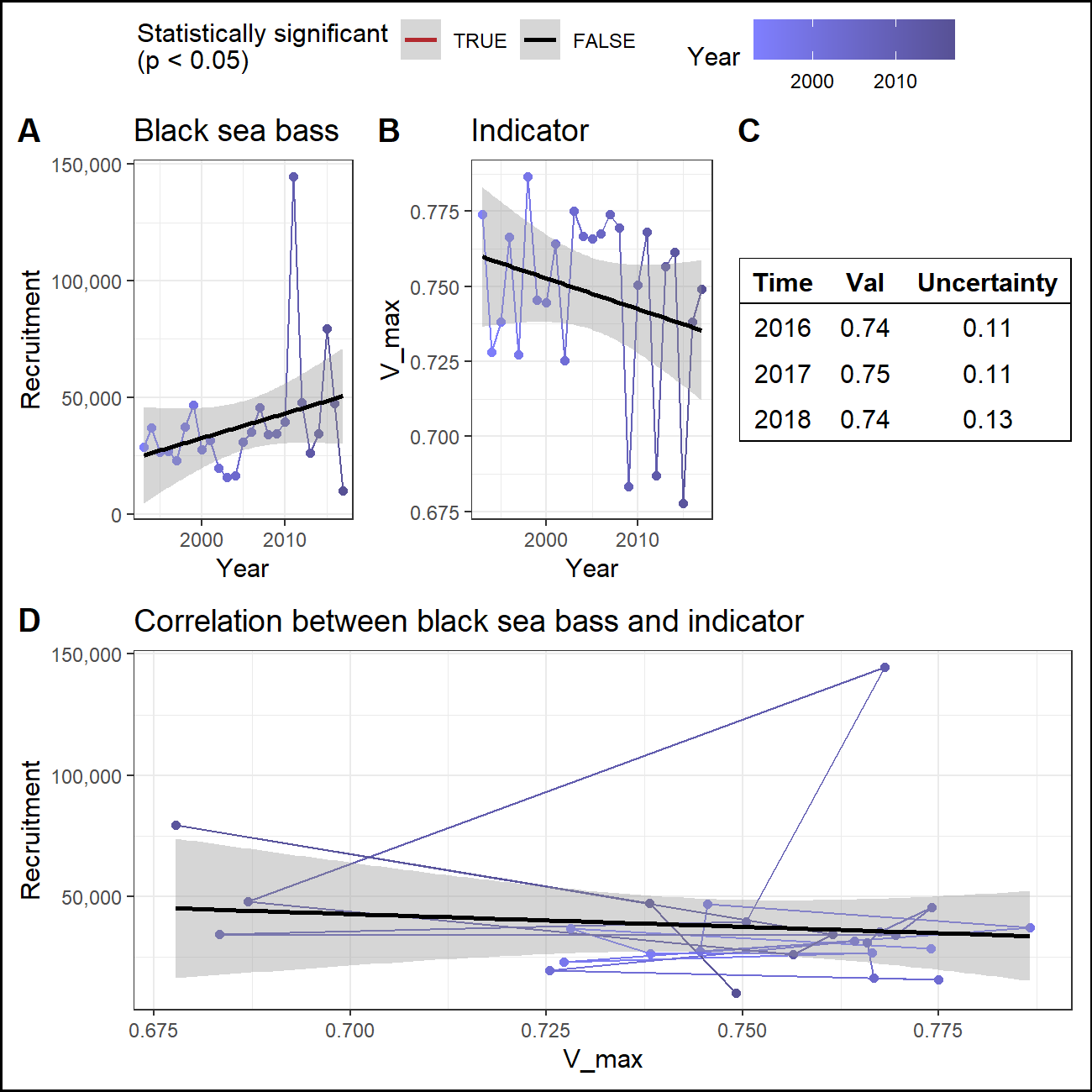
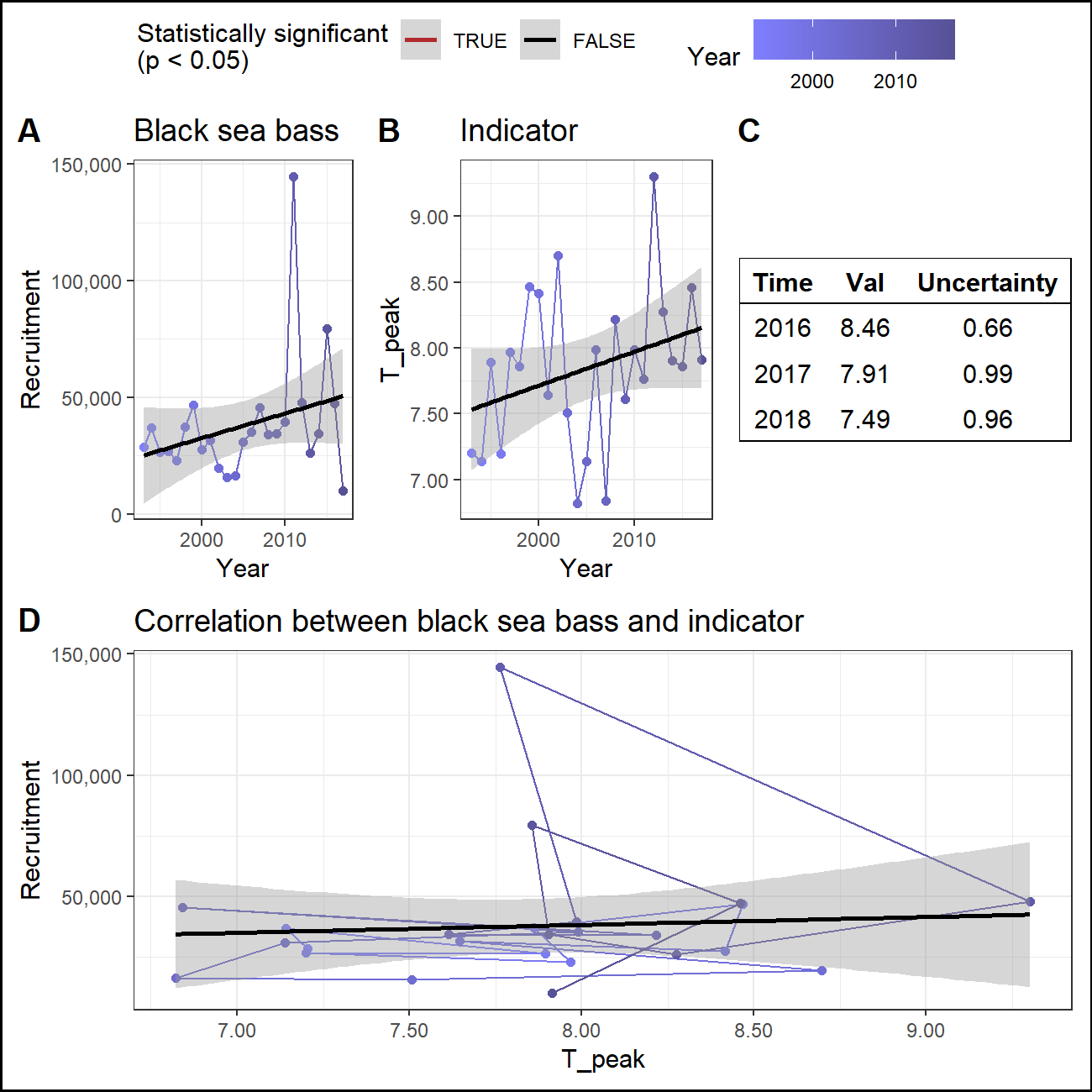
### Fall primary production (prior year)



### Cold pool index (prior year)





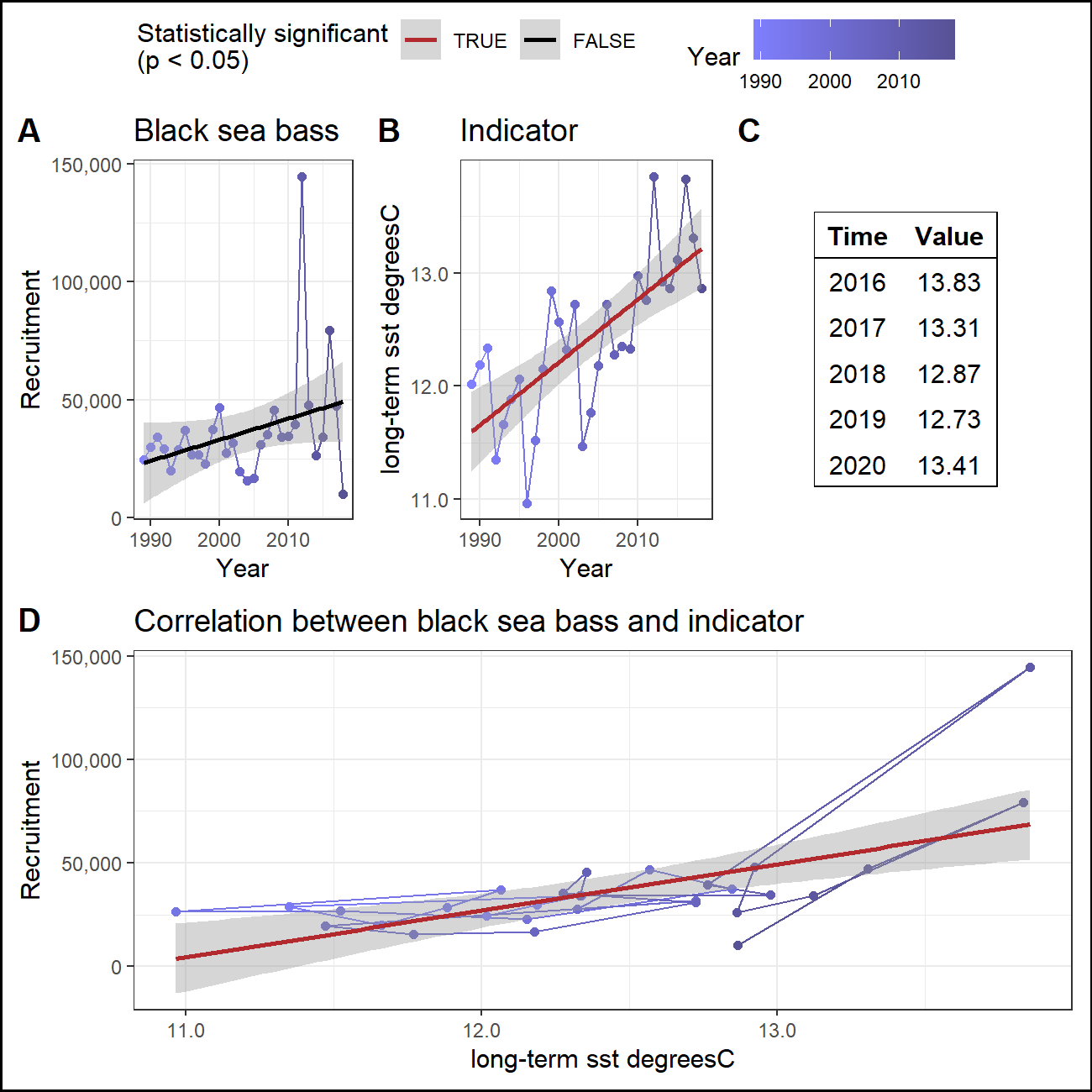


### Predator abundance

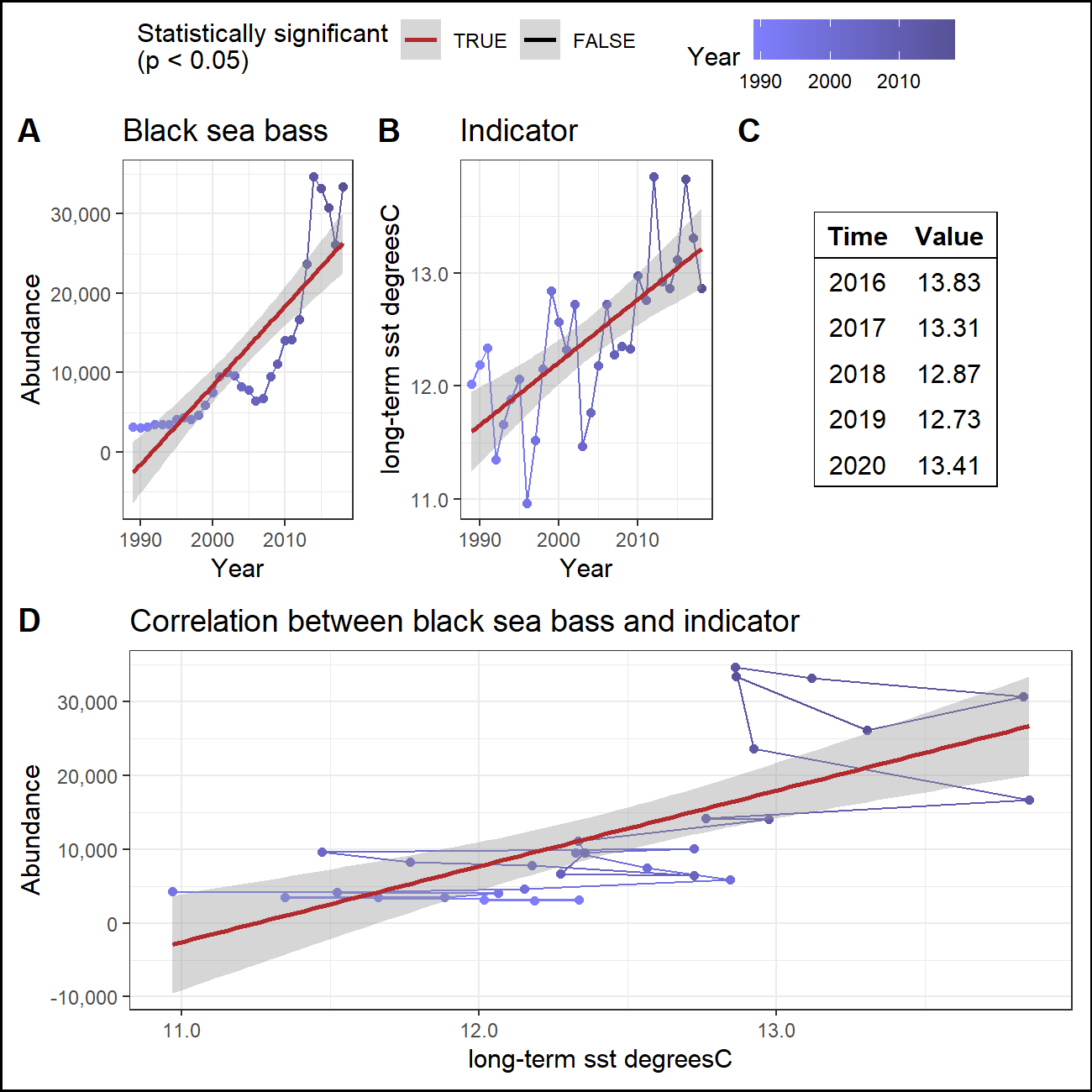
## Ecosystem

### Sea surface temperature

#### Recruitment

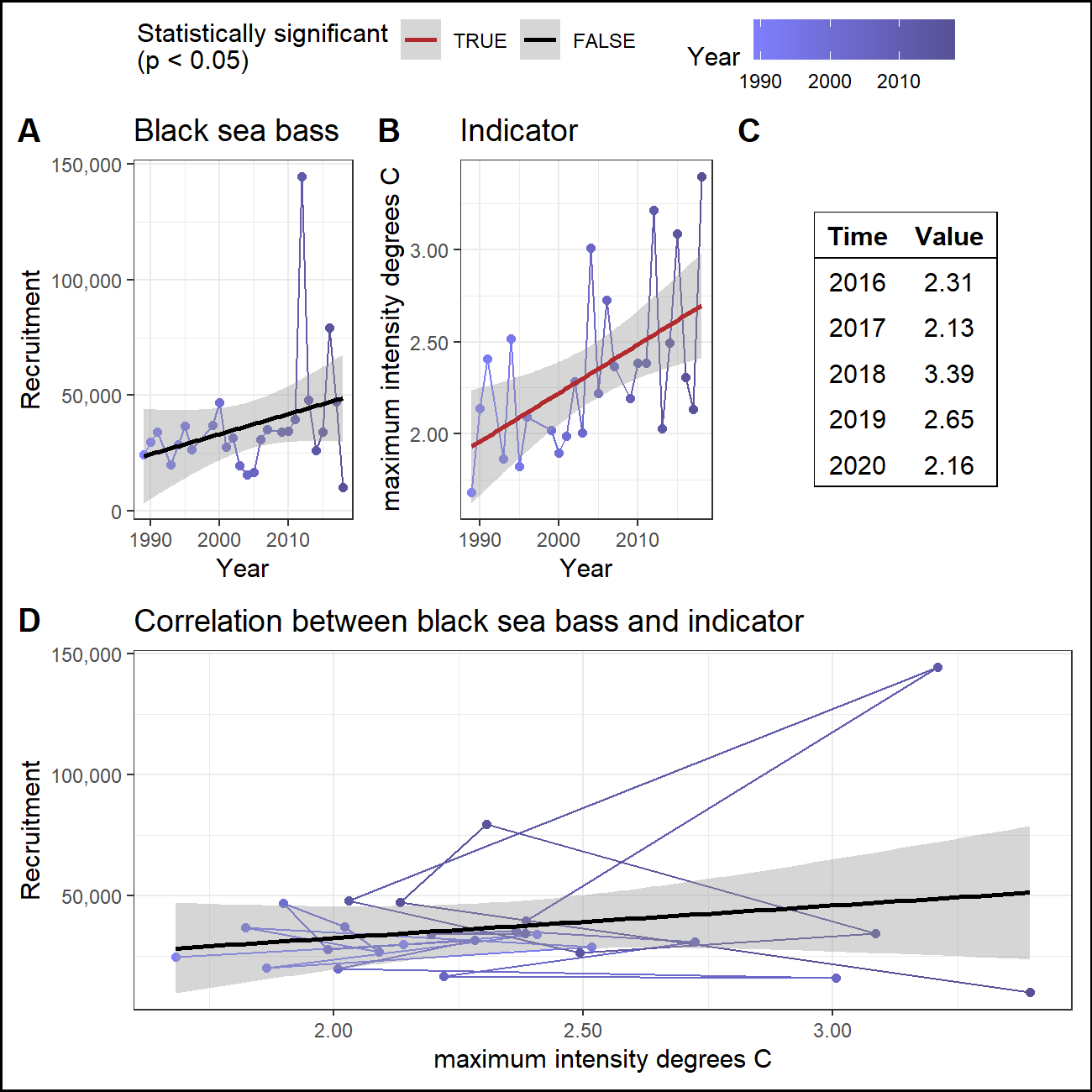
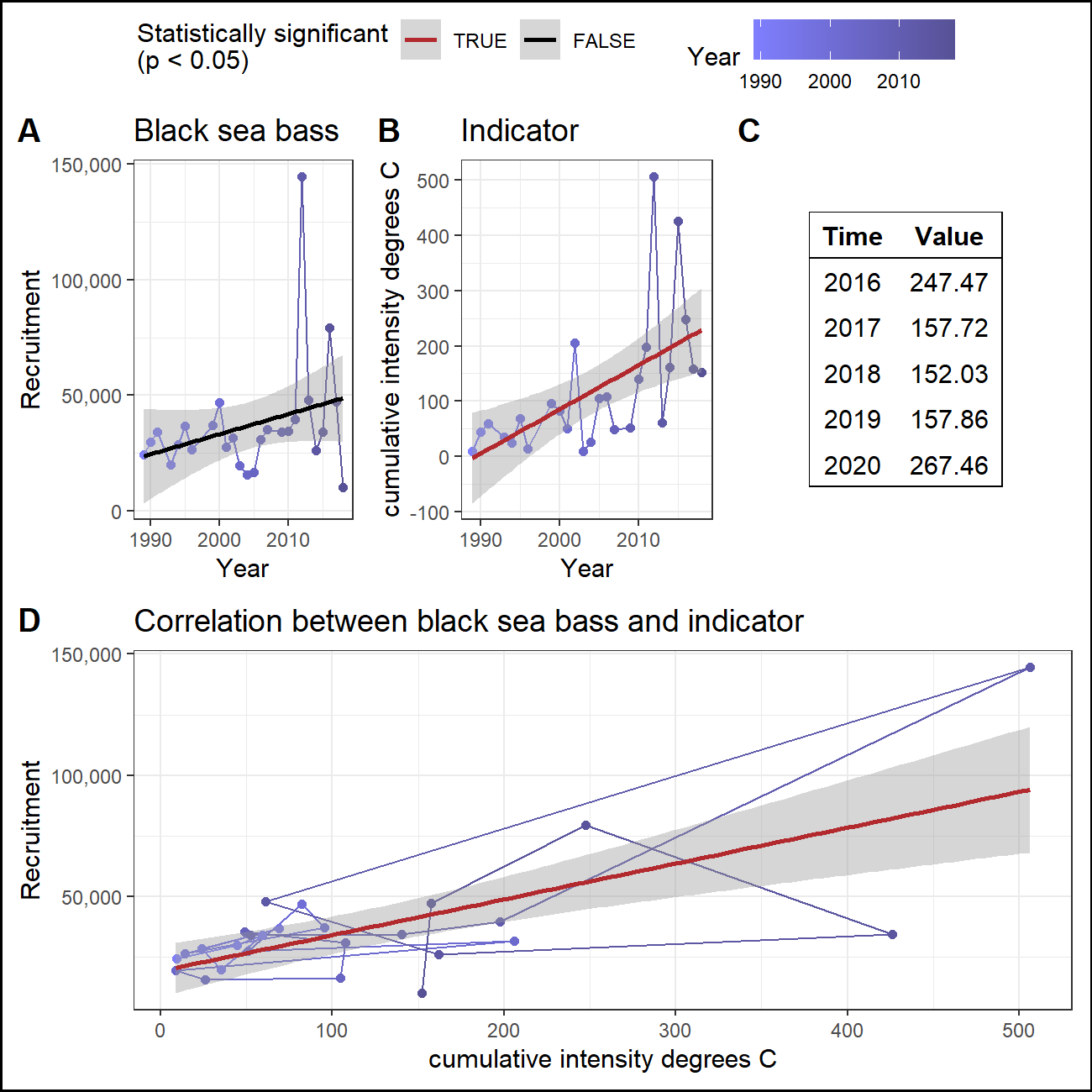


#### Abundance

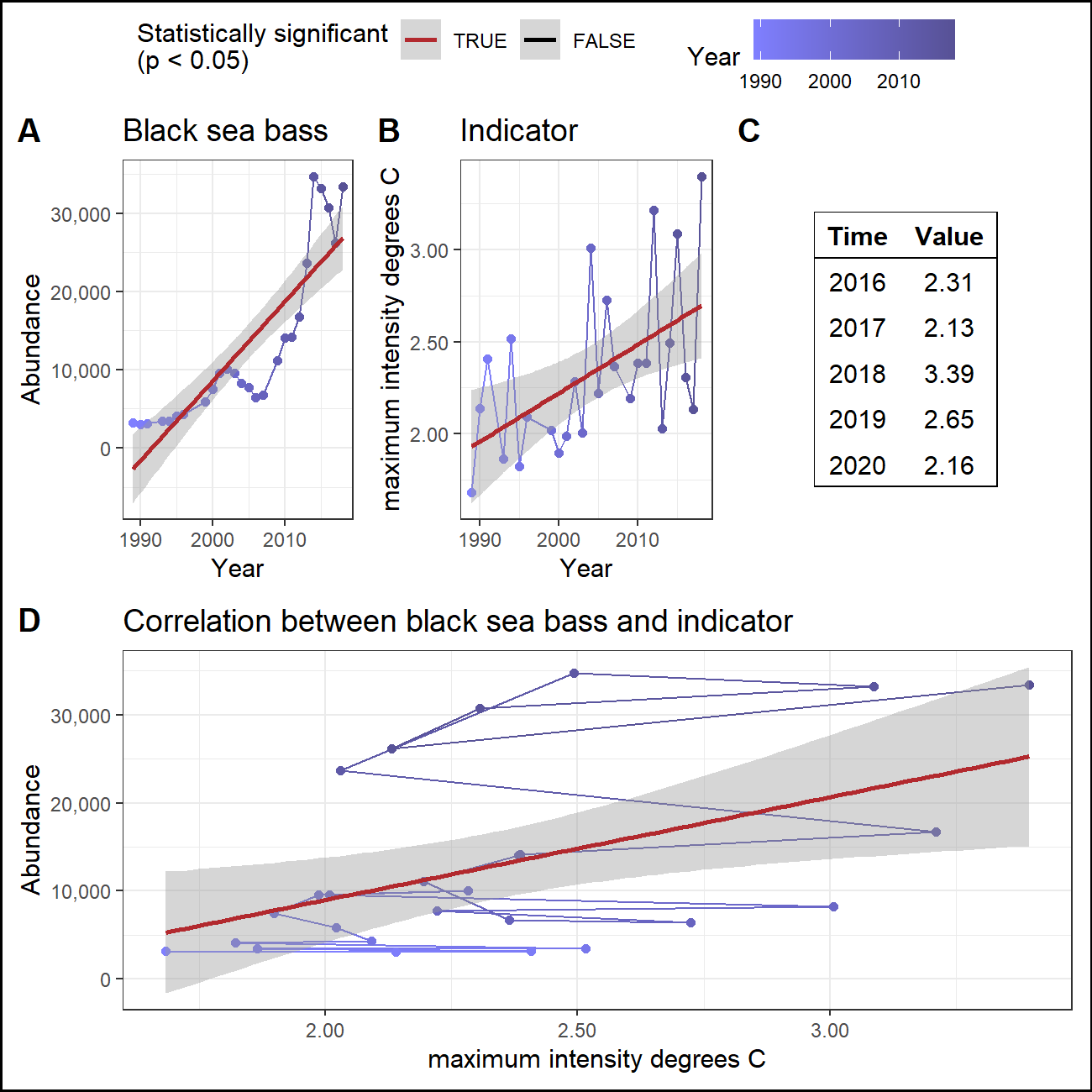
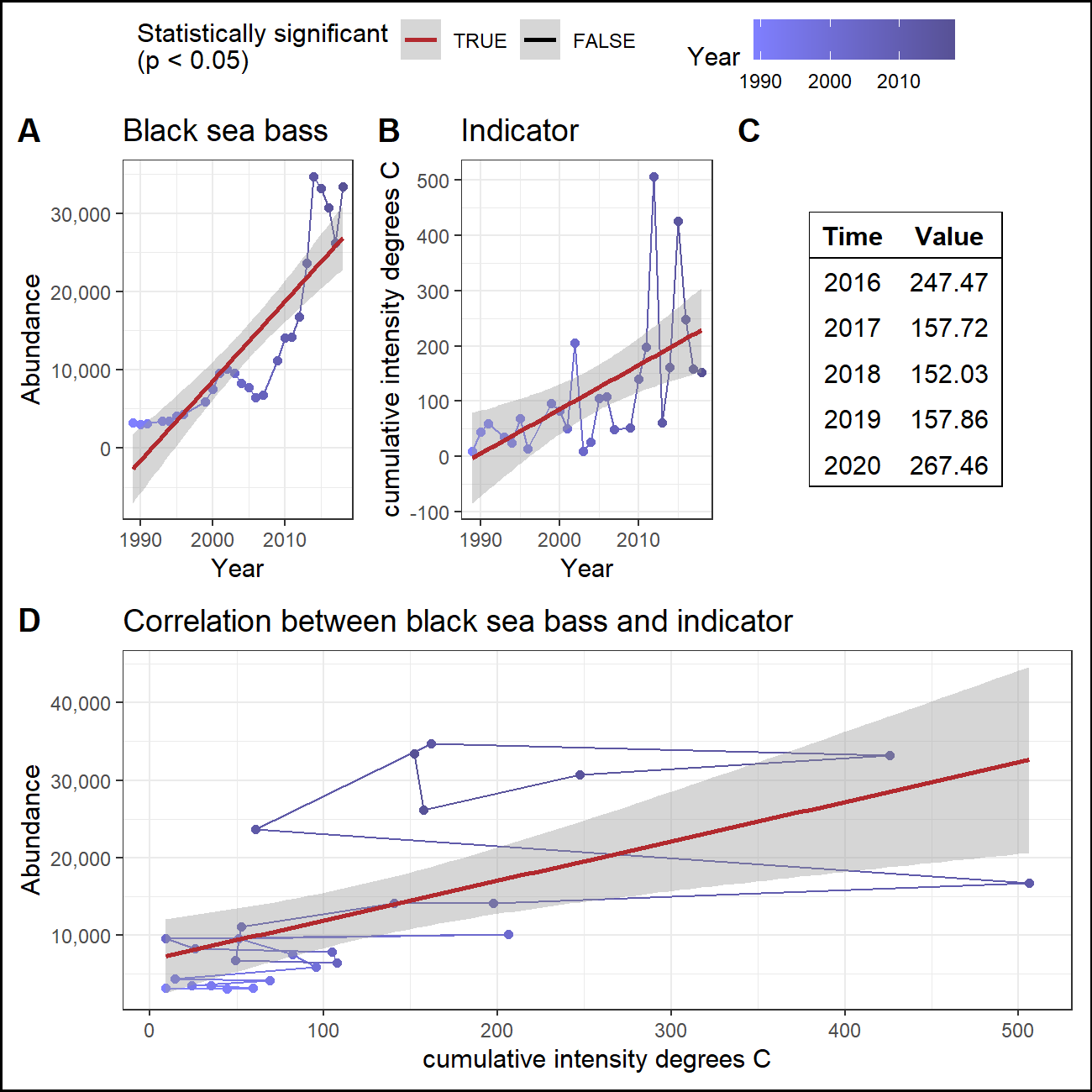


### Marine heatwaves

#### Recruitment

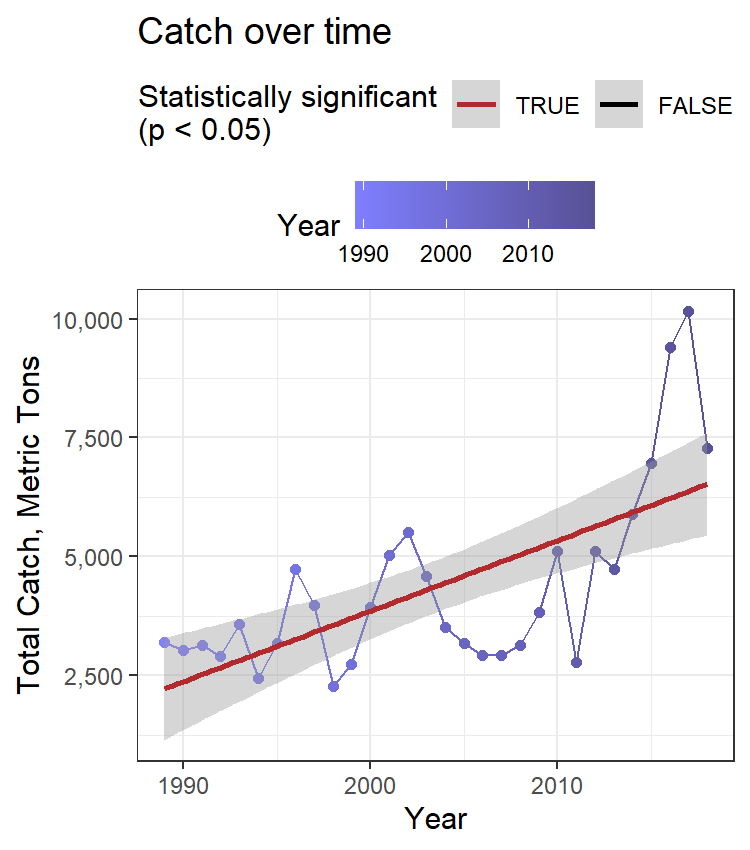


#### Abundance



## Management

### Total catch



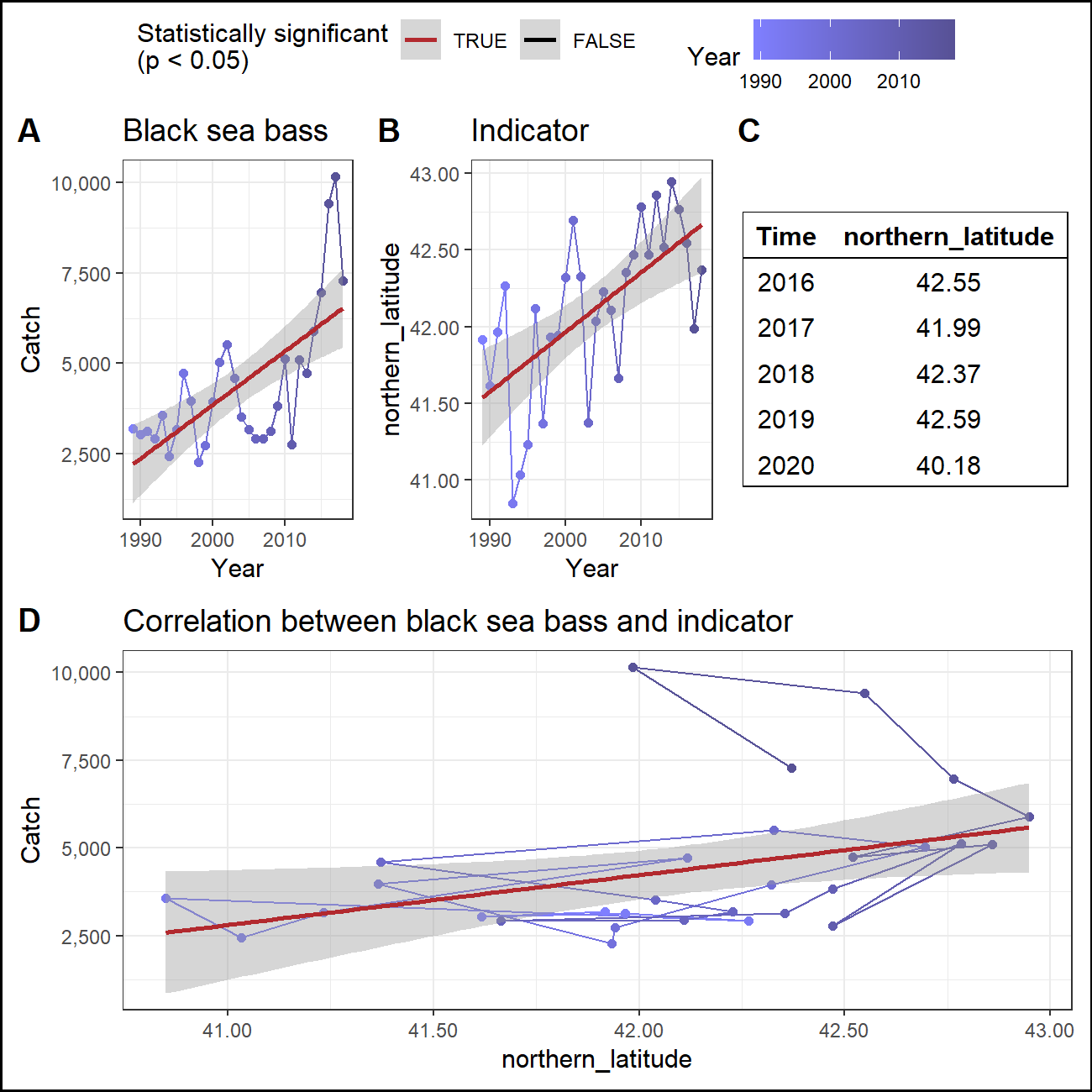
### CPUE

### Catch vs TAC

### Stock range

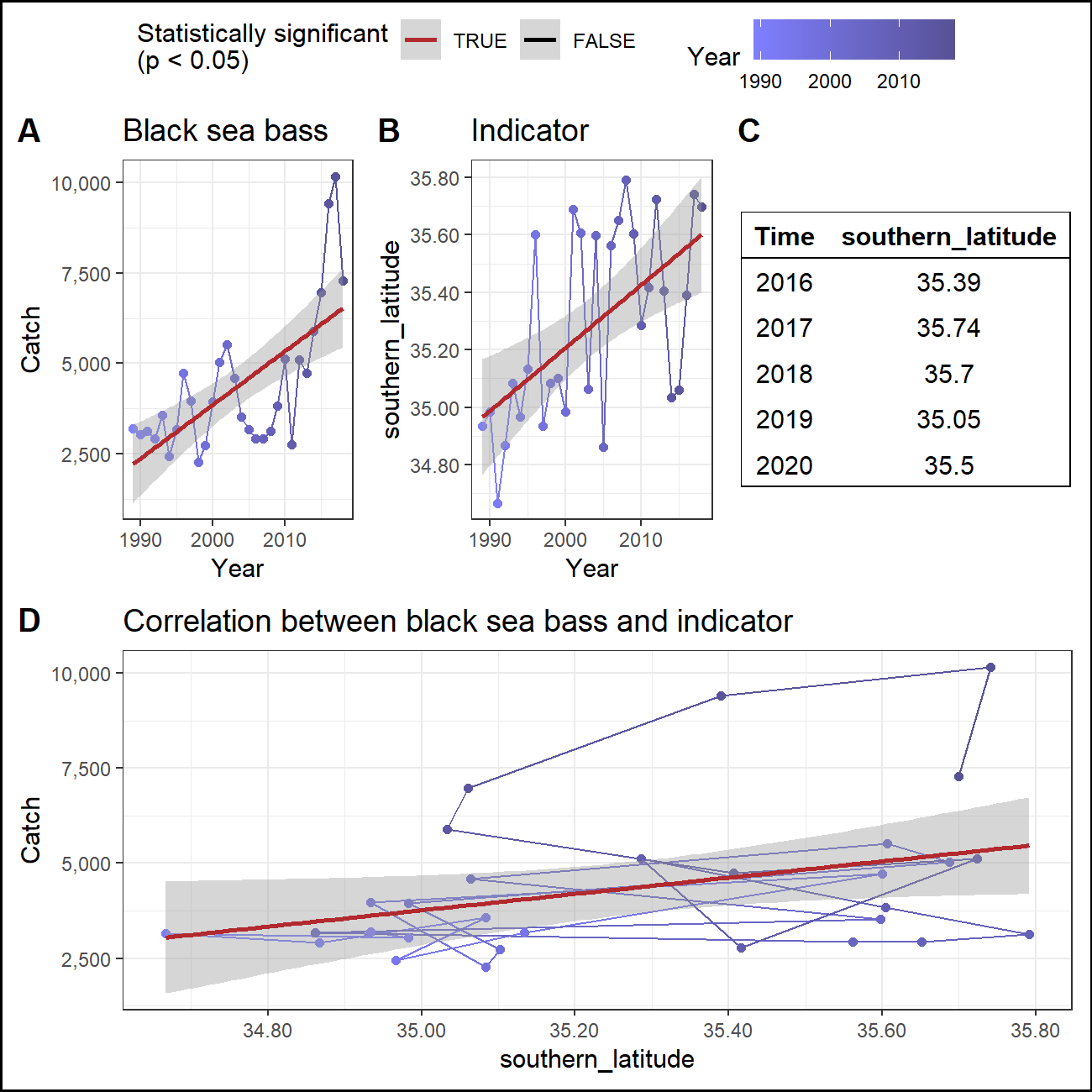
#### Northern range

Northernmost survey observation in each year.



#### Southern range

Southernmost survey observation in each year.



### Center of mass