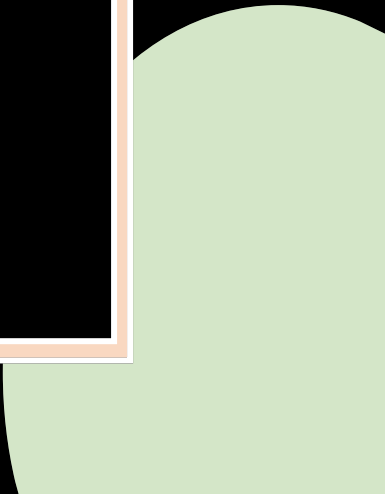




# Dirty Data-Clean Maps

Computational skills workshop  
by  
LaTreee Denson and Alex Davis



**LaTreeese**



**Alex**



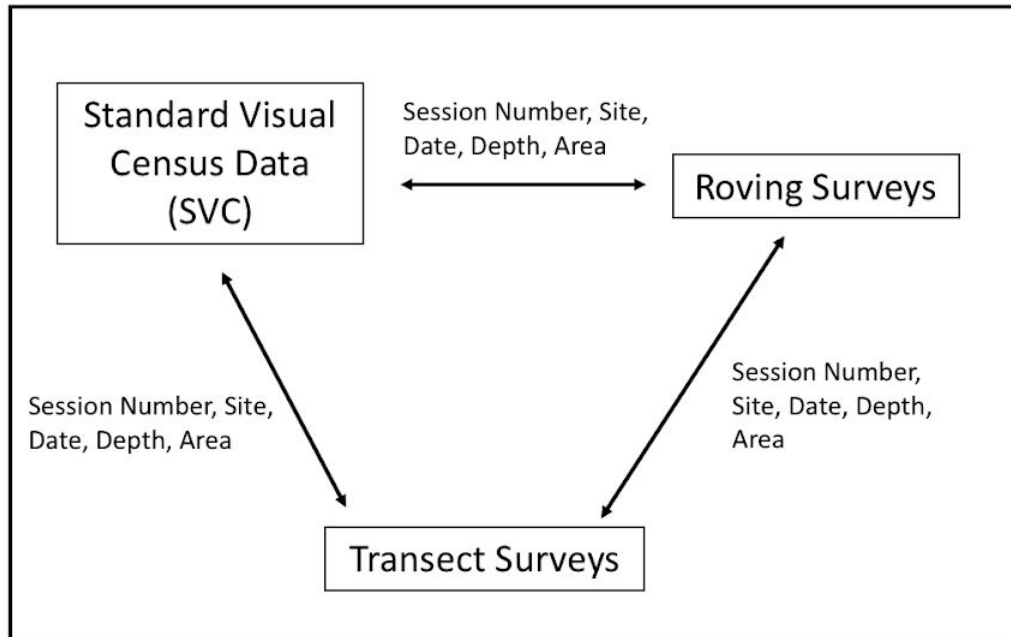
# Data collection can be messy



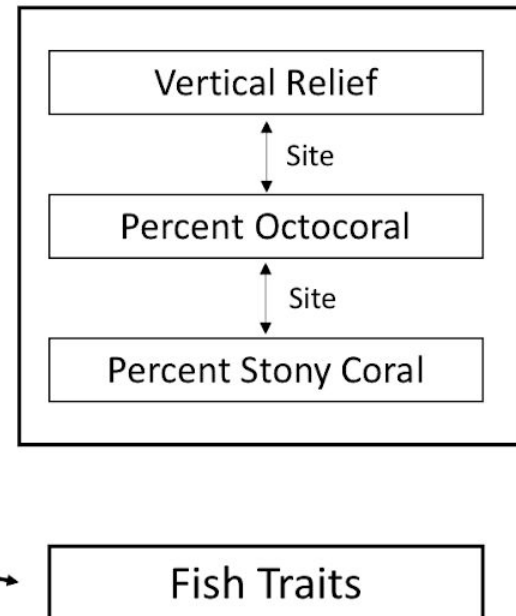
# ...and so can data entry

## Species Surveys

(Sept 2014, Mar 2015,  
Oct 2015)



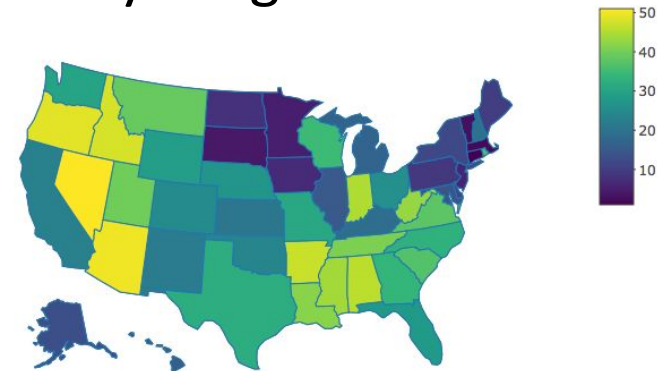
## Habitat Surveys





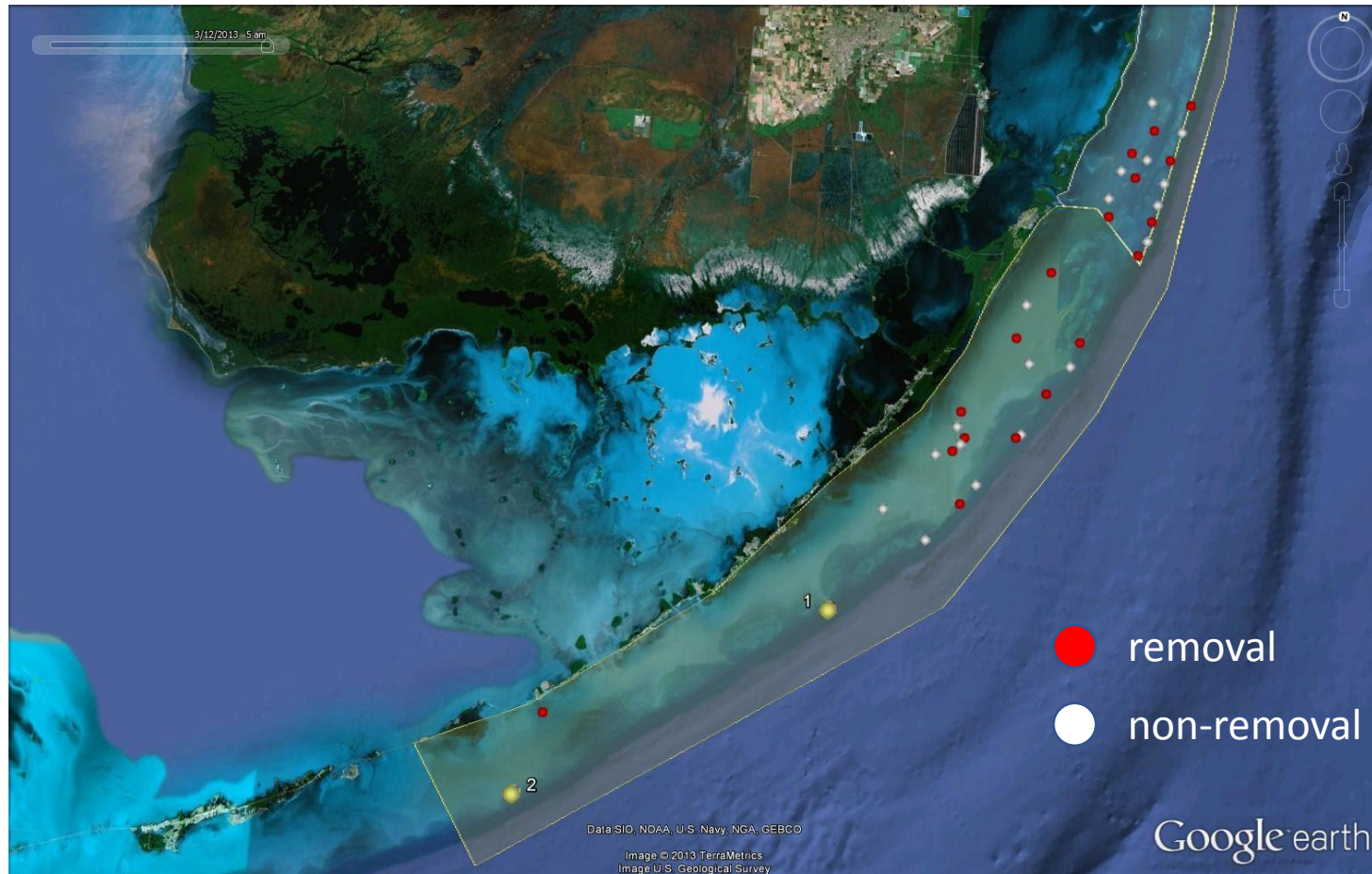
# Why use *R* to map?

- *R* is free and has TONS of online support/help
- Can centralizes your workflow to one program
- Easy way to share code and reproduce exactly
  - Or change things up! But still have everything documented



# Lionfish control studies

## South Florida



# Site Metadata

Region	Location	Site_name	Treatment	Lat	Long	Type	Site Length (m)	Site Width (m)
Florida	Biscayne	Biscayne1	non-removal	25.38374	-80.1593	patch	48	34
Florida	Biscayne	Biscayne2	Removal	25.3891	-80.1749	patch	56	39
Florida	Biscayne	Biscayne3	non-removal	25.37149	-80.1853	patch	29	26
Florida	Biscayne	Biscayne4	Removal	25.36596	-80.1703	patch	88	70
Florida	Biscayne	Biscayne5	non-removal	25.34455	-80.1968	patch	56	35
Florida	Biscayne	Biscayne6	Removal	25.32747	-80.1959	patch	43	42
Florida	Biscayne	Biscayne7	non-removal	25.4388	-80.1565	patch	48	35
Florida	Biscayne	Biscayne8	Removal	25.41211	-80.1529	patch	50	40

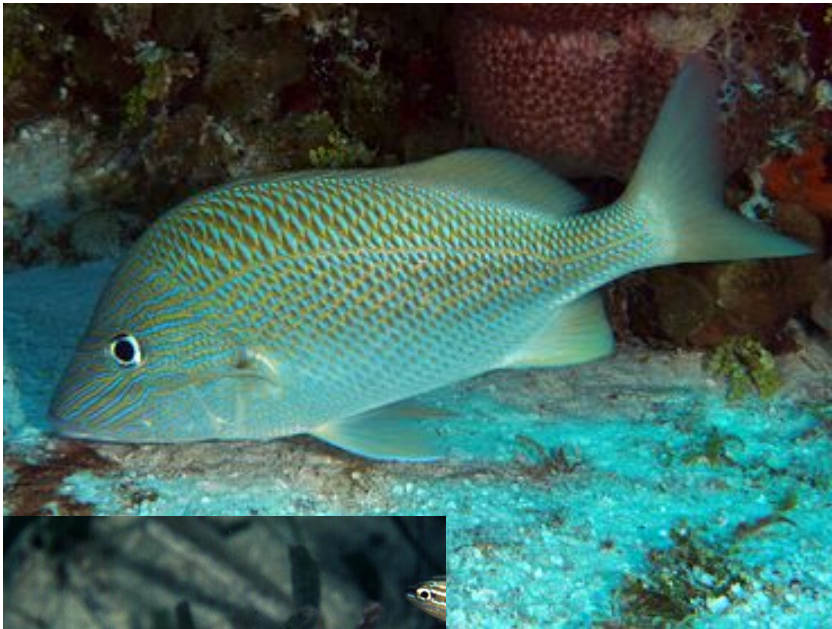
## Transect metadata

Transect_id	Site_name	Date
9575	Biscayne15	3/16/2015
9576	Biscayne4	3/16/2015
9577	Biscayne4	3/16/2015
9578	Biscayne3	3/16/2015
9579	Biscayne3	3/16/2015
9580	Biscayne9	3/18/2015
9581	Biscayne9	3/18/2015
9582	Biscayne13	3/18/2015



# Study species

**White grunt**



**Redband parrotfish**



## Species data

Transect_id	Species	TL_cm
9576	redband parrotfish	9
9576	redband parrotfish	10
9576	redband parrotfish	16
9576	white grunt	10
9576	white grunt	15
9576	white grunt	17
9576	white grunt	21
9576	white grunt	23

# Workshop Details

Question: What are the densities and distribution of redband parrotfish and white grunt off the coast of South Florida?

- Provide maps to help readers visualize the results

Sections:

- Install & Load Packages
- Import & Explore the Data
- Manipulate the Data (simple calculations, joining dataframes, etc.)
- Basic Comparison Graphics
- Mapping!

\*All workshop materials (data, tutorial, helper links, etc.) can be found on the OfficialBweems GitHub. <https://officialbweems.github.io/DirtyData-CleanMaps/>