

Seminoff EPac green turtle Stable Isotope Data Analysis

Lisa Komoroske

2016-12-22

Metadata

Site - an ordinal code for each site

Site code - 3 letter code for each site

Ordered_SITE - combined site code with ordered # roughly North to South for graphing ordering **Location_Label** - shortened locatin names for graphing labeling purposes **Location** - location of turtle capture

LAB ID - self explanatory

Collection Date - self explanatory

Run Date - self explanatory

%N - elemental concentration of N. that is, how much each sample is made up of nitrogen. this is used as a diagnostic to know sample quality (anything outside of ~9-17% N raises a red flag)

%C - elemental concentration of C. that is, how much each sample is made up of carbon. this is used as a diagnostic to know sample quality (anything outside of ~40-60% C raises a red flag)

d15N - stable isotope value for N

d13C - stable isotope value for C

Color - rarely filled in. This is largely for the Galapagos and Colombia, where black turtles (eastern Pacific stock) and yellow turtles (west Pacific origins) co-exist. Safe to say that anything that is not filled in here would be a 'black' morph.

SCL - straight carapace length

CCL_calc_fromSCL - used formula from Seminoff et al. 2003 to interpolate CCLs from SCLs **CCL_empirical** - curved carapace length-these are only the empirically collected values

CCL_combined - curved carapace length-I pasted over all the empirical values, and then for ones that were missing empirical CCL but had **CCL_calc_fromSCL**, I added these in; so this is the combined variable that we'll use for size relationships

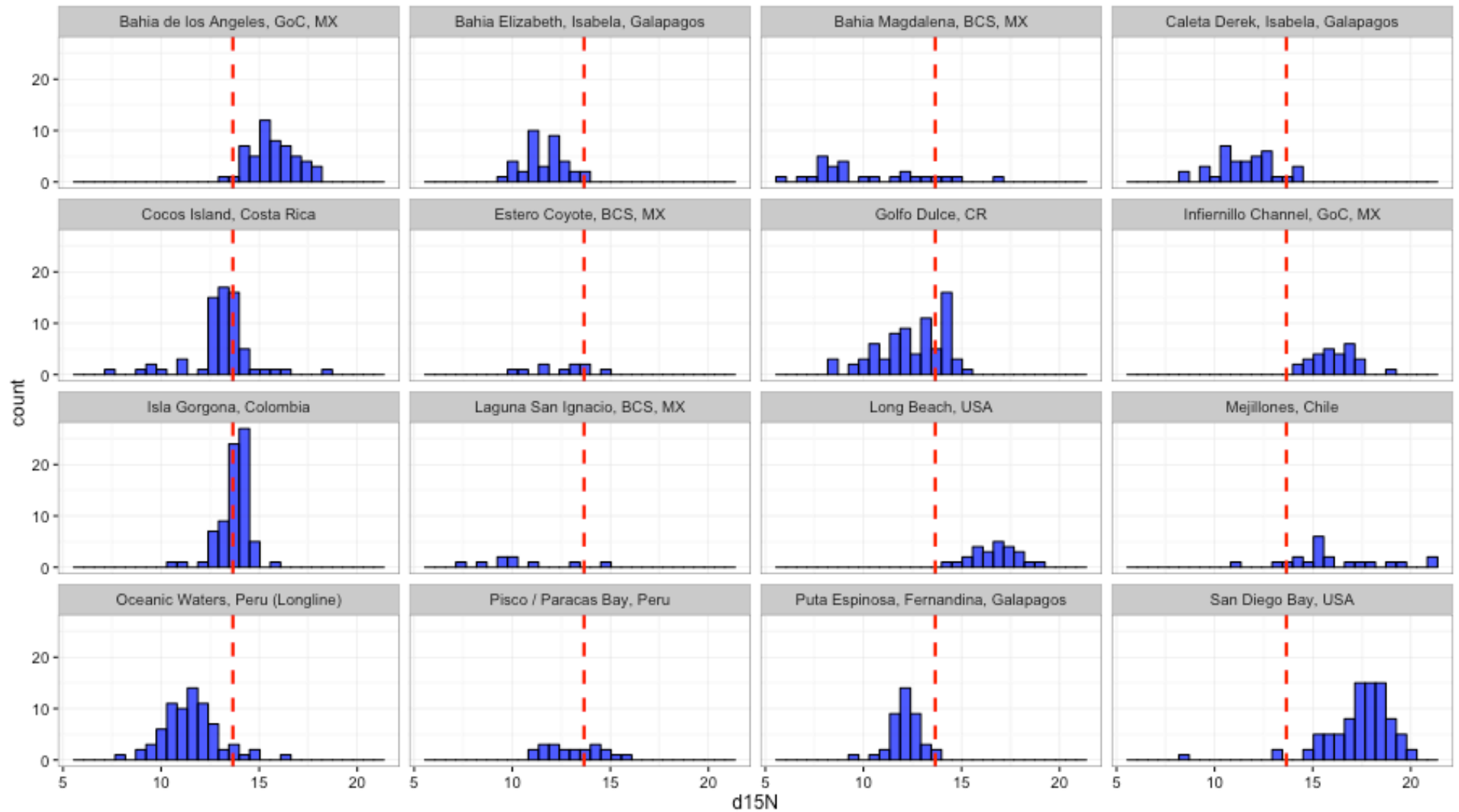
Summary (Sample Sizes)

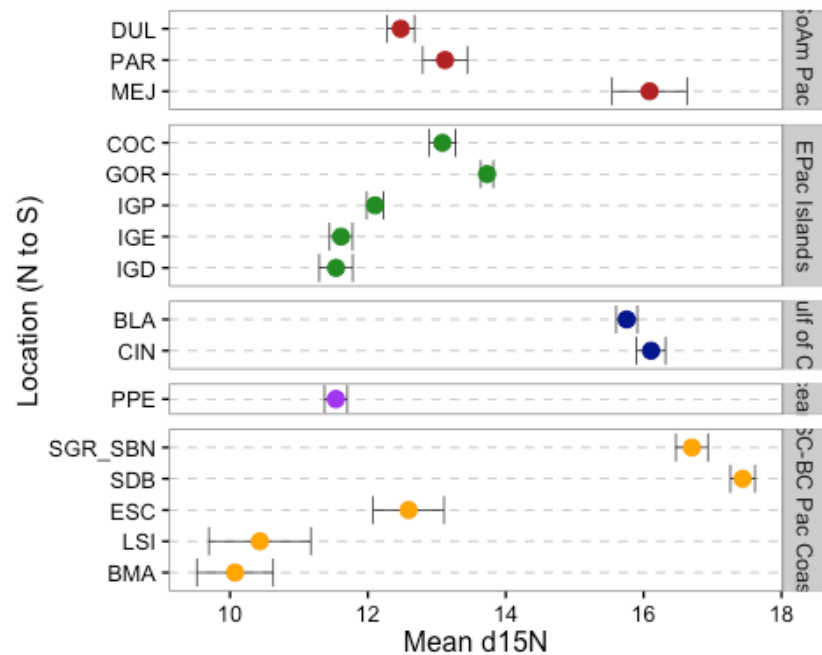
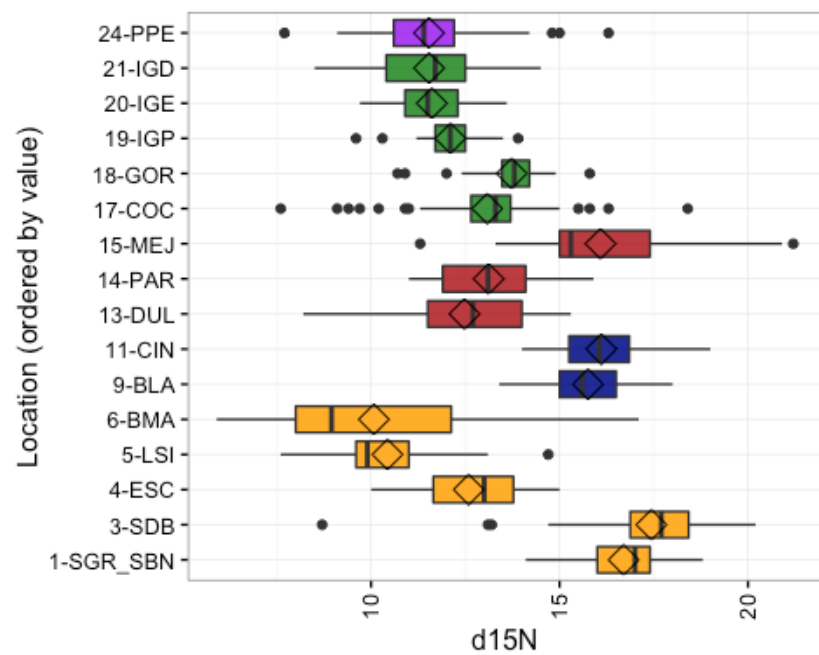
##

| | | | | | | | |
|----|-----------|--------|--------|--------|--------|--------|--------|
| ## | 1-SGR_SBN | 3-SDB | 4-ESC | 5-LSI | 6-BMA | 9-BLA | 11-CIN |
| ## | 25 | 88 | 10 | 9 | 26 | 53 | 28 |
| ## | 13-DUL | 14-PAR | 15-MEJ | 17-COC | 18-GOR | 19-IGP | 20-IGE |
| ## | 74 | 21 | 21 | 67 | 76 | 41 | 37 |

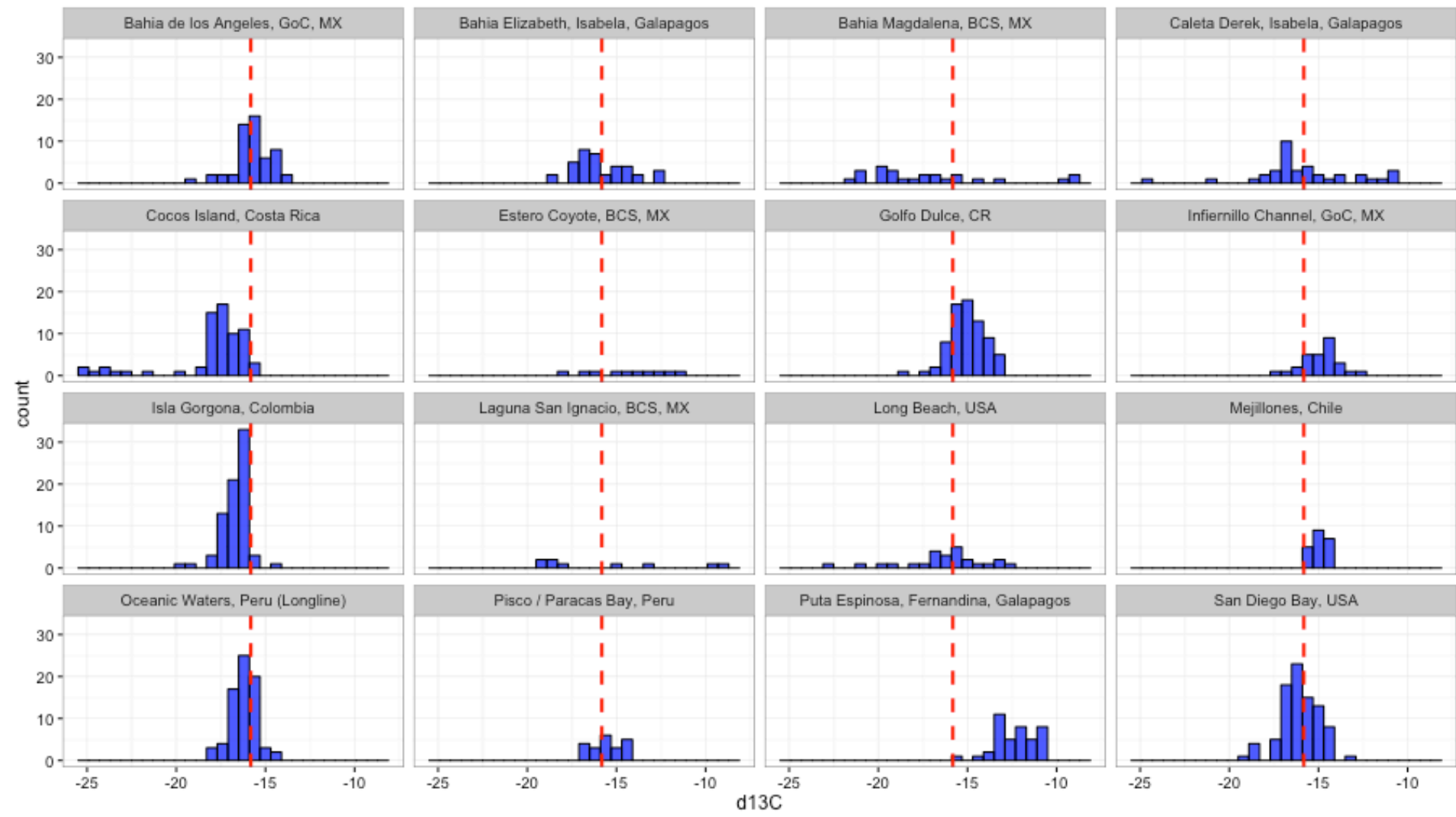
| | | |
|----|--------|--------|
| ## | 21-IGD | 24-PPE |
| ## | 37 | 74 |

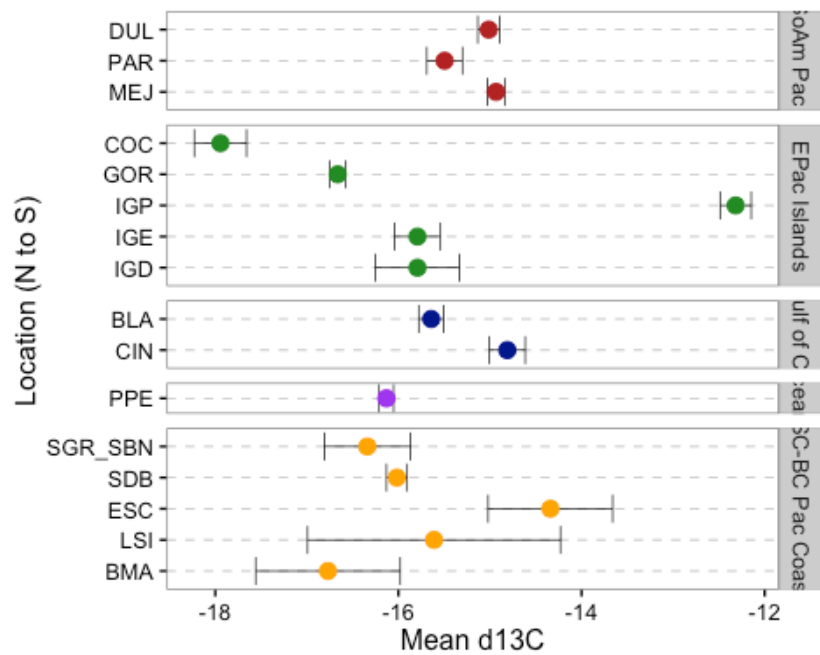
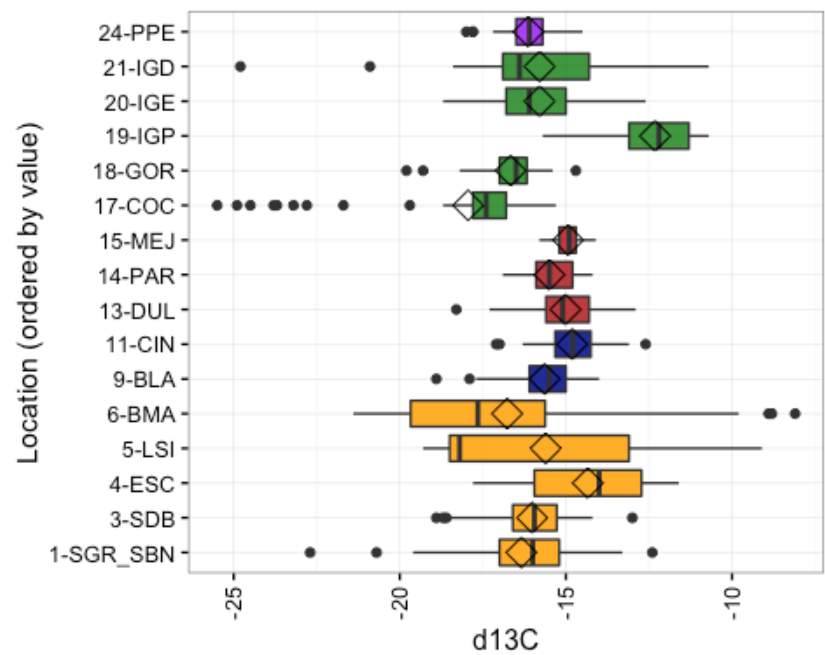
Laguna San Ignacio now only one with lower sample #s-confirm with Jeff keeping/seperate with Estero Coyote



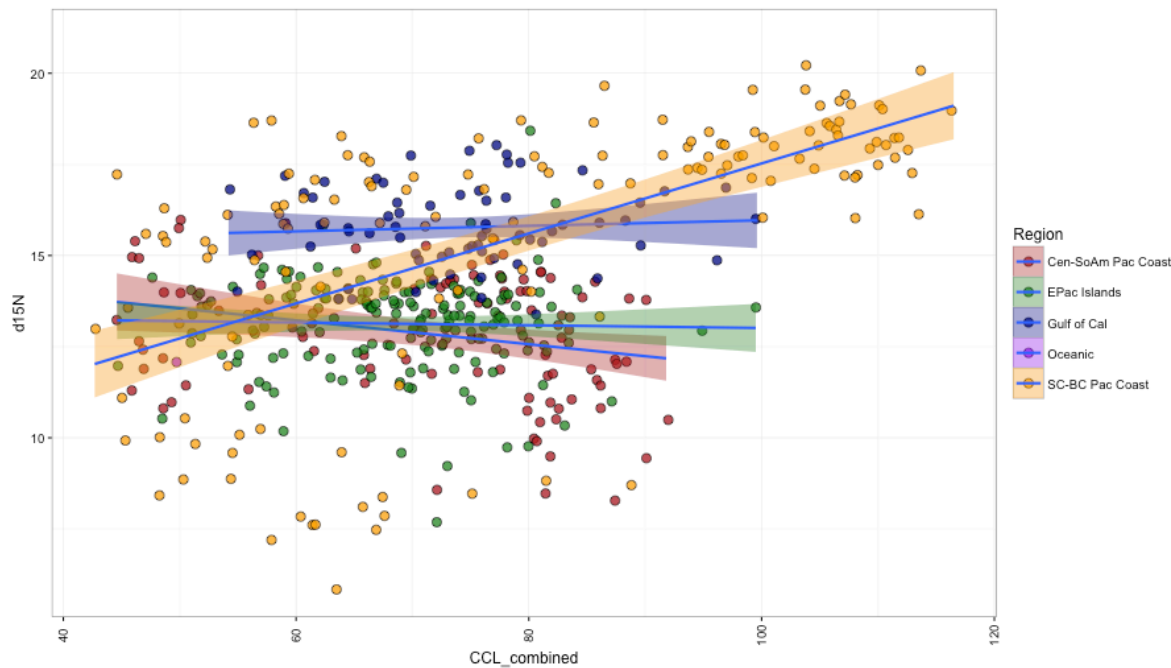
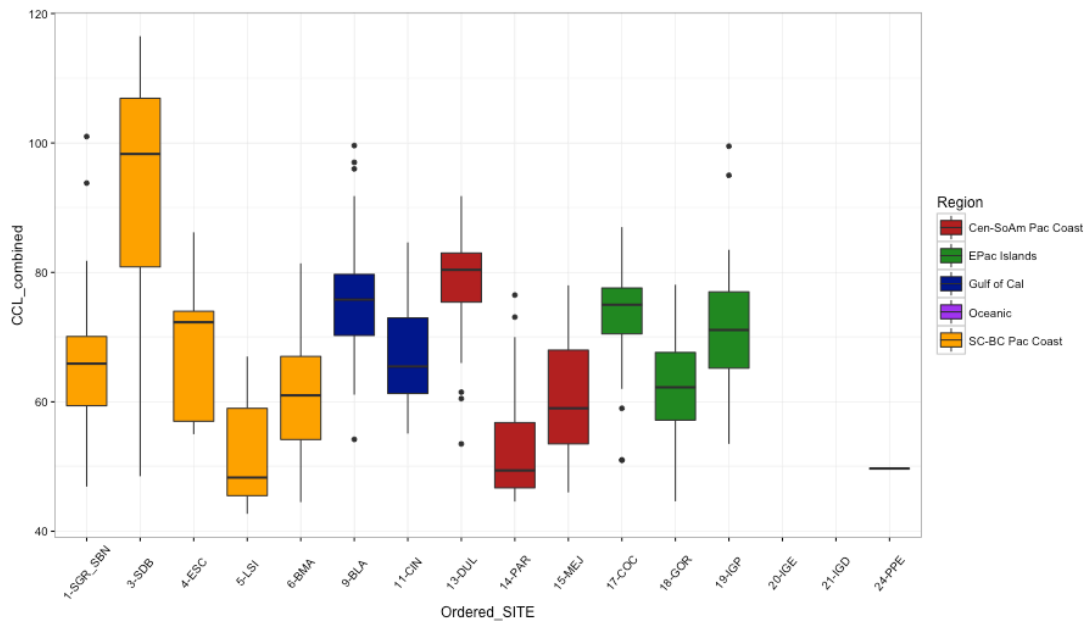


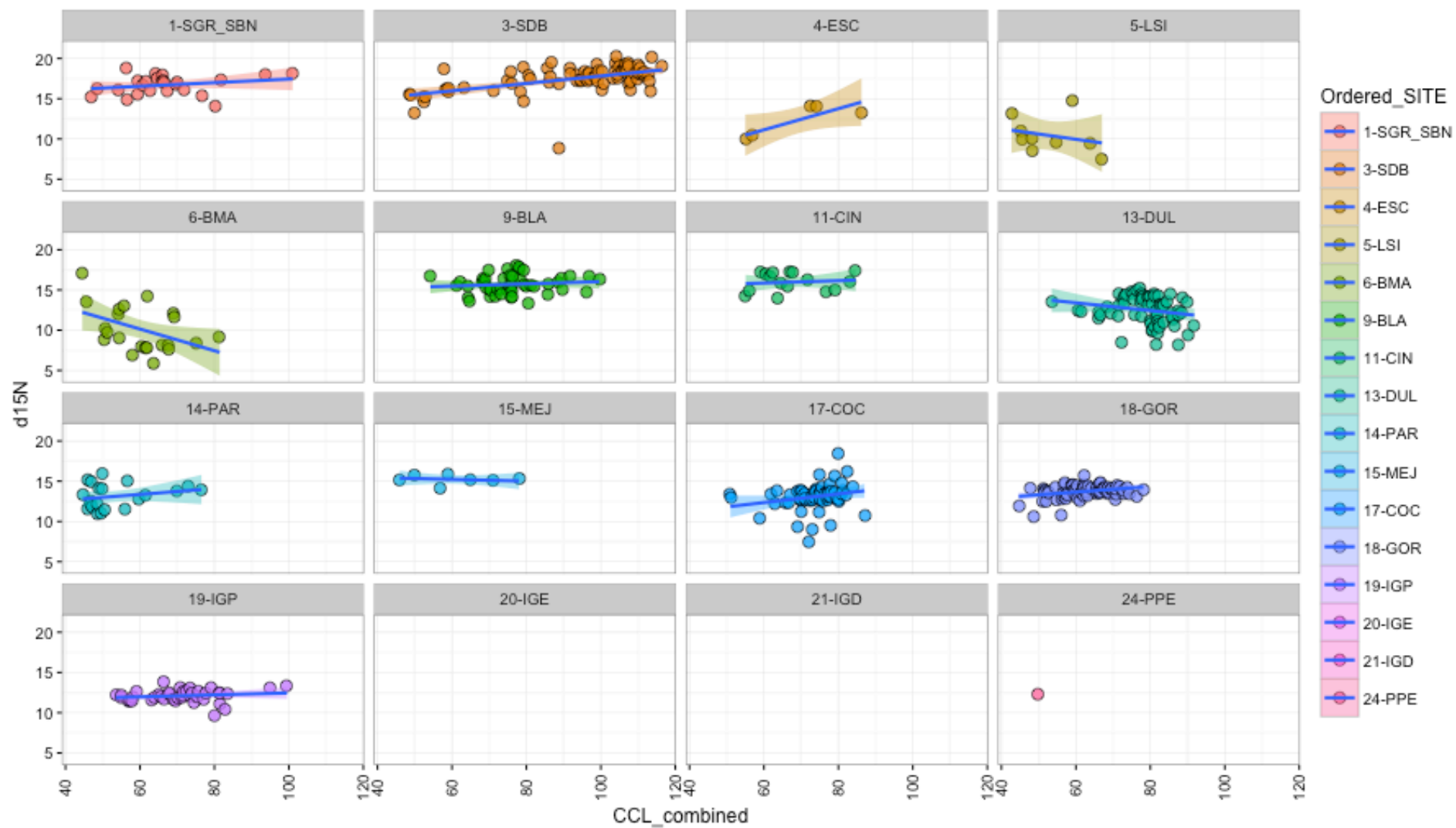
Carbon

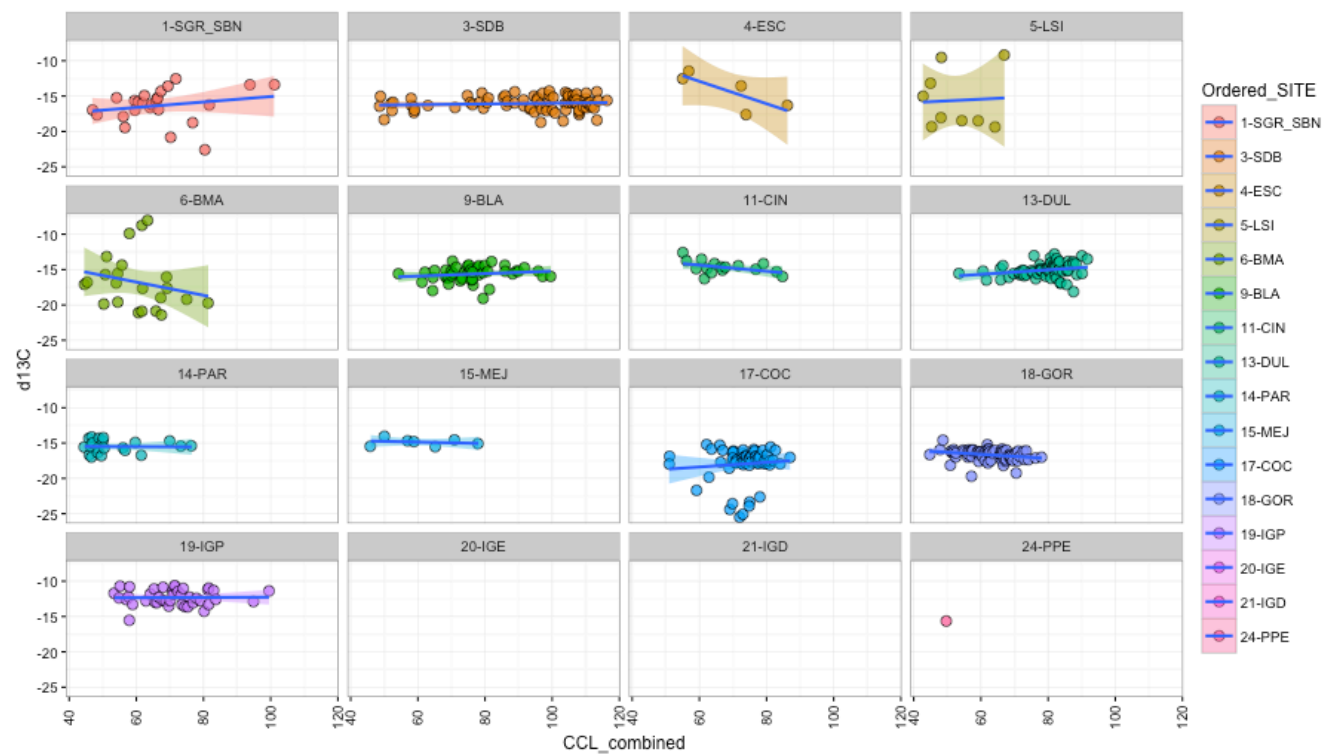
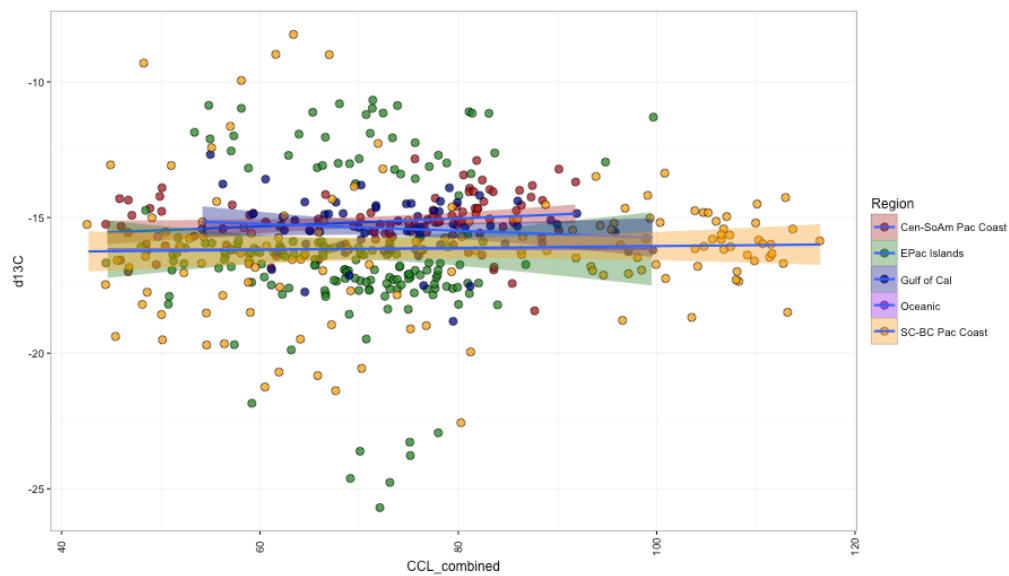




Turtle Size or Color








```
m1<-lm(data=data, d15N~CCL_combined*Ordered_SITE)
## CCL_combined:Ordered_SITE6-BMA    -0.156964    0.039628   -3.961 8.64e-05 ***
## CCL_combined:Ordered_SITE13-DUL   -0.070234    0.032281   -2.176 0.03008 *
```

```
## Anova Table (Type II tests)
```

```
## Response: d15N
```

```
##               Sum Sq Df F value    Pr(>F)
## CCL_combined      38.70  1 19.9084 1.021e-05 ***
## Ordered_SITE    1647.81 13 65.2055 < 2.2e-16 ***
## CCL_combined:Ordered_SITE  97.68 12 4.1874 2.868e-06 ***
## Residuals       900.04 463
```

```
#remember to come back and remove point to see if makes difference in weight of sign. at BMA
```

