

Sarasota MMS Sternite Dataset Preliminary Anaysis

Code ▾

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- Preliminary Analysis
 - Both Species
 - AEG Species
 - ALB Species
 - Between Species AEG and ALB

This analysis is done in a reproducible research manner. All statistical analysis and figures below were created in the open source software package R.

Preliminary Analysis

Both Species

Load Data and Summarize

Code

Code

DATE	LOC	SPECIES	SCUTUM	STERGUM

Length:1236	Min. : 25	Length:1236	Min. :0.0000	Min. :0.0000
Class :character 1st Qu.:11480 Class :character 1st Qu.:0.1000 1st Qu.:0.8000				
Mode :character Median :21489 Mode :character Median :0.2000 Median :1.0000				
NA	Mean :17218	NA	Mean :0.3308	Mean :0.8674
NA	3rd Qu.:24080	NA	3rd Qu.:0.6000	3rd Qu.:1.0000
NA	Max. :35410	NA	Max. :1.0000	Max. :1.0000
NA	NA's :645	NA	NA	NA

Code

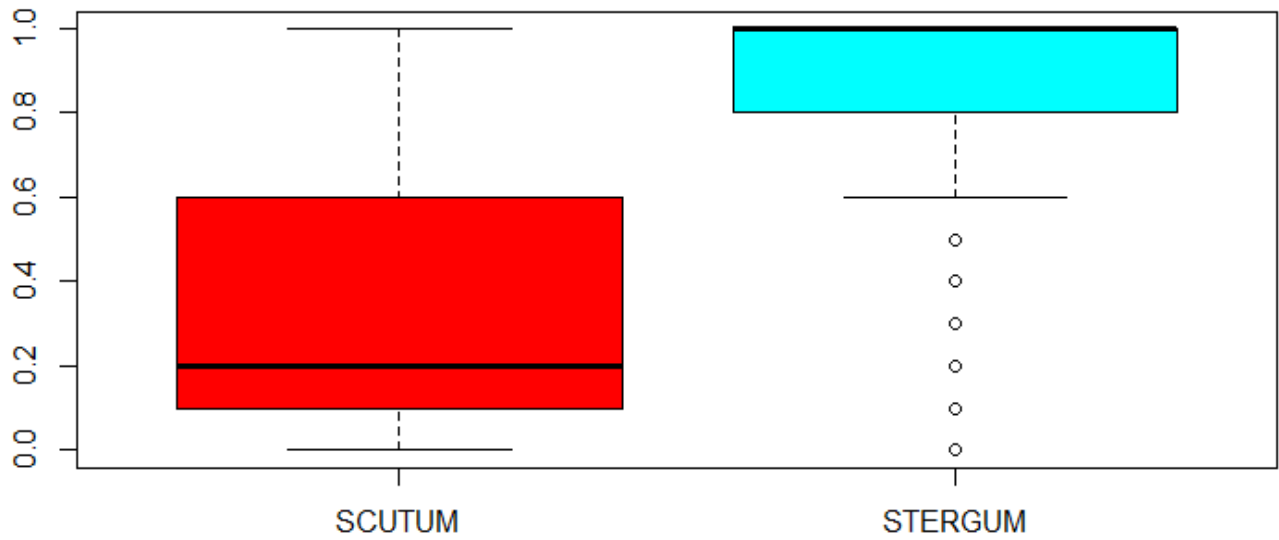
 	vars	n	mean	sd	median	trimmed	mad	min	max
SCUTUM	1	1236	0.3308	0.3337	0.2	0.2936	0.2965	0	1
STERGUM	2	1236	0.8674	0.2247	1	0.9228	0	0	1

Table: Table continues below

 	range	skew	kurtosis	se
SCUTUM	1	0.7768	-0.8385	0.009493
STERGUM	1	-2.052	3.441	0.006392

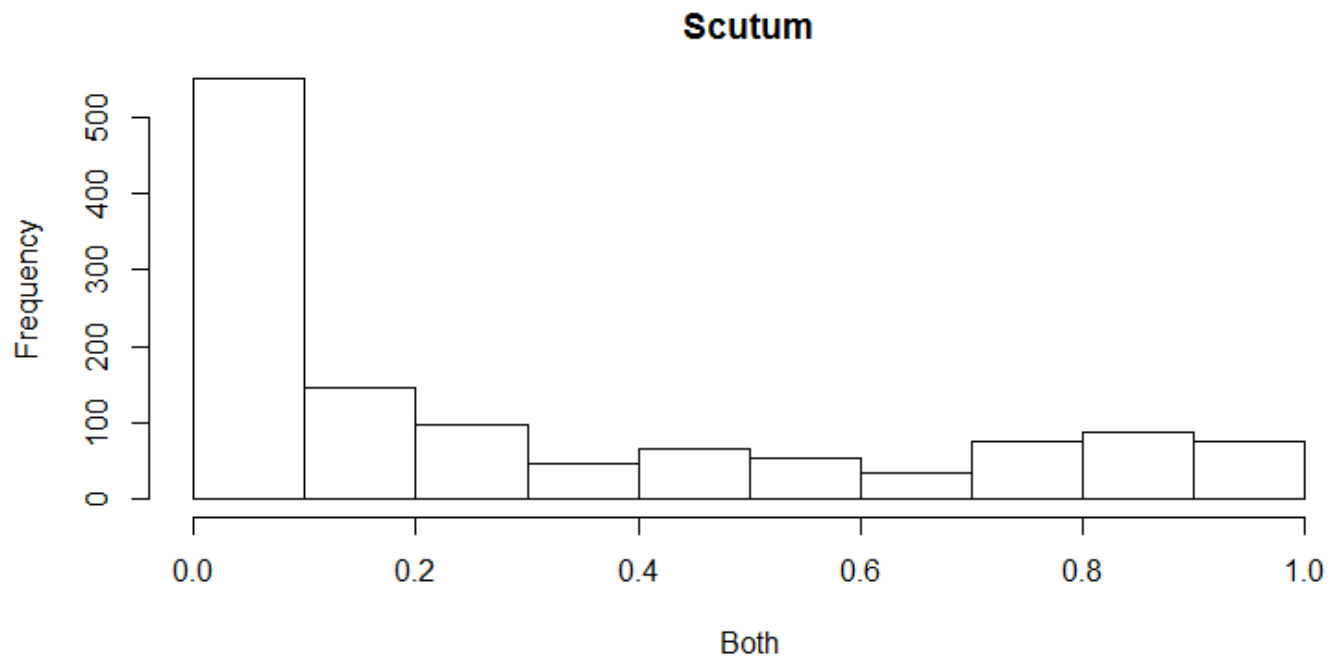
Distribution for Both Species

Code

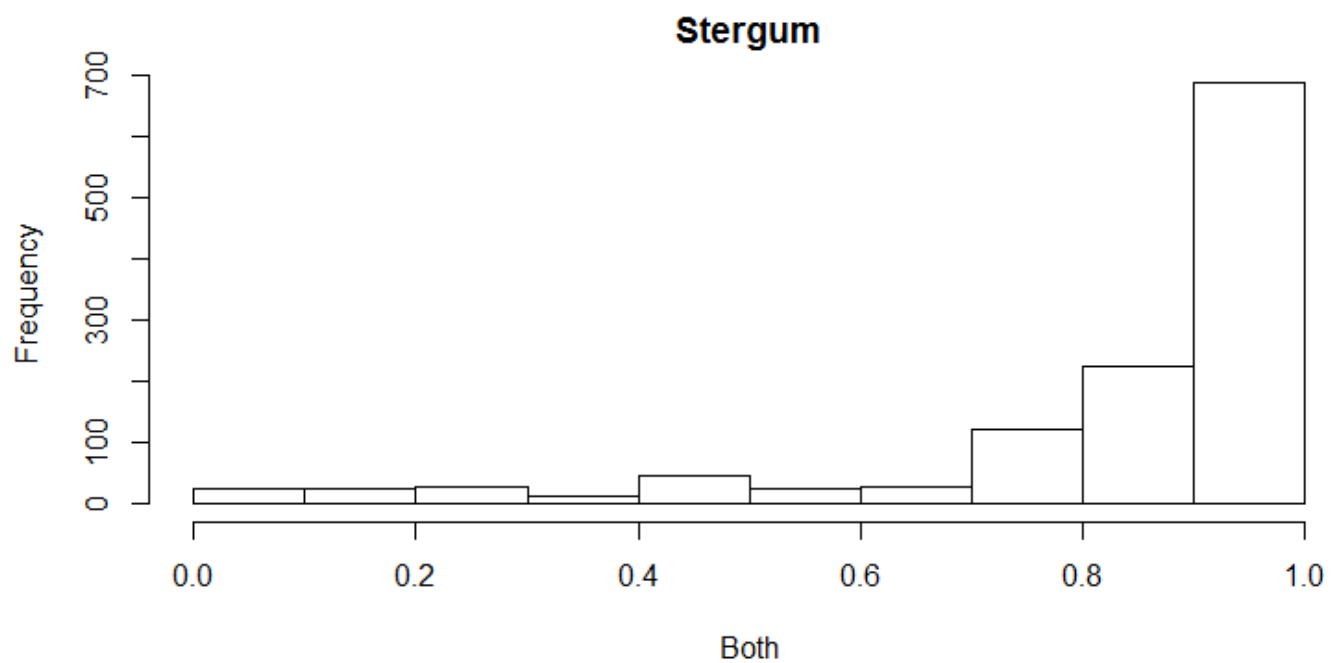


Histogram of Scutum for Both Species

Code



Histogram of Stergum for Both Species

[Code](#)

Discussion

When looking at both species, the scutum and stergum datasets appear to be heavily skewed, though in opposite directions.

AEG Species

AEG Data Summarize

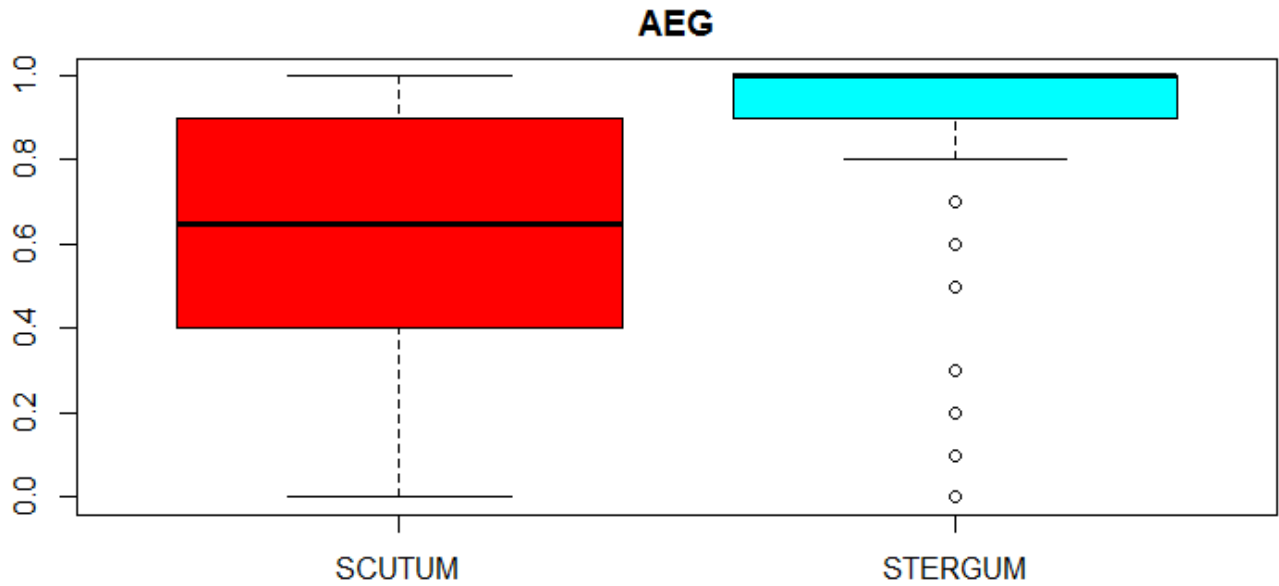
[Code](#)

SCUTUM	STERGUM

Min. :0.0000	Min. :0.0000
1st Qu.:0.4000	1st Qu.:0.9000
Median :0.6500	Median :1.0000
Mean :0.6049	Mean :0.9152
3rd Qu.:0.9000	3rd Qu.:1.0000
Max. :1.0000	Max. :1.0000

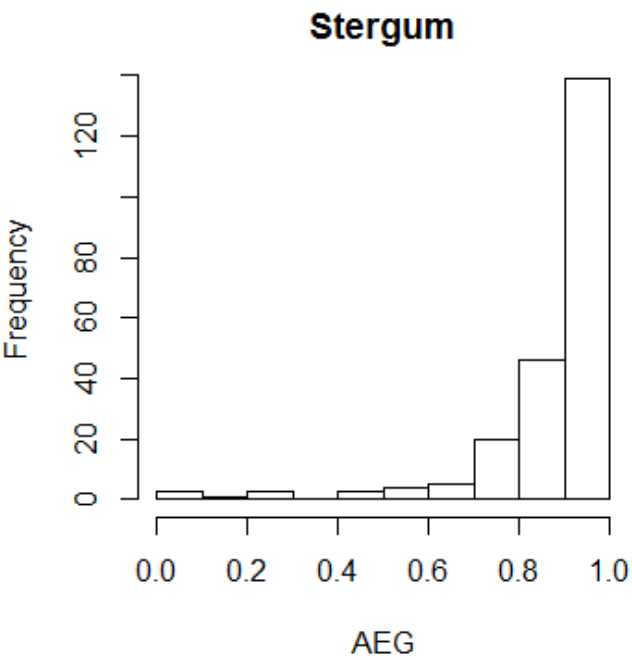
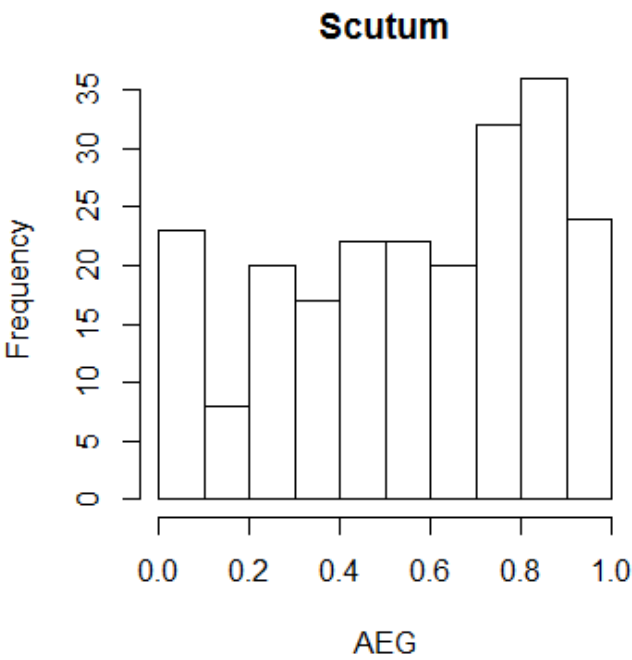
AEG Distribution

Code



AEG Within Species Distribution

Code



Discussion

When looking at the AEG species, the stergum dataset appears to be heavily skewed while the scutum appears to be closer to normal.

ALB Species

ALB Data Summarize

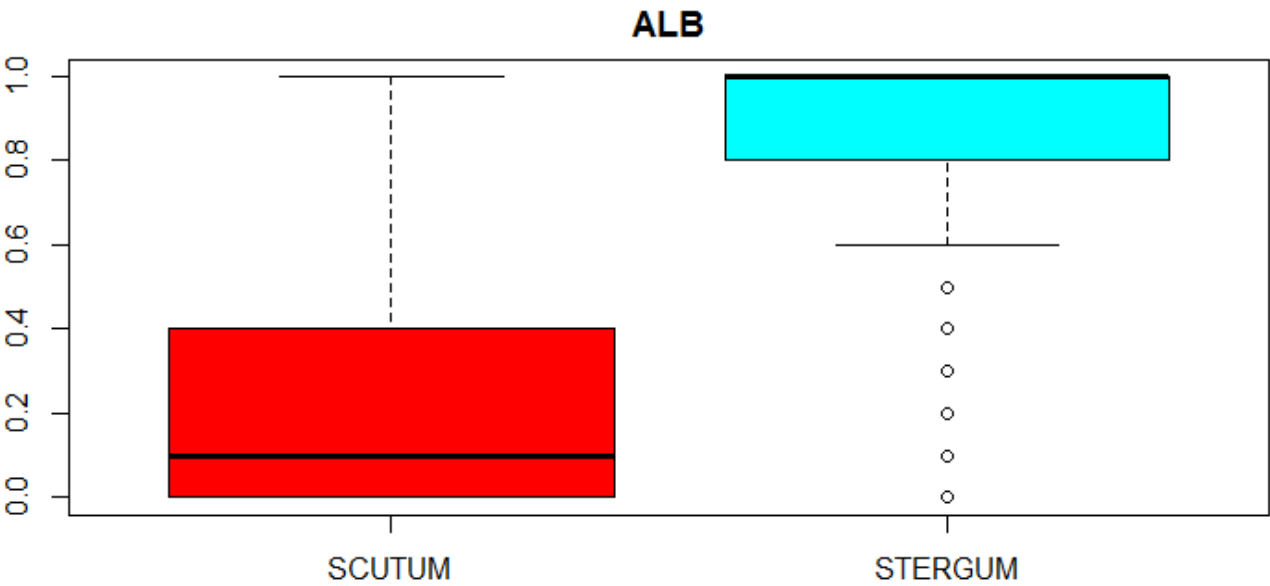
Code

SCUTUM	STERGUM

Min. :0.0000	Min. :0.0000
1st Qu.:0.0000	1st Qu.:0.8000
Median :0.1000	Median :1.0000
Mean :0.2702	Mean :0.8568
3rd Qu.:0.4000	3rd Qu.:1.0000
Max. :1.0000	Max. :1.0000

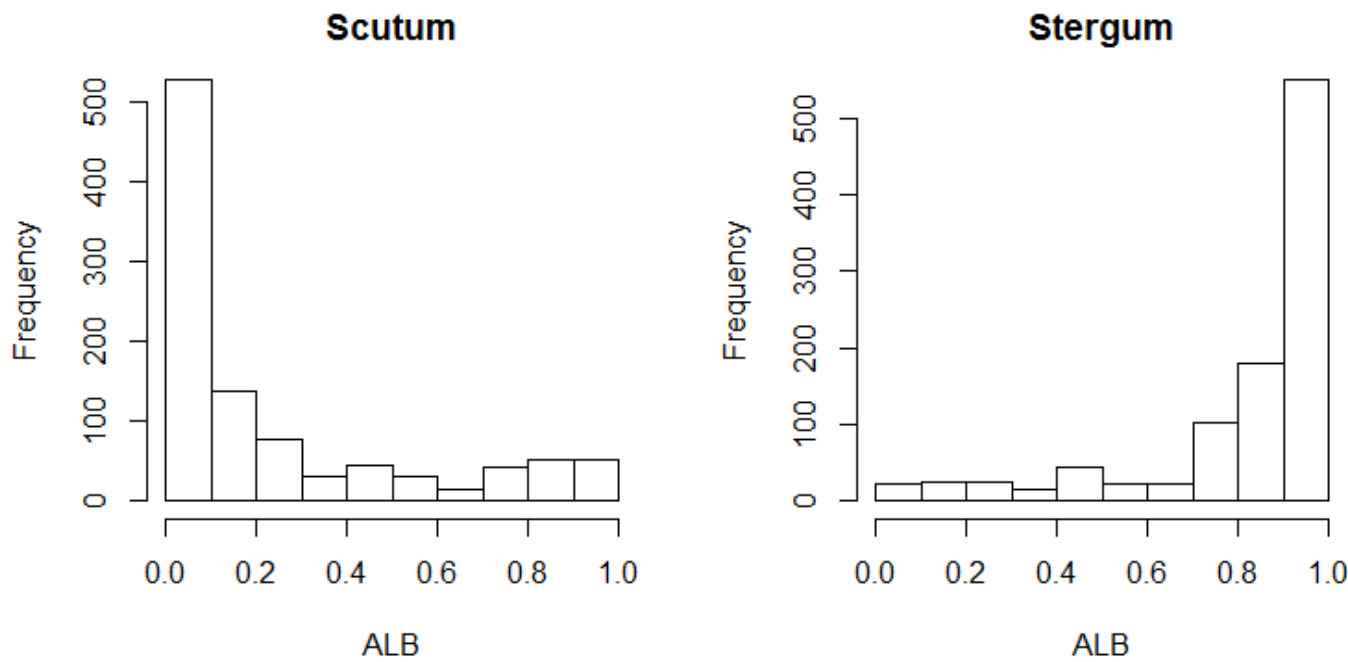
ALB Distribution

Code



ALB Within Species Distribution

Code



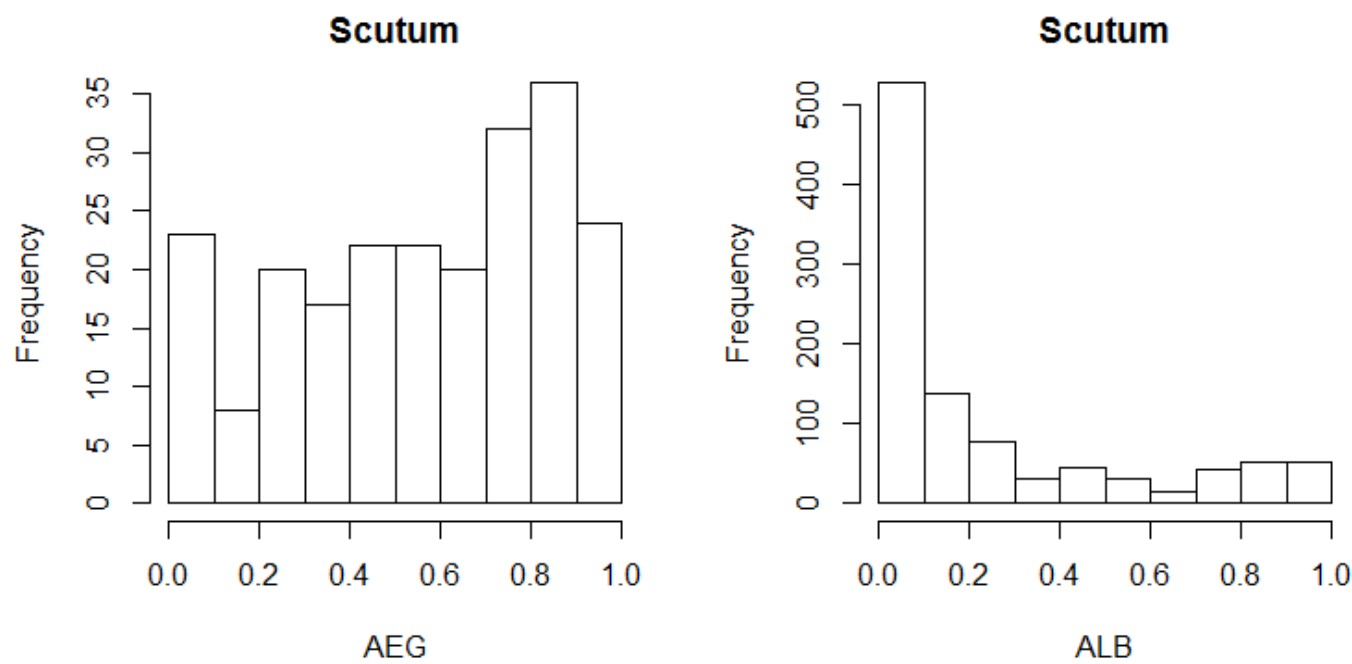
Discussion

When looking at the ALB species, the scutum and stergum datasets appear to be heavily skewed, though in opposite directions.

Between Species AEG and ALB

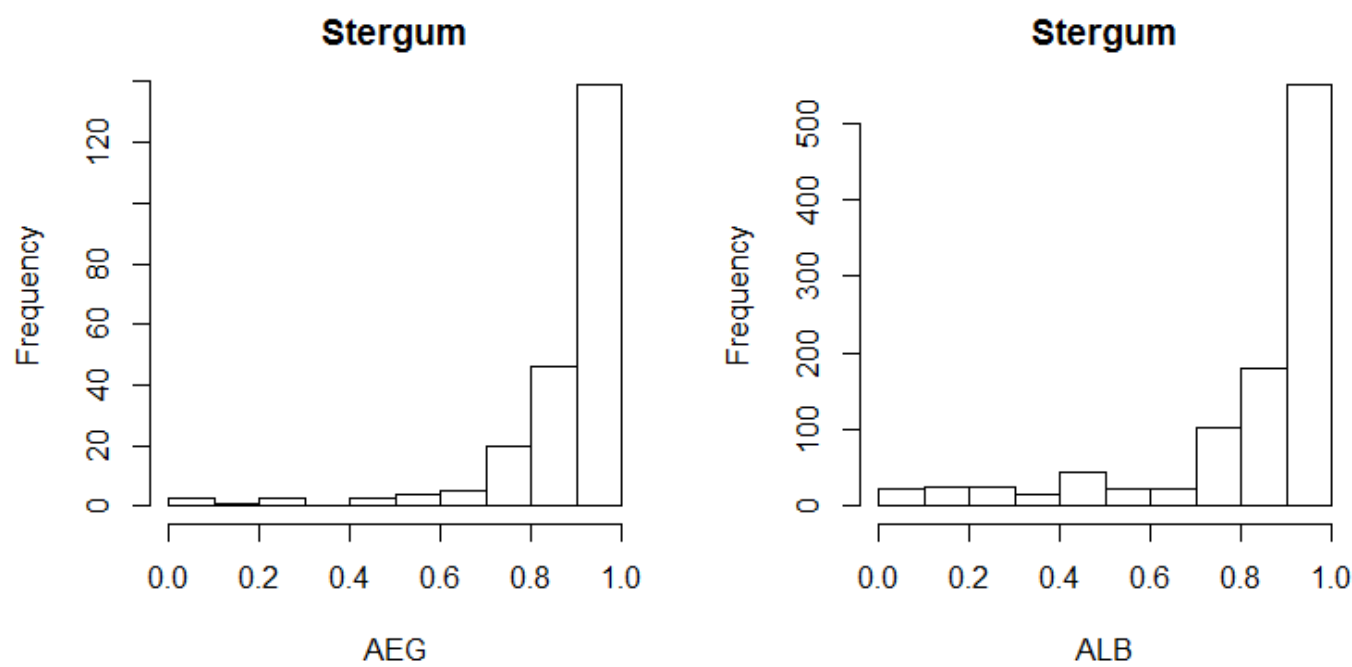
Scutum Between Species Distribution

Code



Stergum Between Species Distribution

Code



Discussion

When looking between the AEG and ALB species, the stergum datasets appear to be heavily skewed in the same direction while the scutum datstets appear to be different between species.