**Results from with zero lines left in:**

**Normality:**

Only SM H’ normal (W = 0.9571, p-value = 0.4876)

**ANOVA:**

ANOVA finds differences between SM and NS, SM and OS but not OS and NS:

> summary(aov(pred.shannon ~ ReefType, data=pd1))

Df Sum Sq Mean Sq F value Pr(>F)

ReefType 2 8.601 4.300 15.11 5.42e-06 \*\*\*

Residuals 57 16.220 0.285

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> pd1aov <- aov(pred.shannon ~ ReefType, data=pd1)

> TukeyHSD(pd1aov)

Tukey multiple comparisons of means 95% family-wise confidence level

Fit: aov(formula = pred.shannon ~ ReefType, data = pd1)

$ReefType

diff lwr upr p adj

Off Shore-Near Shore 0.1925546 -0.2133887 0.598498 0.4928643

Sea Mount-Near Shore 0.8819393 0.4759960 1.287883 0.0000075

Sea Mount-Off Shore 0.6893847 0.2834414 1.095328 0.0004023

---------

**Zero lines in and bootstrapped**

**Normality:**

OS Spp rich and SM H’

**ANOVA**

ANOVA finds differences between ALL reeftypes:

> summary(aov(bootpshan ~ ReefType, data= pdboot))

Df Sum Sq Mean Sq F value Pr(>F)

ReefType 2 85.94 42.97 3046 <2e-16 \*\*\*

Residuals 597 8.42 0.01

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> bootaov <- aov(bootpshan ~ ReefType, data= pdboot)

> TukeyHSD(bootaov)

Tukey multiple comparisons of means 95% family-wise confidence level

Fit: aov(formula = bootpshan ~ ReefType, data = pdboot)

$ReefType

diff lwr upr p adj

Off Shore-Near Shore 0.2043314 0.1764261 0.2322368 0

Sea Mount-Near Shore 0.8852417 0.8573364 0.9131471 0

Sea Mount-Off Shore 0.6809103 0.6530049 0.7088156 0

**Results with zero lines removed:**

**Normality:**

As per above (no zero lines removed from SM data): SM H’ normal (W = 0.9571, p-value = 0.4876)

**ANOVA:**

ANOVA finds differences between SM and NS, SM and OS but not OS and NS:

Df Sum Sq Mean Sq F value Pr(>F)

ReefType 2 5.615 2.8074 9.07 0.000456 \*\*\*

Residuals 48 14.858 0.3095

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> pd1aov <- aov(pred.shannon ~ ReefType, data=pd1)

> TukeyHSD(pd1aov)

Tukey multiple comparisons of means

95% family-wise confidence level

Fit: aov(formula = pred.shannon ~ ReefType, data = pd1)

$ReefType

diff lwr upr p adj

Off Shore-Near Shore 0.09313046 -0.3966174 0.5828783 0.8902310

Sea Mount-Near Shore 0.72970726 0.2503383 1.2090762 0.0016724

Sea Mount-Off Shore 0.63657680 0.1994171 1.0737366 0.0026906

**Zero lines removed and bootstrapped**

**Normality:**

Now all normal except NS Spp rich

**ANOVA**

ANOVA finds differences between ALL reeftypes (output as above)