The following supplement accompanies the article

Changing light levels induce photo-oxidative stress and alterations in shell density of *Amphistegina lobifera* (Foraminifera)

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R scripts

Survivorship and bleaching frequency analyses:

GLMM

```
library(lme4)

y <- cbind(V1,V2)

M1<-glmer(y ~ Light*Reef.site + (1|Tank/Reef site), family =

binomial, data=data file)

summary(M1)
```

ANOVA

```
library(car)

Anova(M1,type="III")
```

Tukey's HSD *post hoc* test

```
library(multcomp)

M.tukeyS<-glmer(cbind(V1,V2)~ Reef site*Light+(1|Reef.site/Tank),

family=binomial, data=data file)

summary(glht(M.tukeyS,linfct=mcp(Reef site*Light ="Tukey")))
```

Initial size

```
splitplotmdl <- aov(Size ~ Light*Reef site + Error(Tank), data= data file
summary(splitplotmdl)
```

Growth rates

```
splitplotmdl <- aov(Growth ~ Light*Reef site + Error(Tank), data= data file
summary(splitplotmdl)
```

Tukey's HSD *post hoc* test

```
library(multcomp)
summary(glht(splitplotmdl,linfct=mcp(Reef site*Light ="Tukey")))
```

Shell density

Partially Nested Balanced ANOVA

```
density.aov <- aov(Density ~ Reef site*Light*Chamber +
Error(Tank/(Chamber*Reef site)), data file)
summary(density.aov)
```

Tukey's HSD *post hoc* test

```
TukeyHSD(density.aov,"as.factor(Reef site*Light*Chamber)", data=data file)
```