QuantMethodsBasics

Reading Data

```
tgpp<-read.csv("https://raw.githubusercontent.com/dmcglinn/quant_methods/gh-pages/data/tgpp.csv", header = T)
```

```
tgpp1<-read.csv("../Data/tgpp.csv", header = T)
```

1.) What are the names of the columns in the data set?

```
colnames(tgpp)
```

```
##  [1] "plot"     "year"     "record_id" "corner"    "scale"
##  [6] "richness" "easting"   "northing"  "slope"     "ph"
## [11] "yrsslb"
```

plot, year, record_id, corner, scale, richness, easting, northing, slope, ph, yrsslb

2.) How many rows and columns in this data set?

```
dim(tgpp)
```

```
## [1] 4080    11
```

4080 rows and 11 columns

3.) What kind of object is each data column?

```
sapply(tgpp, class, simplify = T)
```

```
##      plot       year record_id    corner     scale   richness    easting
## "integer" "integer" "integer" "integer" "numeric" "integer" "integer"
##  northing     slope        ph    yrsslb
## "integer" "integer" "numeric" "numeric"
```
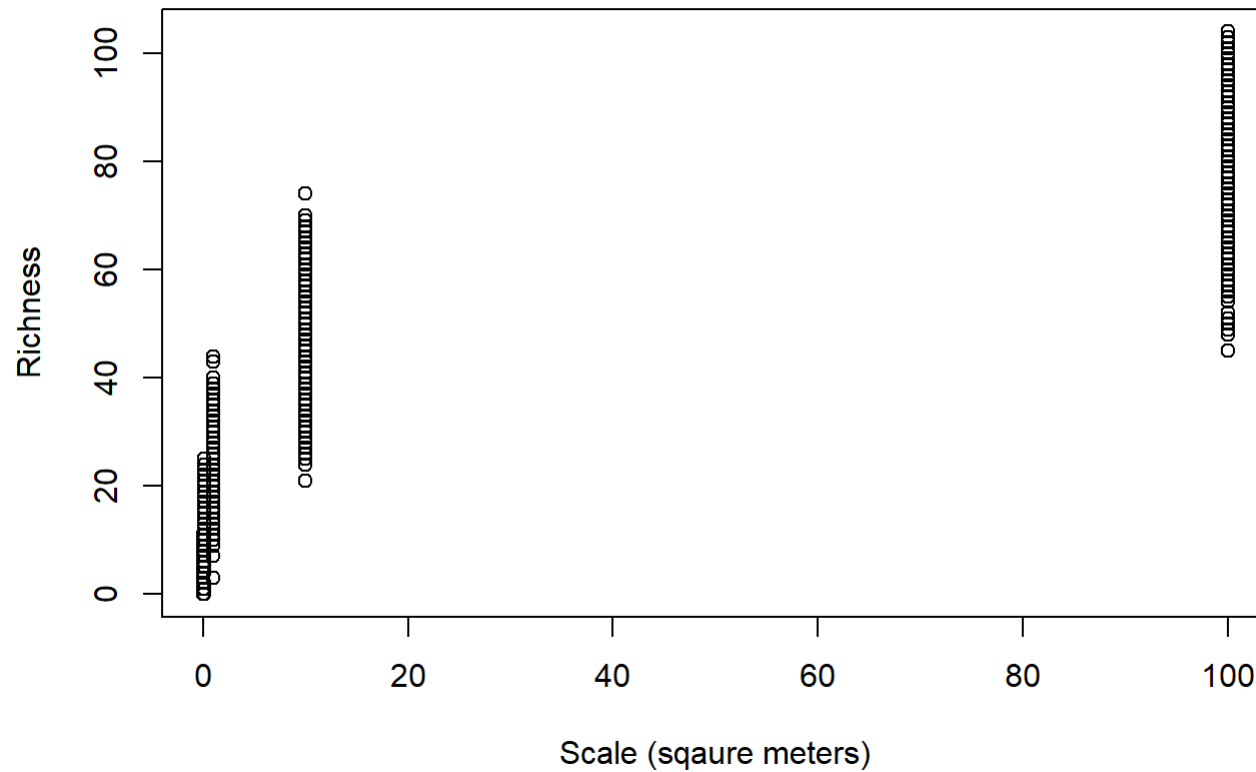
4.) What are the values of of the data file for rows 1,5,8 and columns 3,7, and 10?

```
tgpp[c(1,5,8),c(3,7,10)]
```

```
##    record_id easting  ph
## 1        187  727000 6.9
## 5        191  727000 6.9
## 8        194  727000 6.9
```

5.) Create a pdf of the relationship between the variables "scale" and "richness".
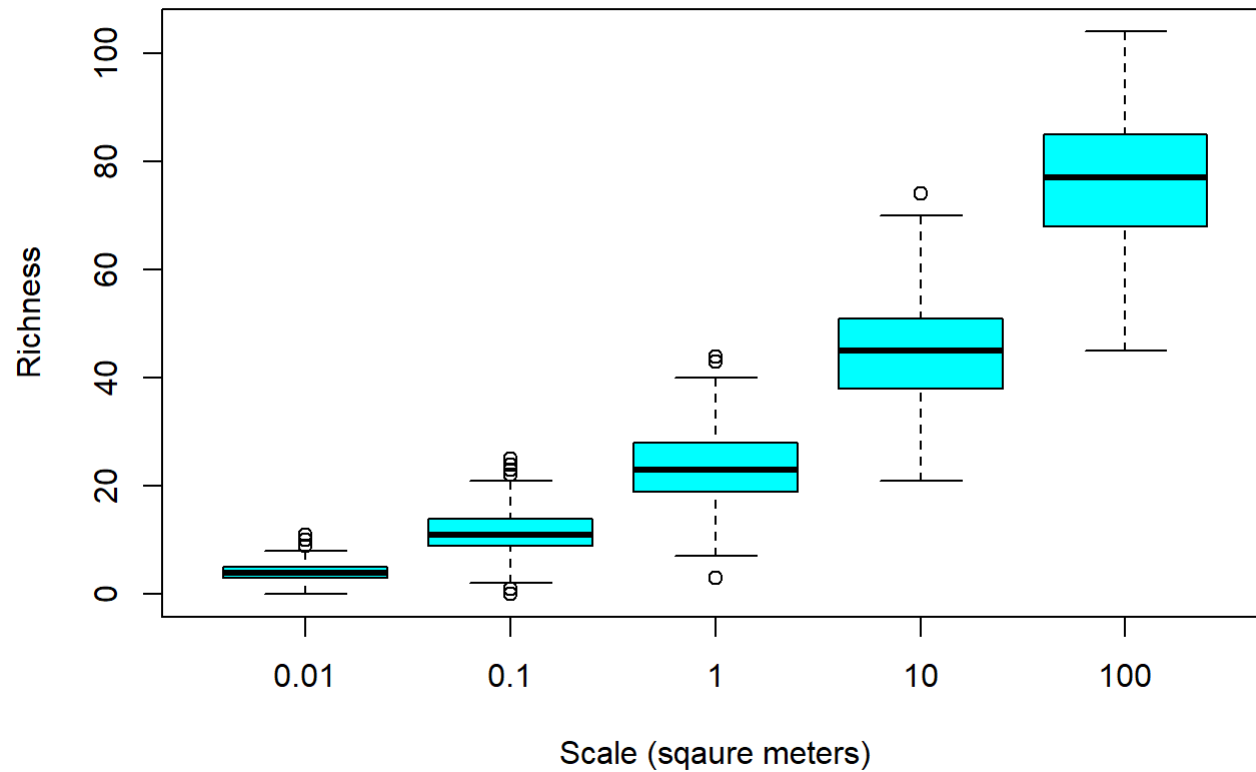
```
plot(richness~scale, xlab="Scale (sqaure meters)", ylab = "Richness", col=9, data = tgpp)
```

```
#sending to PDF
pdf('../Data/inflammation_fig.pdf')
plot(richness~scale, xlab="Scale (sqaure meters)", ylab = "Richness", col=9, data = tgpp)
dev.off()
```

```
## png
##   2
```

```
#setting scale as factor
plot(richness~as.factor(scale), xlab="Scale (sqaure meters)", ylab = "Richness", col=5, data = tgpp)
```

```
#sending to PDF
pdf('../Data/inflammation_fig1.pdf')
plot(richness~as.factor(scale), xlab="Scale (sqaure meters)", ylab = "Richness", col=5, data = tgpp)
dev.off()
```

```
## png
##    2
```

What happens when you set the plot argument log equal to 'xy'?

```
plot(richness~scale, log='xy', xlab="Scale (square meters)", ylab = "Richness", col=9, data = tgpp)
```

```
## Warning in xy.coords(x, y, xlabel, ylabel, log): 4 y values <= 0 omitted
## from logarithmic plot
```
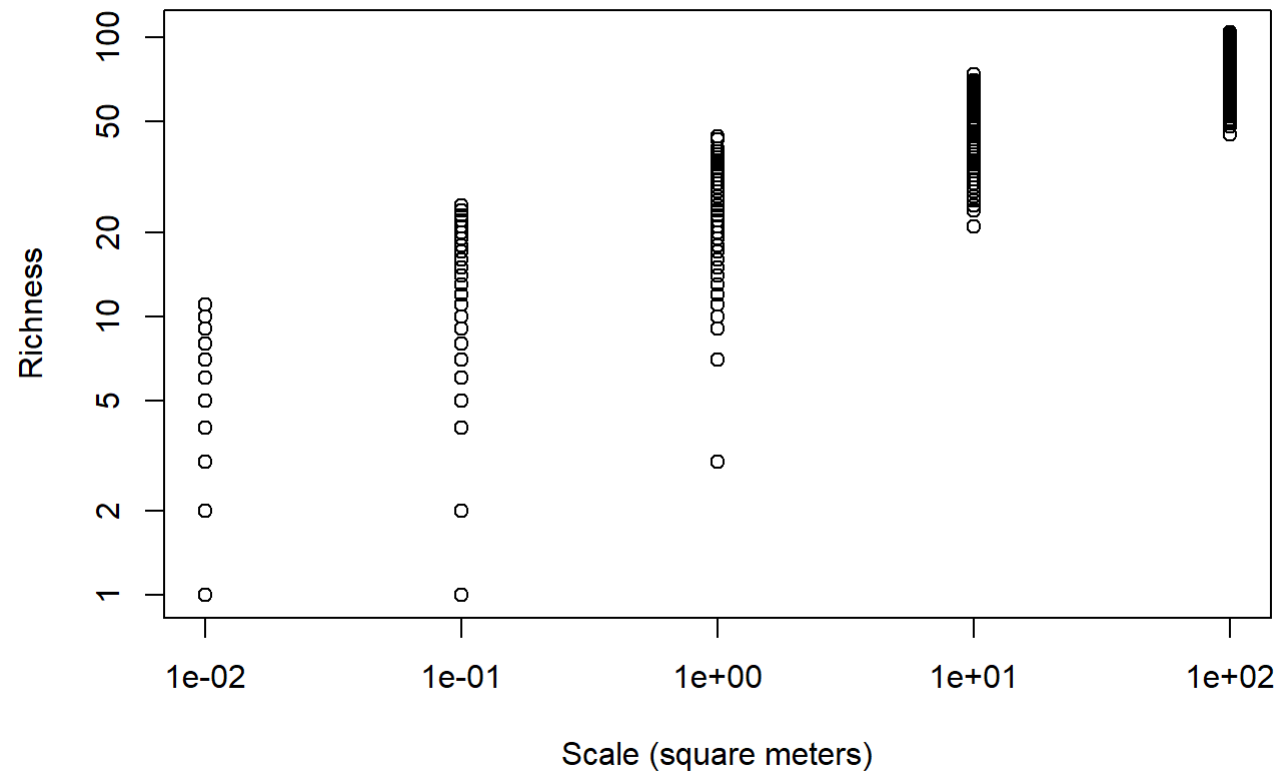

Log transformation changes data similar to as.factor but preserves points instead of creating histogram.