

Welling Basic R Assignment

Reading the dataset into R:

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

1. What are the names of the columns in the dataset?

```
names(tgpp)
```

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

2. How many rows and columns does this dataset have?

```
nrow(tgpp) #number of rows
```

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

```
ncol(tgpp) #number of columns
```

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

3. What kind of object is each data column?

```
sapply(tgpp, class)
```

```
##      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 the the datafile for rows 1, 5, and 8 at columns 3, 7, and 10?

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

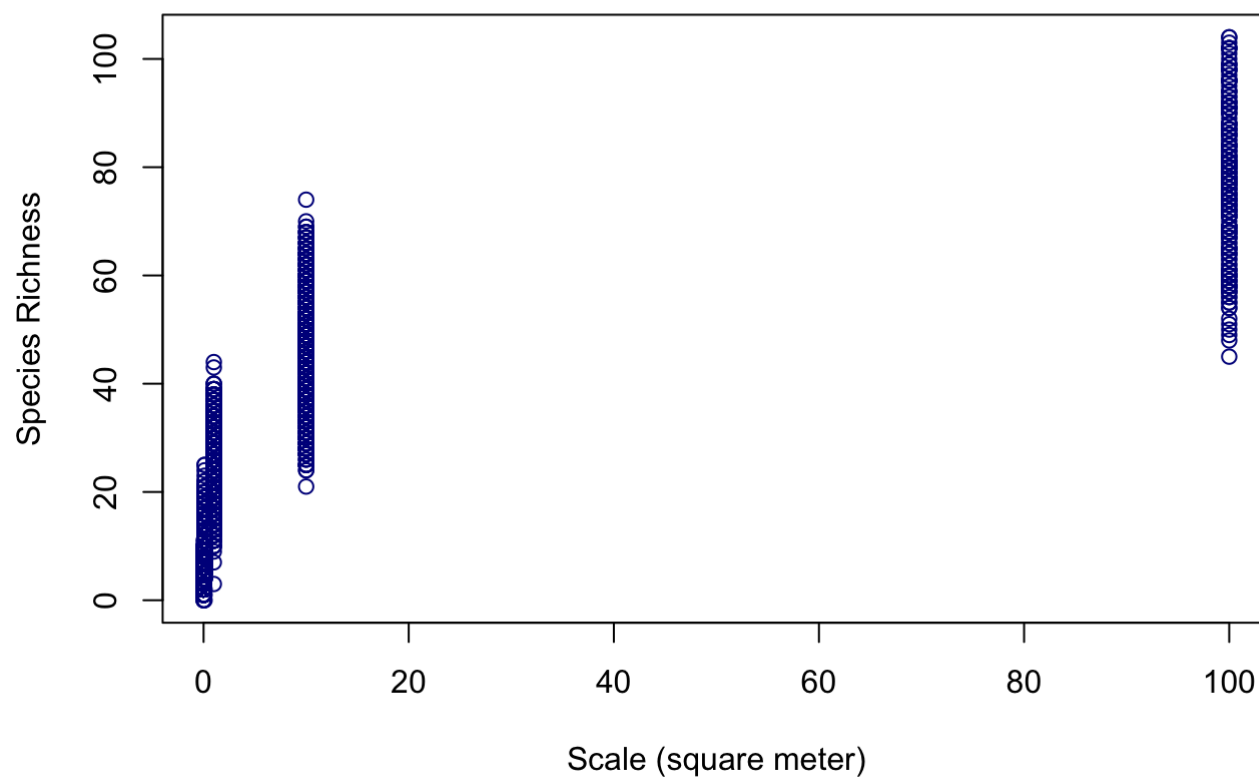
```
##   record_id easting  ph
## 1      187  727000 6.9
## 5      191  727000 6.9
## 8      194  727000 6.9
```

5. Create a pdf of the relationship between the variables “scale” and “richness”. Scale is the area in square meters of the quadrat in which richness was recorded. Be sure to label your axes clearly, and choose a color you find pleasing for the points.

```
pdf('tgpp_fig1.pdf')
plot(tgpp$scale, tgpp$richness, xlab="Scale (square meter)", ylab="Species Richness", col="darkblue")
dev.off()
```

```
## quartz_off_screen
##                2
```

```
plot(tgpp$scale, tgpp$richness, xlab="Scale (square meter)", ylab="Species Richness", col="darkblue")
```



What happens to your plot when you set the plot argument `log` equal to `'xy'`? `plot(..., log='xy')`?

```
plot(tgpp$scale, tgpp$richness, xlab="log(Scale) (square meter)", ylab="log(Species Richness)", col="darkblue", log="xy")
```

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

