

# scatter plot

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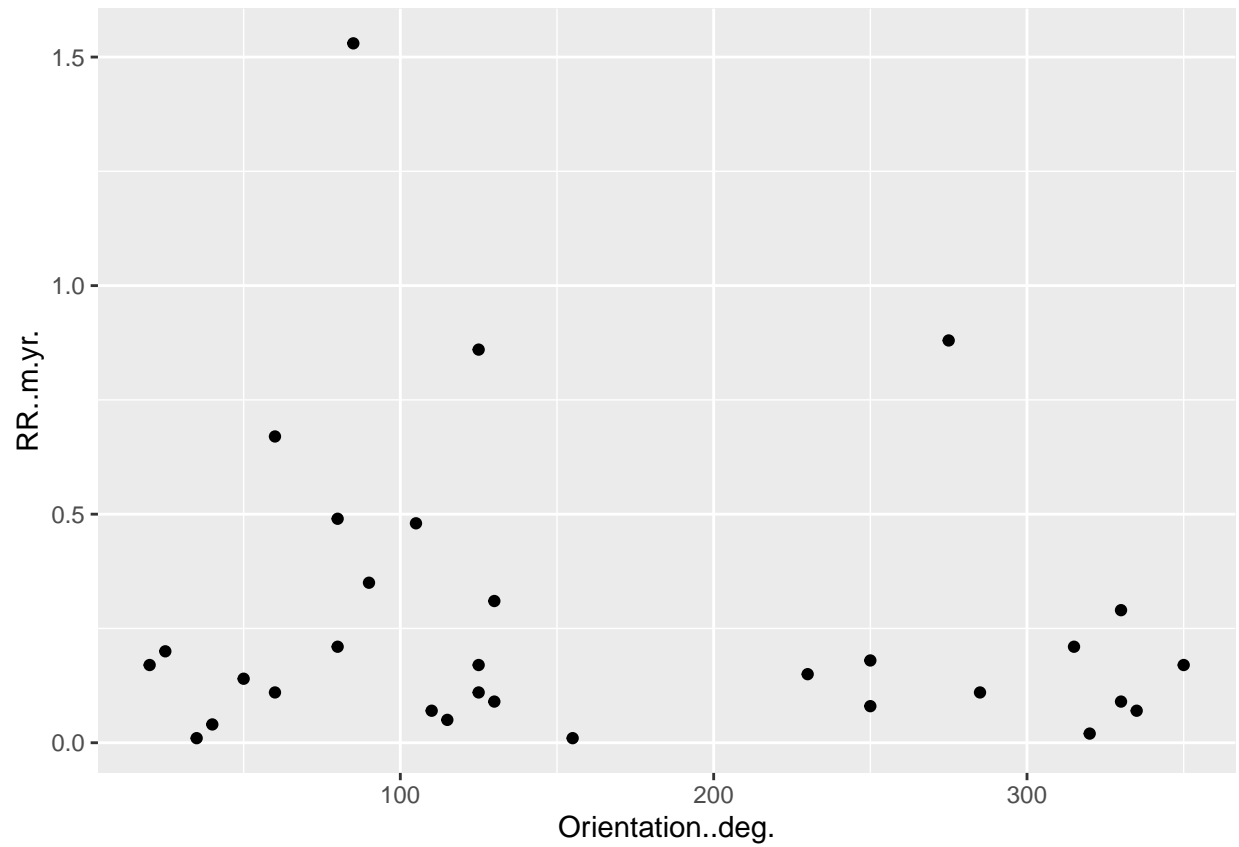
2023-11-28

```
library(ggplot2)
library(tidyverse)
```

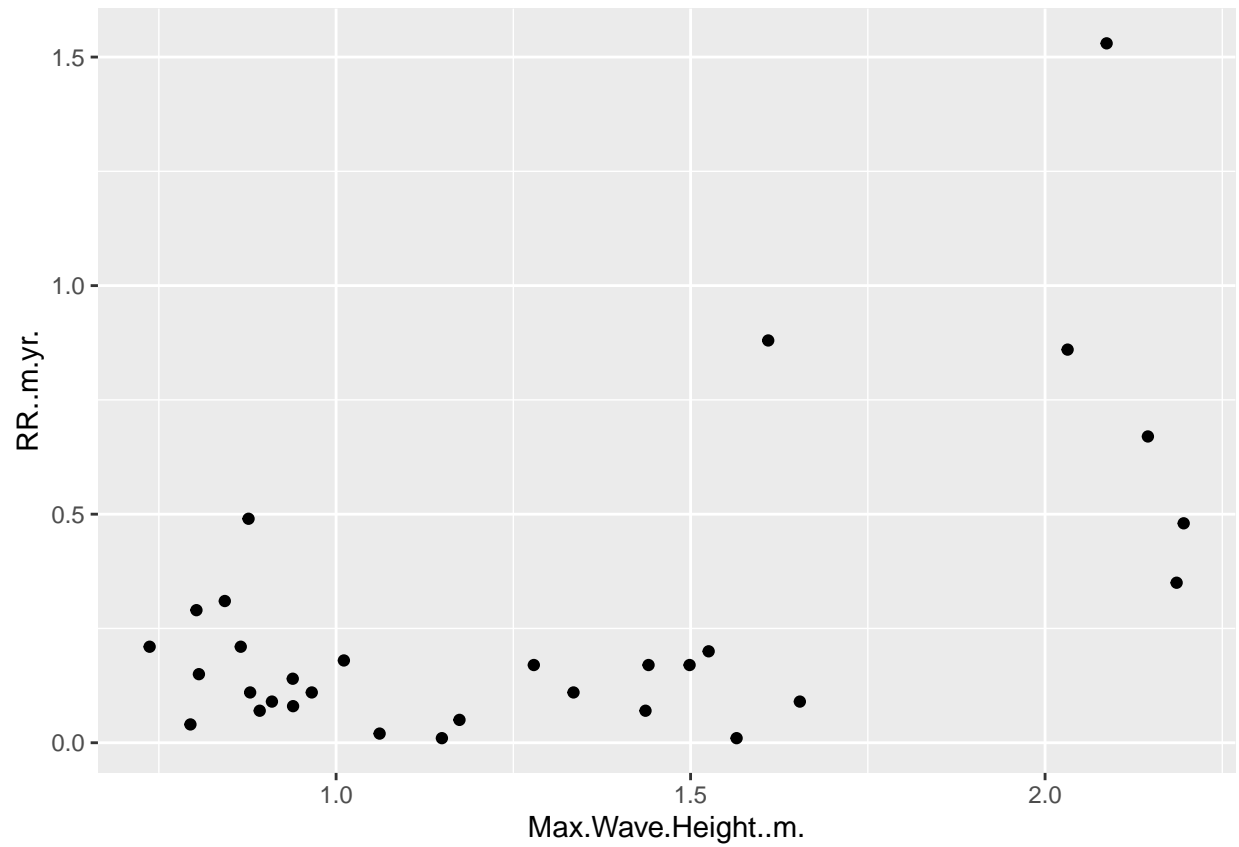
```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.1      v readr      2.1.4
## v forcats    1.0.0      v stringr   1.5.0
## v lubridate  1.9.2      v tibble    3.2.1
## v purrr      1.0.2      v tidyr     1.3.0
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
data <- read.csv("erosion.csv")
data1<-read.csv("erosionnne15.csv")
```

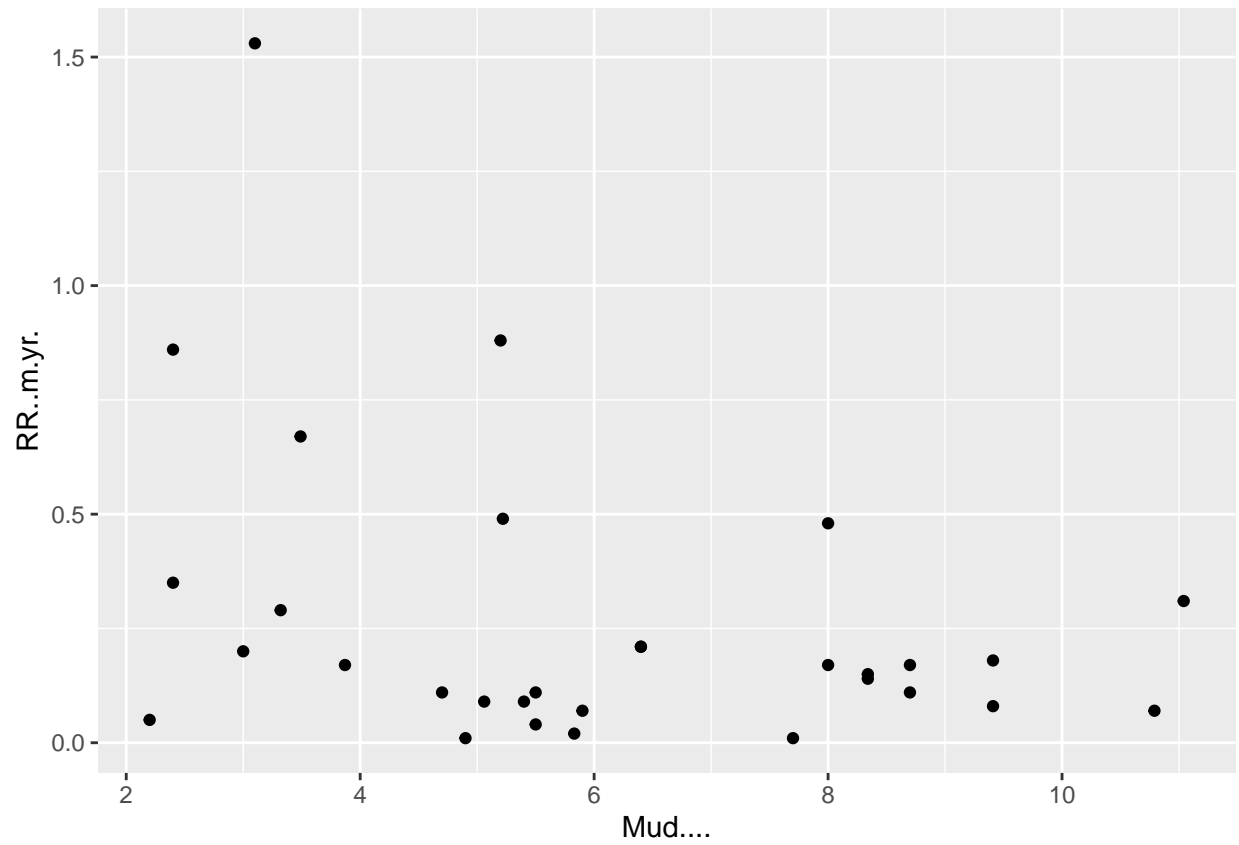
```
ggplot(data,aes(x=Orientation..deg.,y=RR..m.yr.))+
  geom_point()
```



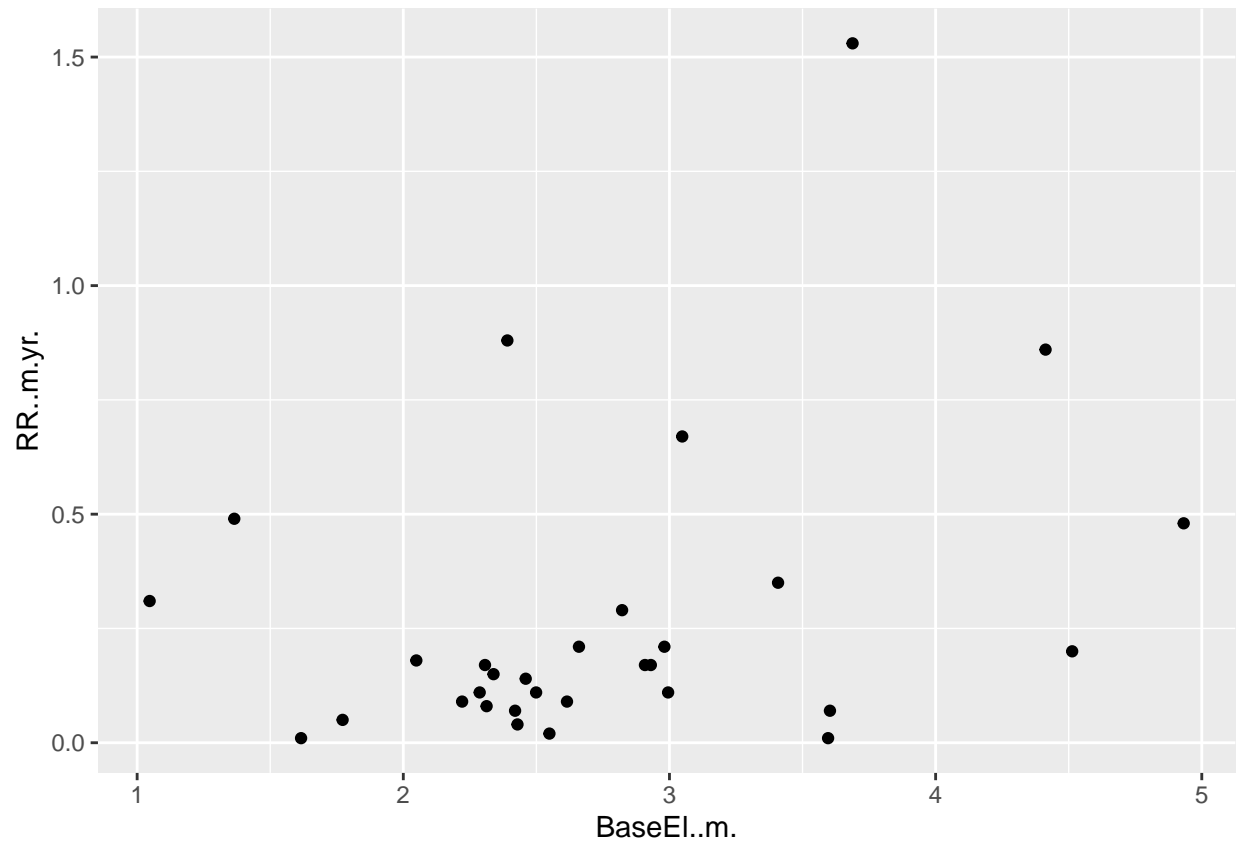
```
ggplot(data,aes(x=Max.Wave.Height..m.,y=RR..m.yr.))+  
  geom_point()
```



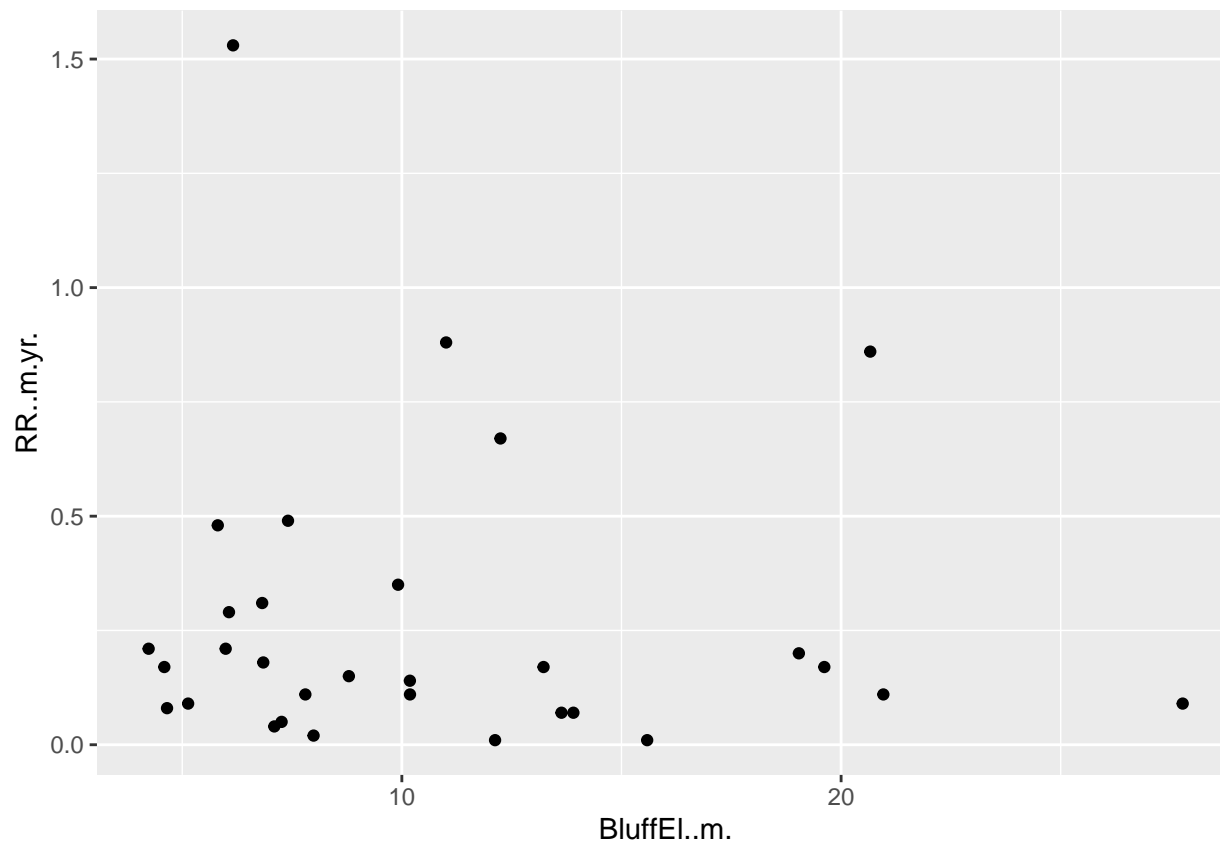
```
ggplot(data,aes(x=Mud...,y=RR..m.yr.))+  
  geom_point()
```



```
ggplot(data,aes(x=BaseEl..m.,y=RR..m.yr.))+  
  geom_point()
```



```
ggplot(data,aes(x=BluffEl..m.,y=RR..m.yr.))+  
  geom_point()
```

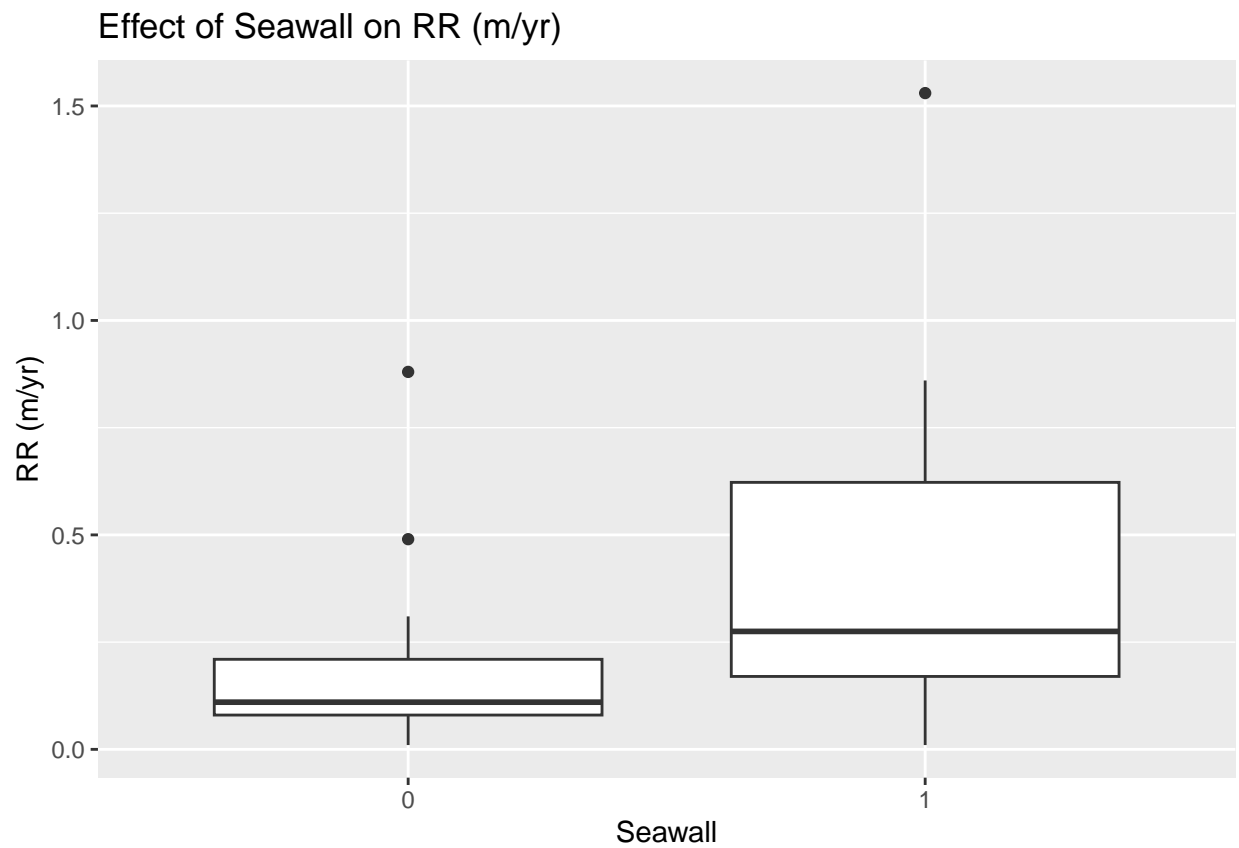


```
data$Seawall <- factor(data$Seawall)
model <- lm(`RR..m.yr.` ~ Seawall, data = data)
summary(model)
```

```
##
## Call:
## lm(formula = RR..m.yr. ~ Seawall, data = data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.44100 -0.13643 -0.07143  0.02879  1.07900
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.18143    0.06676   2.717  0.0110 *
## Seawall1     0.26957    0.11755   2.293  0.0293 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.3059 on 29 degrees of freedom
## Multiple R-squared:  0.1535, Adjusted R-squared:  0.1243
## F-statistic: 5.259 on 1 and 29 DF,  p-value: 0.02927
```

```
ggplot(data, aes(x = Seawall, y = `RR..m.yr.`)) +
  geom_boxplot() +
```

```
labs(title = "Effect of Seawall on RR (m/yr)", x = "Seawall", y = "RR (m/yr)")
```



```
ggplot(data1,aes(x=Wave.Height.for.NNE.wind.15.m.s..m.,y=RR..m.yr.))+  
  geom_point()
```

