

Coverage heatmap

First make coverage file for each marker and individuals. How to make 'mean-coverage-marker' files?

```
#mkdir Data
#for i in $(ls *_merge.bam) ; do bedtools coverage -a ../coverage/Panax_superconti
gl.bed -b $i | cut -f 1,5 > Data/"$i.mean-coverage-marker.txt" ; done
```

##Plot the coverage in a heatmap

```
knitr::opts_knit$set(root.dir = normalizePath("~/heatmap/Data/"))
```

###Read coverage files, transform df and save the tranformed df in heatmap.tsv

```
files <- list.files(pattern = "mean-coverage-marker.txt$")
markers <- read.table(files[1], header=FALSE, sep="\t")[,1]
df <- do.call(cbind,lapply(files,function(fn)read.table(fn,header=FALSE, sep="\t")[,2]))
rownames(df) <- markers
headers<- gsub("[_][\\s\\S]*$", "", files, perl=T)
colnames(df) <- headers
df <- df[,order(colnames(df))]

df.scaled <- as.data.frame(scale(df))

write.table(df, file='heatmap.tsv', quote=FALSE, sep='\t')
```

###Plot the heatmap

```
library("pheatmap");

pdf("target-heatmap-plots_cutoff-30.pdf", h=1000, w=1000, pointsize=20)
bk1 <- c(seq(0,30,by=2),30)
bk2 <- c(31,seq(31,150000,by=5))
bk <- c(bk1,bk2) #combine the break limits for purpose of graphing
my_palette <- c(colorRampPalette(colors = c("darkblue", "lightblue"))(n = length(bk1)-1),
               "gray38", "gray38",
               c(colorRampPalette(colors = c("darkred", "tomato1"))(n = length(bk2)-1)))
pheatmap(df, fontsize_row=3, fontsize_col=5, cluster_rows=TRUE, cluster_cols=TRUE, width=50, height=100, cutree_cols=9, color = my_palette,
dev.off())
```

```
## pdf
## 3
```

```
pdf("target-heatmap-plots_cutoff-100.pdf", h=1000, w=1000, pointsize=20)
bk1 <- c(seq(0,100,by=5),100)
bk2 <- c(101,seq(101,150000,by=10))
bk <- c(bk1,bk2) #combine the break limits for purpose of graphing
my_palette <- c(colorRampPalette(colors = c("darkblue", "lightblue"))(n = length(bk1)-1),
                "gray38", "gray38",
                c(colorRampPalette(colors = c("darkred", "tomato1"))(n = length(bk2)-1)))
pheatmap(df, fontsize_row=3, fontsize_col=3, cluster_rows=TRUE, cluster_cols=TRUE, width=50, height=100, cutree_cols=9, color = my_palette,
dev.off()
```

```
## pdf
## 3
```