

Biometry. Lecture 17

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- 1 2D statistics
 - Some examples



```
> setwd("<working folder>")  
or  
"Change dir"  
in menu!
```

On Mac, be sure that startup option is working: `getwd()`
(`getwd()` checks if R is in working folder, `dir()` checks the folder
content)



2D statistics

Some examples



How to avoid the approximation with simulation

```
> eq <- read.table("http://ashipunov.info/data/eq.txt", h=T)
> table(eq$N.REB, eq$N.ZUB) # less than 5 in cells
> chisq.test(eq$N.REB, eq$N.ZUB) # warning!
> chisq.test(eq$N.REB, eq$N.ZUB, simulate.p.value=T)
```

When some cells contain less than 5 items, `simulate.p.value=T` is recommended.



Seedling example with p-values adjustment

Which fungus terminates the germination?

```
> pr <- read.table(  
+ "http://ashipunov.info/data/seedlings.txt", h=TRUE)  
> head(pr)  
> unique(pr$CID)  
# correct only for one comparison!  
> chisq.test(table(subset(pr, CID==c(0,105))))  
> p105 <- chisq.test(table(subset(pr,  
+ CID==c(0,105))))$p.value  
> p63 <- chisq.test(table(subset(pr,  
+ CID==c(0,63))))$p.value  
> p80 <- chisq.test(table(subset(pr,  
+ CID==c(0,80))))$p.value  
> all.p <- c(p105, p63, p80)  
> p.adjust(all.p)
```



Examples from open data repository

2–3 examples from the open data repository



Finishing...

Save your commands!

`(savehistory(<today's date>.r)` or File -> Save as... on
Mac)



For Further Reading



A. Shipunov.

Biometry [Electronic resource].

2012—onwards.

Mode of access:

http://ashipunov.info/shipunov/school/biol_240



A. Shipunov, and many others.

Visual statistics. Use R!

2016—onwards.

Mode of access: http://ashipunov.info/shipunov/school/biol_240/en/visual_statistics.pdf

