# GGally Notes

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## Contents



## ggcorr to plot correlation matrices

Correlation matrices show correlation coefficients between many continuous variables. These matrices are created using the `cor` function. The `ggcorr` function from the `ggally` package to plot correlation matrices.

Usage

```
ggcorr(data, method = "pairwise", palette = "RdYlGn", ...)
```

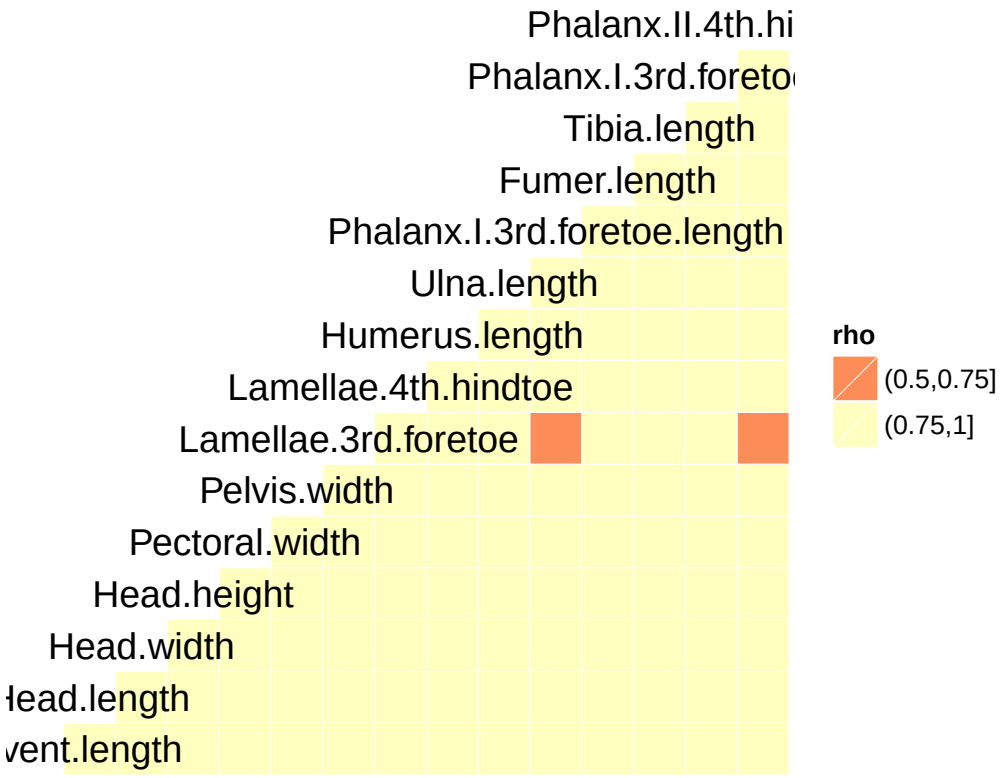
`data` data matrix
`method` character string giving a method for computing covariances. Defaults to "pairwise".
`palette` ColorBrewer palette to be used for correlation coefficients. Defaults to "RdYlGn".
`geom` geom object to use. Accepts either tile (the default) or circle, to plot proportionally scaled circles.

```
#install.packages("GGally")
library(GGally)
library(ggplot2)
library(dplyr)
library(tidyr)
library(rdryad)

# retrieve Analis trait data from Kolbe et al. 2011, Evolution 65(12): 3608-3624.
# http://datadryad.org/handle/10255/dryad.34389?show=full
anolis.data <- download_url("10255/dryad.34389")
anolis.traits <- dryad_getfile(anolis.data)
#is.data.frame(anolis.traits)

anolis.traits <- tbl_df(anolis.traits)
glimpse(anolis.traits)
```

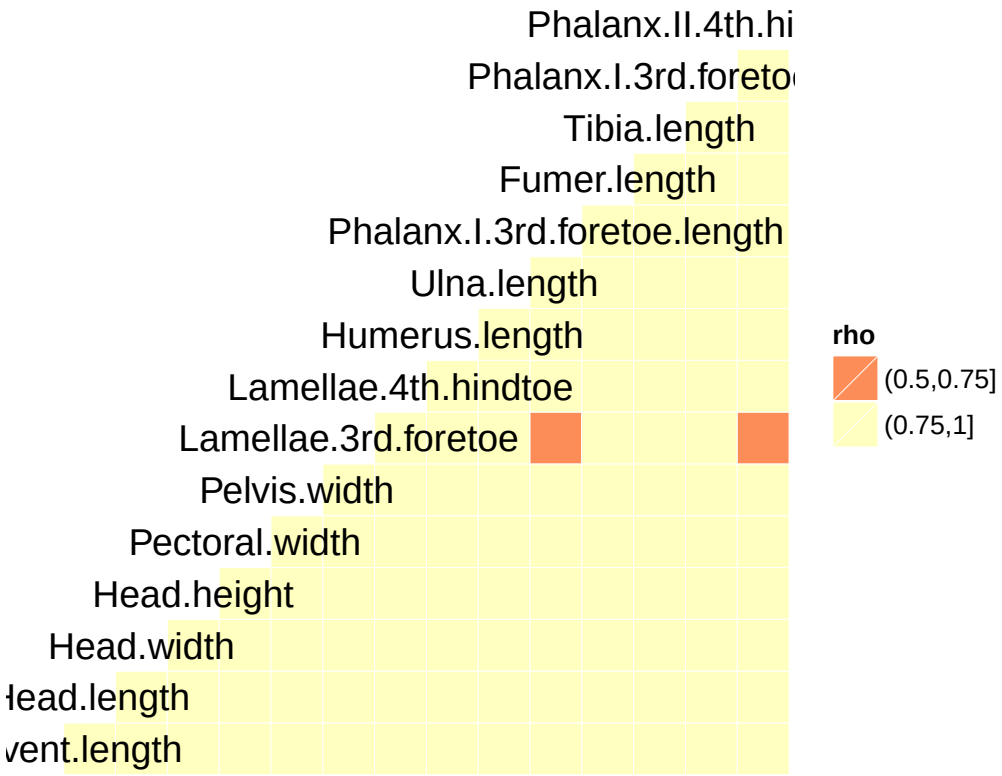
```
## Observations: 21
## Variables: 17
## $ Species                    (fctr) A. allisoni, A. alutaceus, A. ...
## $ Ecomorph                   (fctr) TC, GB, TW, CG, TC, CG, TG, T,...
## $ Snout.vent.length          (dbl) 76.1300, 35.5000, 42.1250, 134....
## $ Head.length                (dbl) 24.74000, 10.13750, 12.71250, 3...
## $ Head.width                 (dbl) 13.63000, 5.15000, 6.31250, 23....
## $ Head.height                (dbl) 9.17500, 4.13750, 4.97500, 20.5...
## $ Pectoral.width             (dbl) 10.05000, 4.20000, 4.90000, 16....
## $ Pelvis.width               (dbl) 7.780000, 2.940000, 4.067500, 1...
## $ Lamellae.3rd.foretoe       (dbl) 21.90000, 11.60000, 11.80000, 2...
## $ Lamellae.4th.hindtoe       (dbl) 30.00000, 17.16700, 17.25000, 3...
```

```
## $ Humerus.length                 (dbl) 12.545000, 5.195000, 5.980000, ...
## $ Ulna.length                    (dbl) 8.80925, 3.92000, 3.99000, 18.0...
## $ Phalanx.I.3rd.foretoe.length   (dbl) 2.859750, 1.105000, 1.500000, 5...
## $ Fumer.length                   (dbl) 14.096750, 9.617500, 7.657500, ...
## $ Tibia.length                   (dbl) 12.565000, 7.980000, 5.892500, ...
## $ Phalanx.I.3rd.foretoe.length.1 (dbl) 7.175750, 5.275000, 3.824250, 1...
## $ Phalanx.II.4th.hindtoe.length  (dbl) 5.090000, 2.588000, 2.054500, 8...
```

```
select(anolis.traits, -(Species:Ecomorph)) %>%
ggcorr()
```




```
ggcorr(anolis.traits[, -c(1, 2)])
```


Phalanx.II.4th.hi
Phalanx.I.3rd.foreto
Tibia.length
Fumer.length
Phalanx.I.3rd.foretoe.length
Ulna.length
Humerus.length
Lamellae.4th.hindtoe
Lamellae.3rd.foretoe
Pelvis.width
Pectoral.width
Head.height
Head.width
lead.length
vent.length
rho
(0.5,0.75]
(0.75,1]