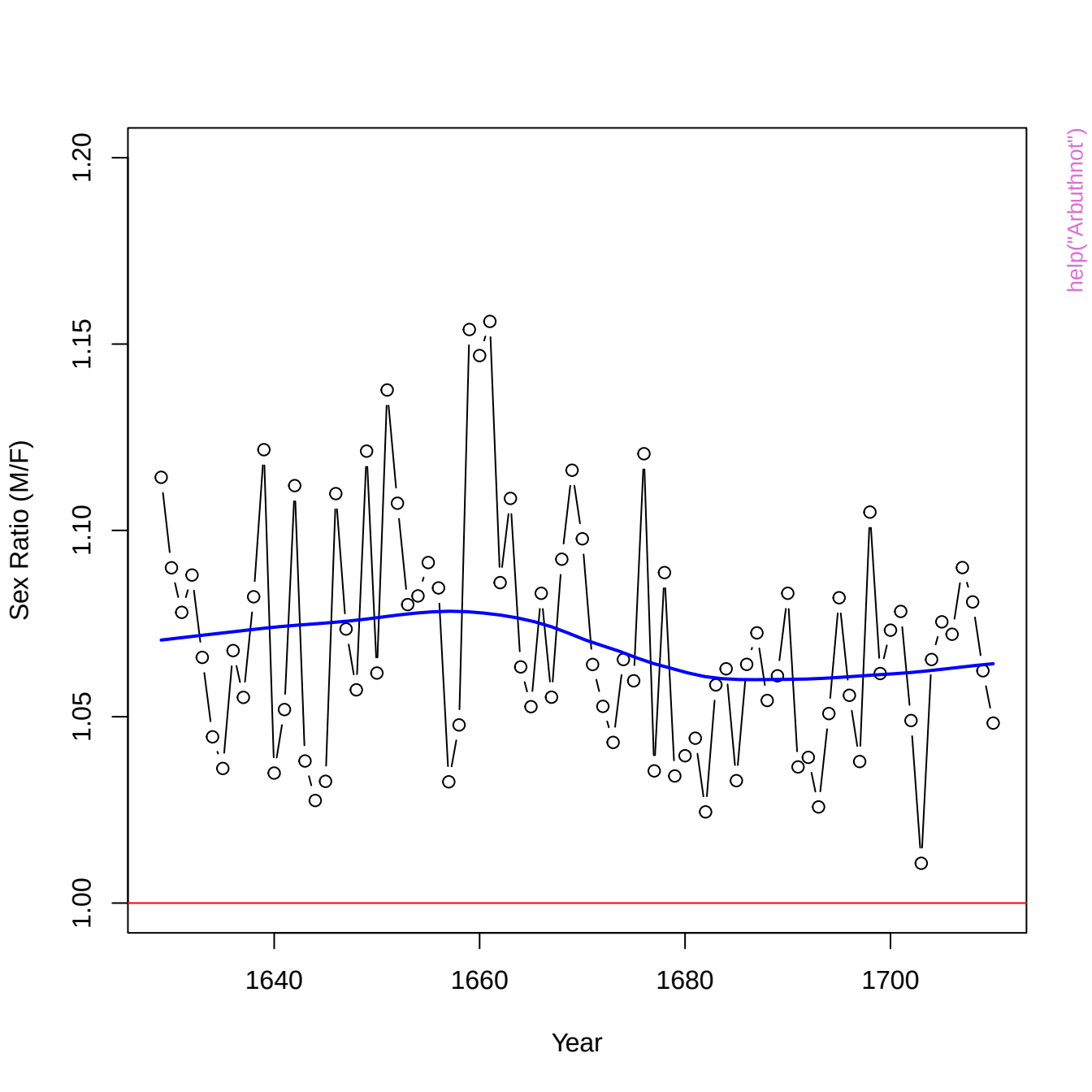
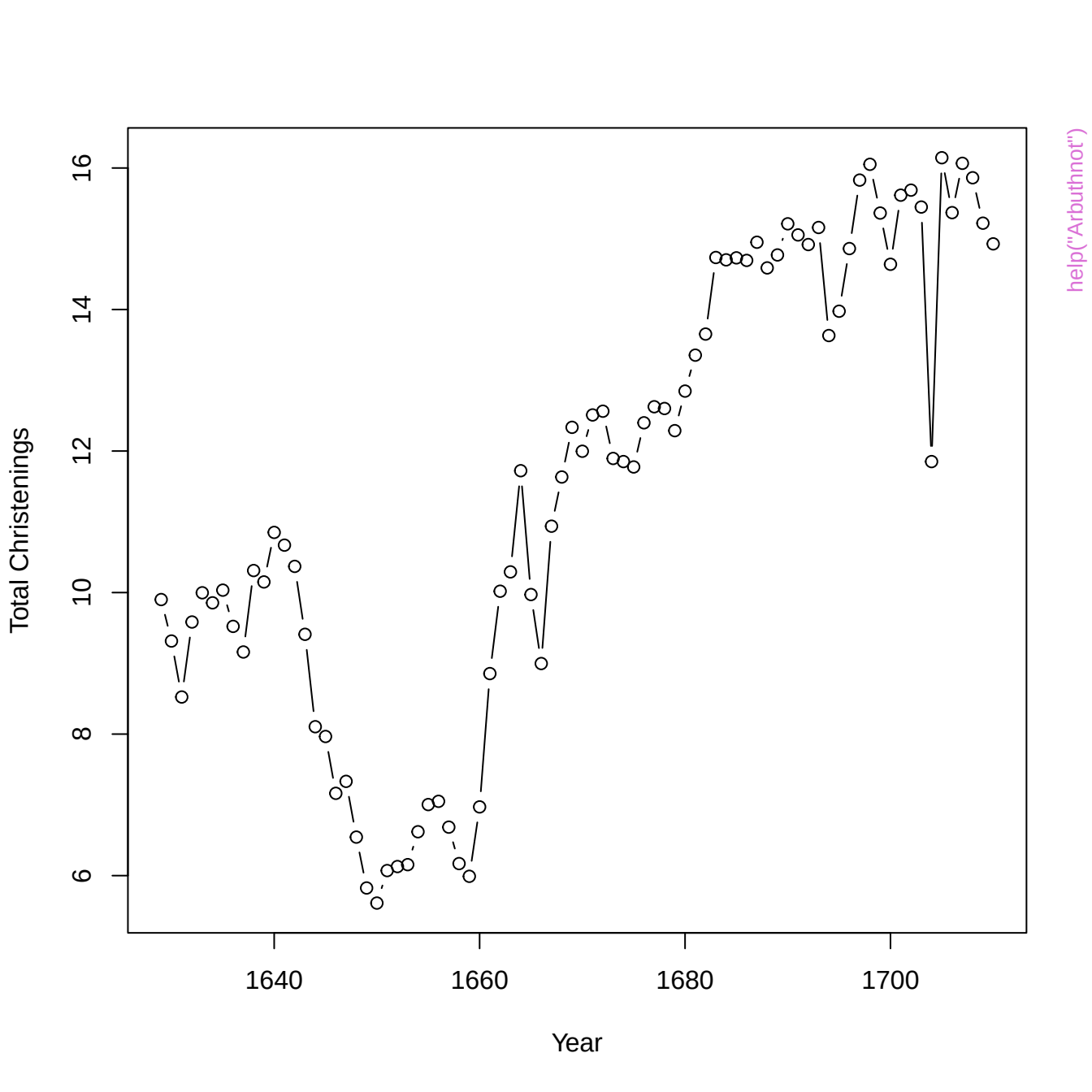
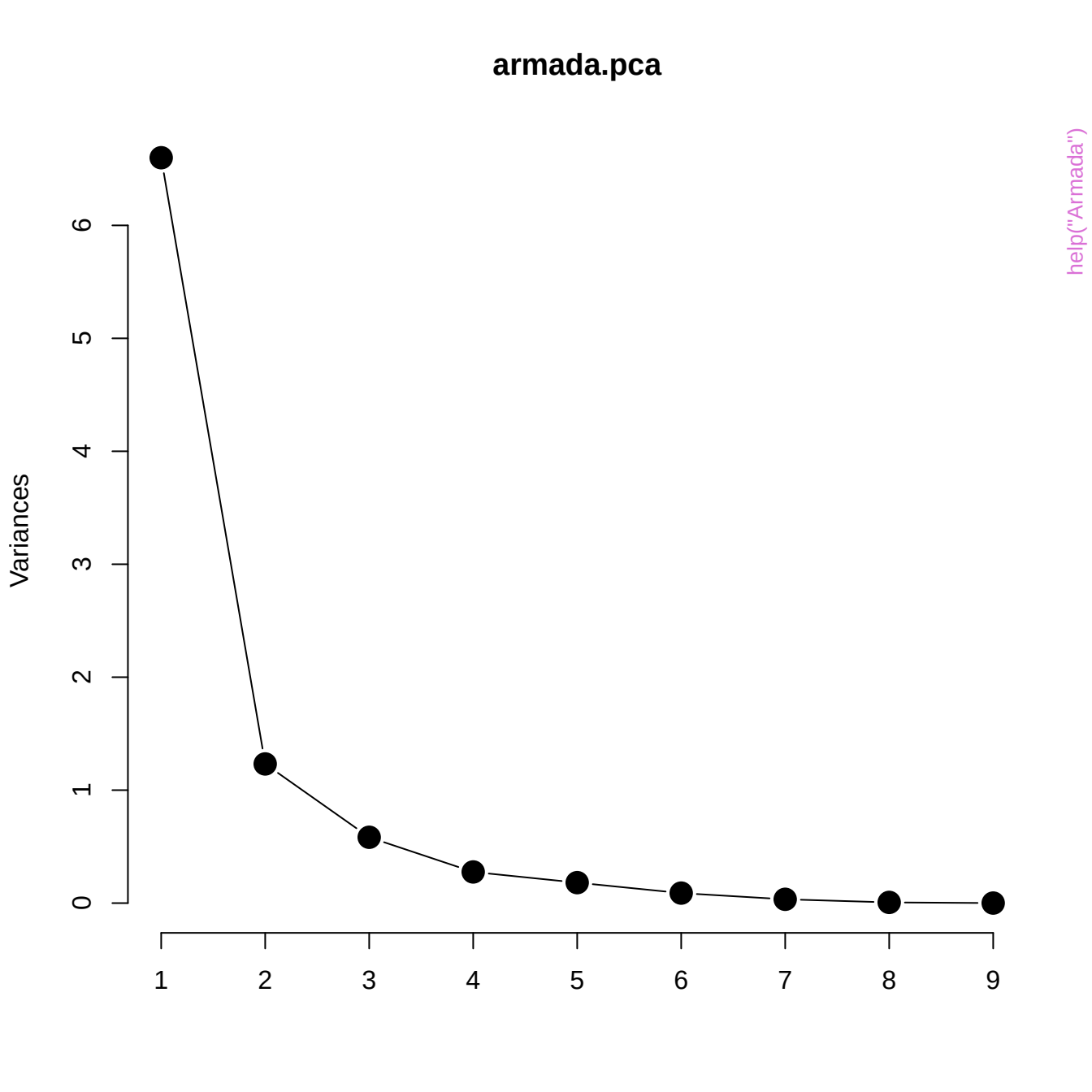
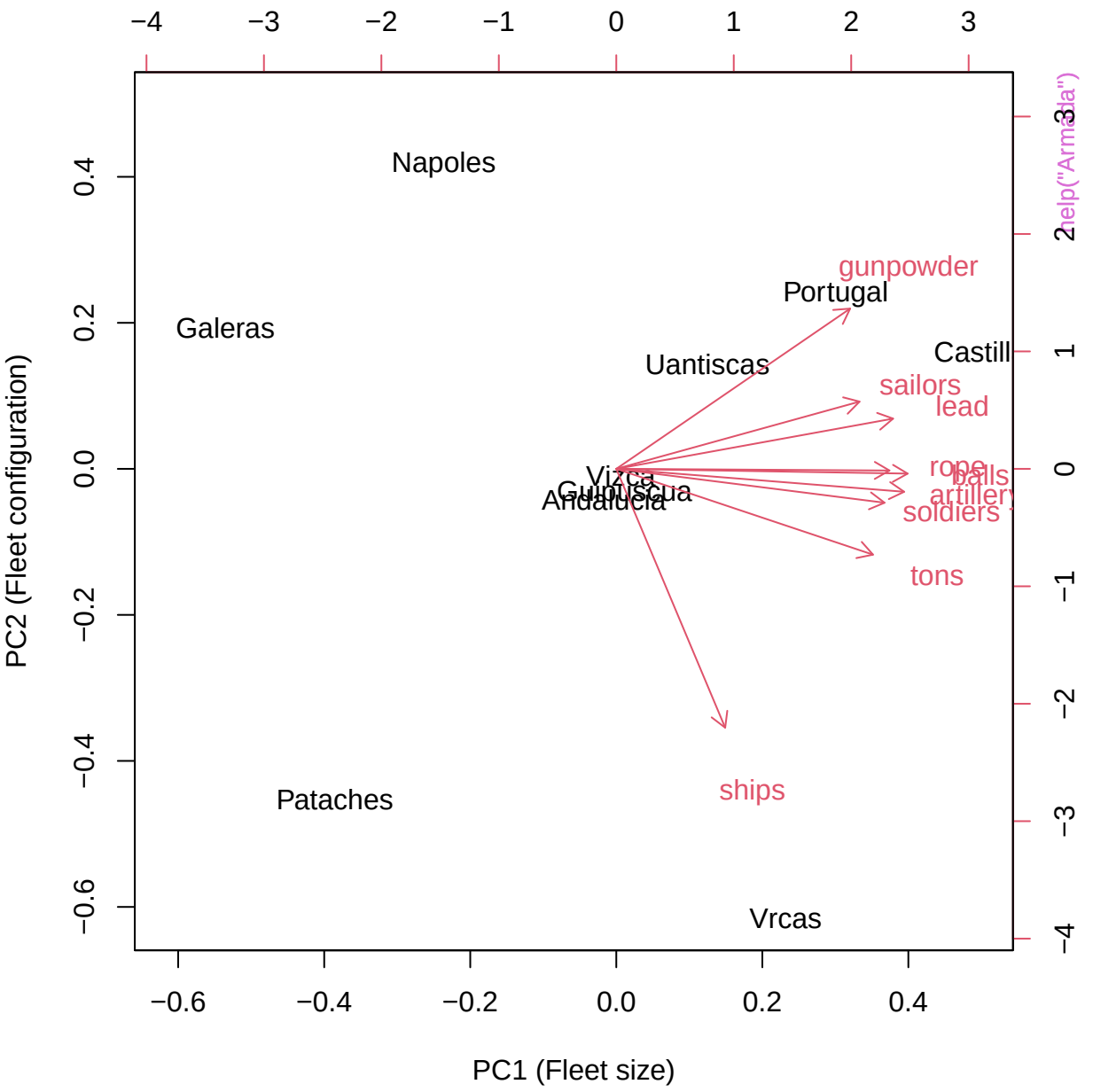
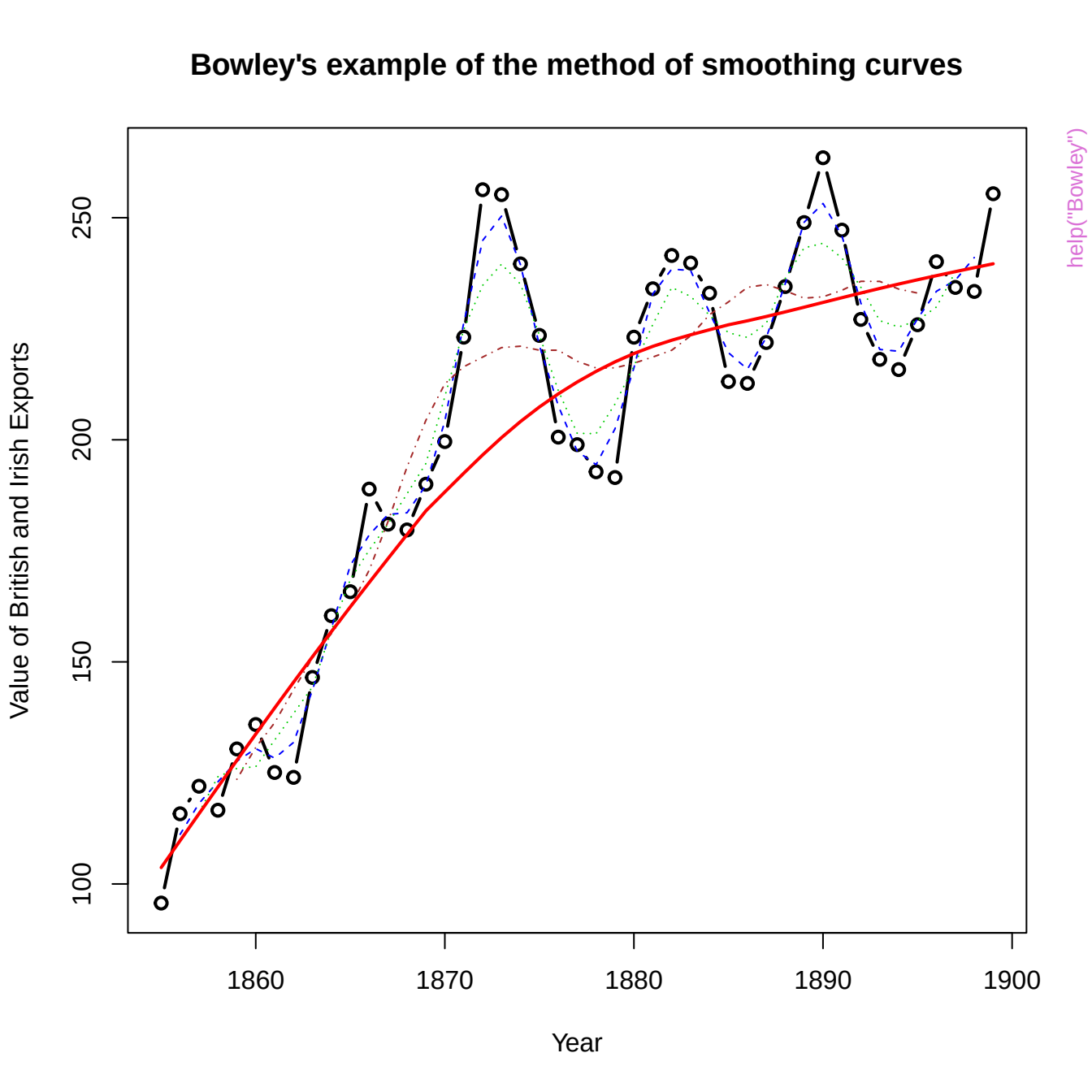
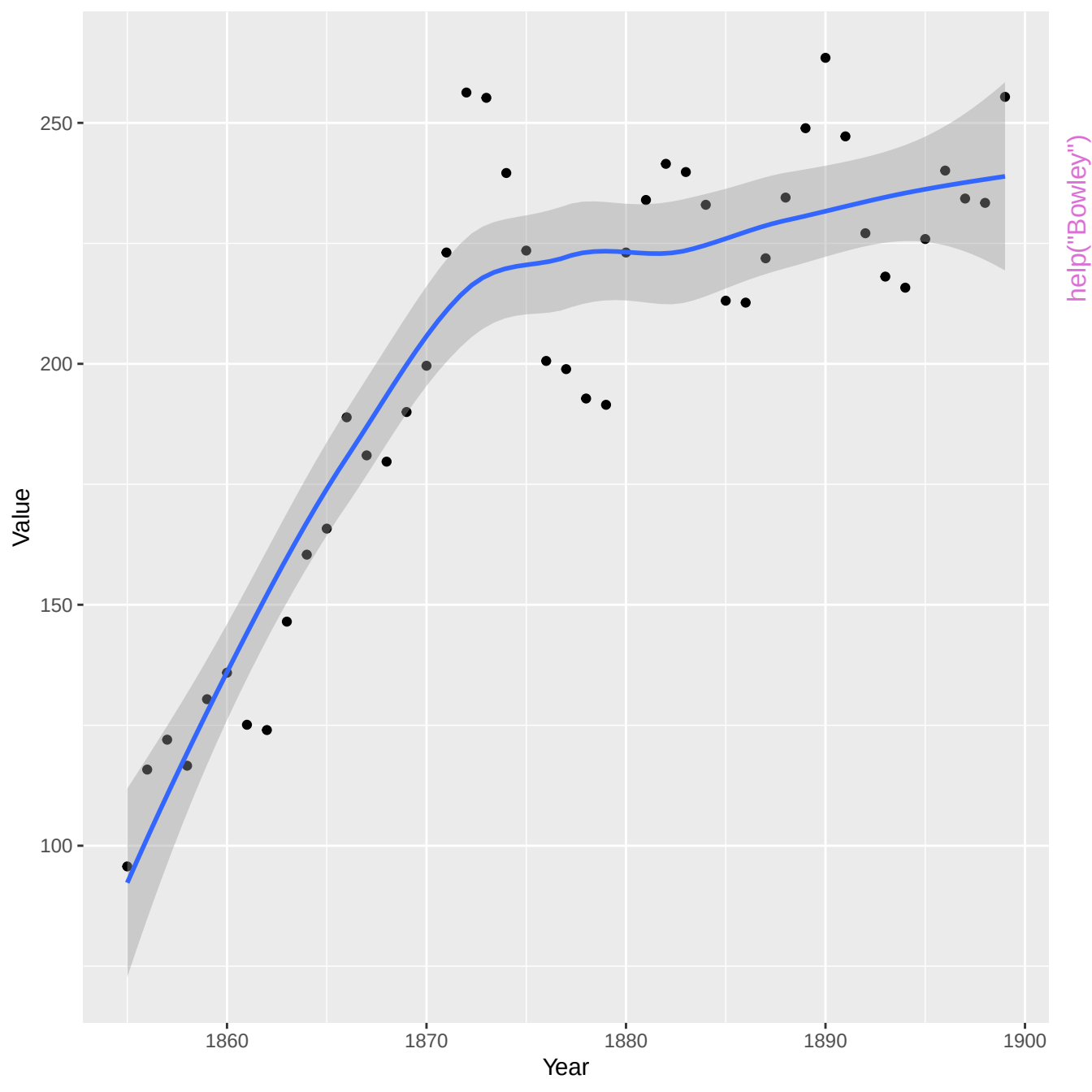

Sex Ratio (M/F)
1.00
1.05
1.10
1.15
1.20
1640
1660
1680
1700
Year
help("Arbuthnot")

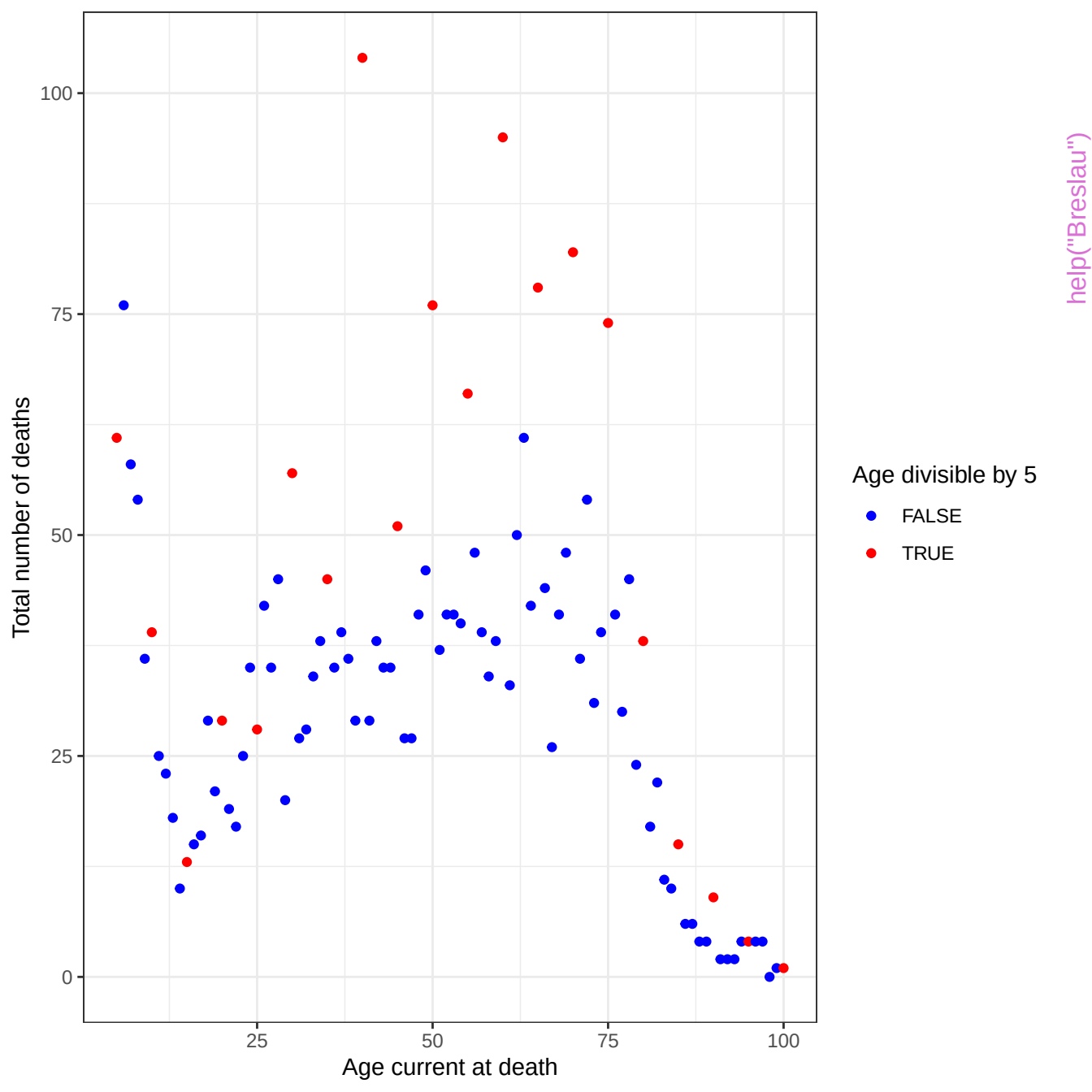

Total Christenings
6
8
10
12
14
16
1640
1660
1680
1700
Year
help("Arbuthnot")

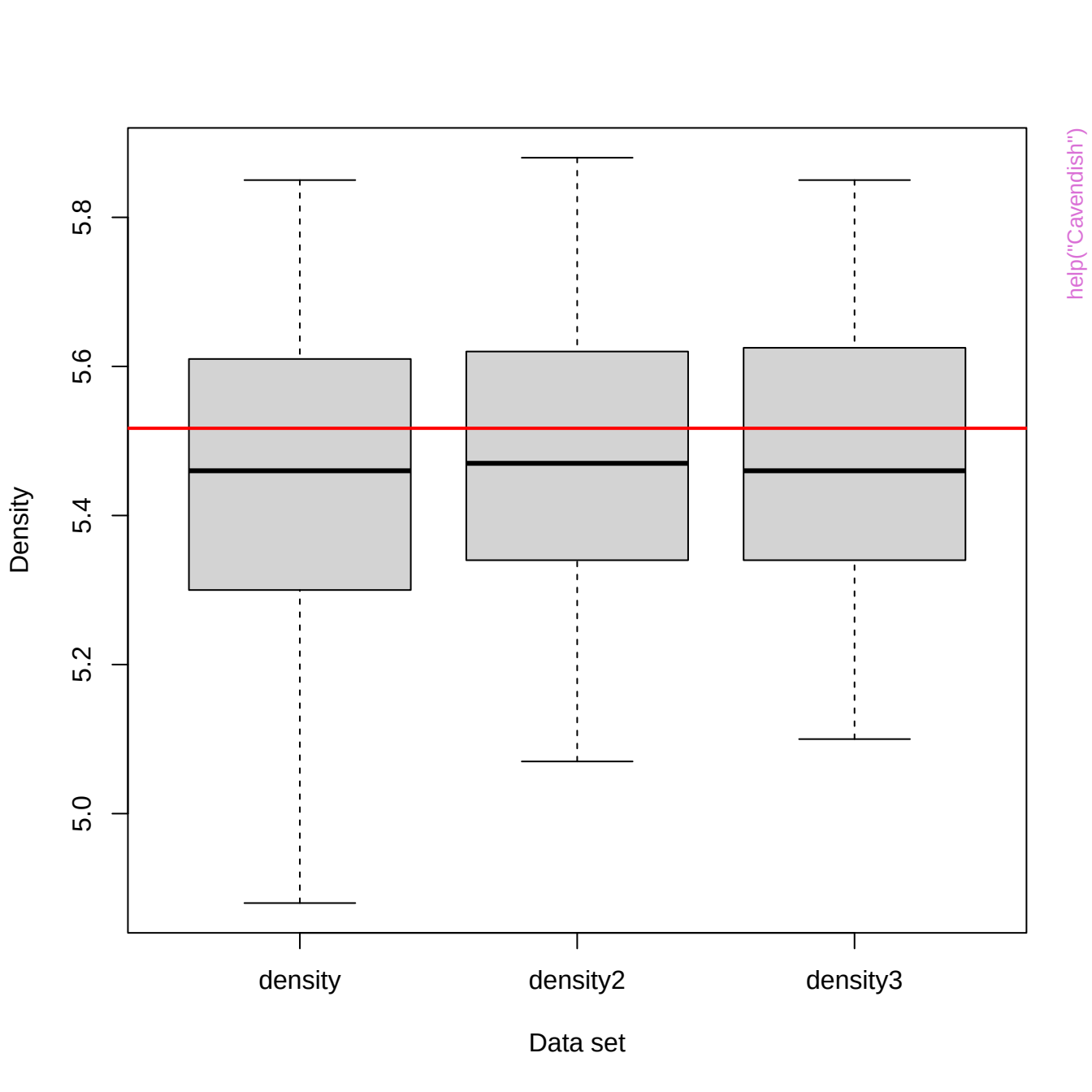

armada.pca
Variances
0
1
2
3
4
5
6
1
2
3
4
5
6
7
8
9
help("Armada")

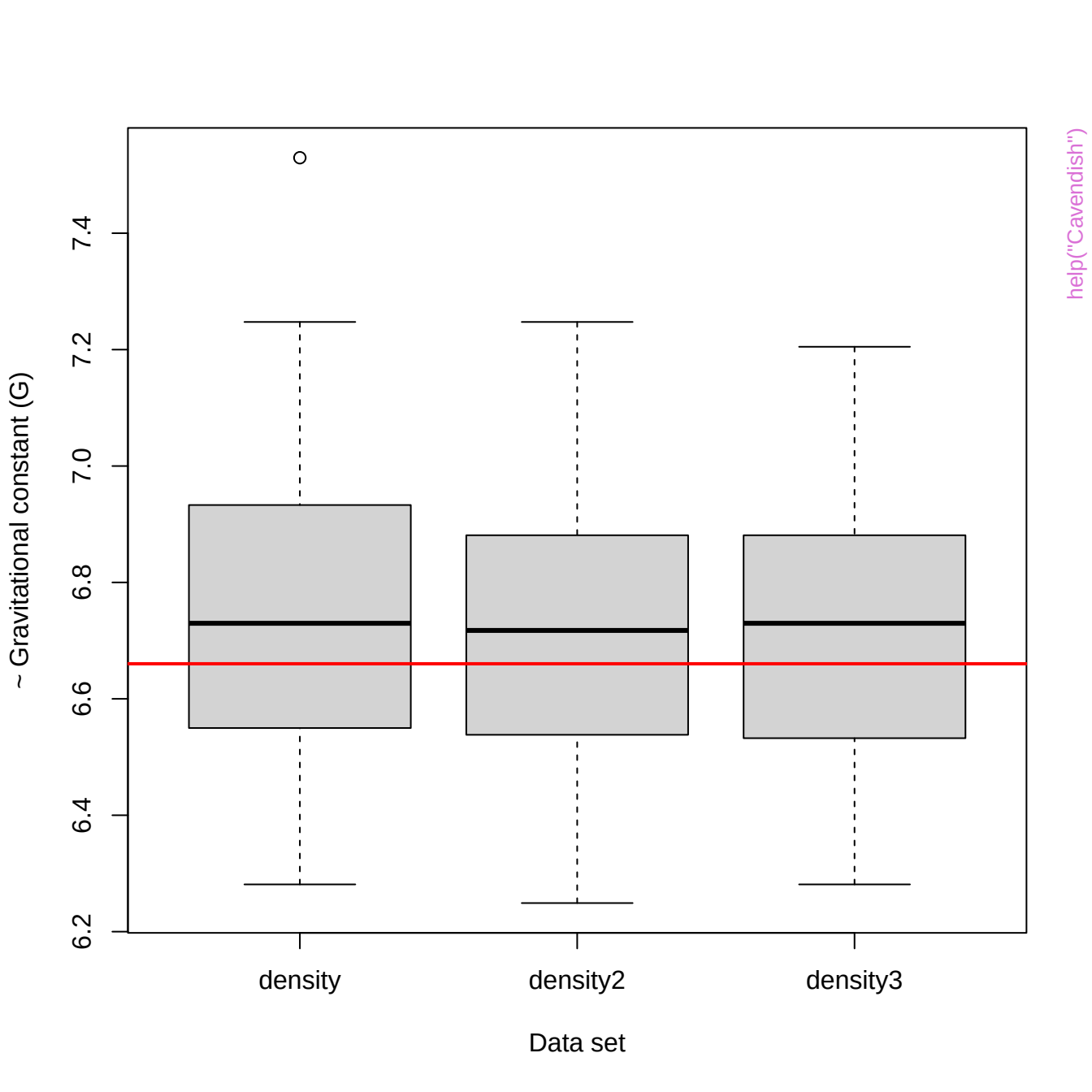

−4
−3
−2
−1
0
1
2
3
help("Armada")
Napoles
Galeras
Pataches
Vrcas
Portugal
Castill
Uantiscas
Vizca
Guipuscua
Andalucia
gunpowder
sailors
lead
rope
balls
artillery
soldiers
tons
ships
0.4
0.2
0.0
−0.2
−0.4
−0.6
PC2 (Fleet configuration)
PC1 (Fleet size)

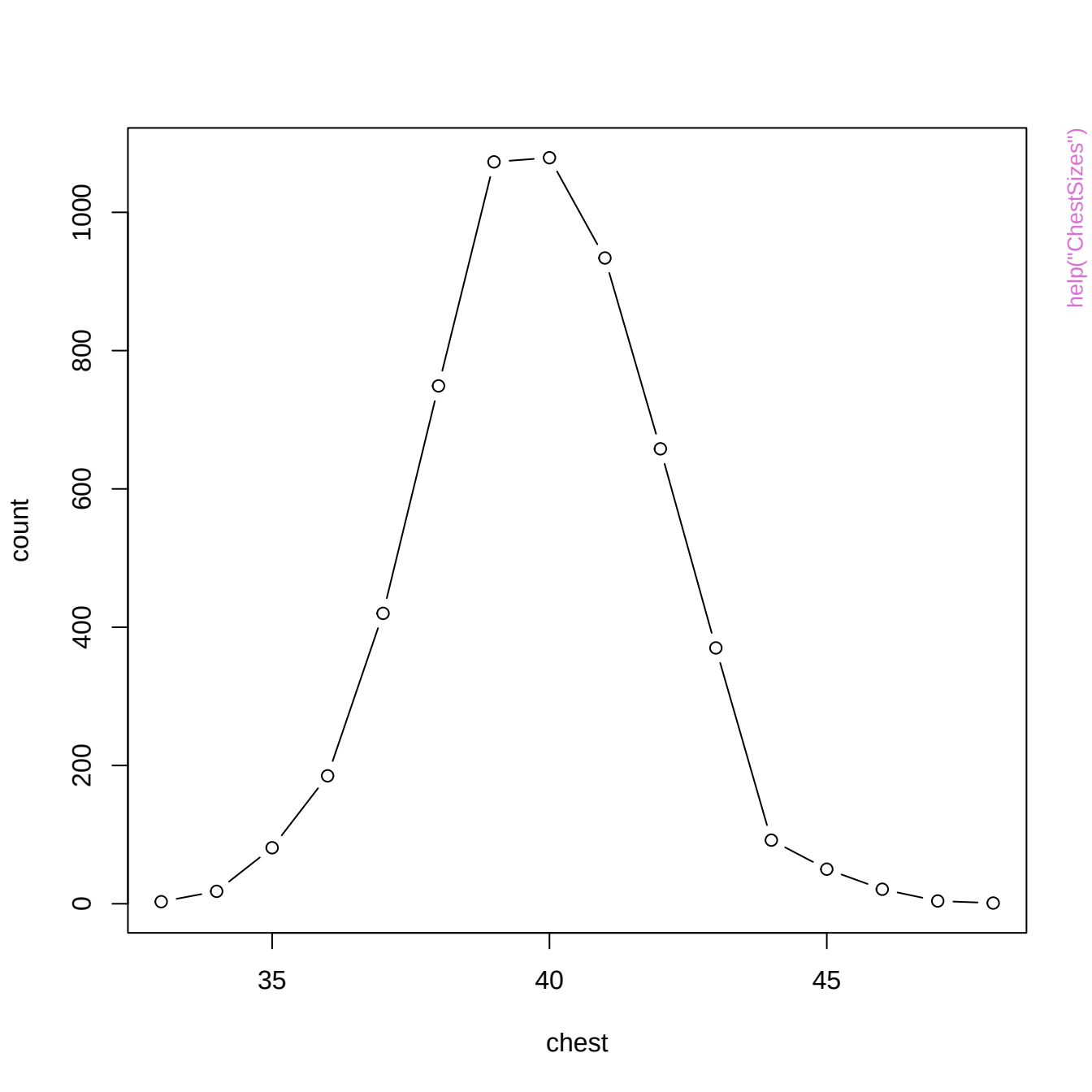

Bowley's example of the method of smoothing curves
Value of British and Irish Exports
100
150
200
250
1860
1870
1880
1890
1900
Year
help("Bowley")

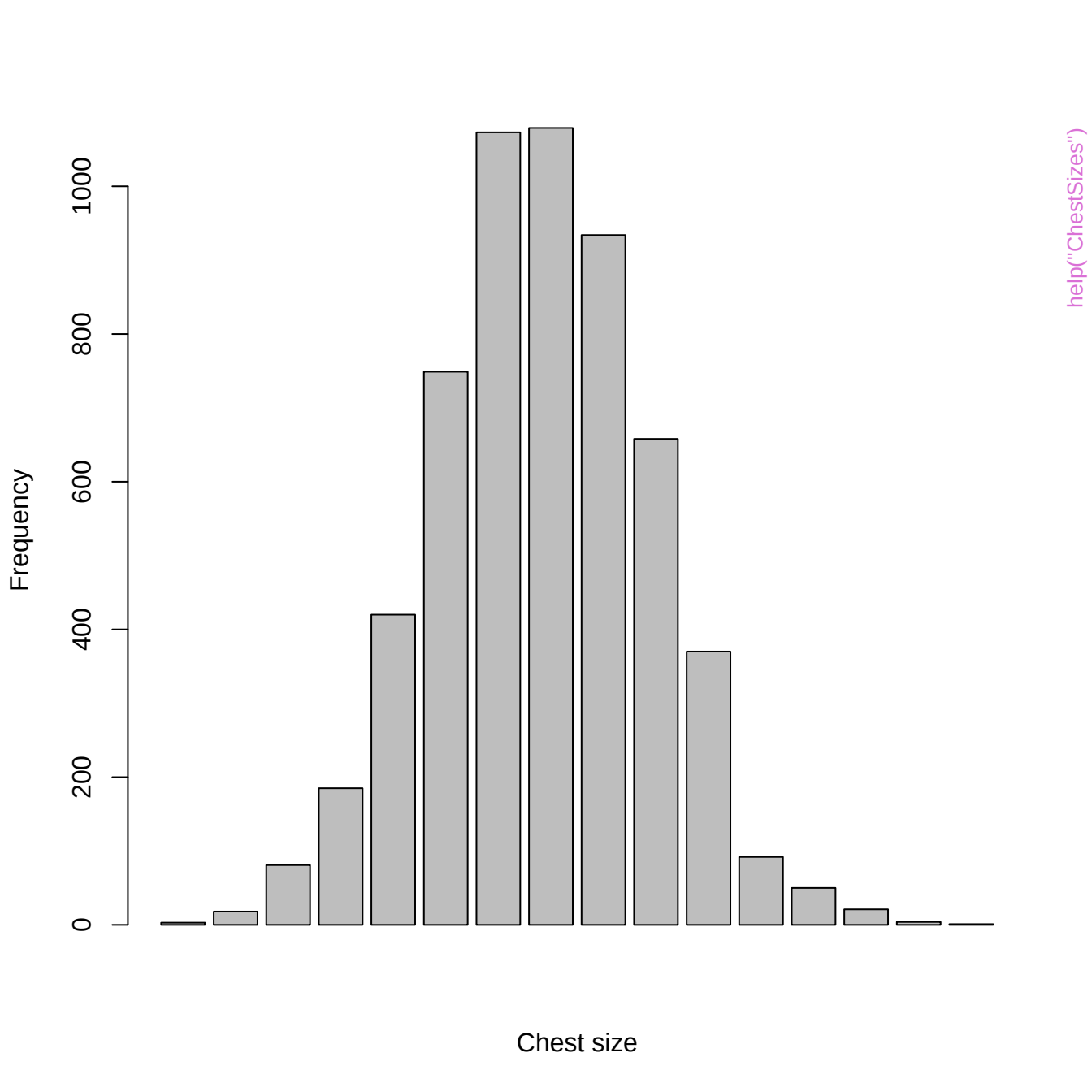

250
200
150
100
Value
1860
1870
1880
1890
1900
Year
help("Bowley")

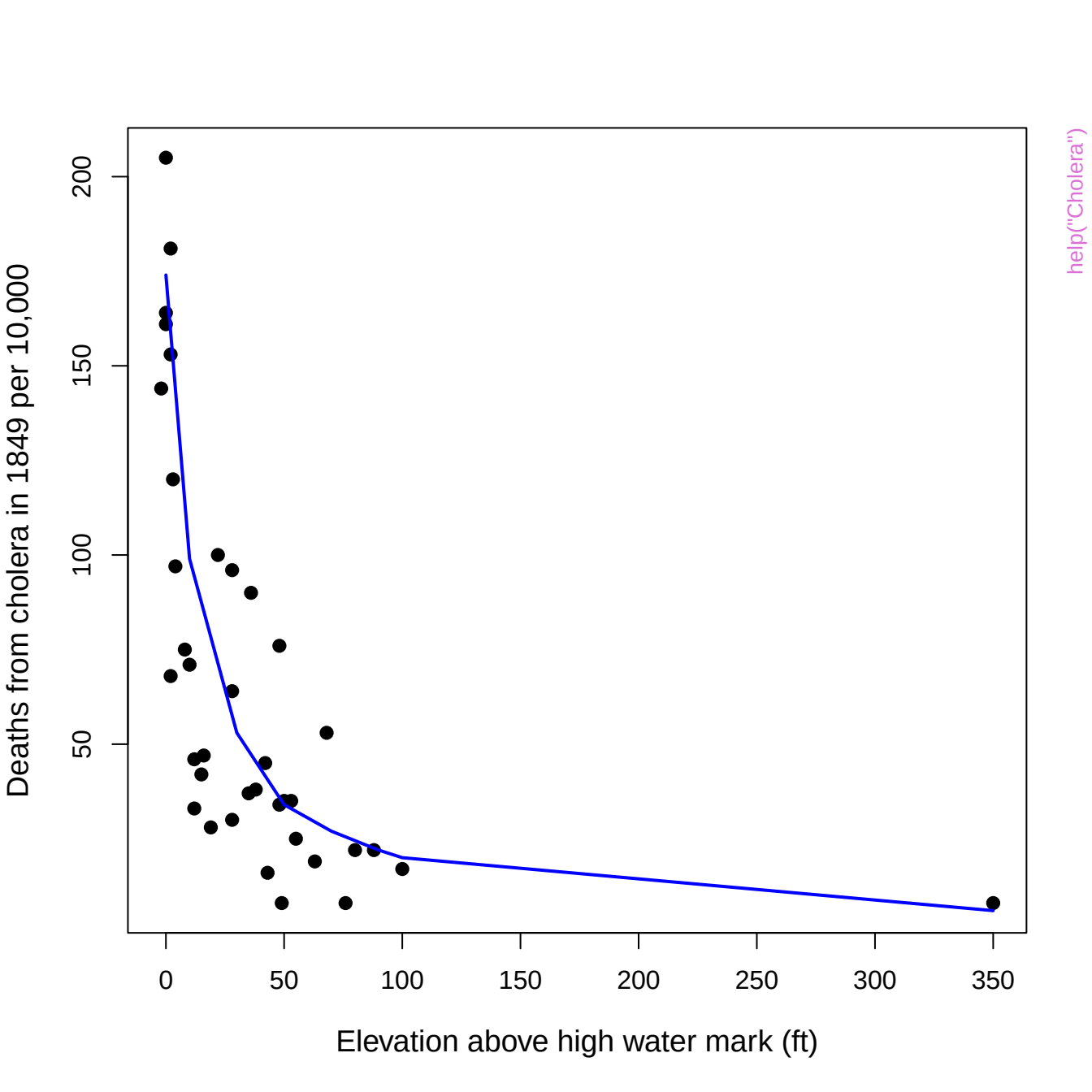

Total number of deaths
100
75
50
25
0
25
50
75
100
Age current at death
Age divisible by 5
FALSE
TRUE
help("Breslau")

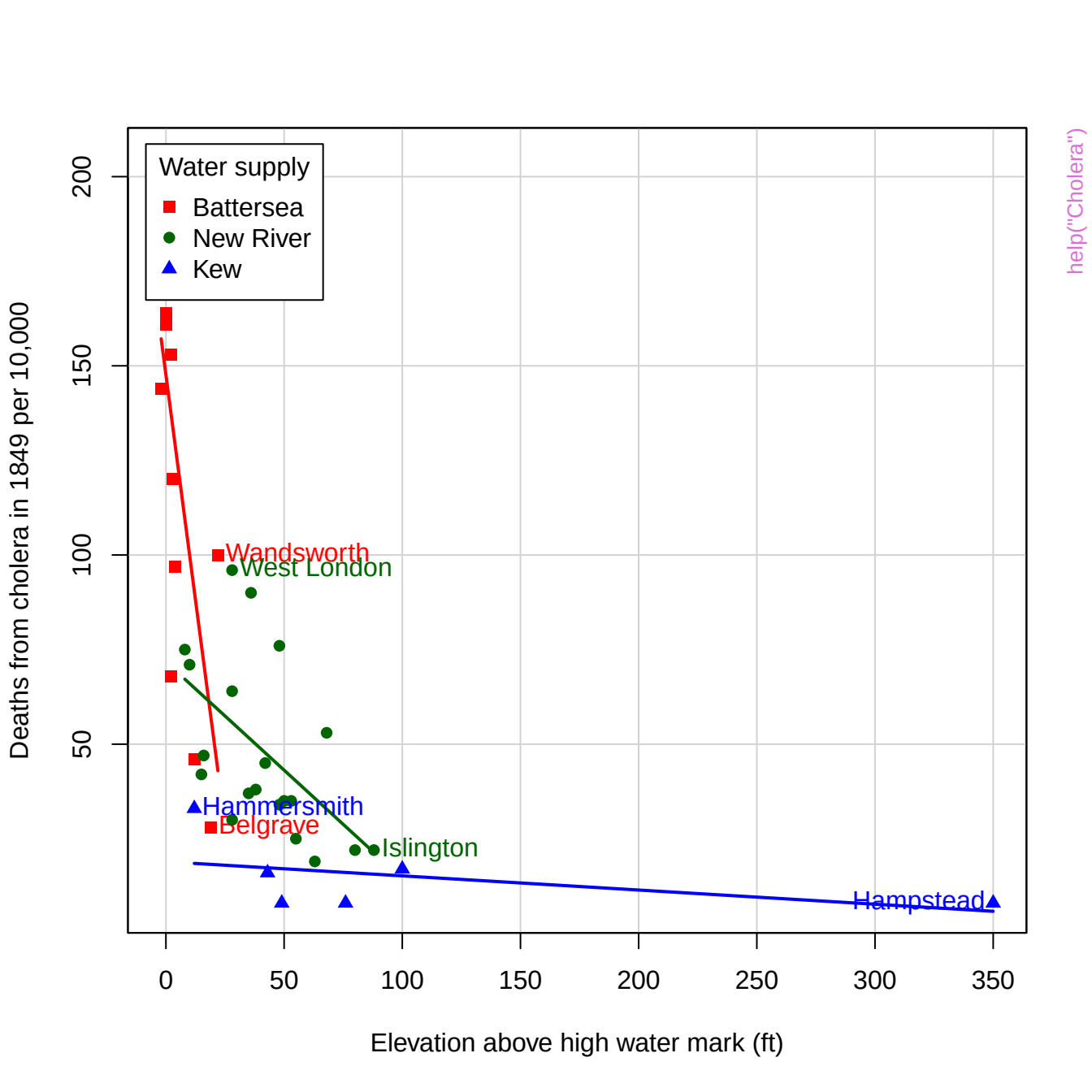

help("Cavendish")
Density
5.0
5.2
5.4
5.6
5.8
density
density2
density3
Data set

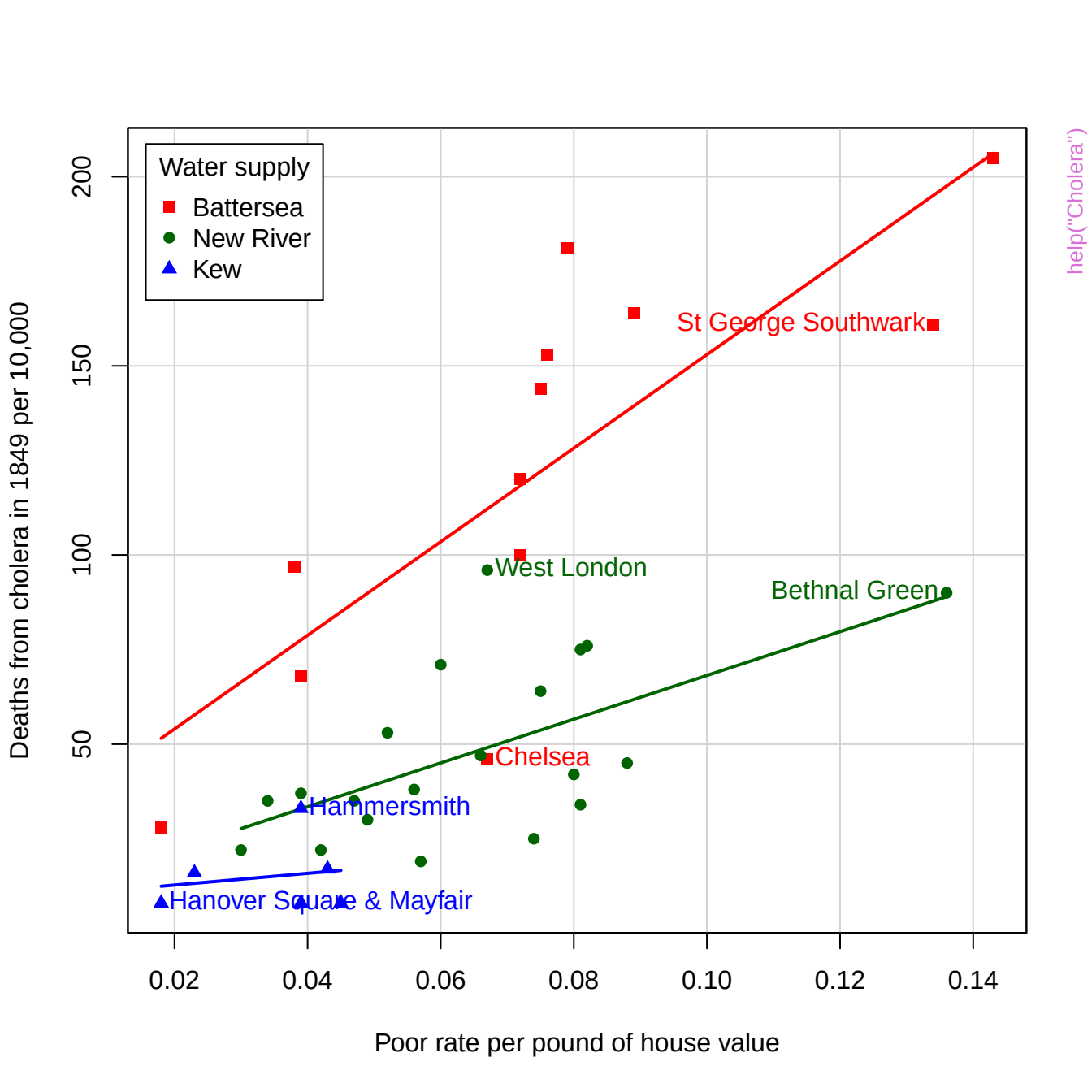

help("Cavendish")
~ Gravitational constant (G)
6.2
6.4
6.6
6.8
7.0
7.2
7.4
density
density2
density3
Data set

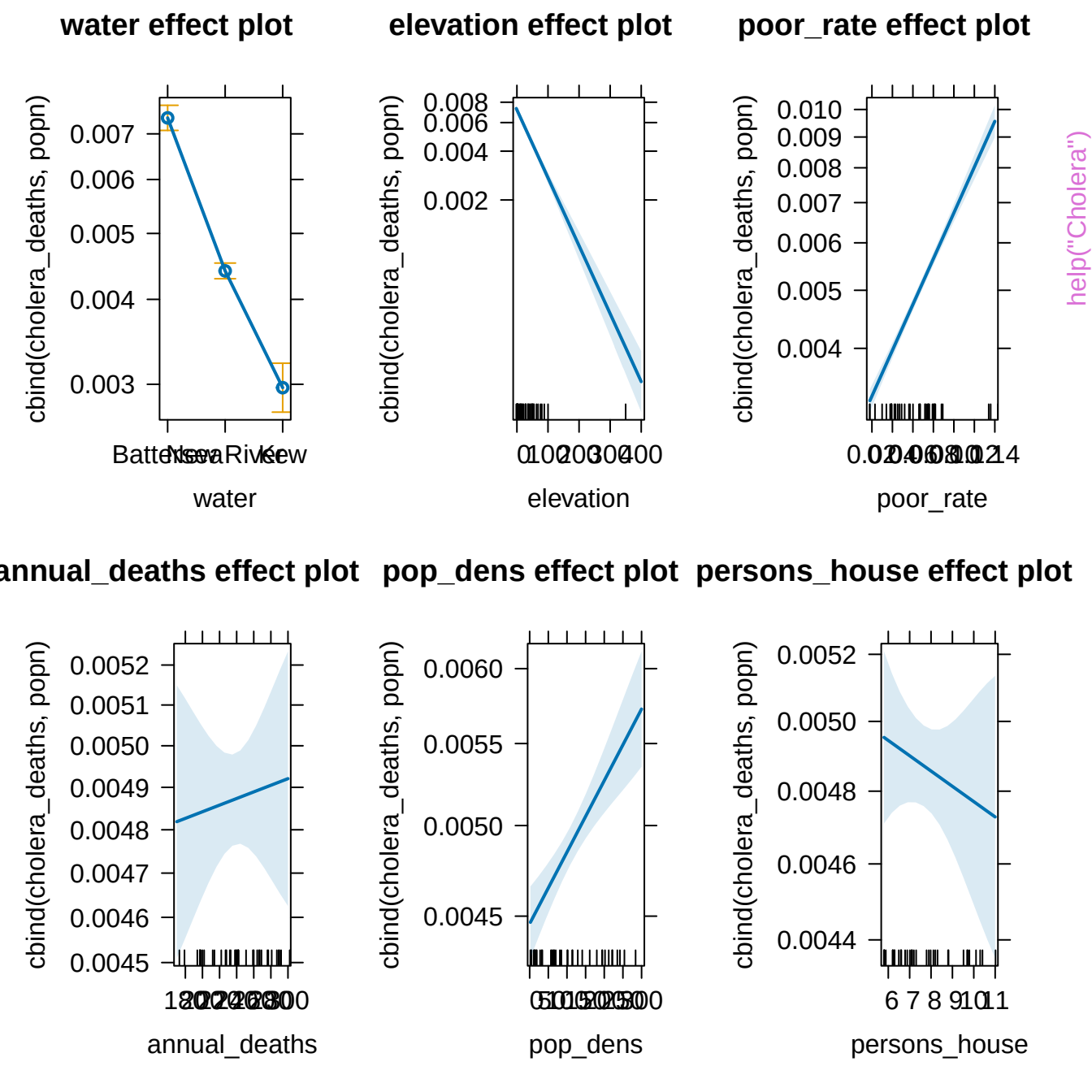

count
0
200
400
600
800
1000
35
40
45
chest
help("ChestSizes")

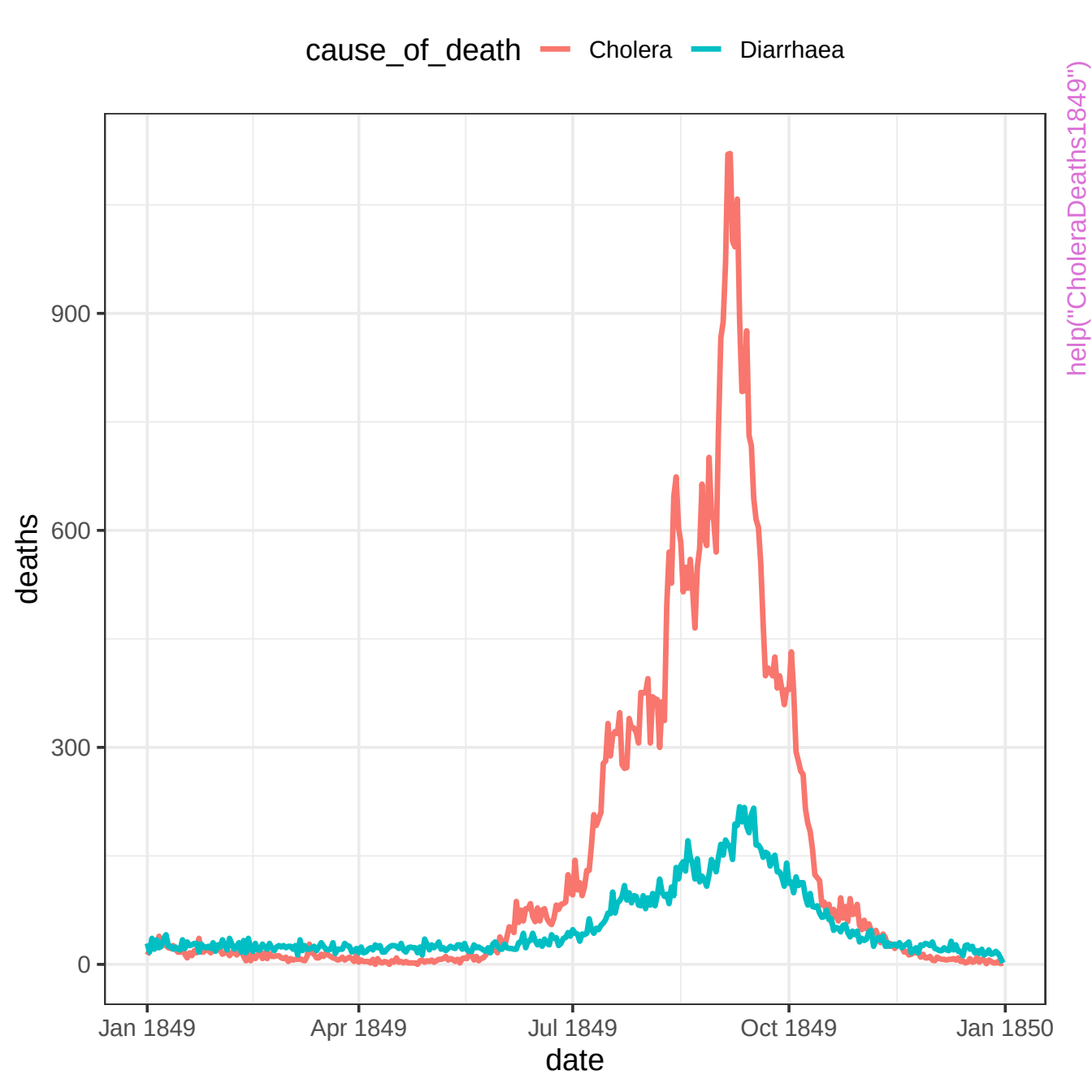

Frequency
0
200
400
600
800
1000
Chest size
help("ChestSizes")

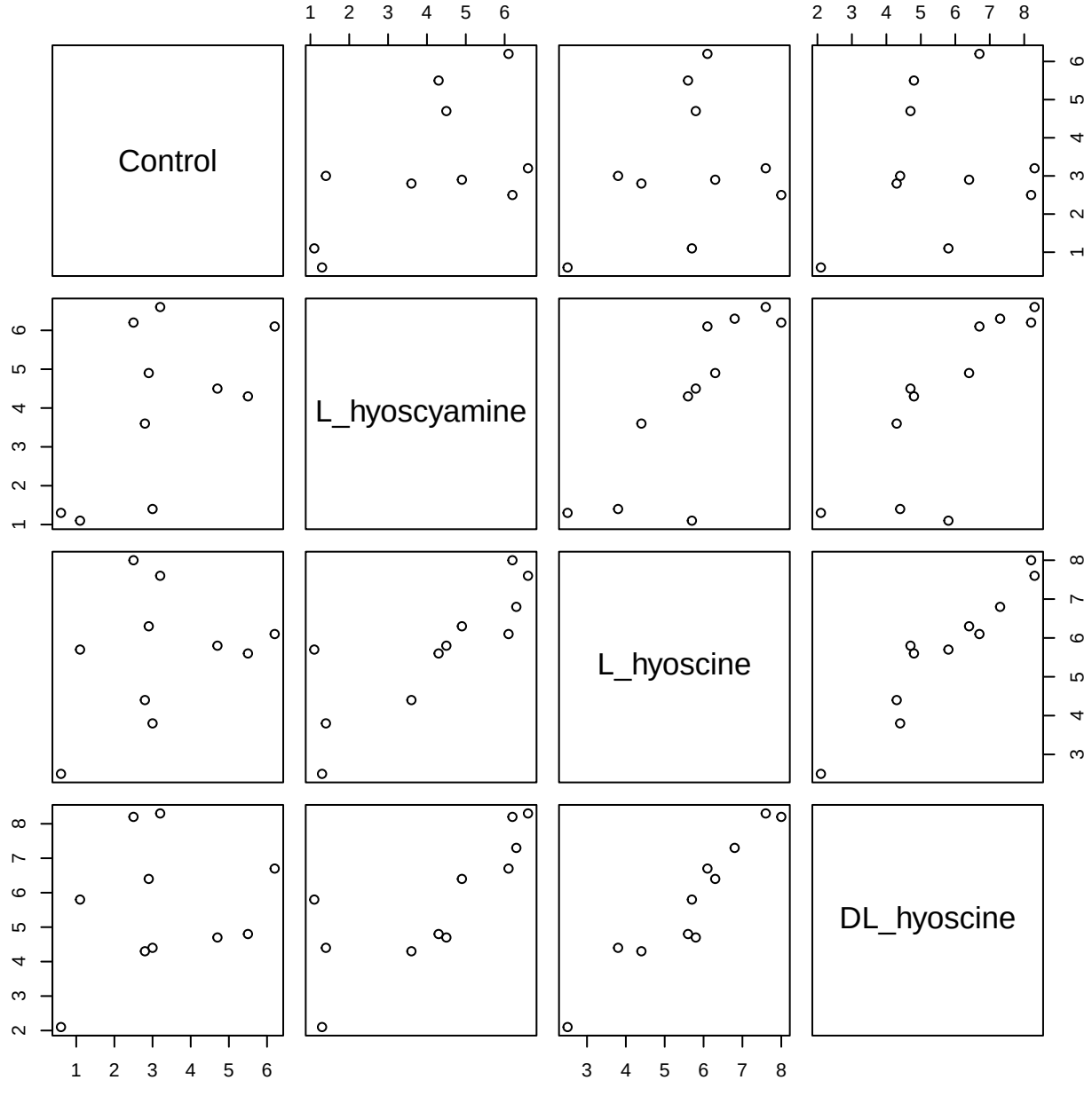

Deaths from cholera in 1849 per 10,000
50
100
150
200
0
50
100
150
200
250
300
350
Elevation above high water mark (ft)
help("Cholera")


Water supply
Battersea
New River
Kew
Wandsworth
West London
Hammersmith
Belgrave
Islington
Hampstead
Deaths from cholera in 1849 per 10,000
Elevation above high water mark (ft)
0
50
100
150
200
250
300
350
50
100
150
200
help("Cholera")

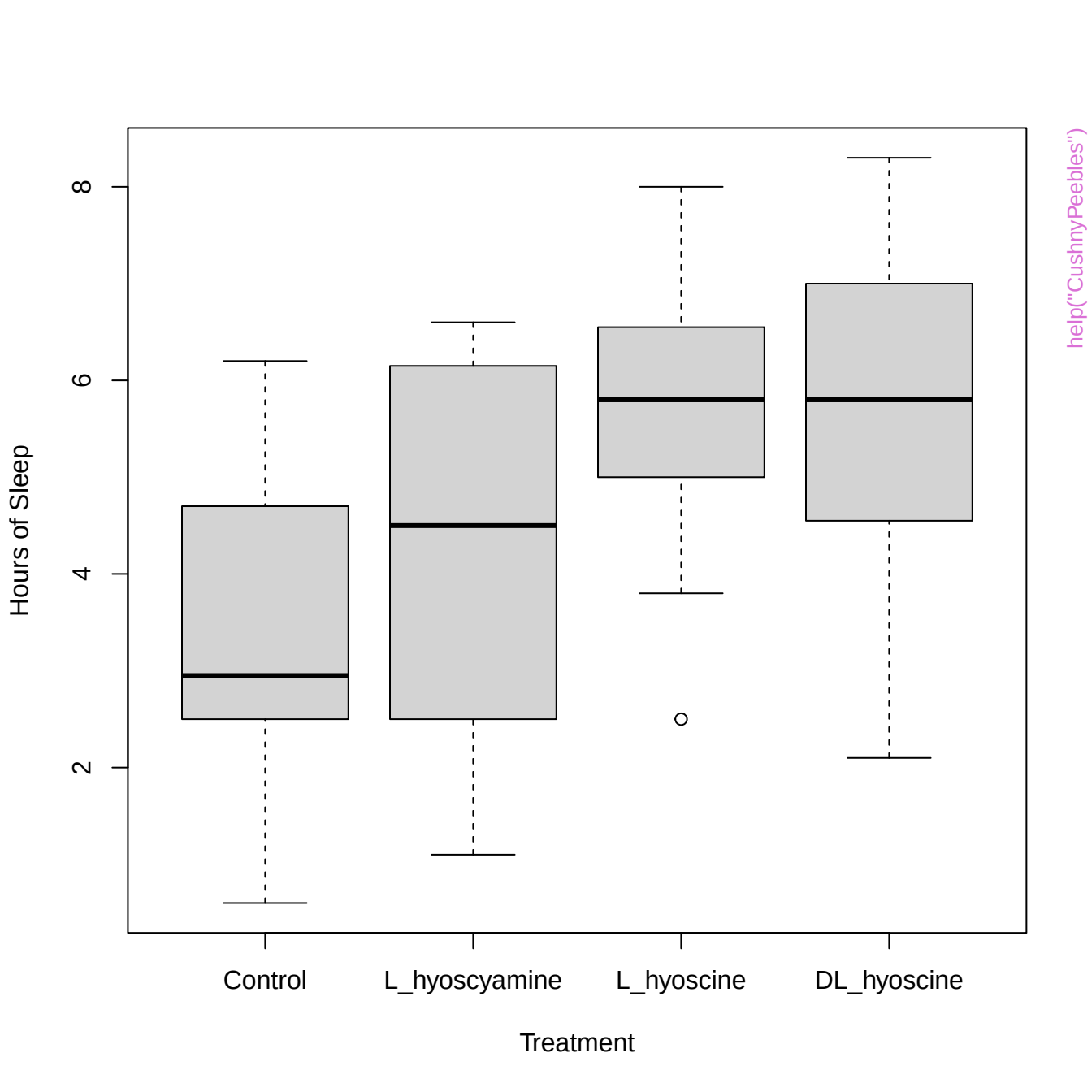

Water supply
Battersea
New River
Kew
St George Southwark
West London
Bethnal Green
Chelsea
Hammersmith
Hanover Square & Mayfair
Deaths from cholera in 1849 per 10,000
Poor rate per pound of house value
50
100
150
200
0.02
0.04
0.06
0.08
0.10
0.12
0.14
help("Cholera")

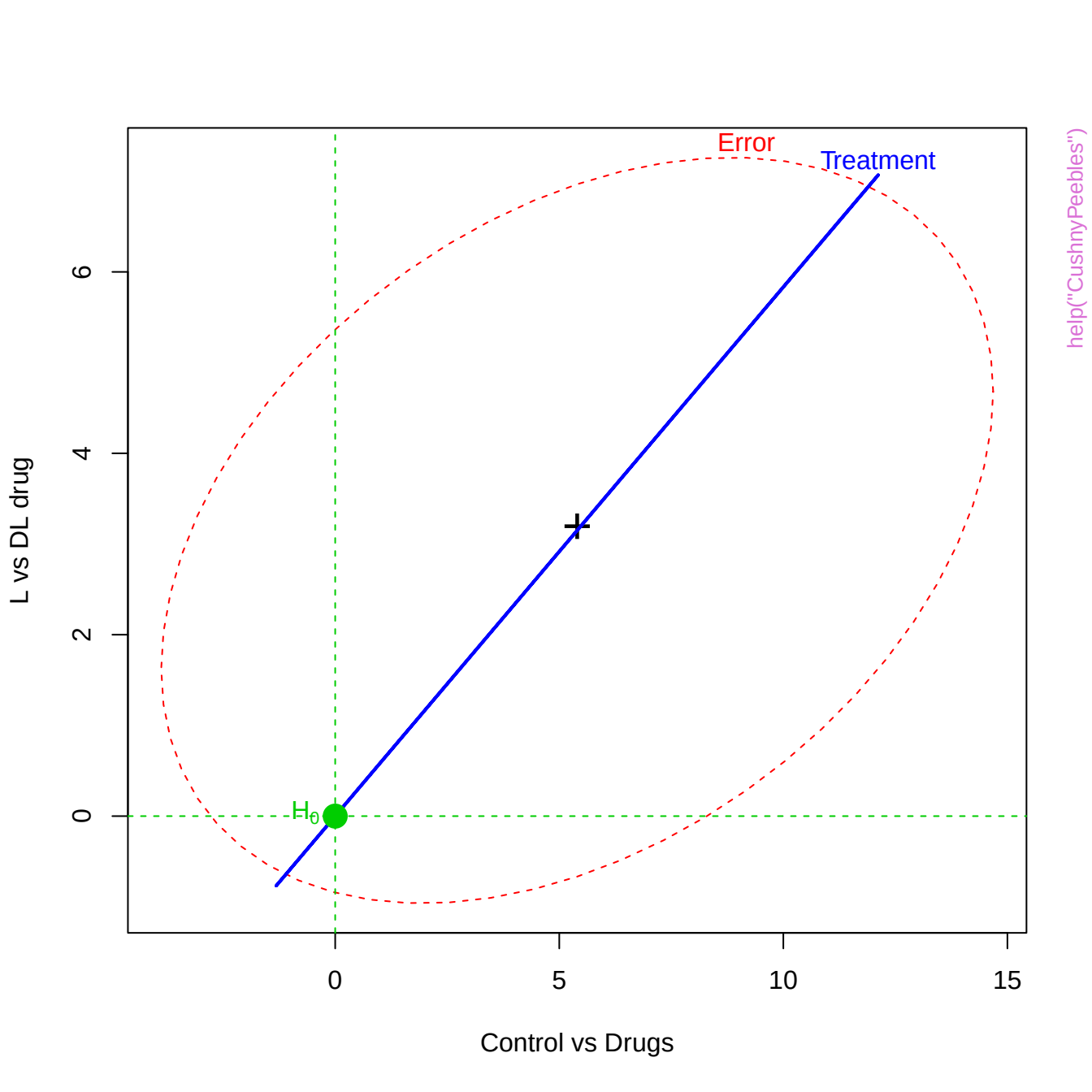

water effect plot
elevation effect plot
poor_rate effect plot
annual_deaths effect plot
pop_dens effect plot
persons_house effect plot
cbind(cholera_deaths, popn)
water
elevation
poor_rate
annual_deaths
pop_dens
persons_house
help("Cholera")

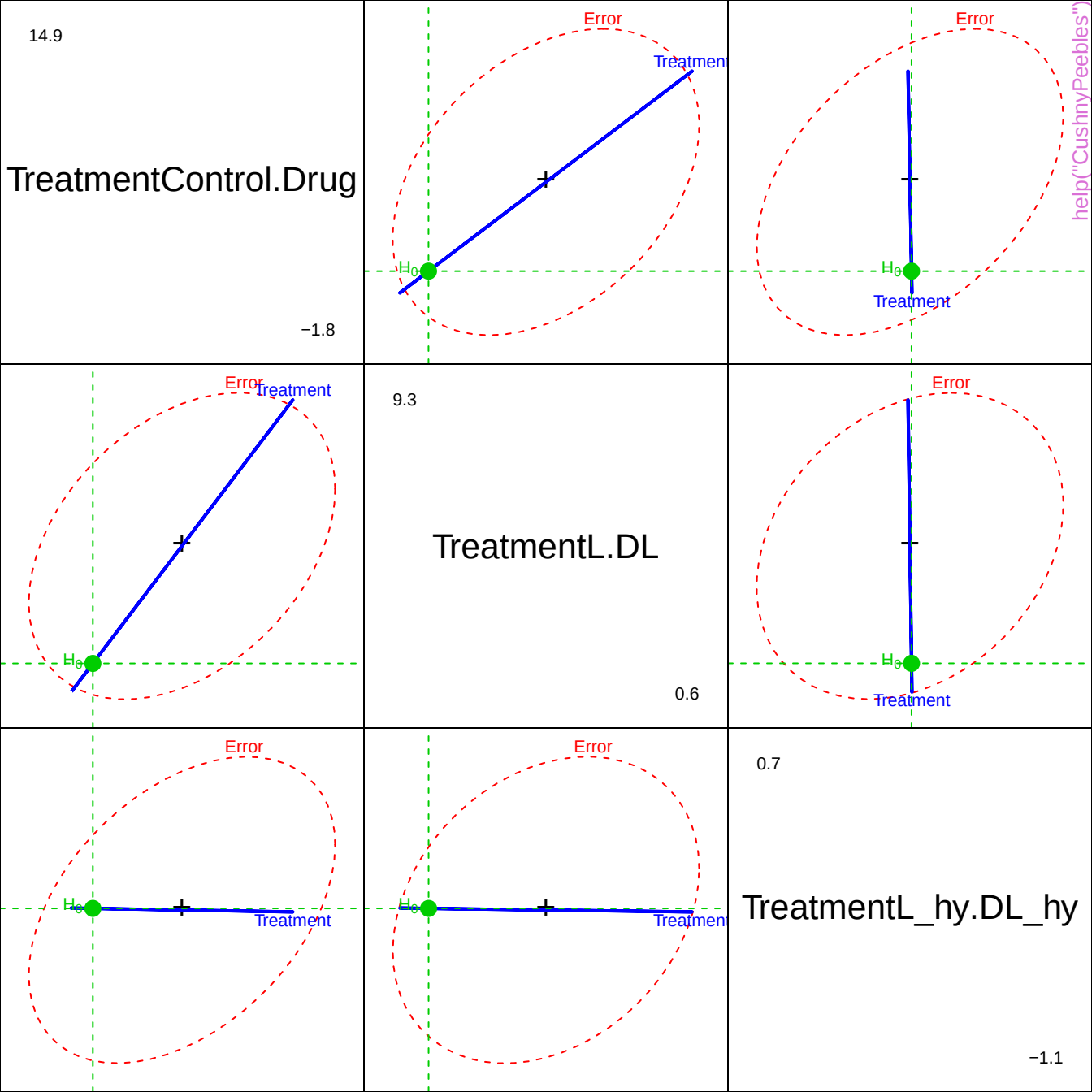

cause_of_death
Cholera
Diarrhaea
deaths
900
600
300
0
Jan 1849
Apr 1849
Jul 1849
Oct 1849
Jan 1850
date
help("CholeraDeaths1849")

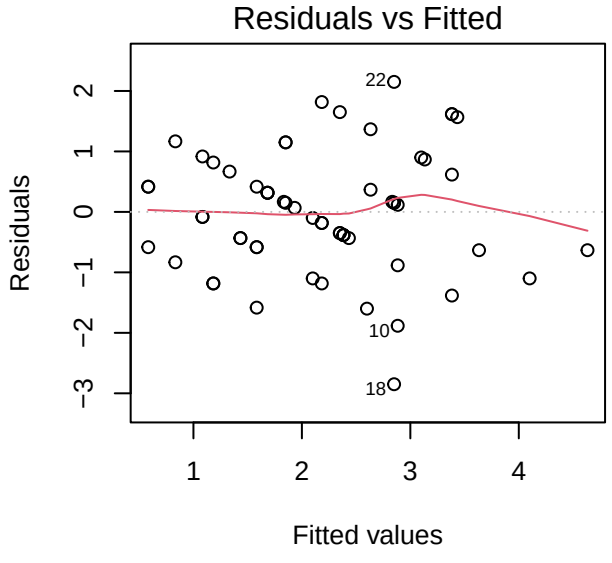


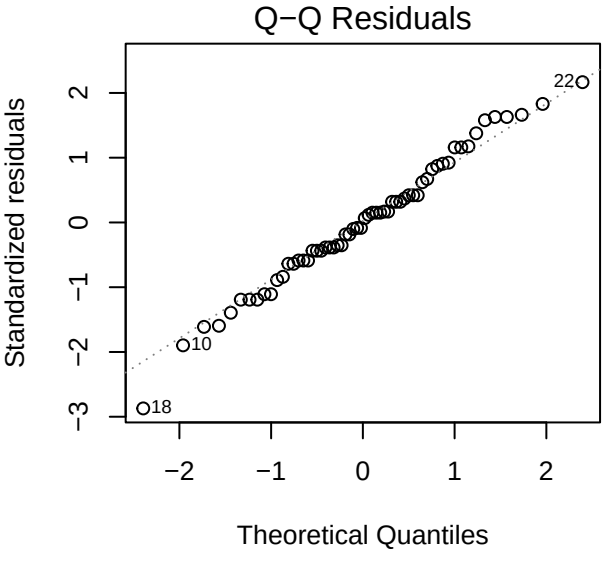
help("CushnyPeebles")


Hours of Sleep
2
4
6
8
Control
L_hyoscyamine
L_hyoscine
DL_hyoscine
Treatment
help("CushnyPeebles")

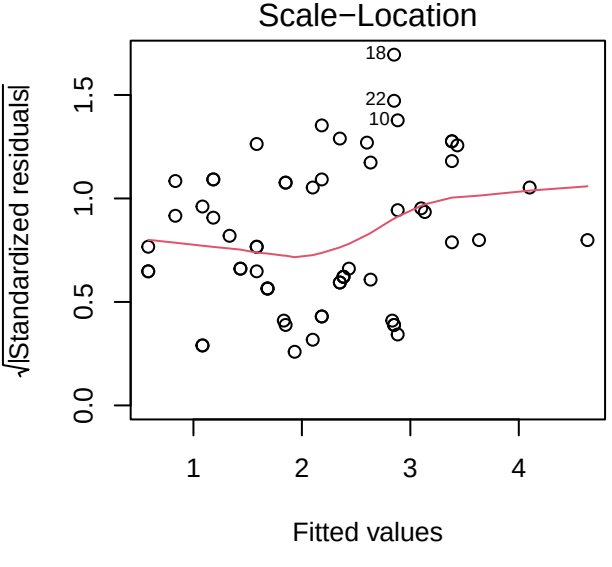

Error
Treatment
H0
L vs DL drug
Control vs Drugs
0
2
4
6
0
5
10
15
help("CushnyPeebles")

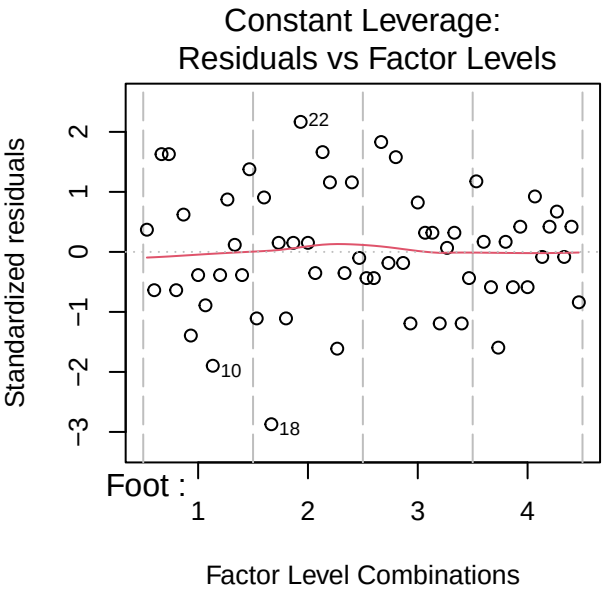

14.9
TreatmentControl.Drug
−1.8
Error
Treatmen
H0
Error
H0
Treatment
help("CushnyPeebles")
Error
Treatment
H0
9.3
TreatmentL.DL
0.6
Error
H0
Treatment
Error
H0
Treatment
Error
Treatmen
H0
0.7
TreatmentL_hy.DL_hy
−1.1


Residuals vs Fitted
Residuals
Fitted values
22
10
18


Q−Q Residuals
Standardized residuals
Theoretical Quantiles
22
10
18

help("Dactyl")

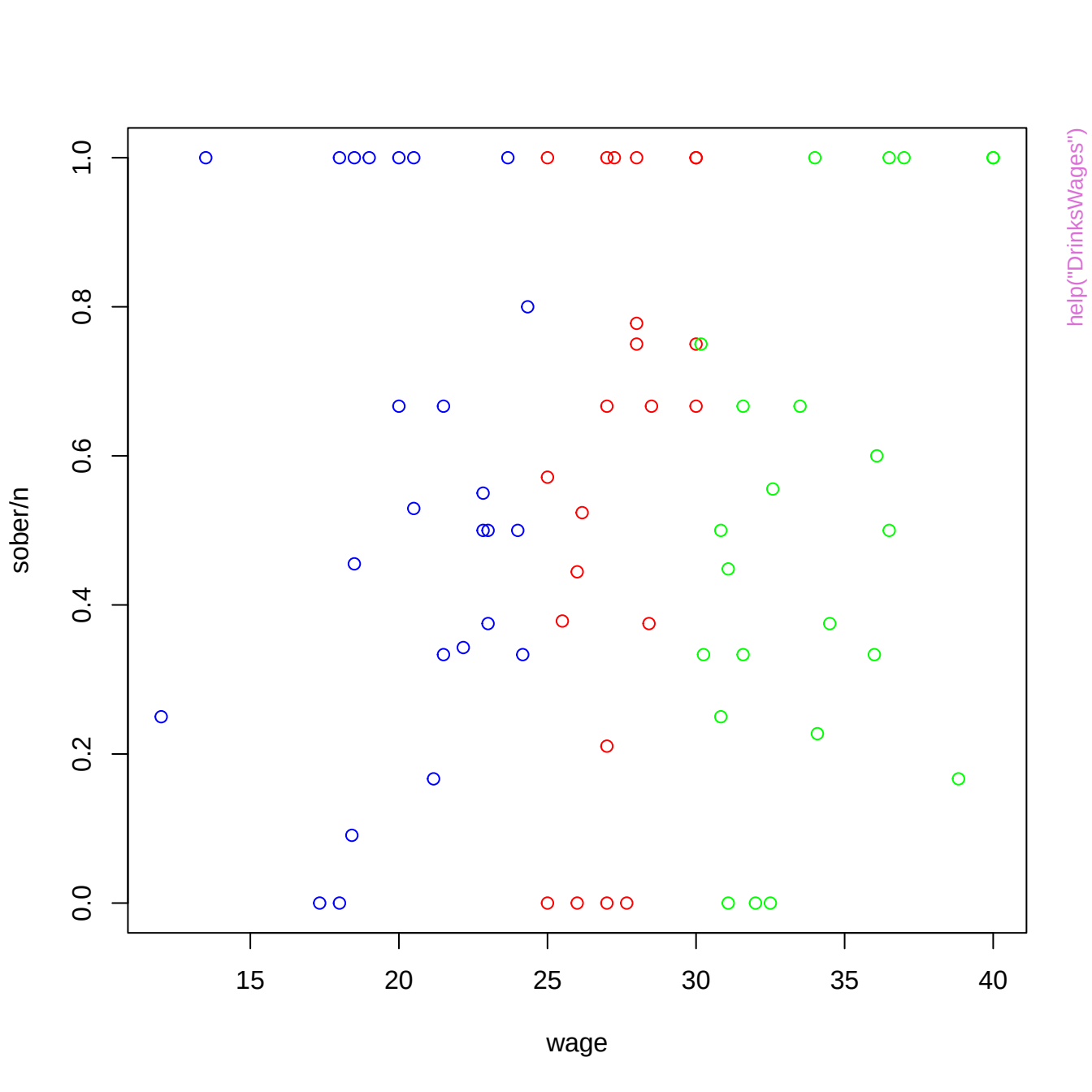

Scale−Location
√|Standardized residuals|
Fitted values
18
22
10

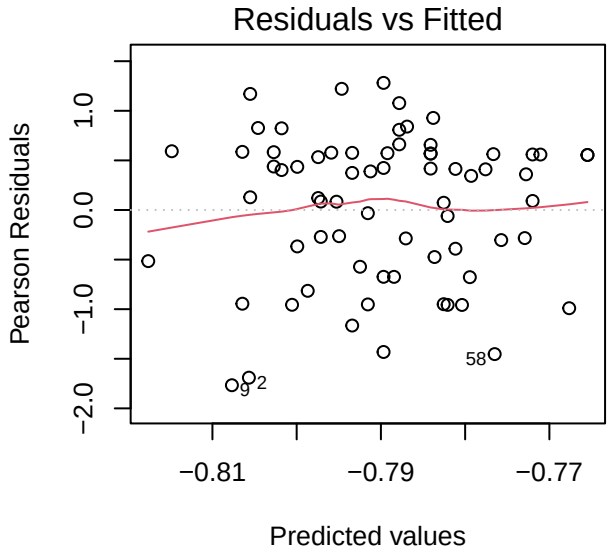

Constant Leverage:
Residuals vs Factor Levels
Standardized residuals
Factor Level Combinations
Foot :
22
10
18

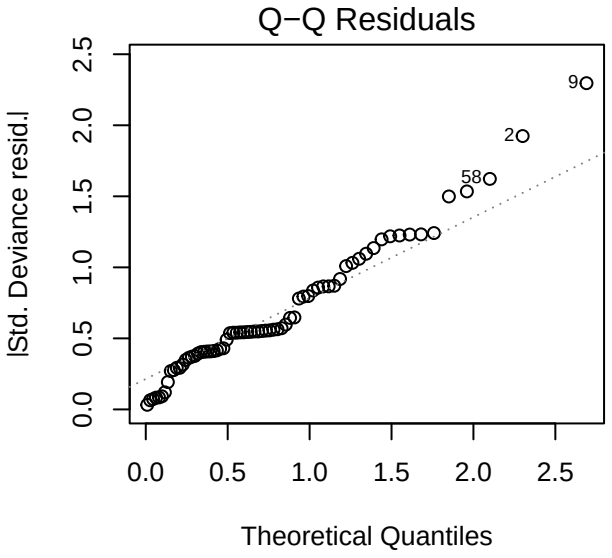
xtabs(count ~ Foot + Lines, data = Dactyl)

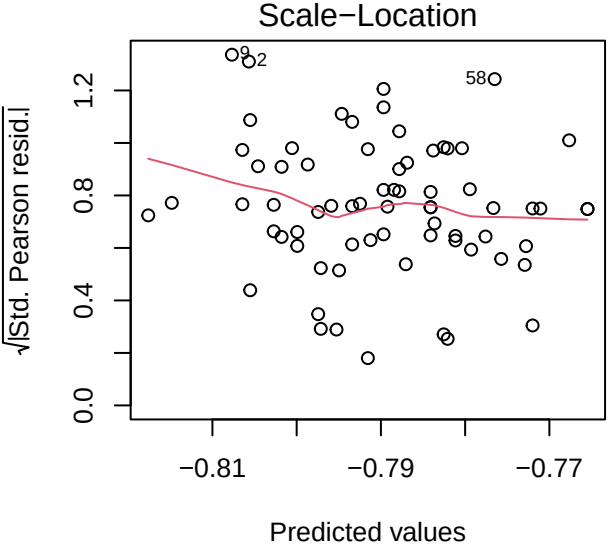
help("Dactyl")

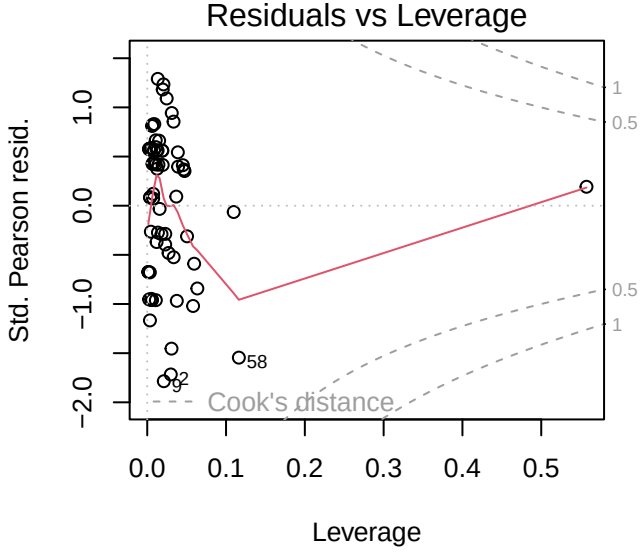
help("DrinksWages")

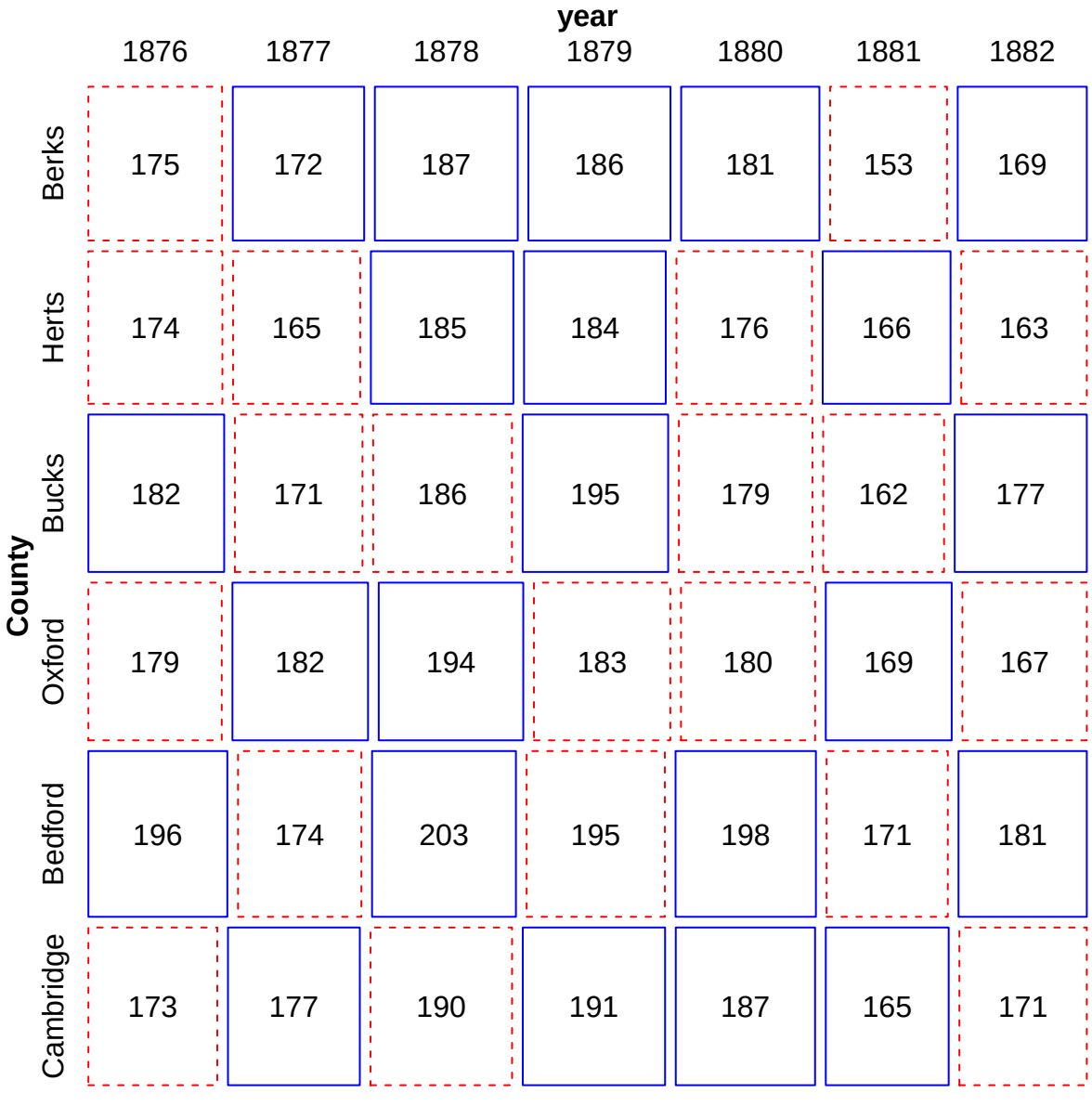

sober/n
0.0
0.2
0.4
0.6
0.8
1.0
15
20
25
30
35
40
wage
help("DrinksWages")


Residuals vs Fitted
Pearson Residuals
1.0
0.0
−1.0
−2.0
−0.81
−0.79
−0.77
Predicted values
9
2
58

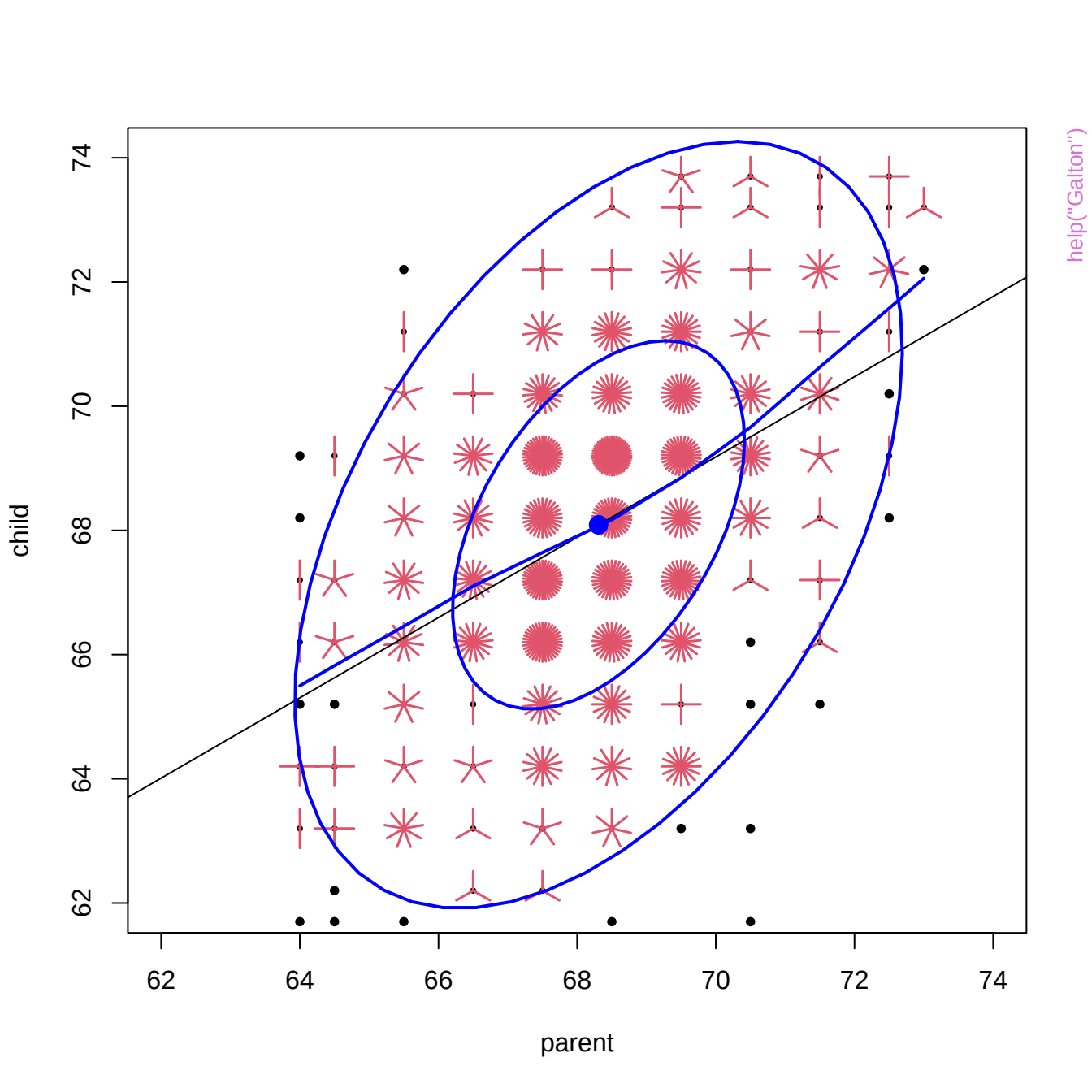

Q−Q Residuals
|Std. Deviance resid.|
2.5
2.0
1.5
1.0
0.5
0.0
0.0
0.5
1.0
1.5
2.0
2.5
Theoretical Quantiles
9
2
58
help("DrinksWages")

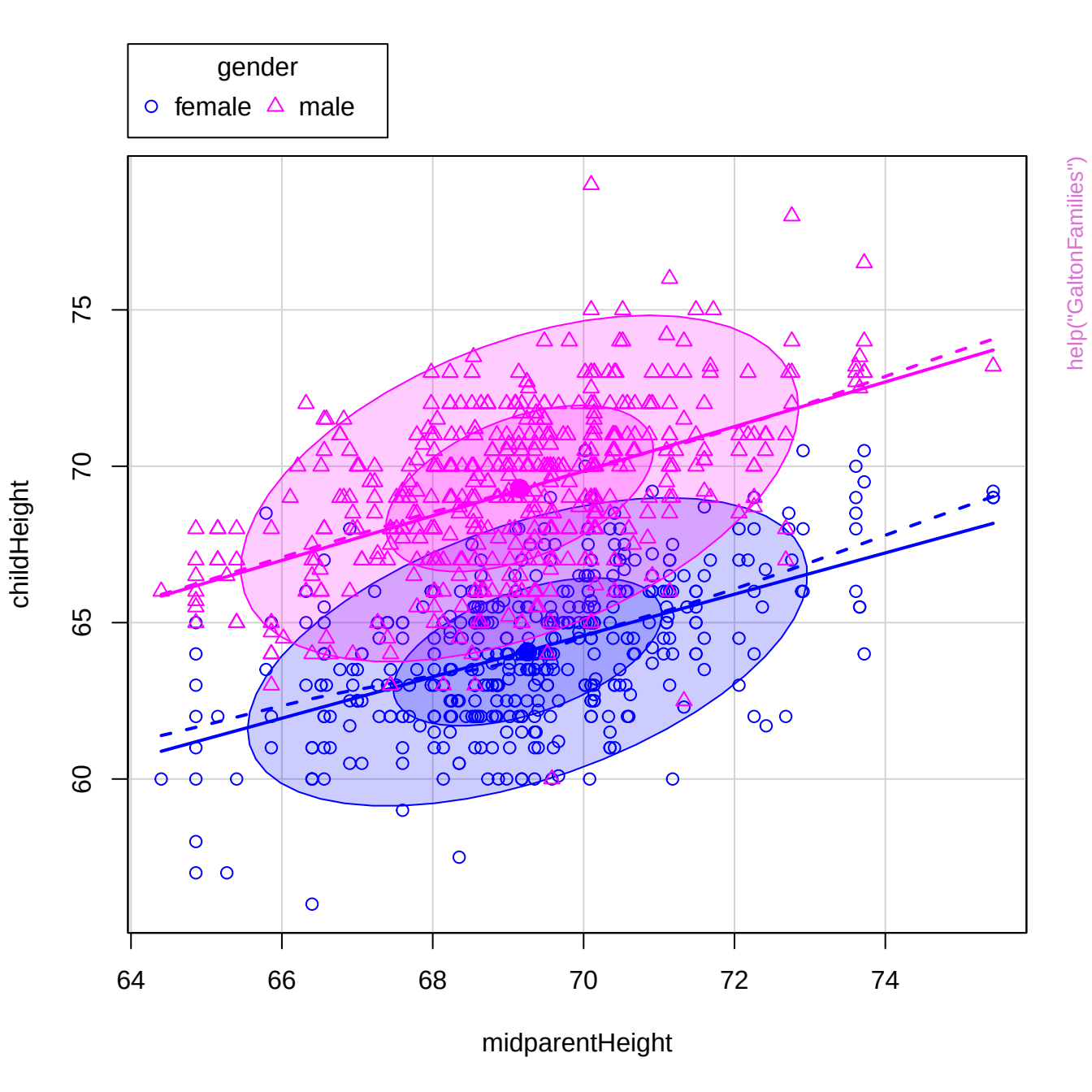

Scale−Location
√|Std. Pearson resid.|
1.2
0.8
0.4
0.0
−0.81
−0.79
−0.77
Predicted values
9
2
58

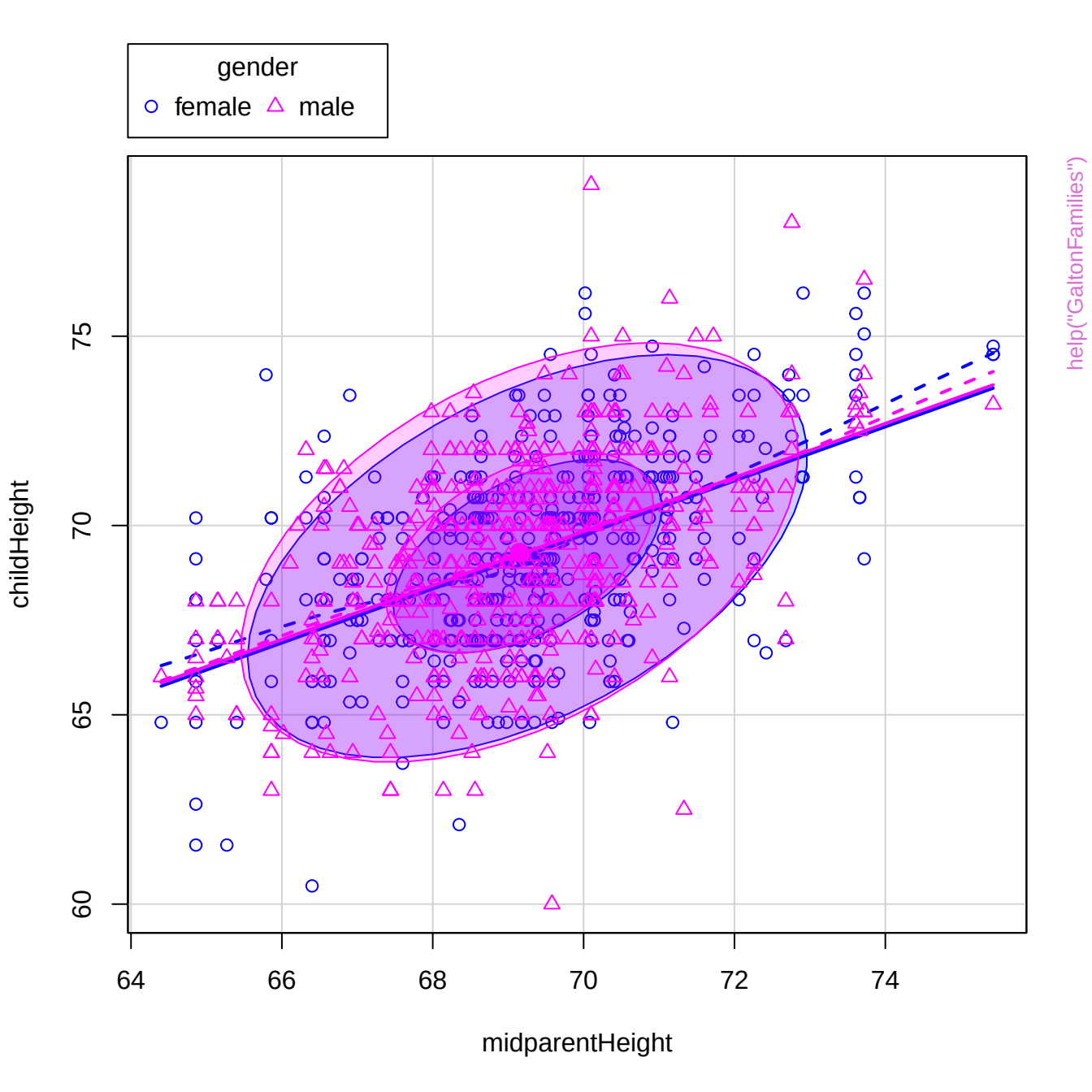

Residuals vs Leverage
Std. Pearson resid.
1.0
0.0
−1.0
−2.0
0.0
0.1
0.2
0.3
0.4
0.5
Leverage
1
0.5
0.5
1
Cook's distance
58
9
2

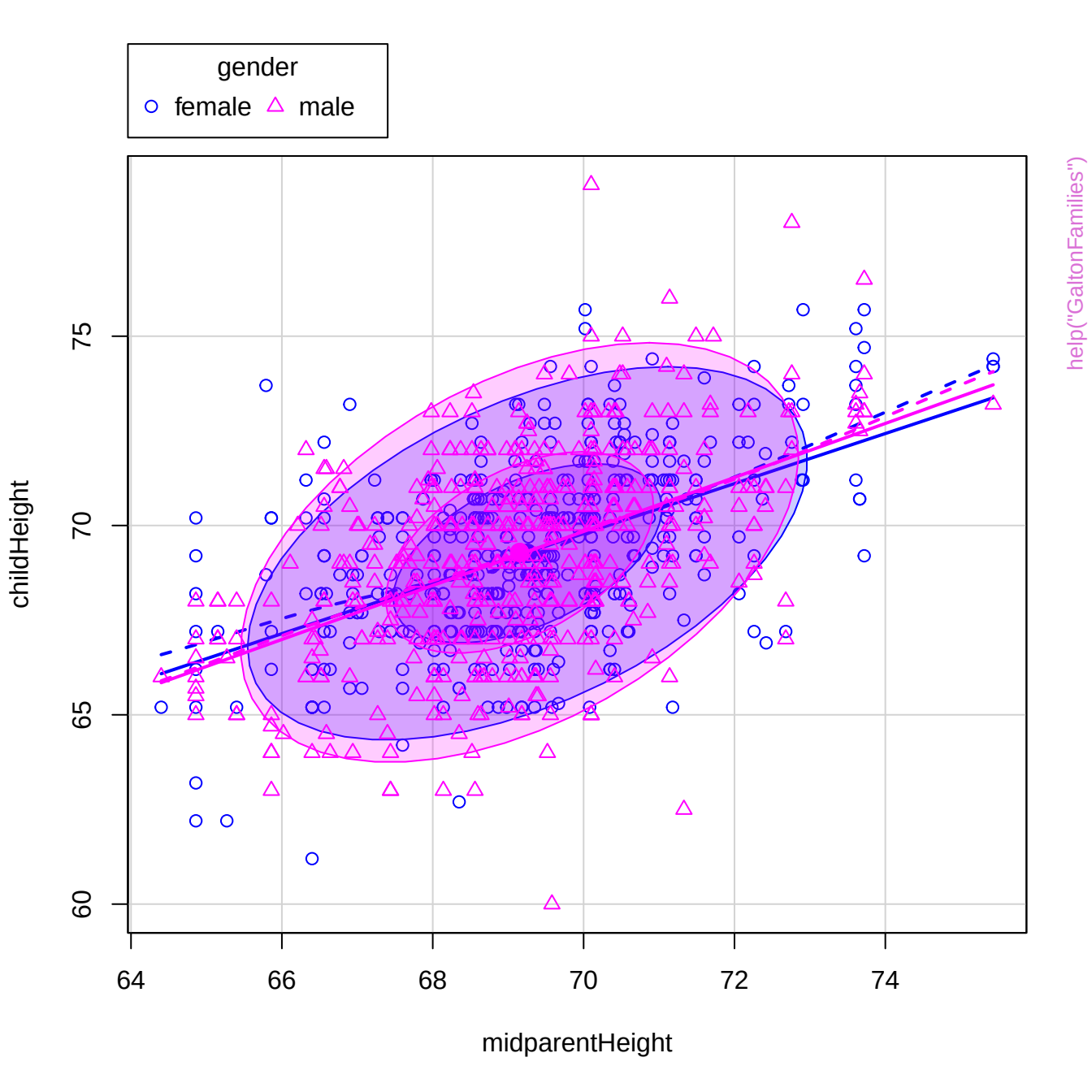


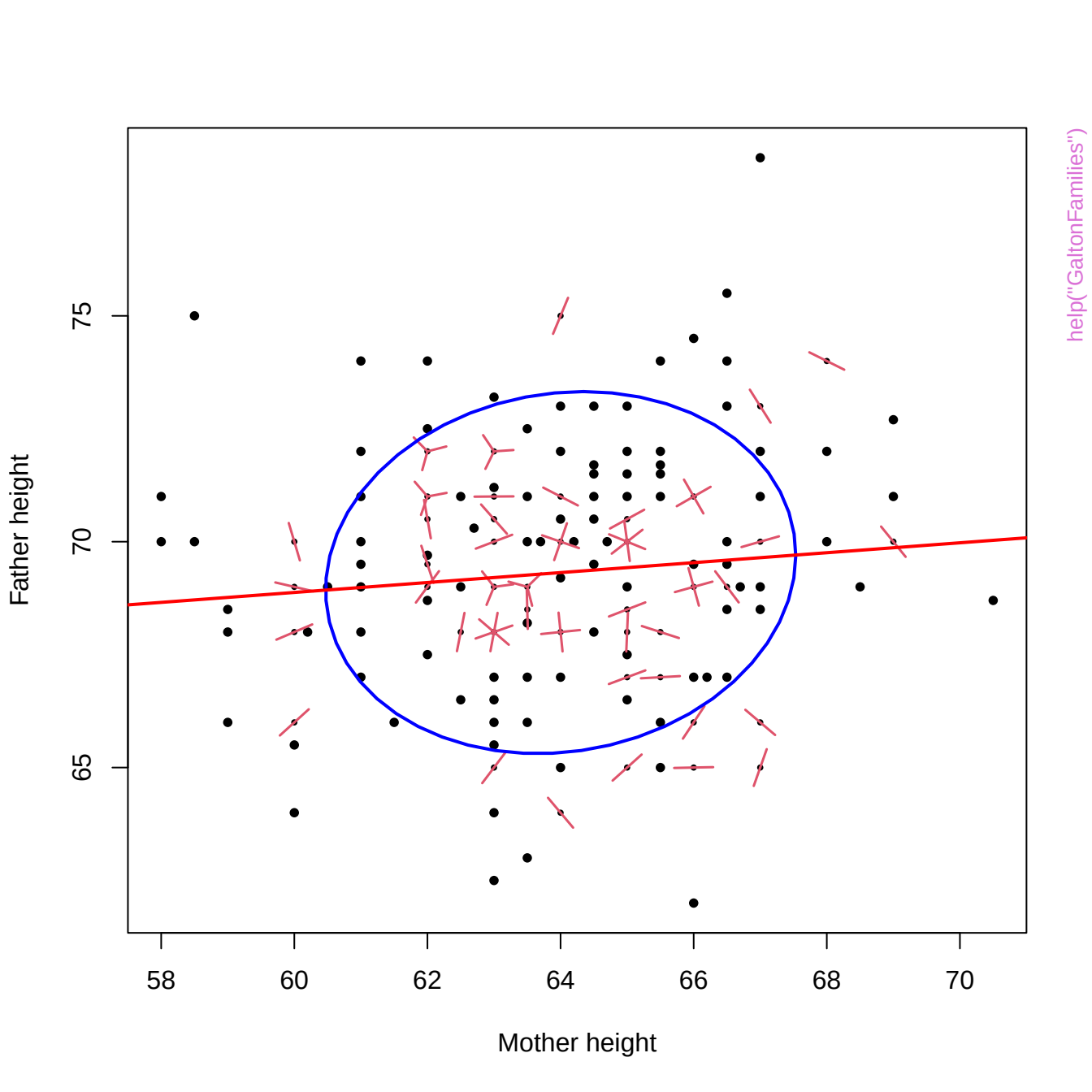
help("EdgeworthDeaths")

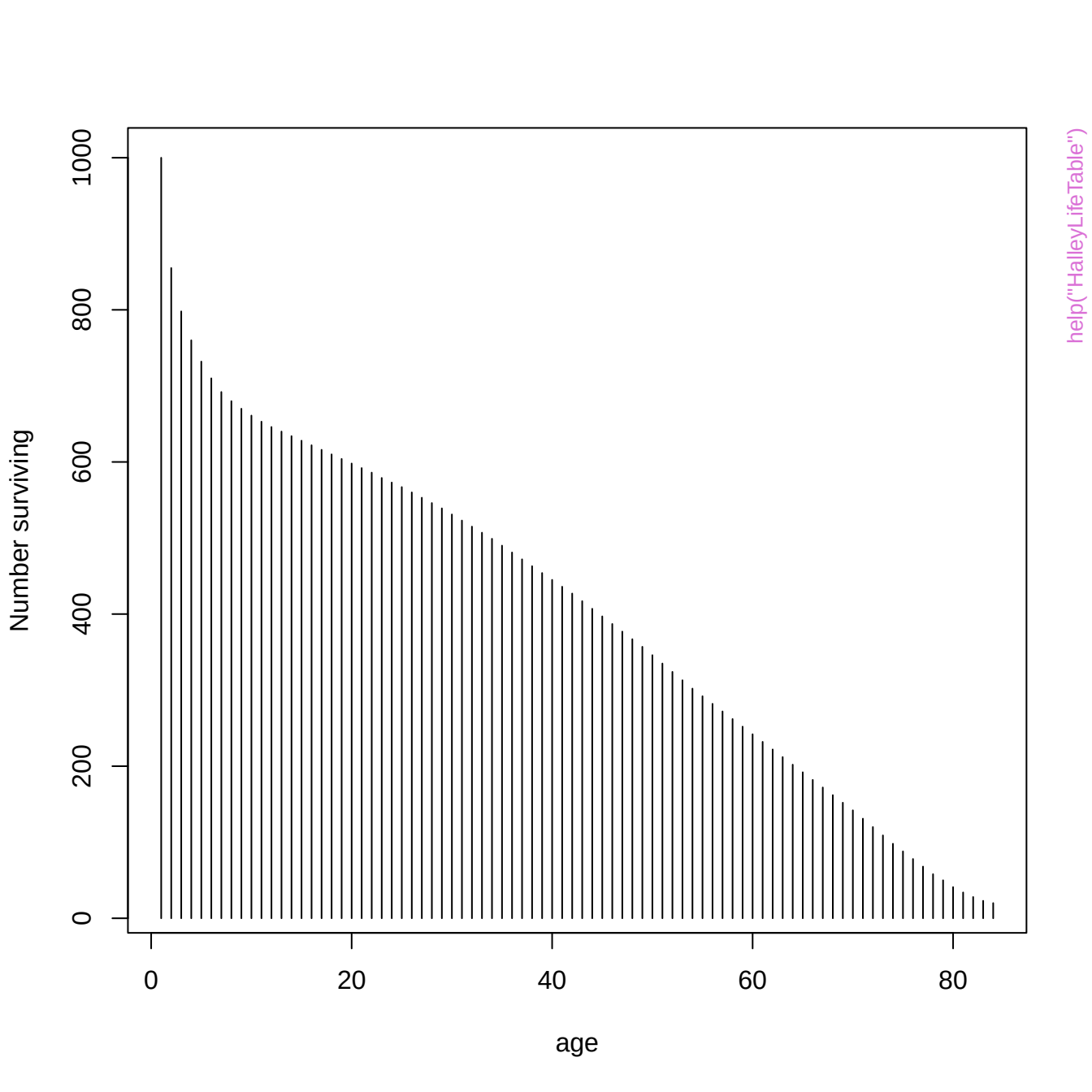

child
parent
62
64
66
68
70
72
74
help("Galton")

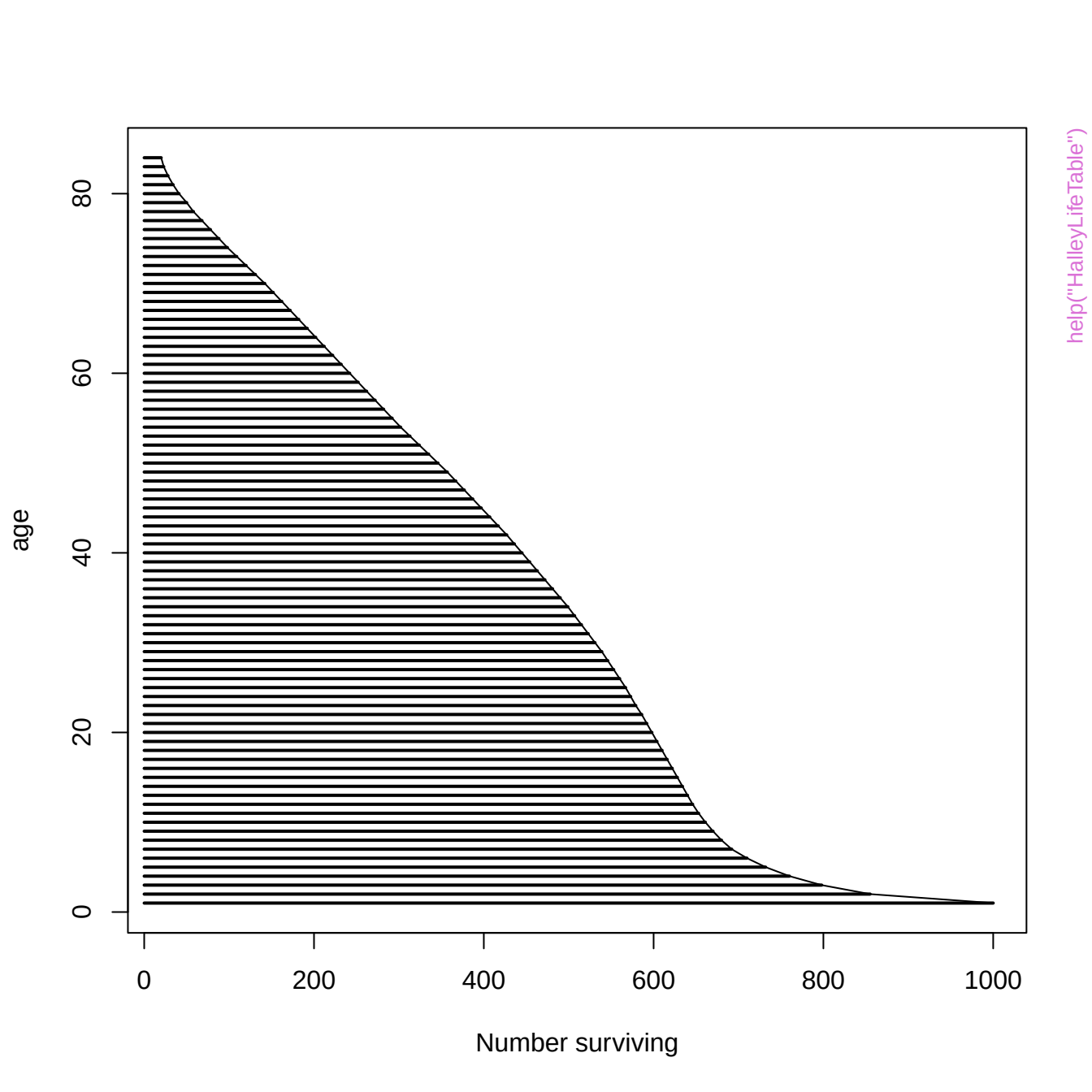

gender
female
male
childHeight
midparentHeight
60
65
70
75
64
66
68
70
72
74
help("GaltonFamilies")

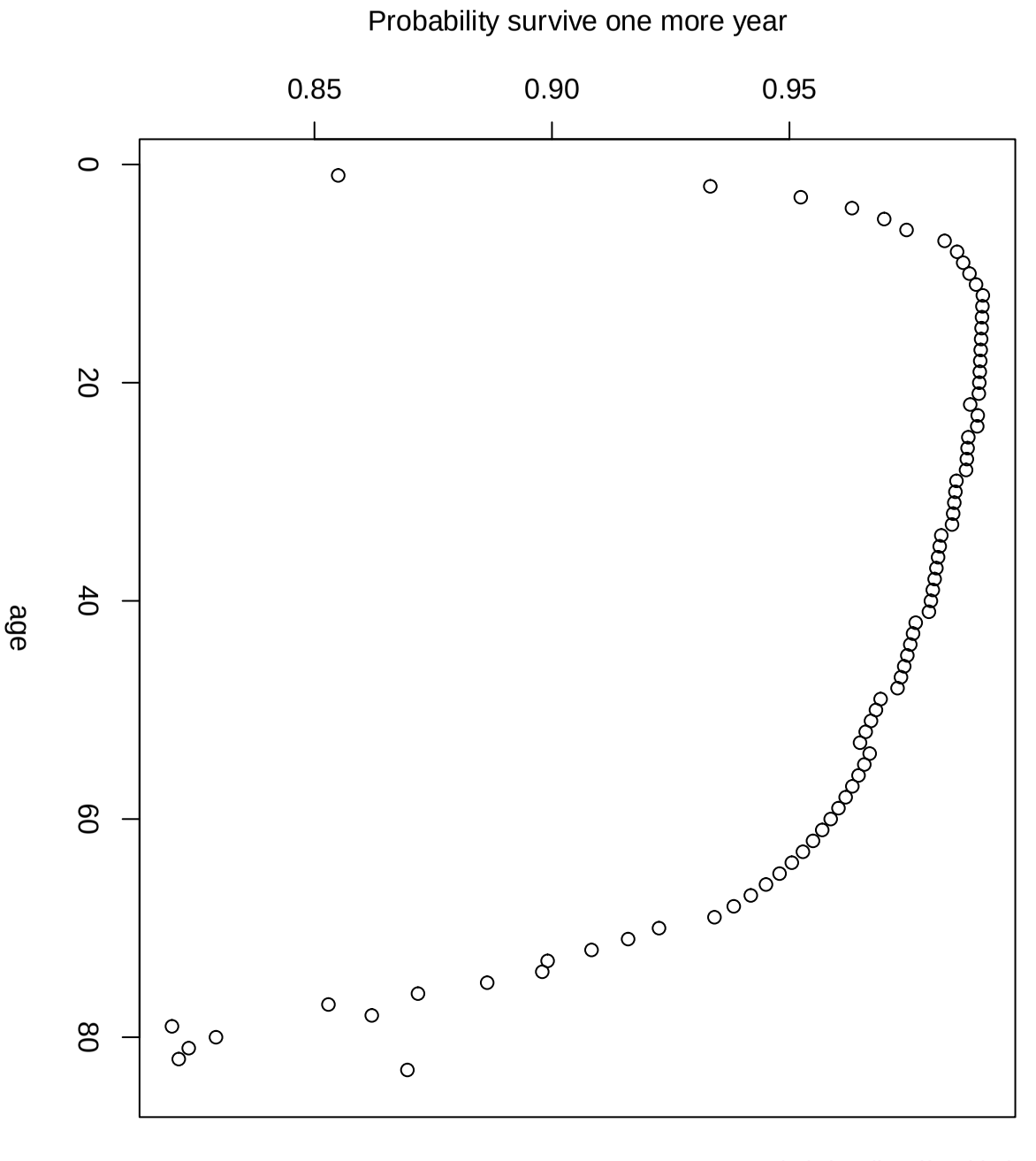

gender
female
male
childHeight
60
65
70
75
64
66
68
70
72
74
midparentHeight
help("GaltonFamilies")


gender
female
male
childHeight
60
65
70
75
64
66
68
70
72
74
midparentHeight
help("GaltonFamilies")

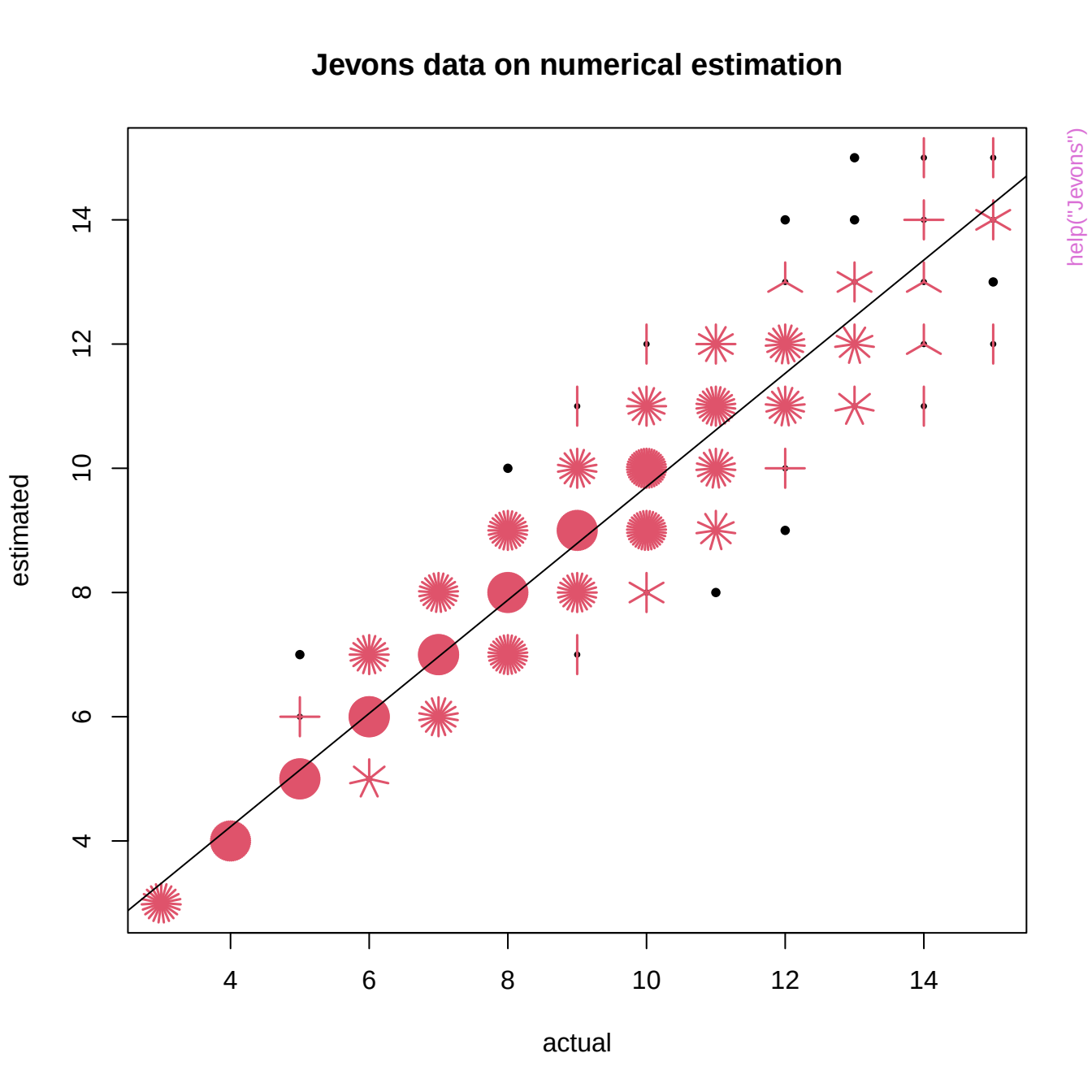

Father height
Mother height
65
70
75
58
60
62
64
66
68
70
help("GaltonFamilies")


Number surviving
0
200
400
600
800
1000
0
20
40
60
80
age
help("HalleyLifeTable")

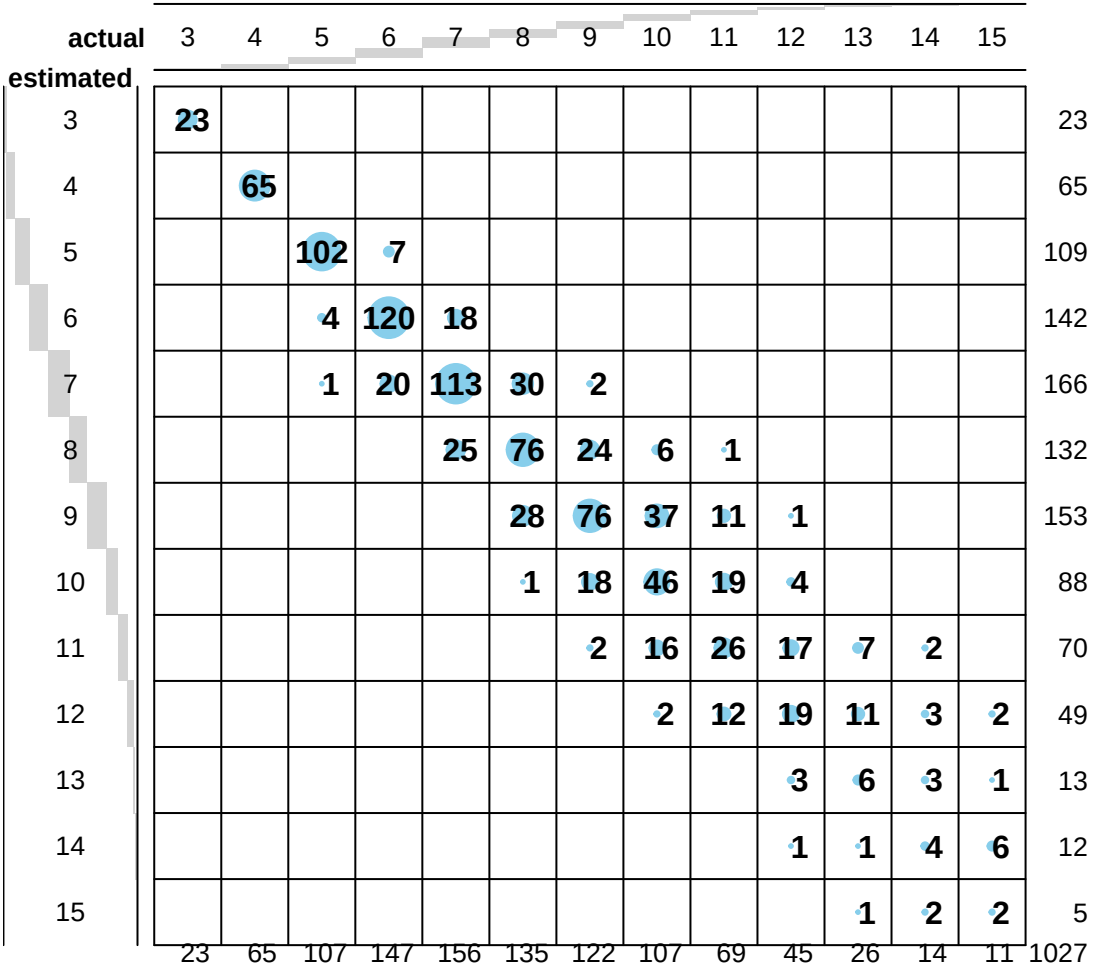

age
0
20
40
60
80
0
200
400
600
800
1000
Number surviving
help("HalleyLifeTable")



help("HalleyLifeTable")

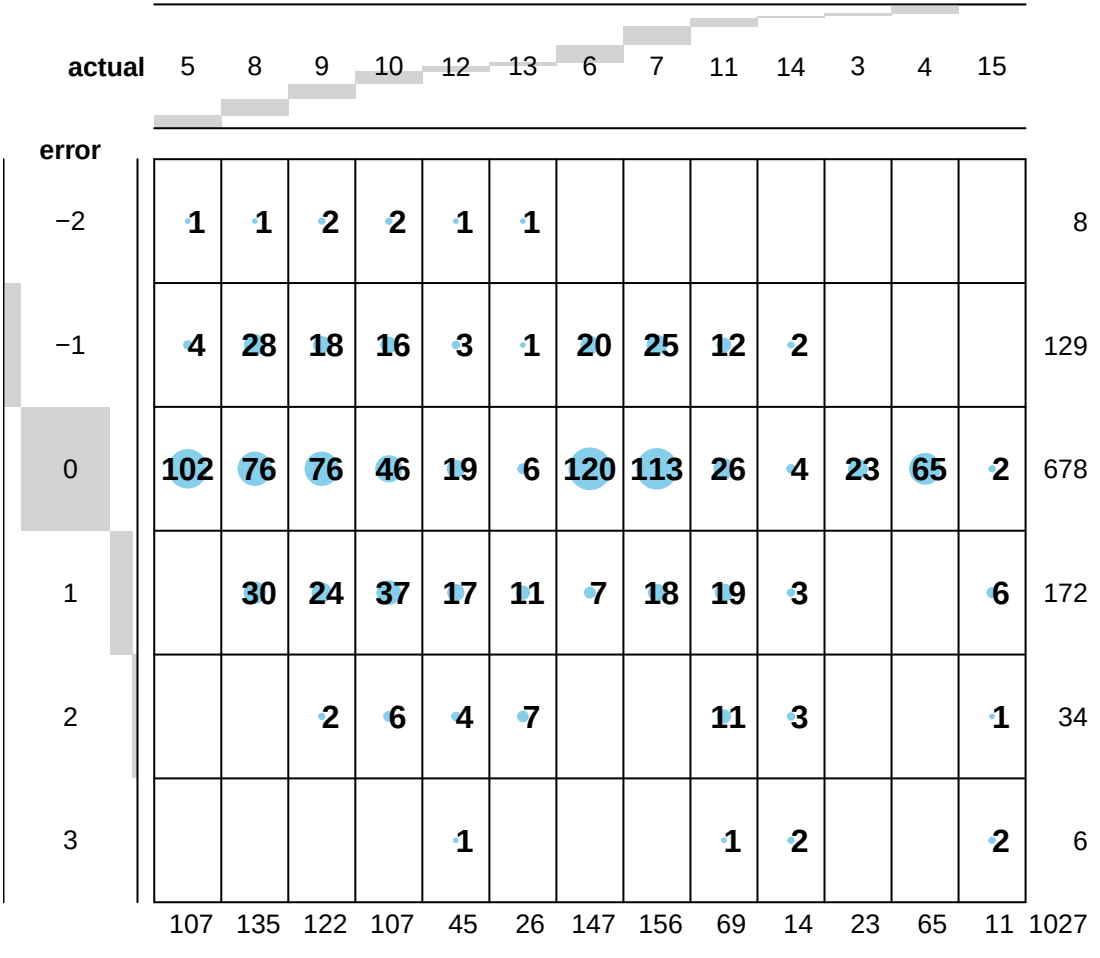

Jevons data on numerical estimation
estimated
actual
4
6
8
10
12
14
help("Jevons")

Jevons data on numerical estimation
Bubble area proportional to frequency

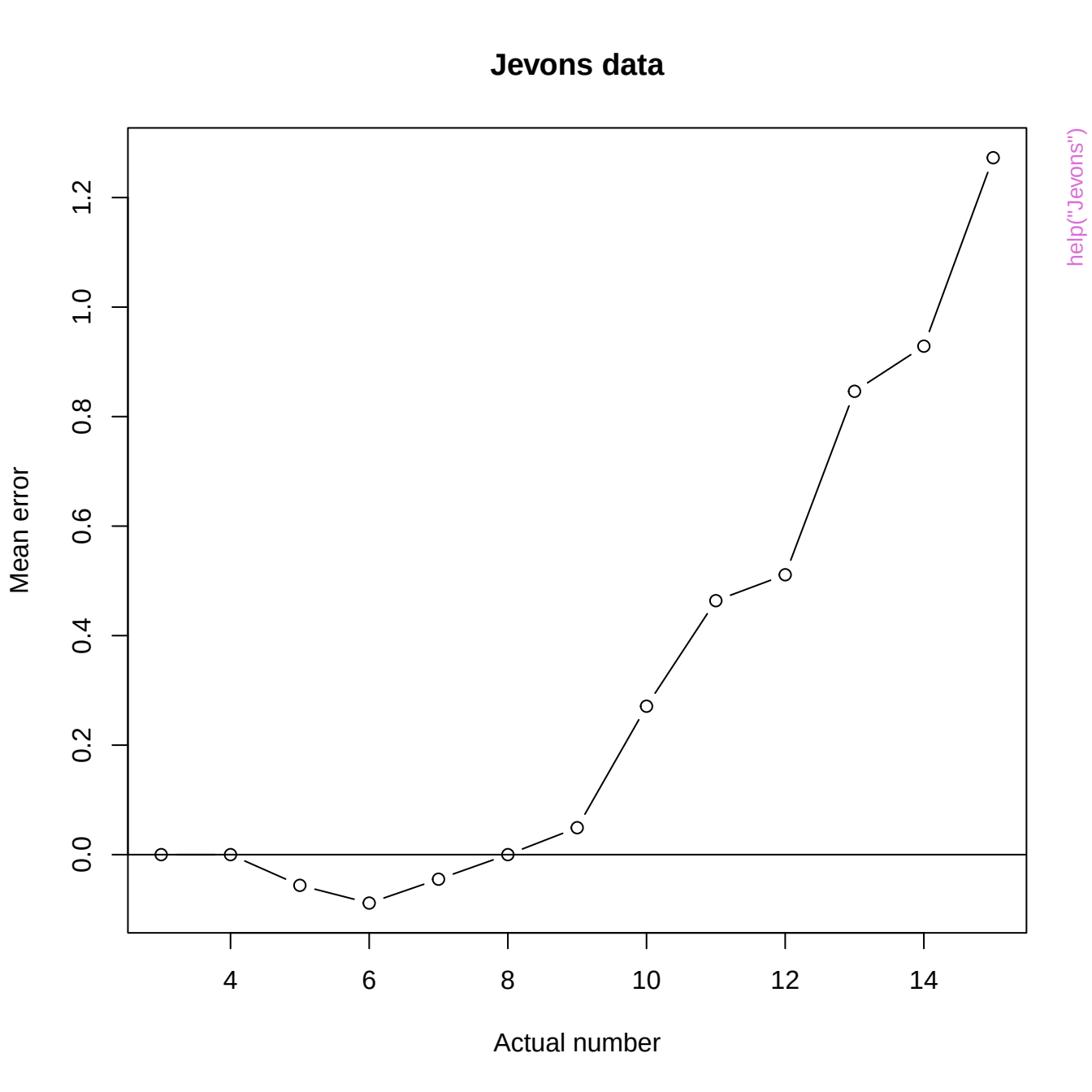


help("Jevons")

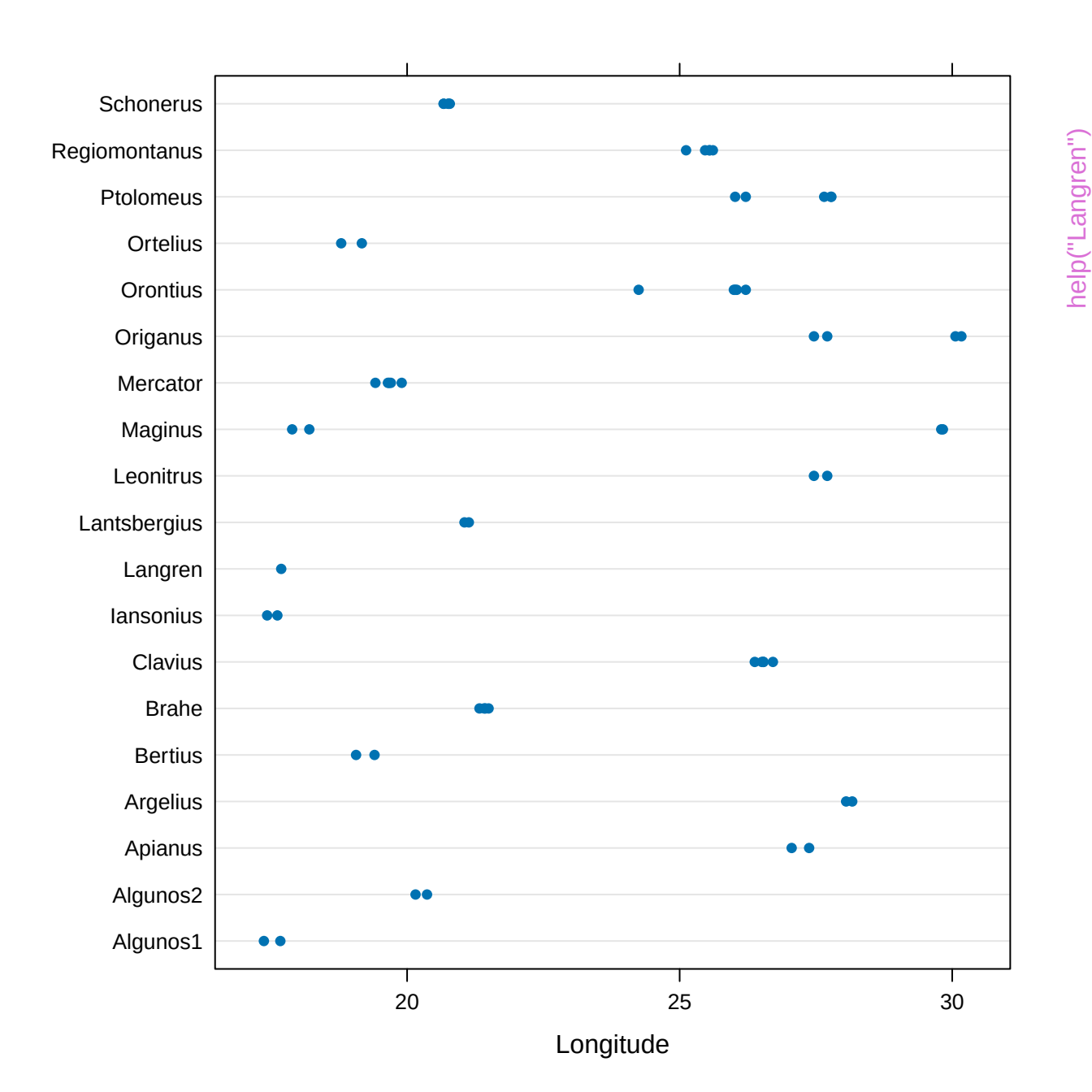
Jevons data on numerical estimation: Errors
Bubble area proportional to frequency

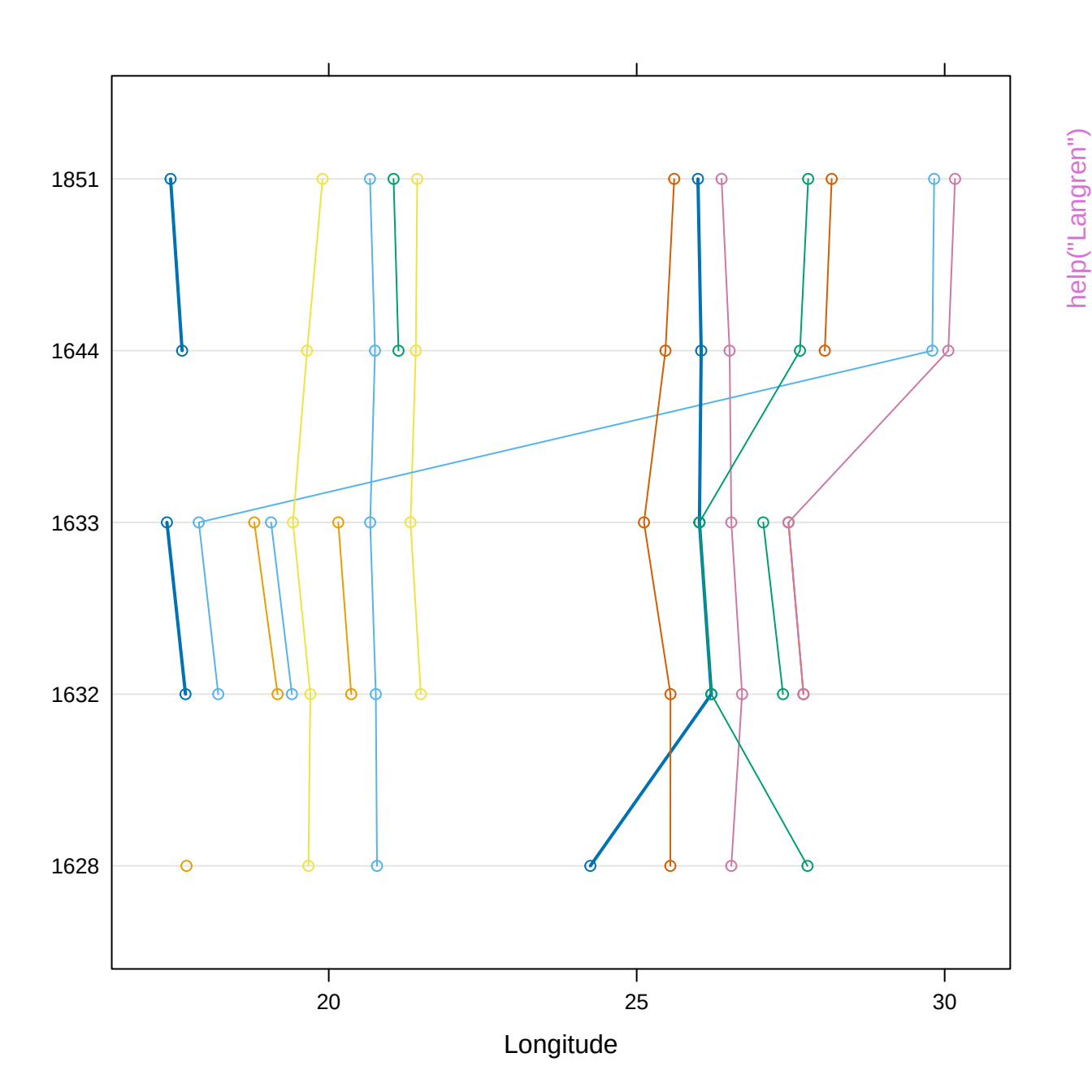


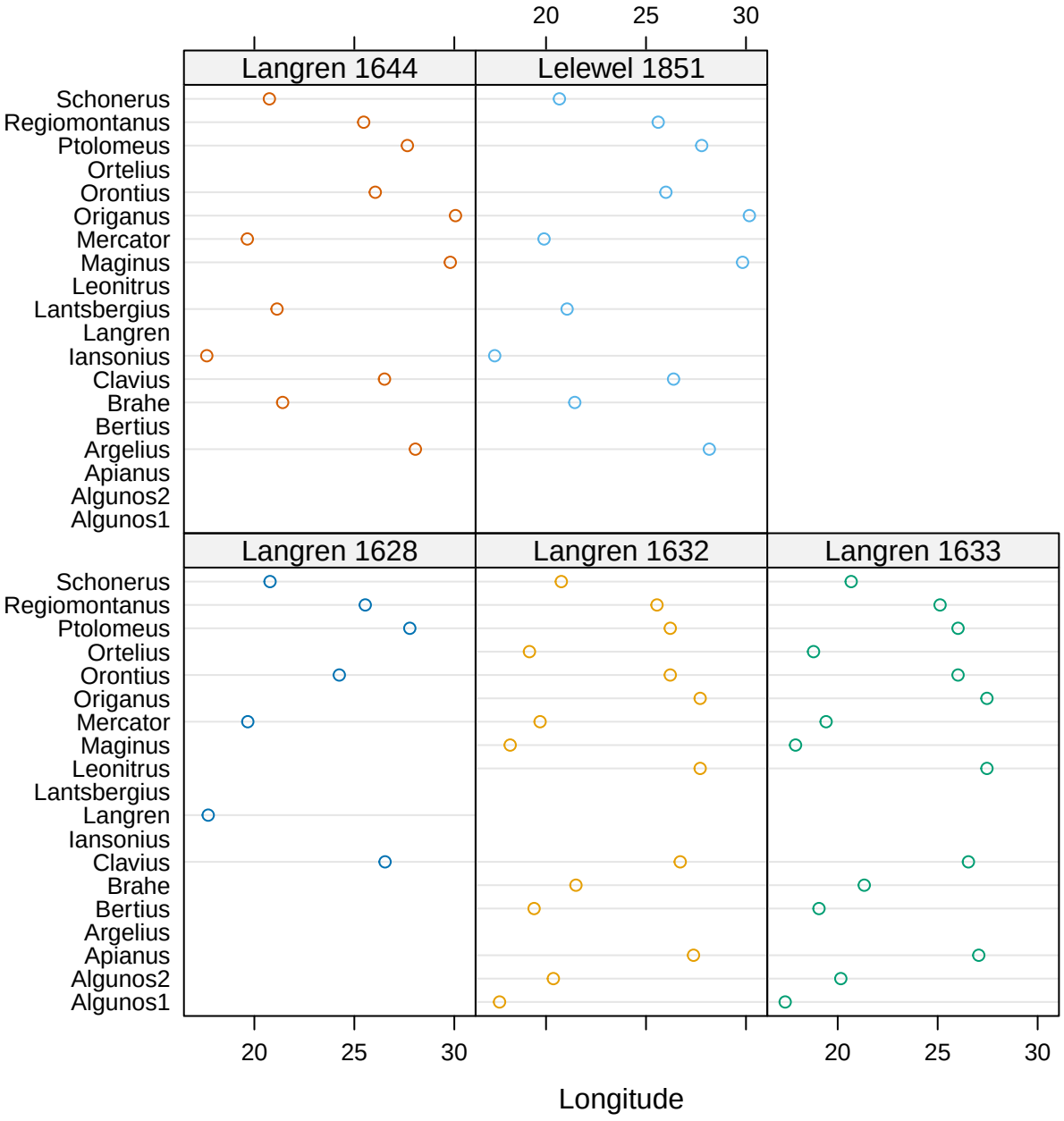
help("Jevons")


Jevons data
help("Jevons")
Mean error
0.0
0.2
0.4
0.6
0.8
1.0
1.2
4
6
8
10
12
14
Actual number

help("Langren")


Schonerus
Regiomontanus
Ptolomeus
Ortelius
Orontius
Origanus
Mercator
Maginus
Leonitrus
Lantsbergius
Langren
Iansonius
Clavius
Brahe
Bertius
Argelius
Apianus
Algunos2
Algunos1
20
25
30
Longitude
help("Langren")


1851
1644
1633
1632
1628
20
25
30
Longitude
help("Langren")



help("Langren")