"Wing lab cs length 13.csv"

Scaled CS and wing length of lab reared

bartlett.test(Wing.length..mm.~Latitude, data=quickie)

Bartlett test of homogeneity of variances

data: Wing.length..mm. by Latitude

Bartlett's K-squared = 20.765, df = 6, p-value = 0.002022

>

> wing.mod2=aov(Wing.length..mm.~Latitude, data=quickie)

> summary(wing.mod2)

Df Sum Sq Mean Sq F value Pr(>F)

Latitude 1 2.459 2.4590 82.5 <2e-16 \*\*\*

Residuals 868 25.871 0.0298

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

print(HSD.test(wing.mod2, 'Latitude'))

$statistics

Mean CV MSerror HSD r.harmonic

2.679551 6.442957 0.02980536 0.06492937 123.491

$parameters

Df ntr StudentizedRange alpha test name.t

868 7 4.179378 0.05 Tukey Latitude

$means

Wing.length..mm. std r Min Max

-22.611 2.811598 0.1874891 112 2.325 3.345

-10.796 2.710478 0.1828271 113 2.254 3.195

-10.7 2.679533 0.1536643 120 2.305 3.104

-9.223 2.660108 0.1577168 136 2.256 3.038

-8.742 2.644523 0.2052987 130 2.174 3.122

-3.028 2.637283 0.1532976 139 2.256 2.979

-2.864 2.636142 0.1611424 120 2.269 3.004

$comparison

NULL

$groups

trt means M

1 -22.611 2.811598 a

2 -10.796 2.710478 b

3 -10.7 2.679533 bc

4 -9.223 2.660108 bc

5 -8.742 2.644523 c

6 -3.028 2.637283 c

7 -2.864 2.636142 c

bartlett.test(CS.scaled.13~Latitude, data=quickie)

Bartlett test of homogeneity of variances

data: CS.scaled.13 by Latitude

Bartlett's K-squared = 19.728, df = 6, p-value = 0.003095

>

> wing.mod3=aov(CS.scaled.13~Latitude, data=quickie)

> summary(wing.mod3)

Df Sum Sq Mean Sq F value Pr(>F)

Latitude 1 2.834 2.834 88.48 <2e-16 \*\*\*

Residuals 868 27.799 0.032

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1