"Wing lab cs length 13.csv"

Scaled CS and wing length of lab reared

wing.mod3=aov(**Wing.length..mm.**~Locality+Sex+Temp.Num, data=quickie)

> summary(wing.mod3)

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

Locality 6 2.746 0.458 27.18 < 2e-16 \*\*\*

Sex 1 0.736 0.736 43.73 6.61e-11 \*\*\*

Temp.Num 1 10.347 10.347 614.37 < 2e-16 \*\*\*

Residuals 861 14.500 0.017

---

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

print(HSD.test(wing.mod3, 'Locality'))

$means

Wing.length..mm. std r Min Max

APR 2.637283 0.1532976 139 2.256 2.979

ARS 2.636142 0.1611424 120 2.269 3.004

RMO 2.660108 0.1577168 136 2.256 3.038

RPV 2.644523 0.2052987 130 2.174 3.122

SJU 2.811598 0.1874891 112 2.325 3.345

TLC 2.679533 0.1536643 120 2.305 3.104

TPN 2.710478 0.1828271 113 2.254 3.195

$groups

trt means M

1 SJU 2.811598 a

2 TPN 2.710478 b

3 TLC 2.679533 bc

4 RMO 2.660108 c

5 RPV 2.644523 c

6 APR 2.637283 c

7 ARS 2.636142 c

wing.mod4=aov(**CS.scaled.13**~Locality+Sex+Temp.Num, data=quickie)

> summary(wing.mod4)

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

Locality 6 3.071 0.512 27.270 <2e-16 \*\*\*

Sex 1 0.005 0.005 0.261 0.61

Temp.Num 1 11.398 11.398 607.284 <2e-16 \*\*\*

Residuals 861 16.160 0.019

---

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

wing.mod7=aov(**CS.scaled.18**~Locality+Sex+Temp.Num, data=quickie)

> summary(wing.mod7)

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

Locality 6 3.696 0.616 39.95 <2e-16 \*\*\*

Sex 1 2.347 2.347 152.22 <2e-16 \*\*\*

Temp.Num 1 8.600 8.600 557.75 <2e-16 \*\*\*

Residuals 861 13.276 0.015

---

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

**Repeatability** **testing**

14.5% of all field and lab wings

Field- 7 groups\*5 repeats= 35 repeated

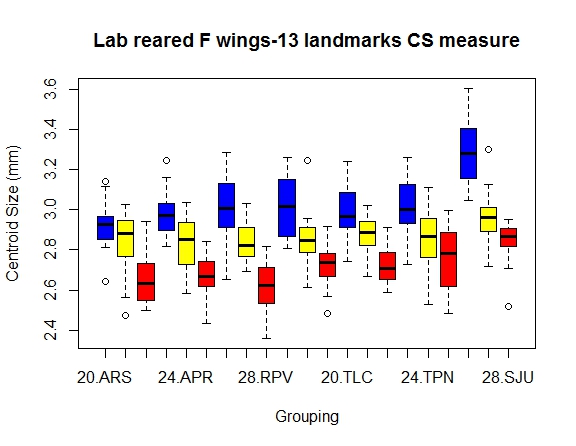
Lab- 42 “groups” (locality, sex, temp) \*3 repeats= 126 repeated

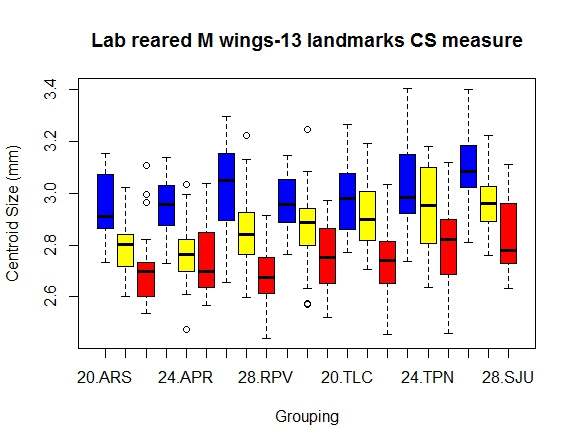
|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Repeatability** | **Lab** | **Repeatability** |
| 13 | 0.9997 | 13 | 0.965423531 |
| 18 | 0.836437272 | 18 | 0.972750948 |

Key for graphs:

Red- 28C, Yellow- 24C, Blue- 20C

Localities on x-axis: increasing latitude, left-> right



****

