

DvN_Results

Bumblebat

12/11/2023

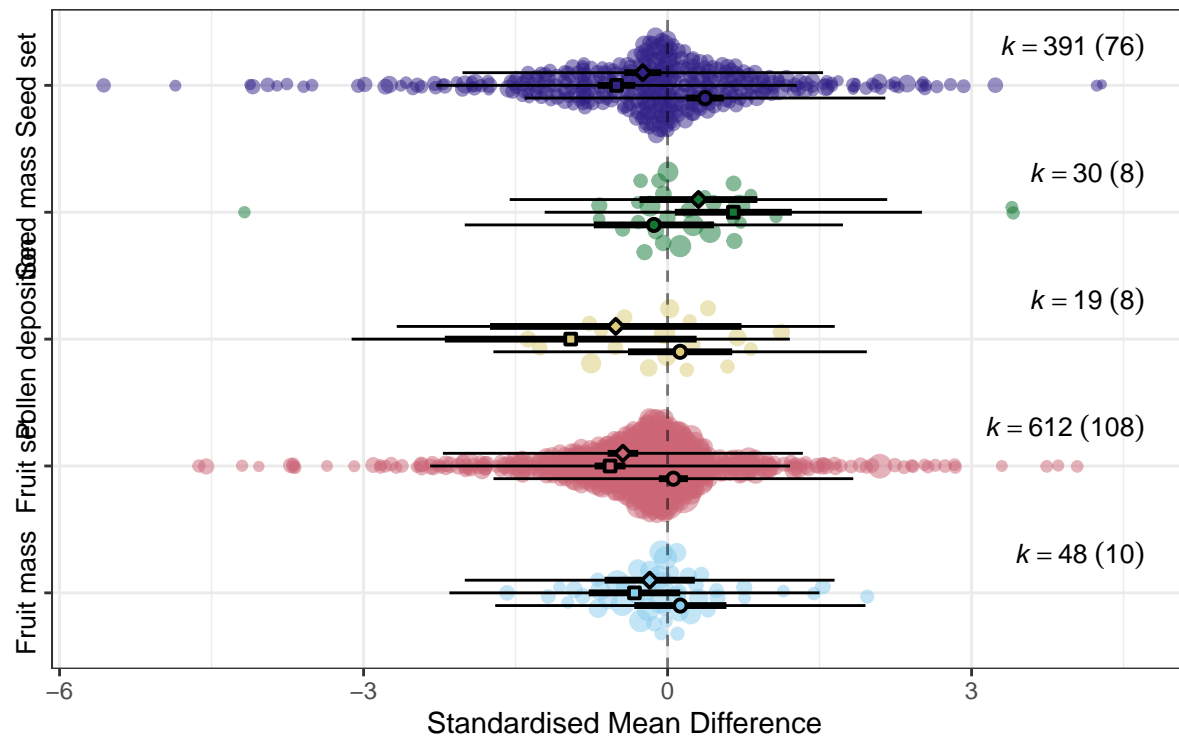
####Throughout (+ive) or (-ive) in brackets indicates that that treatment performs better if values are (+ive) or (-ive)

Effect size (ES) between pollination effectiveness measures

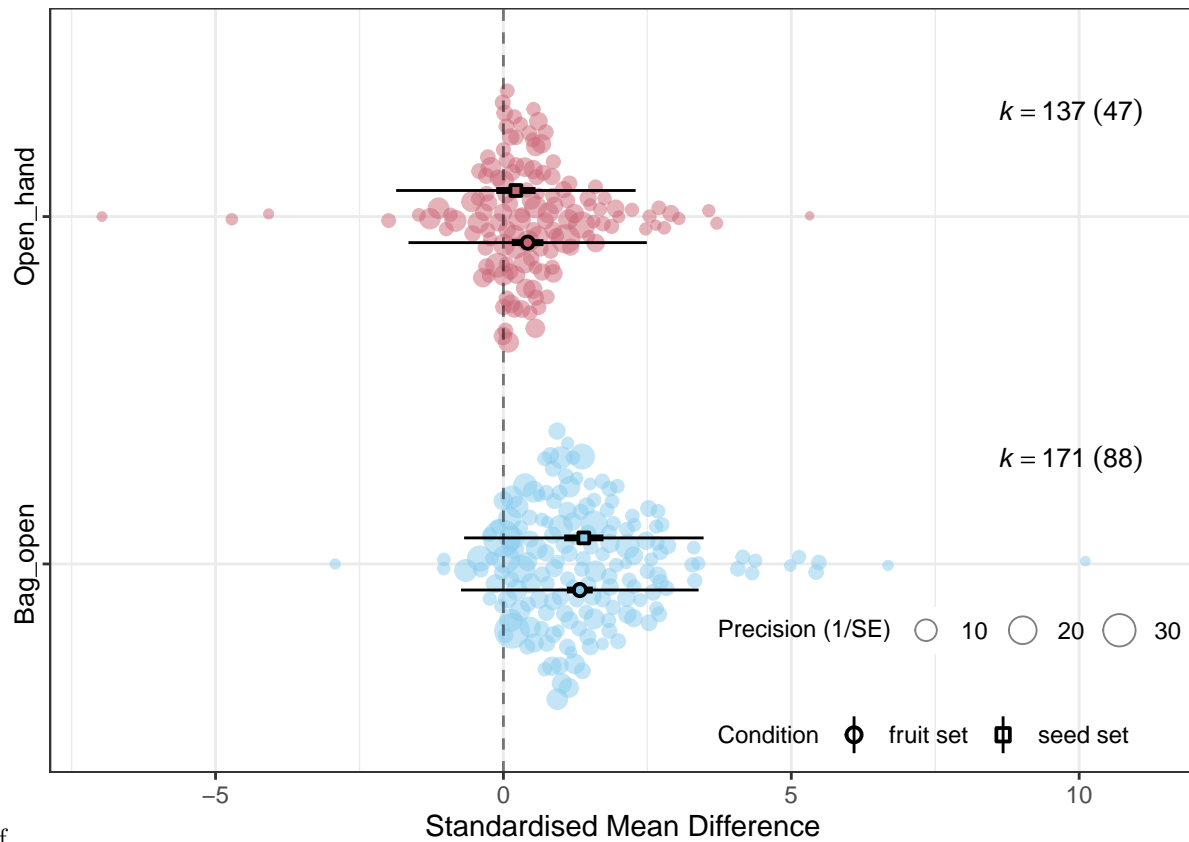
```
##
## Multivariate Meta-Analysis Model (k = 1100; method: REML)
##
## Variance Components:
##
##      estim      sqrt  nlvls  fixed      factor      R
## sigma^2.1  0.1660  0.4074   136    no      study_ID  no
## sigma^2.2  0.6138  0.7834  1100    no      effect_ID  no
## sigma^2.3  0.0000  0.0001   140    no      phylo    yes
## sigma^2.4  0.0352  0.1877   140    no  accepted_name  no
##
## Test for Residual Heterogeneity:
## QE(df = 1085) = 12228.7017, p-val < .0001
##
## Test of Moderators (coefficients 2:15):
## QM(df = 14) = 144.0705, p-val < .0001
##
## Model Results:
##
##                                     estimate
## intrcpt                                0.1258
## treatment_effectiveness_metricfruit set -0.0685
## treatment_effectiveness_metricpollen deposition -0.0021
## treatment_effectiveness_metricseed mass -0.2611
## treatment_effectiveness_metricseed set 0.2443
## treatmentopen_day -0.4526
## treatmentopen_night -0.3025
## treatment_effectiveness_metricfruit set:treatmentopen_day -0.1721
## treatment_effectiveness_metricpollen deposition:treatmentopen_day -0.6268
## treatment_effectiveness_metricseed mass:treatmentopen_day 1.2366
## treatment_effectiveness_metricseed set:treatmentopen_day -0.4216
## treatment_effectiveness_metricfruit set:treatmentopen_night -0.1959
## treatment_effectiveness_metricpollen deposition:treatmentopen_night -0.3326
## treatment_effectiveness_metricseed mass:treatmentopen_night 0.7425
## treatment_effectiveness_metricseed set:treatmentopen_night -0.3122
##                                     se
## intrcpt                                0.2321
```

## treatment_effectiveness_metricfruit set	0.2357
## treatment_effectiveness_metricpollen deposition	0.3490
## treatment_effectiveness_metricseed mass	0.3782
## treatment_effectiveness_metricseed set	0.2433
## treatmentopen_day	0.2982
## treatmentopen_night	0.2960
## treatment_effectiveness_metricfruit set:treatmentopen_day	0.3101
## treatment_effectiveness_metricpollen deposition:treatmentopen_day	0.7313
## treatment_effectiveness_metricseed mass:treatmentopen_day	0.4934
## treatment_effectiveness_metricseed set:treatmentopen_day	0.3194
## treatment_effectiveness_metricfruit set:treatmentopen_night	0.3079
## treatment_effectiveness_metricpollen deposition:treatmentopen_night	0.7298
## treatment_effectiveness_metricseed mass:treatmentopen_night	0.4938
## treatment_effectiveness_metricseed set:treatmentopen_night	0.3169
##	zval
## intrcpt	0.5420
## treatment_effectiveness_metricfruit set	-0.2908
## treatment_effectiveness_metricpollen deposition	-0.0060
## treatment_effectiveness_metricseed mass	-0.6903
## treatment_effectiveness_metricseed set	1.0044
## treatmentopen_day	-1.5178
## treatmentopen_night	-1.0220
## treatment_effectiveness_metricfruit set:treatmentopen_day	-0.5549
## treatment_effectiveness_metricpollen deposition:treatmentopen_day	-0.8571
## treatment_effectiveness_metricseed mass:treatmentopen_day	2.5063
## treatment_effectiveness_metricseed set:treatmentopen_day	-1.3201
## treatment_effectiveness_metricfruit set:treatmentopen_night	-0.6362
## treatment_effectiveness_metricpollen deposition:treatmentopen_night	-0.4558
## treatment_effectiveness_metricseed mass:treatmentopen_night	1.5036
## treatment_effectiveness_metricseed set:treatmentopen_night	-0.9850
##	pval
## intrcpt	0.5878
## treatment_effectiveness_metricfruit set	0.7712
## treatment_effectiveness_metricpollen deposition	0.9953
## treatment_effectiveness_metricseed mass	0.4900
## treatment_effectiveness_metricseed set	0.3152
## treatmentopen_day	0.1291
## treatmentopen_night	0.3068
## treatment_effectiveness_metricfruit set:treatmentopen_day	0.5789
## treatment_effectiveness_metricpollen deposition:treatmentopen_day	0.3914
## treatment_effectiveness_metricseed mass:treatmentopen_day	0.0122
## treatment_effectiveness_metricseed set:treatmentopen_day	0.1868
## treatment_effectiveness_metricfruit set:treatmentopen_night	0.5247
## treatment_effectiveness_metricpollen deposition:treatmentopen_night	0.6485
## treatment_effectiveness_metricseed mass:treatmentopen_night	0.1327
## treatment_effectiveness_metricseed set:treatmentopen_night	0.3246
##	ci.lb
## intrcpt	-0.3291
## treatment_effectiveness_metricfruit set	-0.5305
## treatment_effectiveness_metricpollen deposition	-0.6861
## treatment_effectiveness_metricseed mass	-1.0024
## treatment_effectiveness_metricseed set	-0.2324
## treatmentopen_day	-1.0370
## treatmentopen_night	-0.8827

```
## treatment_effectiveness_metricfruit set:treatmentopen_day -0.7800
## treatment_effectiveness_metricpollen deposition:treatmentopen_day -2.0601
## treatment_effectiveness_metricseed mass:treatmentopen_day 0.2696
## treatment_effectiveness_metricseed set:treatmentopen_day -1.0475
## treatment_effectiveness_metricfruit set:treatmentopen_night -0.7993
## treatment_effectiveness_metricpollen deposition:treatmentopen_night -1.7630
## treatment_effectiveness_metricseed mass:treatmentopen_night -0.2254
## treatment_effectiveness_metricseed set:treatmentopen_night -0.9334
## ci.ub
## intrcpt 0.5806
## treatment_effectiveness_metricfruit set 0.3934
## treatment_effectiveness_metricpollen deposition 0.6820
## treatment_effectiveness_metricseed mass 0.4802
## treatment_effectiveness_metricseed set 0.7211
## treatmentopen_day 0.1319
## treatmentopen_night 0.2777
## treatment_effectiveness_metricfruit set:treatmentopen_day 0.4358
## treatment_effectiveness_metricpollen deposition:treatmentopen_day 0.8065
## treatment_effectiveness_metricseed mass:treatmentopen_day 2.2037 *
## treatment_effectiveness_metricseed set:treatmentopen_day 0.2044
## treatment_effectiveness_metricfruit set:treatmentopen_night 0.4076
## treatment_effectiveness_metricpollen deposition:treatmentopen_night 1.0977
## treatment_effectiveness_metricseed mass:treatmentopen_night 1.7103
## treatment_effectiveness_metricseed set:treatmentopen_night 0.3090
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```



Summary of pollination dependency (bag (-ive) vs. open (+ive)) and limitation (open (-ive) vs. hand (+ive))



LIM summary-1.pdf

The influence of pollination dependency on day (-ive) vs. night (+ive) pollination for fruit and seed set

##Fruit set = significant quadratic relationship

##Seed set = insignificant

Fruit set and species-level pollination dependency. Order is DvN, OvD, OvN

##

Multivariate Meta-Analysis Model (k = 158; method: REML)

##

Variance Components:

##

	estim	sqrt	nlvls	fixed	factor	R
## sigma ² .1	0.3835	0.6193	81	no	study_ID	no
## sigma ² .2	0.4539	0.6737	158	no	effect_ID	no
## sigma ² .3	0.0000	0.0000	76	no	phylo	yes
## sigma ² .4	0.2187	0.4676	76	no	accepted_name	no

##

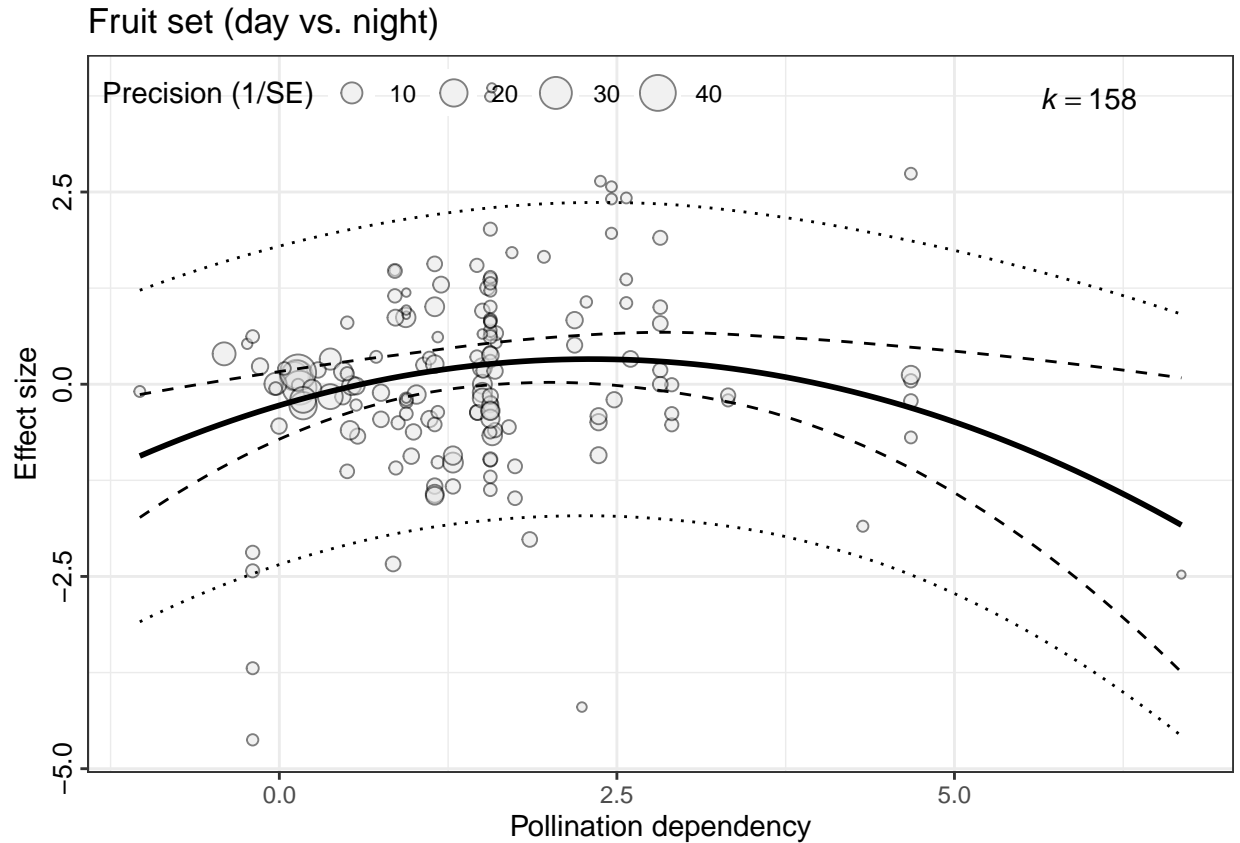
Test for Residual Heterogeneity:

QE(df = 155) = 1828.0406, p-val < .0001

##

Test of Moderators (coefficients 2:3):

```
## QM(df = 2) = 6.5072, p-val = 0.0386
##
## Model Results:
##
##           estimate      se      zval      pval      ci.lb      ci.ub
## intrcpt          -0.2747  0.2050  -1.3399  0.1803   -0.6764   0.1271
## spp.poll.dep         0.5210  0.2142   2.4325  0.0150    0.1012   0.9408  *
## I(spp.poll.dep^2)   -0.1129  0.0448  -2.5189  0.0118   -0.2007  -0.0250  *
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```



DEP-1.pdf

```
##
## Multivariate Meta-Analysis Model (k = 59; method: REML)
##
## Variance Components:
##
##           estim      sqrt  nlvls  fixed      factor      R
## sigma^2.1  0.0000  0.0000    39    no      study_ID    no
## sigma^2.2  0.2384  0.4883    59    no      effect_ID    no
## sigma^2.3  0.1917  0.4378    36    no        phylo    yes
## sigma^2.4  1.6052  1.2670    36    no  accepted_name    no
##
## Test for Residual Heterogeneity:
## QE(df = 57) = 1081.5958, p-val < .0001
##
## Test of Moderators (coefficient 2):
```

```
## QM(df = 1) = 1.1791, p-val = 0.2775
##
## Model Results:
##
##           estimate      se      zval      pval      ci.lb      ci.ub
## intrcpt           0.1980  0.3616   0.5476  0.5840  -0.5107  0.9068
## spp.poll.dep      -0.1677  0.1544  -1.0859  0.2775  -0.4704  0.1350
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

The influence of pollen limitation (open (-ive) vs. hand (+ive)) on day (-ive) vs. night (+ive) pollination for fruit and seed set

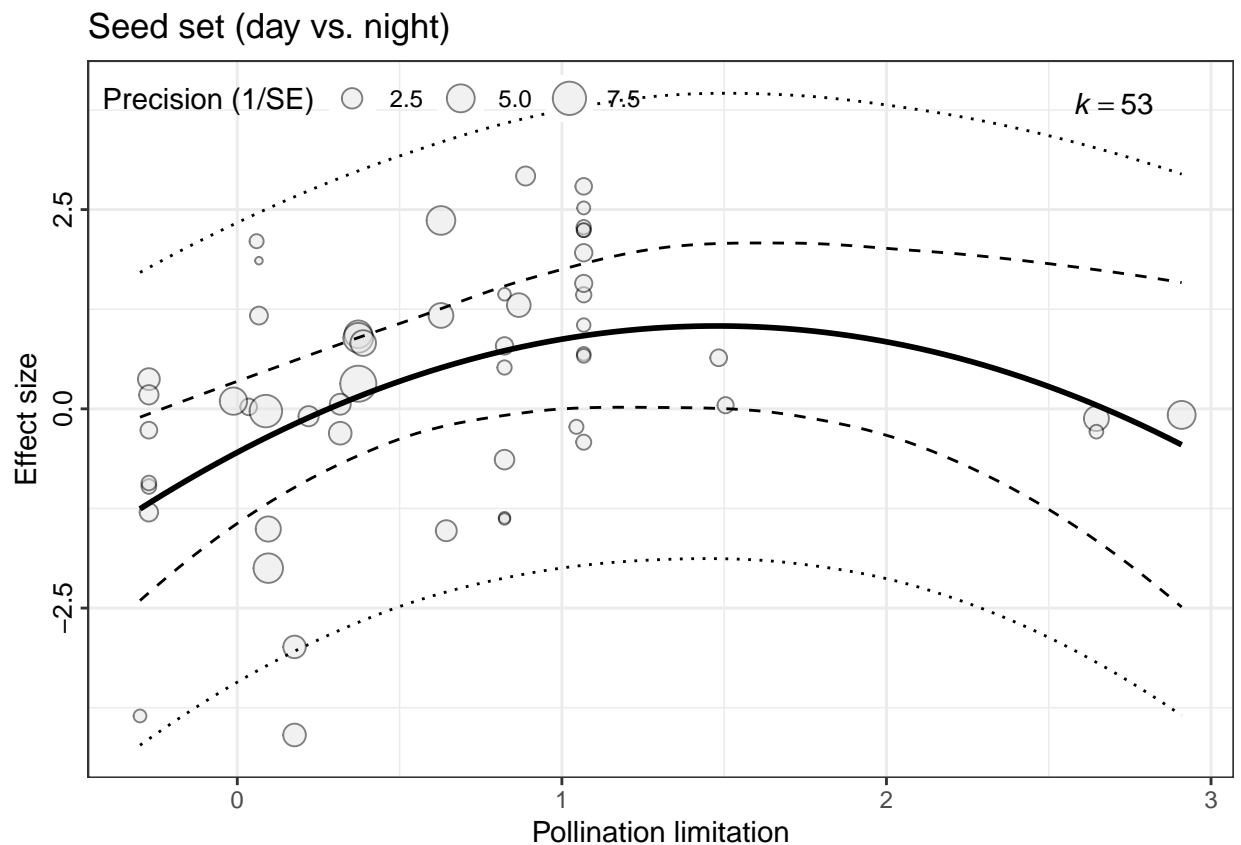
##Fruit set = insignificant

##Seed set = significant quadratic relationship

```
##
## Multivariate Meta-Analysis Model (k = 110; method: REML)
##
## Variance Components:
##
##           estim      sqrt  nlvls  fixed      factor      R
## sigma^2.1  0.6988  0.8360    46    no      study_ID    no
## sigma^2.2  0.4282  0.6544   110    no      effect_ID    no
## sigma^2.3  0.0000  0.0001    42    no        phylo    yes
## sigma^2.4  0.1843  0.4293    42    no  accepted_name    no
##
## Test for Residual Heterogeneity:
## QE(df = 107) = 1455.9893, p-val < .0001
##
## Test of Moderators (coefficients 2:3):
## QM(df = 2) = 0.1089, p-val = 0.9470
##
## Model Results:
##
##           estimate      se      zval      pval      ci.lb      ci.ub
## intrcpt           0.1246  0.2092   0.5959  0.5512  -0.2853  0.5346
## spp.poll.lim       0.0953  0.3184   0.2993  0.7647  -0.5287  0.7193
## I(spp.poll.lim^2)  -0.0255  0.0785  -0.3251  0.7451  -0.1793  0.1283
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
## Multivariate Meta-Analysis Model (k = 53; method: REML)
##
## Variance Components:
##
##           estim      sqrt  nlvls  fixed      factor      R
## sigma^2.1  0.0000  0.0000    26    no      study_ID    no
## sigma^2.2  0.2637  0.5135    53    no      effect_ID    no
## sigma^2.3  0.0000  0.0001    24    no        phylo    yes
## sigma^2.4  1.6802  1.2962    24    no  accepted_name    no
```

```
##
## Test for Residual Heterogeneity:
## QE(df = 50) = 647.1124, p-val < .0001
##
## Test of Moderators (coefficients 2:3):
## QM(df = 2) = 4.8734, p-val = 0.0874
##
## Model Results:
##
##               estimate      se      zval      pval      ci.lb      ci.ub
## intrcpt          -0.5463  0.4265  -1.2809  0.2002  -1.3824   0.2897
## spp.poll.lim       2.1474  0.9753   2.2018  0.0277   0.2359   4.0588  *
## I(spp.poll.lim^2)  -0.7268  0.3660  -1.9858  0.0471  -1.4442  -0.0094  *
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```



The influence of plant trait dimensions: Flower dimensions (PC1, negative correlation), Plant size and to a lesser extent, style length (PC2, negative correlation), and plant size (PC3, positive correlation) & environment

Flower dimensions seem to be more important in improving day pollination relative to open conditions than night pollination. Could this be associated with visual cues?

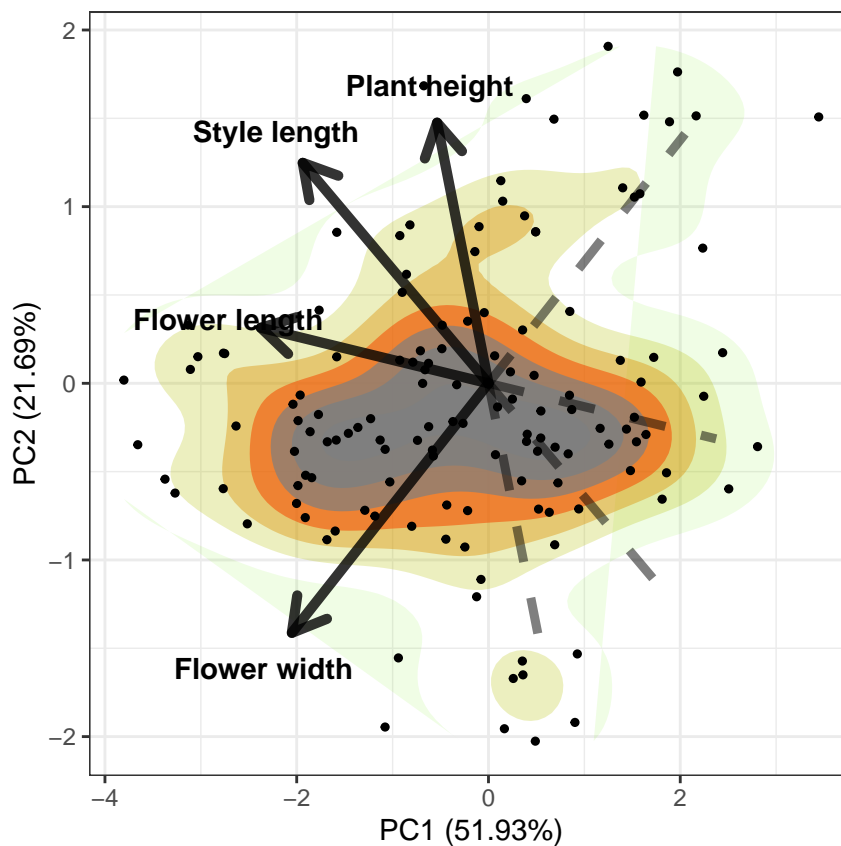
```
##   PC1   PC2   PC3   PC4
## 51.93 21.69 21.18  5.19
```

```
## [1] 94.8
## Phylogenetic pca
## Standard deviations:
##      PC1      PC2      PC3      PC4
## 0.15146681 0.09788505 0.09673811 0.04789623
## Loads:
##      PC1      PC2      PC3      PC4
## flower_width_midpoint_mm -0.7817083 0.5384239 0.2927808 0.115374273
## flower_length_midpoint_mm -0.9051256 -0.1198546 -0.1916796 -0.360057489
## style_length_midpoint_mm -0.7384342 -0.4756881 -0.3912048 0.274580677
## plant_height_midpoint_m -0.2042648 -0.5624059 0.8011899 -0.008387344
## lambda:
## [1] 0.8824116

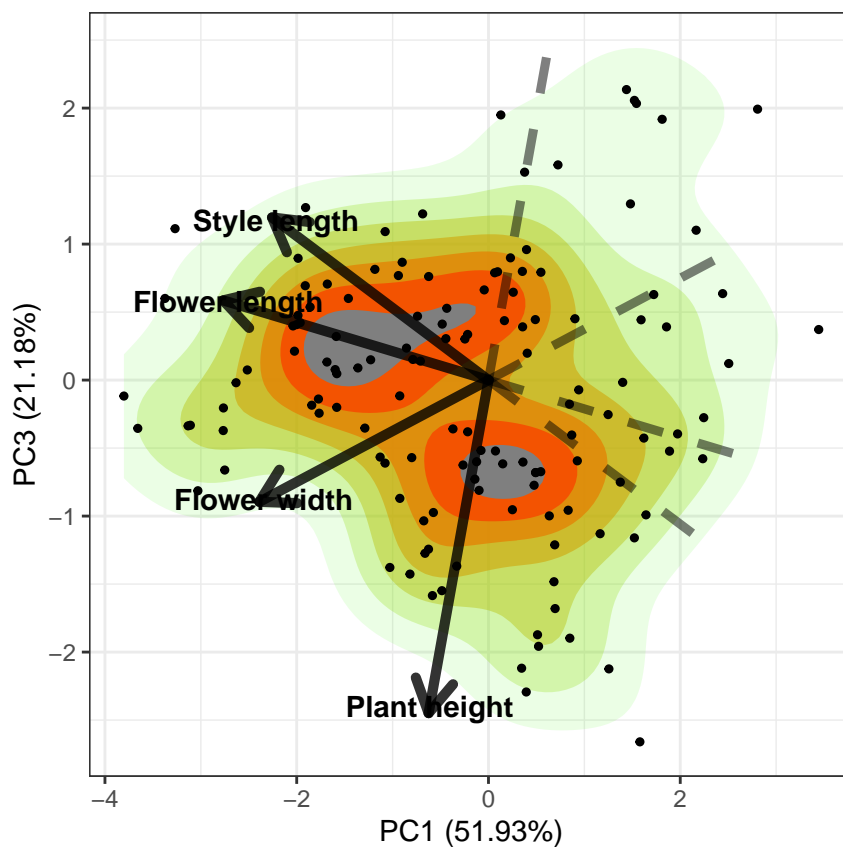
## PC1
## 51.93

## PC2
## 21.69

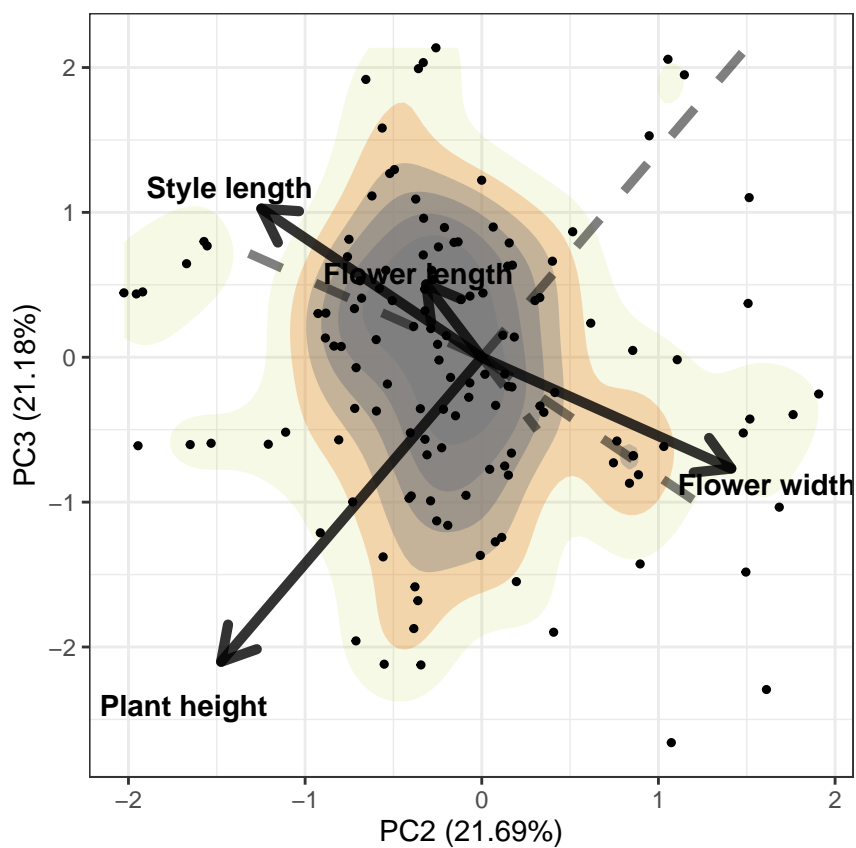
## Warning: The dot-dot notation (`..level..`) was deprecated in ggplot2 3.4.0.
## i Please use `after_stat(level)` instead.
## This warning is displayed once every 8 hours.
## Call `lifecycle::last_lifecycle_warnings()` to see where this warning was
## generated.
```



plot 1-1.pdf



plot 2-1.pdf



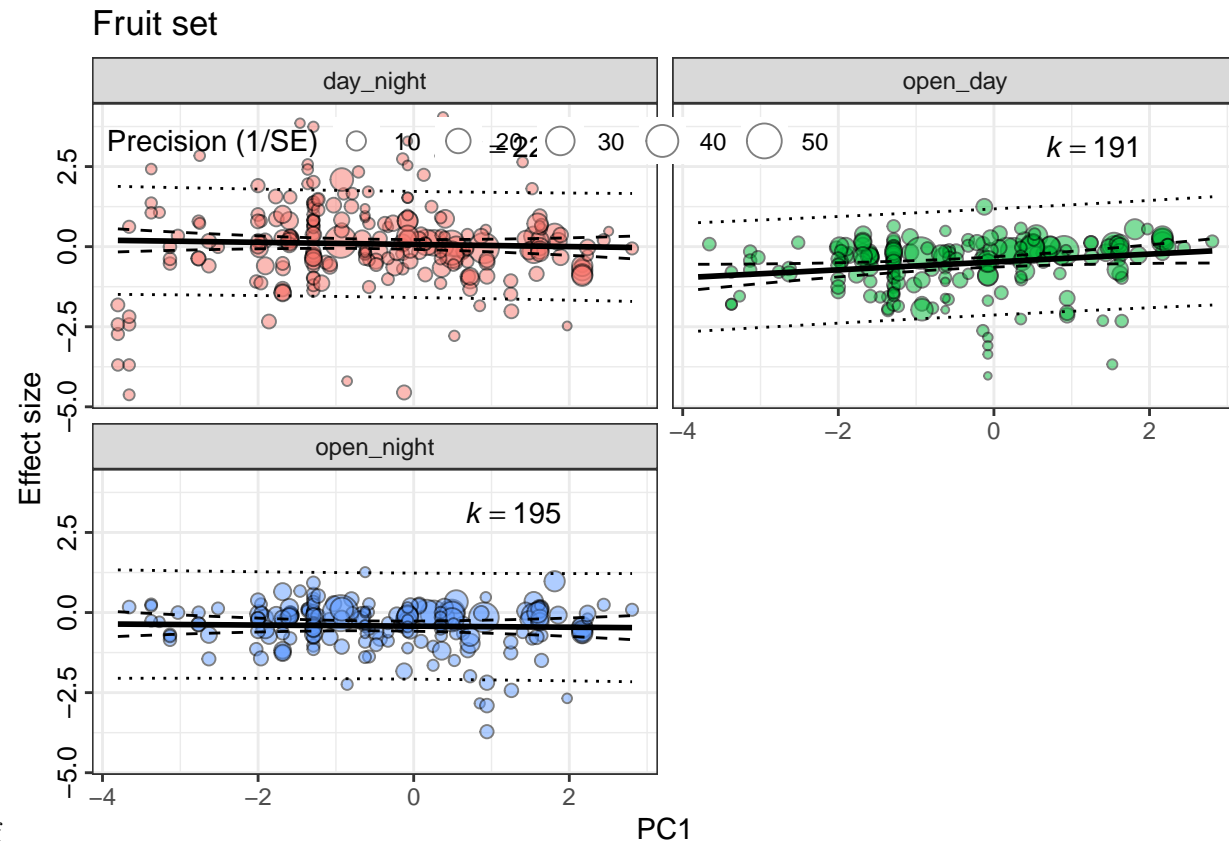
plot 3-1.pdf

```

####Fruit set and traits and environment
##Very weak effects of DTR ##Some interactions open_day and PC1
#weak interaction between Daylength and open_day (will be borderline if slope is sig diff from 0)

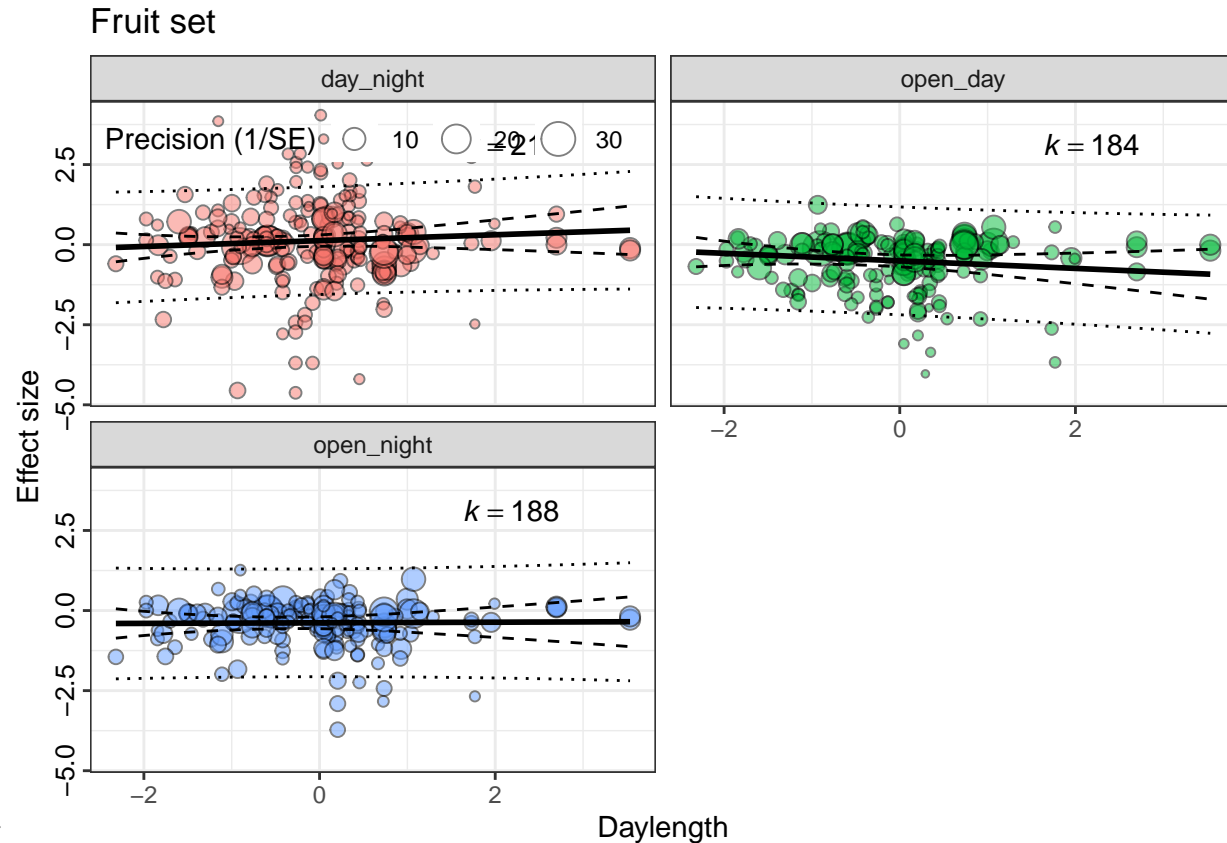
##
## Multivariate Meta-Analysis Model (k = 612; method: REML)
##
## Variance Components:
##
##      estim      sqrt  nlvls  fixed      factor      R
## sigma^2.1  0.2433  0.4933   108    no      study_ID  no
## sigma^2.2  0.4645  0.6815   612    no      effect_ID  no
## sigma^2.3  0.0000  0.0000   113    no      phylo      yes
## sigma^2.4  0.0000  0.0001   113    no  accepted_name  no
##
## Test for Residual Heterogeneity:
## QE(df = 600) = 7535.8627, p-val < .0001
##
## Test of Moderators (coefficients 2:12):
## QM(df = 11) = 91.8854, p-val < .0001
##
## Model Results:
##
##      estimate      se      zval      pval      ci.lb      ci.ub
## intrcpt          0.0792  0.0769    1.0299  0.3030   -0.0715    0.2299
## treatmentopen_day -0.5024  0.0824   -6.0968 <.0001   -0.6640   -0.3409
## treatmentopen_night -0.4632  0.0822   -5.6362 <.0001   -0.6243   -0.3021
## PC1              -0.0332  0.0490   -0.6781  0.4977   -0.1293    0.0628
## PC2              -0.0127  0.0915   -0.1390  0.8894   -0.1921    0.1667
## PC3               0.0711  0.0821    0.8656  0.3867   -0.0899    0.2320
## treatmentopen_day:PC1  0.1561  0.0577    2.7076  0.0068    0.0431    0.2691
## treatmentopen_night:PC1  0.0164  0.0570    0.2882  0.7732   -0.0953    0.1281
## treatmentopen_day:PC2  0.1112  0.1013    1.0978  0.2723   -0.0873    0.3098
## treatmentopen_night:PC2  0.0502  0.1012    0.4966  0.6194   -0.1480    0.2485
## treatmentopen_day:PC3  0.0895  0.0869    1.0295  0.3032   -0.0809    0.2599
## treatmentopen_night:PC3  0.0909  0.0868    1.0477  0.2948   -0.0792    0.2610
##
## intrcpt
## treatmentopen_day      ***
## treatmentopen_night    ***
## PC1
## PC2
## PC3
## treatmentopen_day:PC1      **
## treatmentopen_night:PC1
## treatmentopen_day:PC2
## treatmentopen_night:PC2
## treatmentopen_day:PC3
## treatmentopen_night:PC3
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```



env fruit set-1.pdf

Warning: 21 rows with NAs omitted from model fitting.



env fruit set-2.pdf

###Seed set and traits and environment

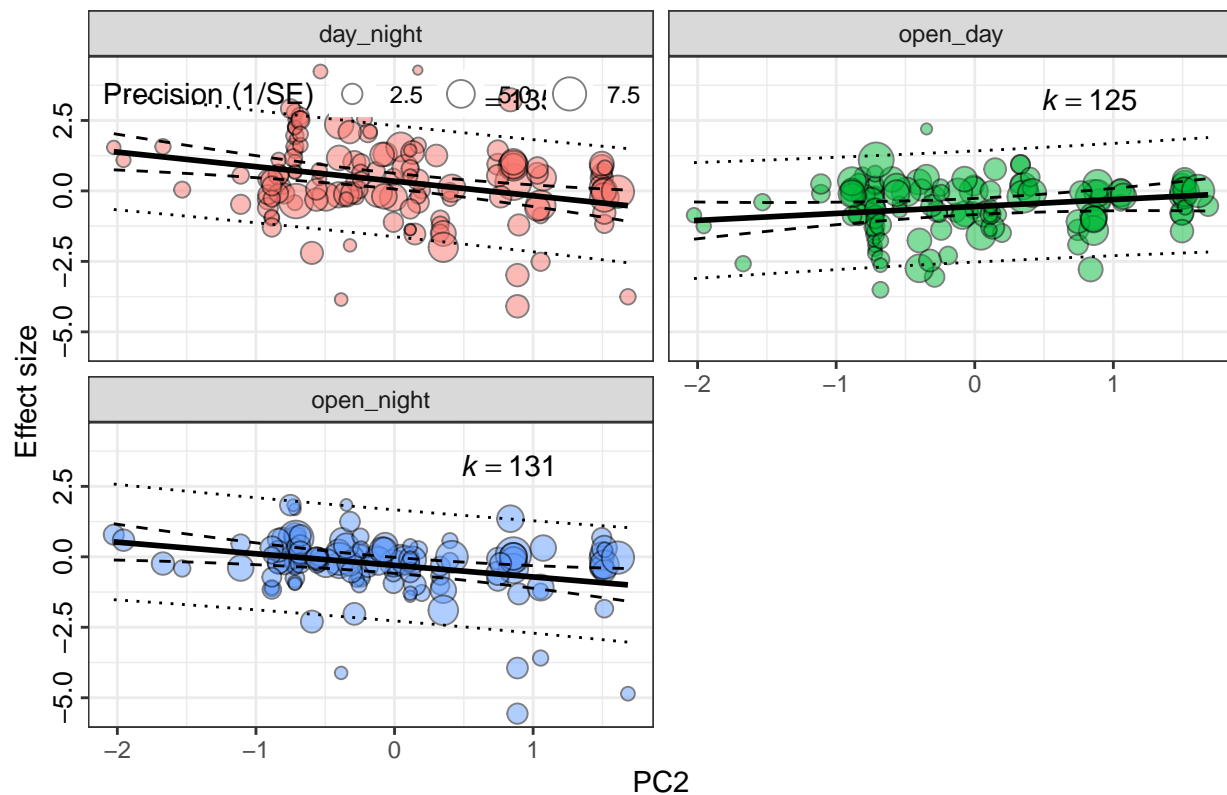
##strong effect of PC2 - negative for day vs night (+ive) and night (-ive) vs. open (+ive) , and then positive for day (-ive) vs. open (+ive) ##strong effect of PC3 on open_day

#weak interaction between Daylength and open_day (will be borderline if slope is sig diff from 0)

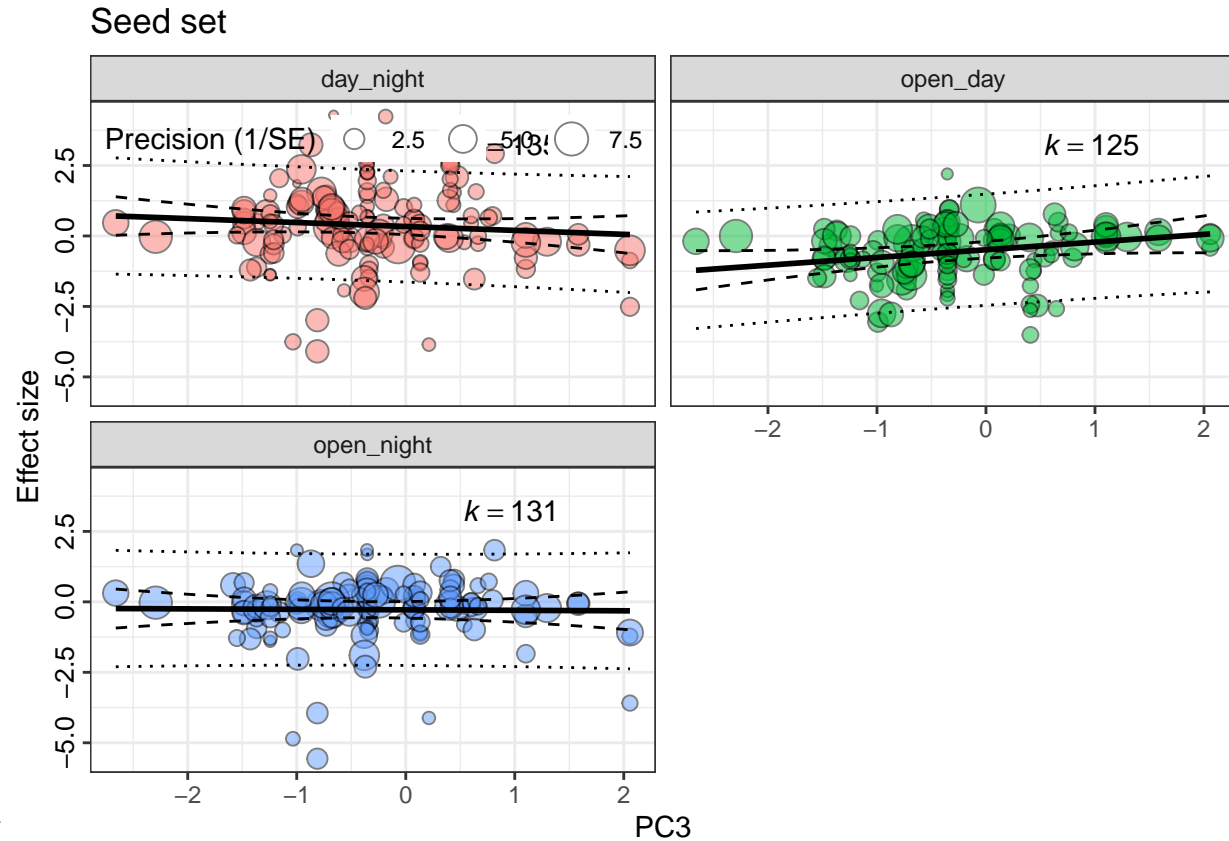
```
##
## Multivariate Meta-Analysis Model (k = 391; method: REML)
##
## Variance Components:
##
##      estim  sqrt  nlvls  fixed      factor  R
## sigma^2.1 0.0000 0.0001   76    no      study_ID no
## sigma^2.2 0.7768 0.8813  391    no      effect_ID no
## sigma^2.3 0.0604 0.2458   75    no        phylo  yes
## sigma^2.4 0.1537 0.3920   75    no  accepted_name no
##
## Test for Residual Heterogeneity:
## QE(df = 379) = 3208.1891, p-val < .0001
##
## Test of Moderators (coefficients 2:12):
## QM(df = 11) = 87.3262, p-val < .0001
##
## Model Results:
##
##      estimate      se      zval      pval      ci.lb      ci.ub
## intrcpt          0.3343  0.1452   2.3024  0.0213   0.0497   0.6188
```

```
## treatmentopen_day      -0.8481  0.1362 -6.2250 <.0001 -1.1151 -0.5811
## treatmentopen_night    -0.6212  0.1371 -4.5325 <.0001 -0.8899 -0.3526
## PC1                     0.0605  0.0799  0.7567  0.4492 -0.0962  0.2172
## PC2                    -0.5158  0.1423 -3.6249  0.0003 -0.7948 -0.2369
## PC3                    -0.1396  0.1302 -1.0723  0.2836 -0.3947  0.1156
## treatmentopen_day:PC1   -0.1429  0.0963 -1.4841  0.1378 -0.3315  0.0458
## treatmentopen_night:PC1 -0.0165  0.0948 -0.1737  0.8621 -0.2023  0.1694
## treatmentopen_day:PC2    0.7623  0.1724  4.4213 <.0001  0.4244  1.1002
## treatmentopen_night:PC2  0.1045  0.1720  0.6076  0.5435 -0.2326  0.4416
## treatmentopen_day:PC3    0.4132  0.1472  2.8067  0.0050  0.1246  0.7017
## treatmentopen_night:PC3  0.1224  0.1487  0.8230  0.4105 -0.1691  0.4138
##
## intrcpt                  *
## treatmentopen_day        ***
## treatmentopen_night      ***
## PC1
## PC2                      ***
## PC3
## treatmentopen_day:PC1
## treatmentopen_night:PC1
## treatmentopen_day:PC2    ***
## treatmentopen_night:PC2
## treatmentopen_day:PC3    **
## treatmentopen_night:PC3
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Seed set



env seed set-1.pdf



env seed set-2.pdf

Warning: 9 rows with NAs omitted from model fitting.

##

Multivariate Meta-Analysis Model (k = 382; method: REML)

##

Variance Components:

##

	estim	sqrt	nlvls	fixed	factor	R
## sigma ² .1	0.0000	0.0001	74	no	study_ID	no
## sigma ² .2	0.7111	0.8433	382	no	effect_ID	no
## sigma ² .3	0.0708	0.2662	73	no	phylo	yes
## sigma ² .4	0.1494	0.3865	73	no	accepted_name	no

##

Test for Residual Heterogeneity:

QE(df = 364) = 2799.3359, p-val < .0001

##

Test of Moderators (coefficients 2:18):

QM(df = 17) = 101.6204, p-val < .0001

##

Model Results:

##

	estimate	se	zval	pval	ci.lb	ci.ub
## intrcpt	0.3780	0.1722	2.1956	0.0281	0.0406	0.7154
## treatmentopen_day	-0.8483	0.1334	-6.3566	<.0001	-1.1098	-0.5867
## treatmentopen_night	-0.6381	0.1348	-4.7344	<.0001	-0.9022	-0.3739
## PC1	0.0747	0.0876	0.8520	0.3942	-0.0971	0.2464
## PC2	-0.4254	0.1524	-2.7918	0.0052	-0.7241	-0.1268
## PC3	-0.1037	0.1453	-0.7143	0.4751	-0.3884	0.1809

```

## sDTR          0.2034  0.1618   1.2573  0.2086 -0.1137   0.5204
## treatmentopen_day:PC1 -0.2211  0.0949 -2.3291  0.0199 -0.4071 -0.0350
## treatmentopen_night:PC1 -0.0322  0.0935 -0.3441  0.7308 -0.2154   0.1511
## treatmentopen_day:PC2   0.7825  0.1749  4.4728 <.0001   0.4396   1.1254
## treatmentopen_night:PC2  0.1203  0.1746  0.6893  0.4906 -0.2218   0.4625
## treatmentopen_day:PC3   0.3413  0.1456  2.3439  0.0191  0.0559   0.6267
## treatmentopen_night:PC3  0.0977  0.1476  0.6614  0.5084 -0.1917   0.3870
## treatmentopen_day:sDTR -0.2528  0.1317 -1.9190  0.0550 -0.5110   0.0054
## treatmentopen_night:sDTR -0.0589  0.1322 -0.4452  0.6562 -0.3180   0.2003
## PC1:sDTR          -0.0434  0.0798 -0.5432  0.5870 -0.1998   0.1131
## PC2:sDTR           0.2738  0.1249  2.1919  0.0284  0.0290   0.5187
## PC3:sDTR           0.0993  0.1282  0.7745  0.4386 -0.1519   0.3505
##
## intrcpt          *
## treatmentopen_day      ***
## treatmentopen_night    ***
## PC1
## PC2                  **
## PC3
## sDTR
## treatmentopen_day:PC1      *
## treatmentopen_night:PC1
## treatmentopen_day:PC2      ***
## treatmentopen_night:PC2
## treatmentopen_day:PC3      *
## treatmentopen_night:PC3
## treatmentopen_day:sDTR      .
## treatmentopen_night:sDTR
## PC1:sDTR
## PC2:sDTR              *
## PC3:sDTR
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## Warning: 9 rows with NAs omitted from model fitting.
##
## Multivariate Meta-Analysis Model (k = 382; method: REML)
##
## Variance Components:
##
##      estim      sqrt  nlvls  fixed      factor      R
## sigma^2.1  0.0000  0.0001    74    no      study_ID  no
## sigma^2.2  0.6914  0.8315   382    no      effect_ID  no
## sigma^2.3  0.0500  0.2237    73    no        phylo  yes
## sigma^2.4  0.2123  0.4608    73    no  accepted_name  no
##
## Test for Residual Heterogeneity:
## QE(df = 364) = 2865.3186, p-val < .0001
##
## Test of Moderators (coefficients 2:18):
## QM(df = 17) = 104.0417, p-val < .0001
##
## Model Results:

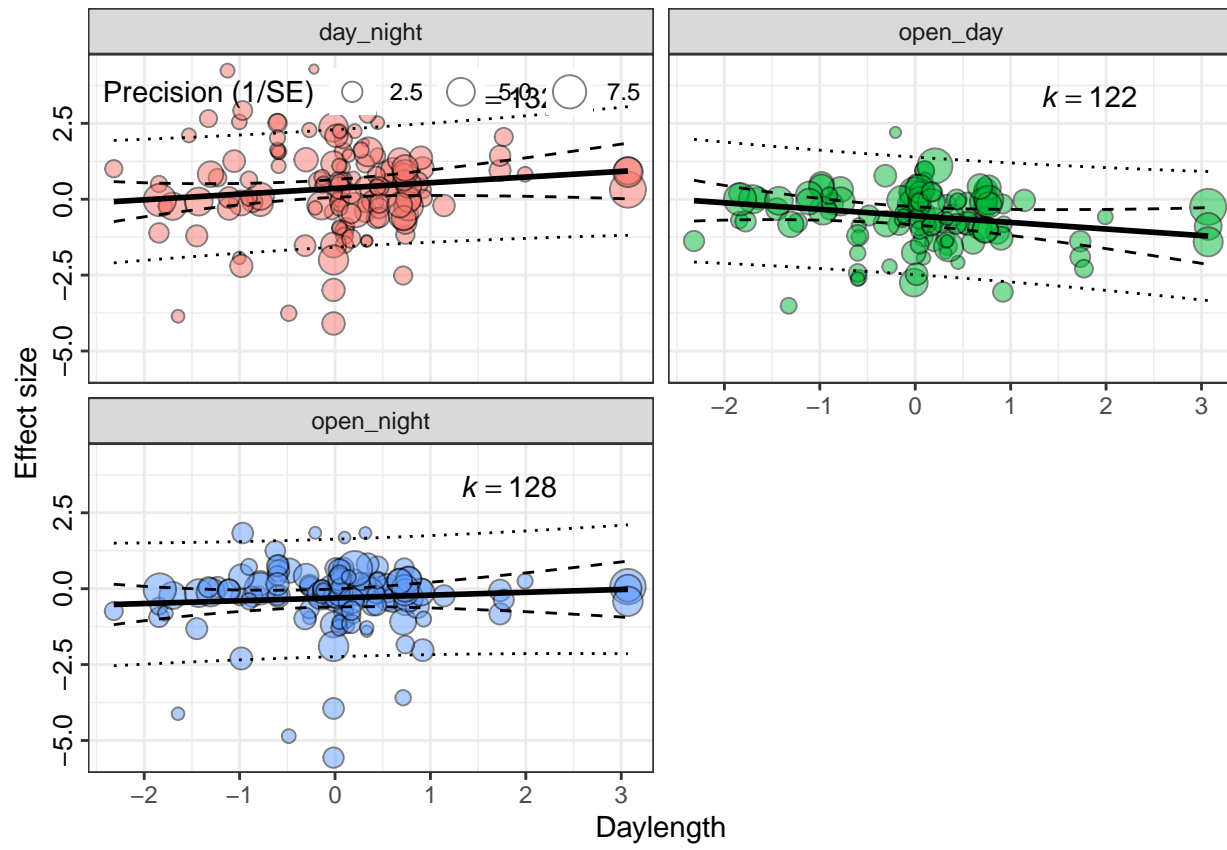
```

```

##
##               estimate      se      zval      pval      ci.lb
## intrcpt          0.2846  0.1522   1.8699  0.0615  -0.0137
## treatmentopen_day -0.7820  0.1327  -5.8936 <.0001  -1.0420
## treatmentopen_night -0.6251  0.1337  -4.6751 <.0001  -0.8872
## PC1              0.0344  0.0851   0.4049  0.6856  -0.1323
## PC2             -0.6026  0.1550  -3.8882  0.0001  -0.9064
## PC3             -0.1432  0.1389  -1.0312  0.3025  -0.4155
## sDaylength       0.1656  0.1489   1.1117  0.2663  -0.1263
## treatmentopen_day:PC1 -0.1061  0.0972  -1.0917  0.2749  -0.2965
## treatmentopen_night:PC1 -0.0119  0.0954  -0.1244  0.9010  -0.1989
## treatmentopen_day:PC2  0.9466  0.1704   5.5564 <.0001   0.6127
## treatmentopen_night:PC2  0.1514  0.1706   0.8876  0.3747  -0.1830
## treatmentopen_day:PC3  0.3460  0.1426   2.4273  0.0152   0.0666
## treatmentopen_night:PC3  0.0982  0.1442   0.6808  0.4960  -0.1845
## treatmentopen_day:sDaylength -0.4035  0.1418  -2.8444  0.0044  -0.6815
## treatmentopen_night:sDaylength -0.0945  0.1417  -0.6671  0.5047  -0.3723
## PC1:sDaylength     -0.0653  0.0729  -0.8954  0.3706  -0.2081
## PC2:sDaylength      0.1417  0.1446   0.9796  0.3273  -0.1418
## PC3:sDaylength     -0.0037  0.1152  -0.0323  0.9743  -0.2294
##
##               ci.ub
## intrcpt          0.5829
## treatmentopen_day -0.5219 ***
## treatmentopen_night -0.3631 ***
## PC1              0.2012
## PC2             -0.2989 ***
## PC3              0.1290
## sDaylength       0.4575
## treatmentopen_day:PC1 0.0844
## treatmentopen_night:PC1 0.1751
## treatmentopen_day:PC2 1.2804 ***
## treatmentopen_night:PC2 0.4858
## treatmentopen_day:PC3 0.6255 *
## treatmentopen_night:PC3 0.3808
## treatmentopen_day:sDaylength -0.1255 **
## treatmentopen_night:sDaylength 0.1832
## PC1:sDaylength     0.0776
## PC2:sDaylength      0.4252
## PC3:sDaylength     0.2220
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

## $title
## [1] "Seed set"
##
## attr("class")
## [1] "labels"

```

env seed set-3.pdf