Metanalysis

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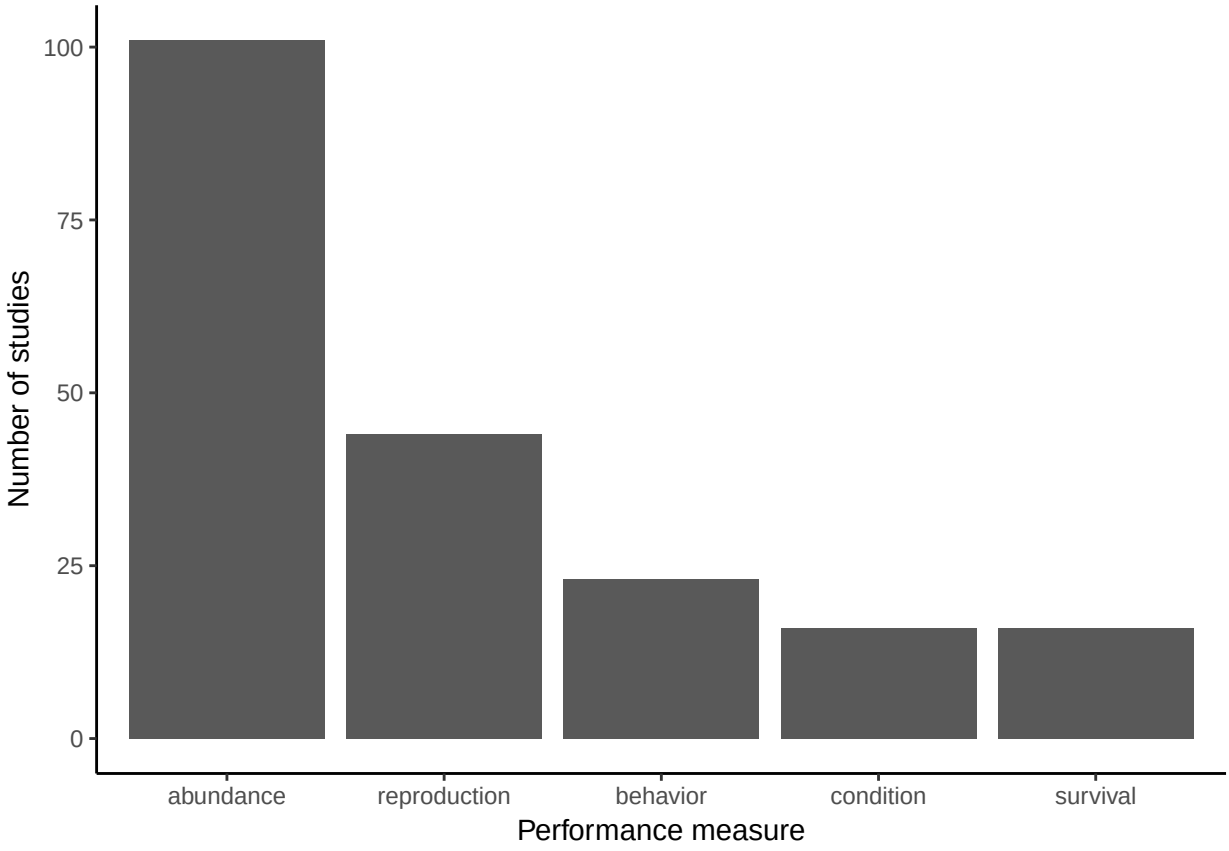
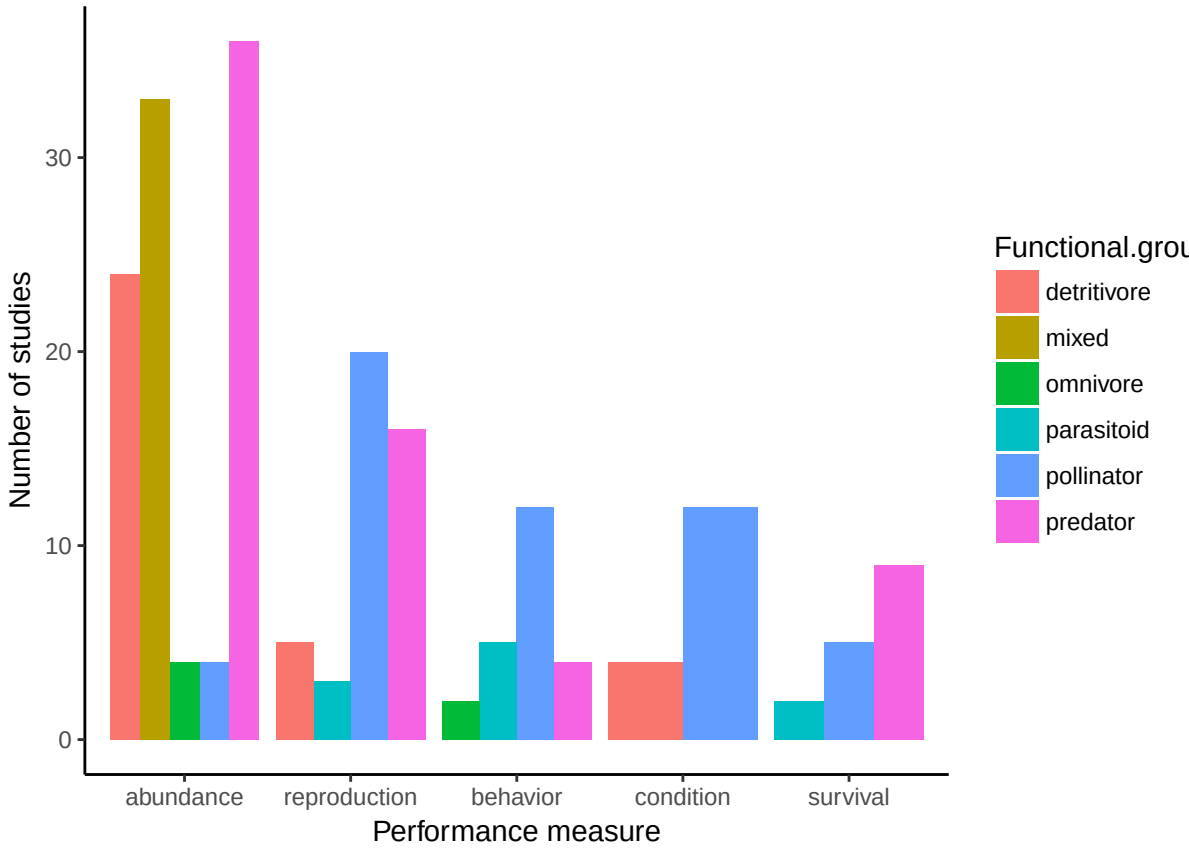
summary stats

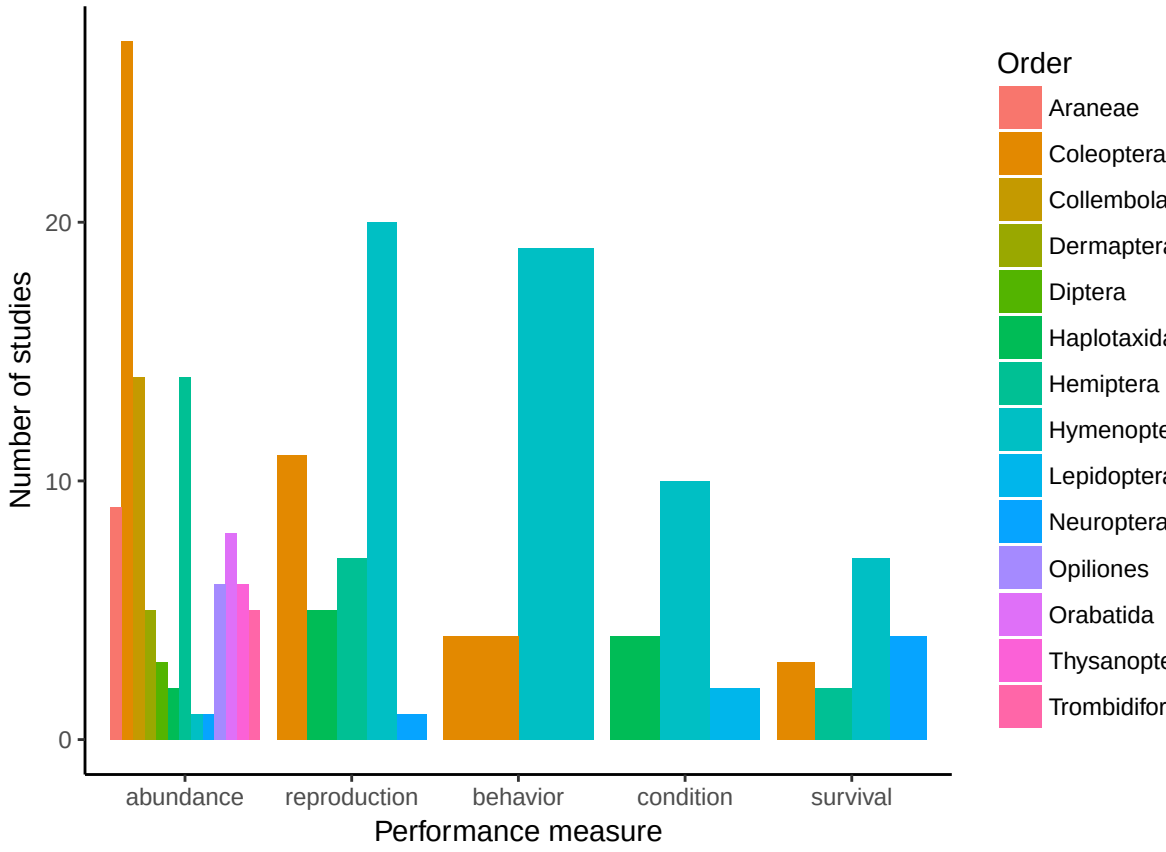
Studies per fitness measure



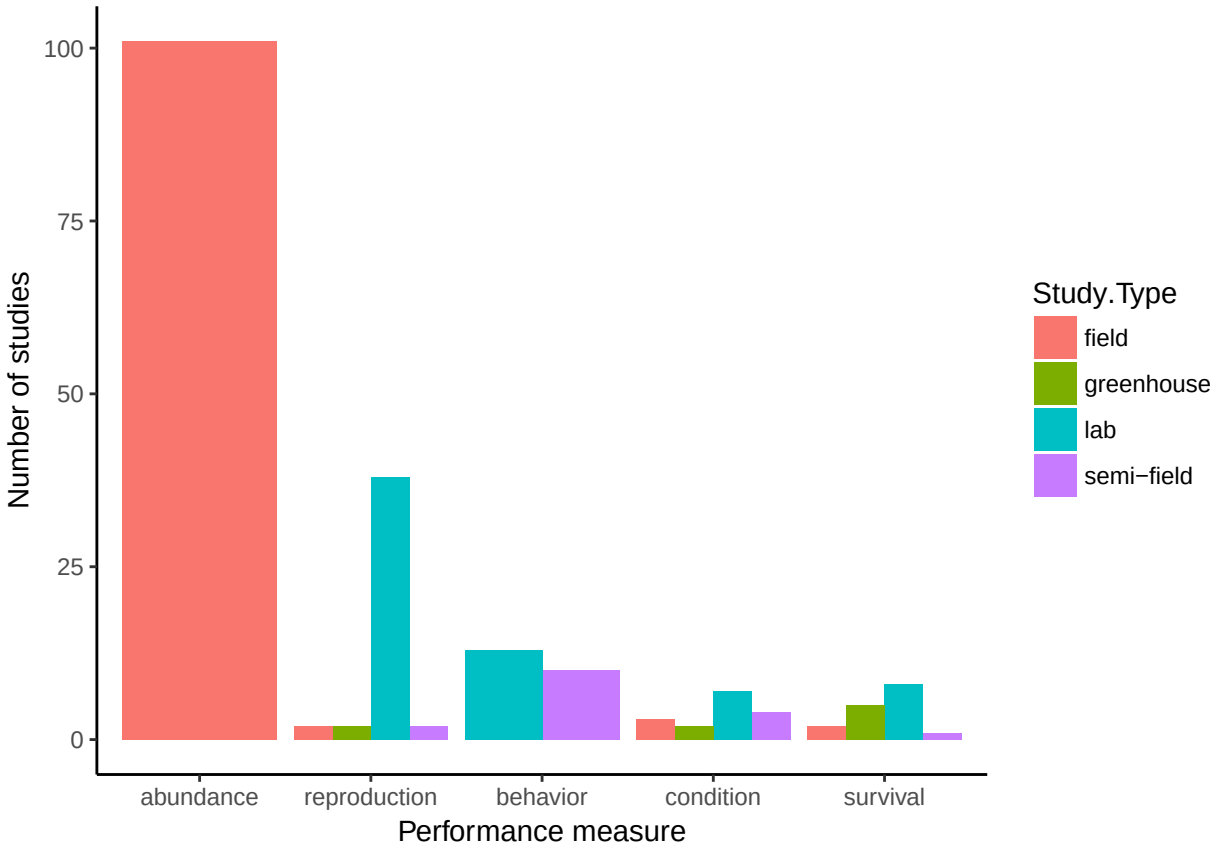
Categories present by Fitness measure



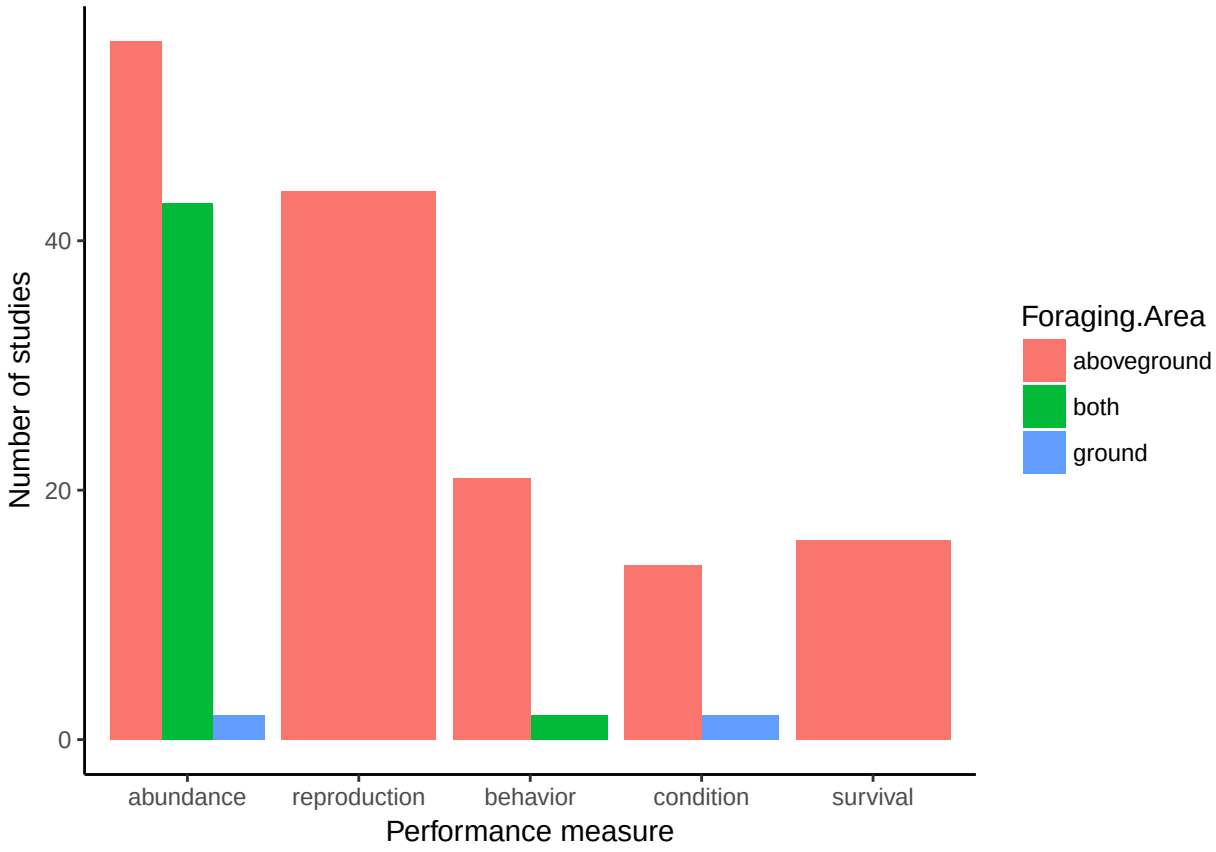
Functional group



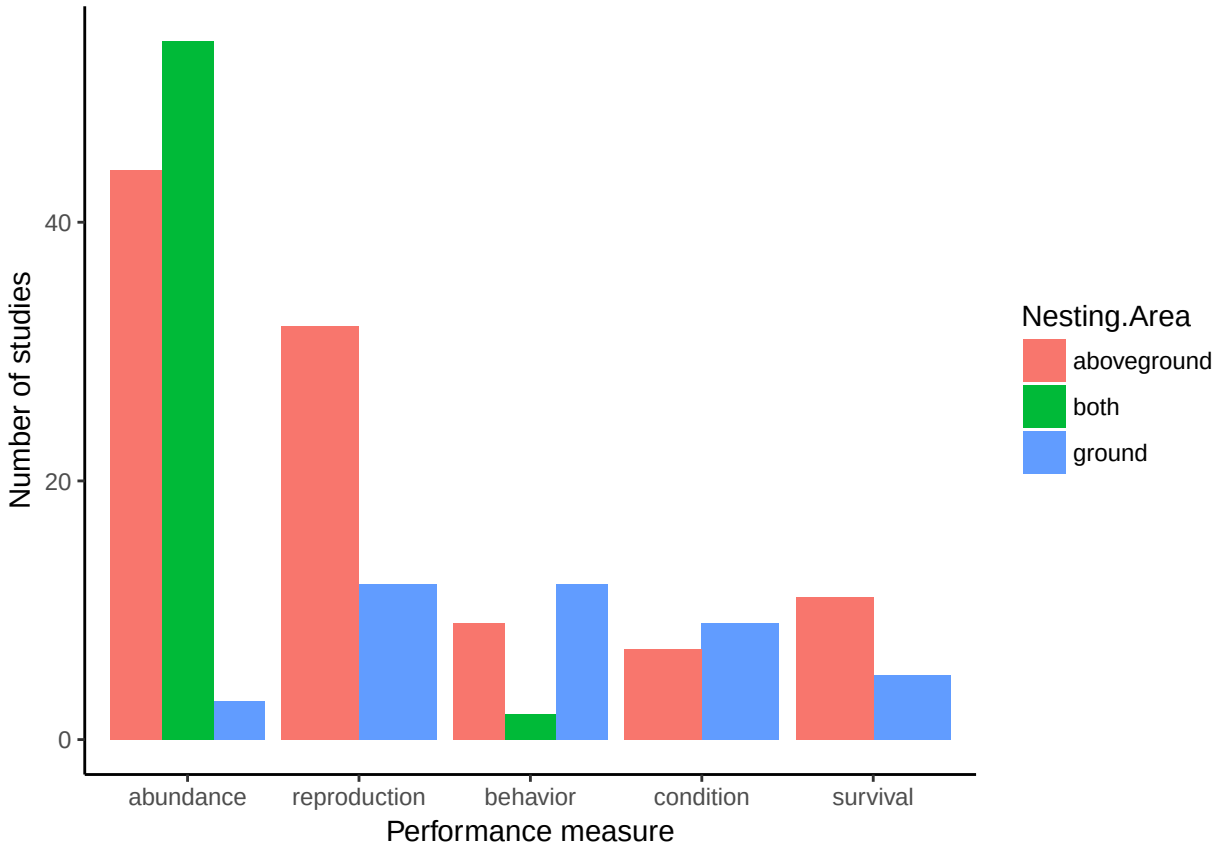
Taxonimical Order


100
75
50
25
0
Number of studies
abundance
reproduction
behavior
condition
survival
Performance measure
Study.Type
field
greenhouse
lab
semi−field

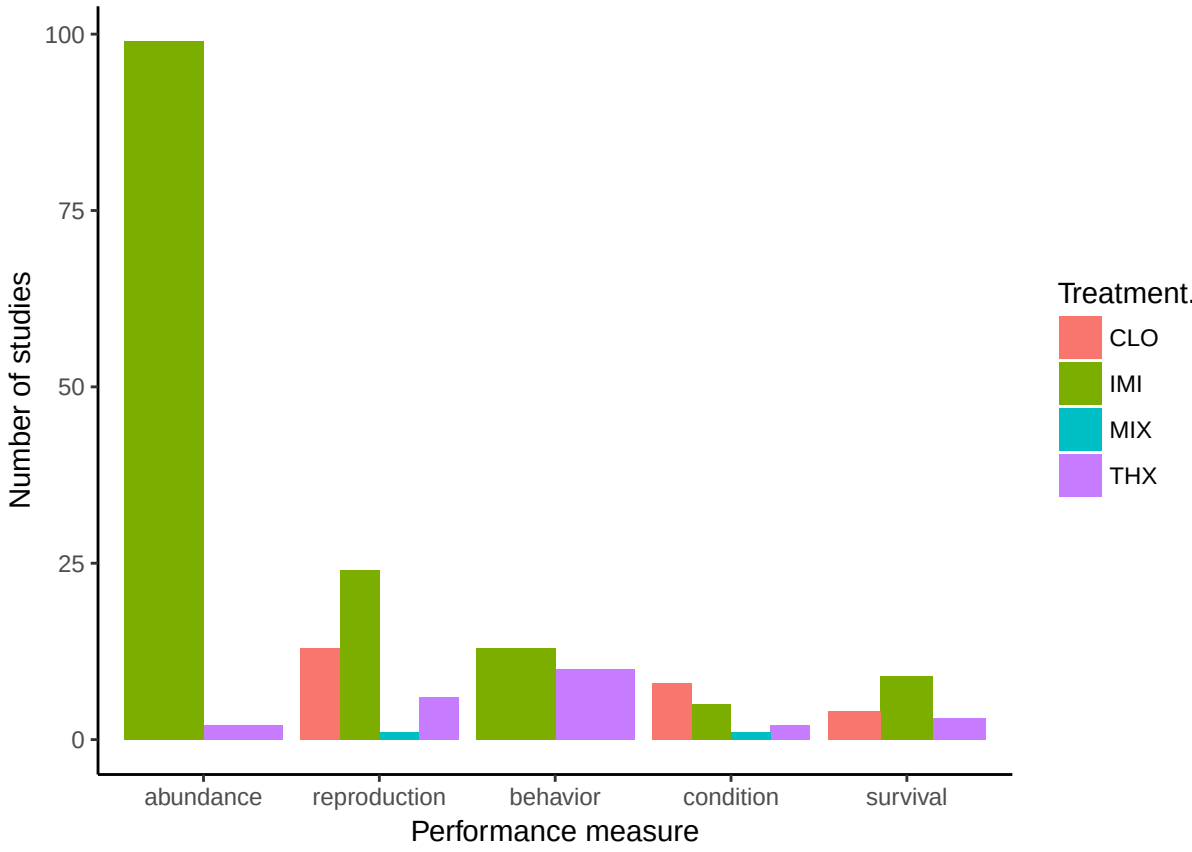
Study type



Foraging Area



Nesting Area



Application type

Use of Hedge's g for testing differences

Interpreting Results A g of 1 indicates the two groups differ by 1 standard deviation, a g of 2 indicates they differ by 2 standard deviations, and so on. Standard deviations are equivalent to z-scores (1 standard deviation = 1 z-score). Rule of Thumb Interpretation

Cohen's d and Hedges' g are interpreted in a similar way. Cohen suggested using the following rule of thumb for interpreting results:

- Small effect (cannot be discerned by the naked eye) = 0.2
- Medium Effect = 0.5
- Large Effect (can be seen by the naked eye) = 0.8

Heterogeneity

Tau Square

- An estimate of the between-study variance in a random-effects meta-analysis is given as (known as tau-squared).
- If > 1, suggests presence of substantial statistical heterogeneity.

I Squared Thresholds for the interpretation of I2 can be misleading, since the importance of inconsistency depends on several factors. A rough guide to interpretation is as follows:

– 0% to 40%: might not be important;

– 30% to 60%: may represent moderate heterogeneity;

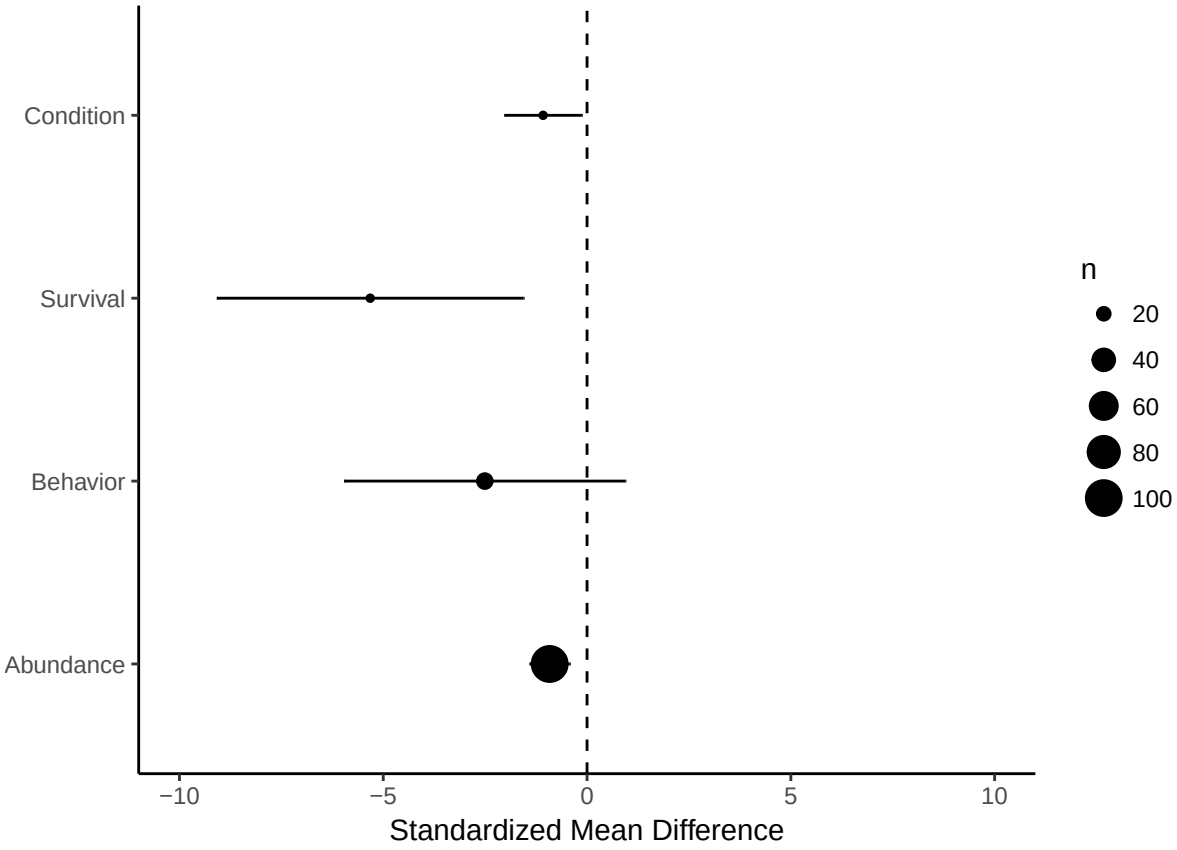
– 50% to 90%: may represent substantial heterogeneity;

– 75% to 100%: considerable heterogeneity*.

If there is evidence of statistical heterogeneity, we should proceed cautiously, investigate the reasons for its presence and modify our approach accordingly, perhaps by dividing the studies into subgroups of those with similar characteristics.

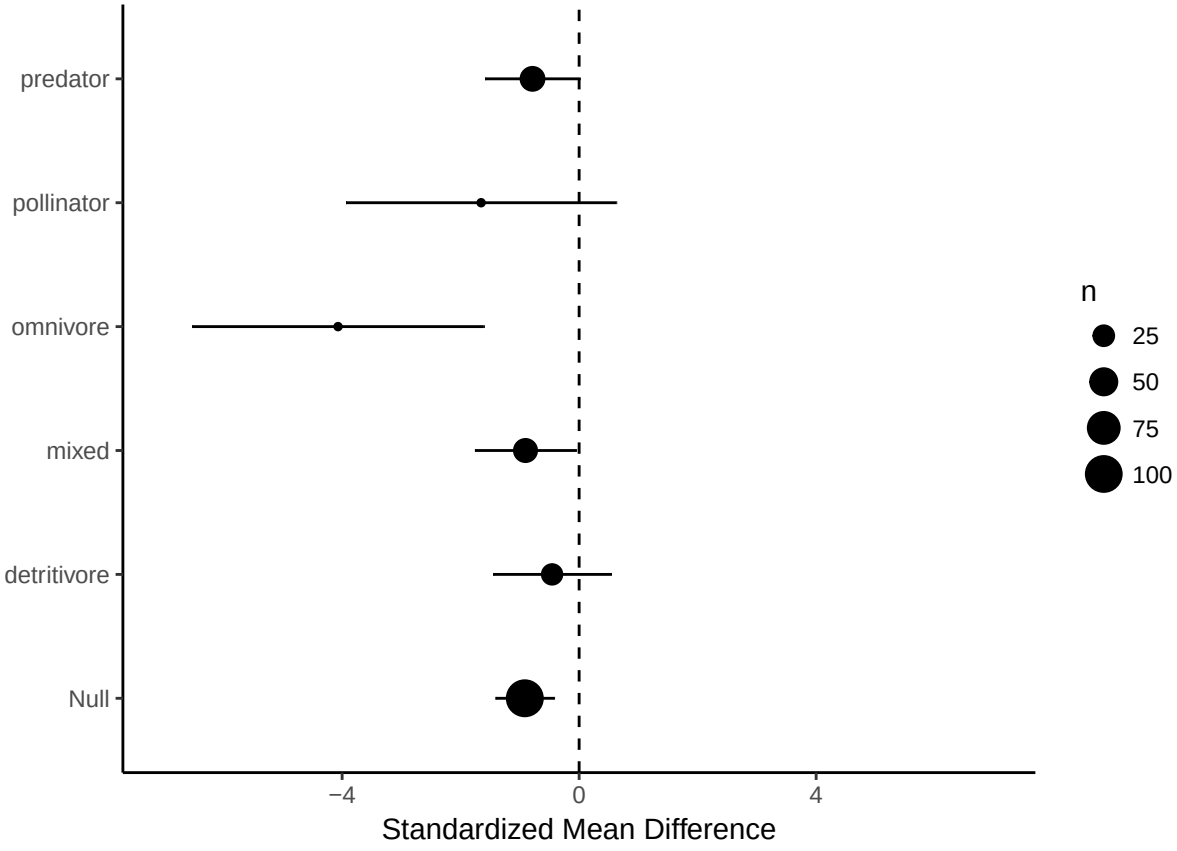
Fitness measure

estimate	ci.ub	ci.lb	group	p	n
-0.917	-0.423	-1.410	Abundance	0.000	101
-2.508	0.940	-5.957	Behavior	0.154	23
-5.319	-1.556	-9.083	Survival	0.006	16
-3.366	13.710	-20.441	Reproduction	0.699	44
-1.078	-0.128	-2.027	Condition	0.026	16



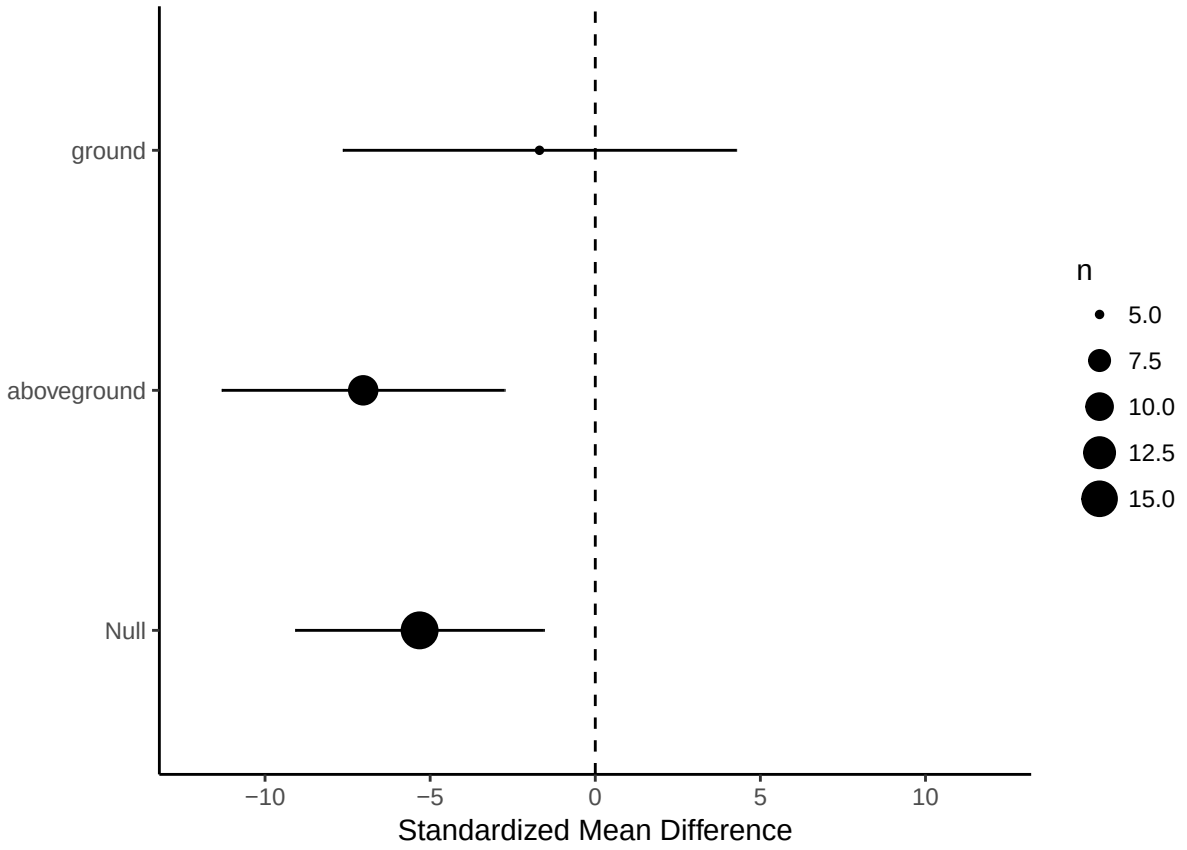
Abundance

estimate	ci.ub	ci.lb	group	p	n
-0.917	-0.423	-1.410	Null	0.000	101
-0.456	0.538	-1.450	detritivore	0.368	24
-0.905	-0.052	-1.758	mixed	0.038	33
-4.069	-1.608	-6.531	omnivore	0.001	4
-1.654	0.626	-3.934	pollinator	0.155	4
-0.787	0.011	-1.585	predator	0.053	36



Survival

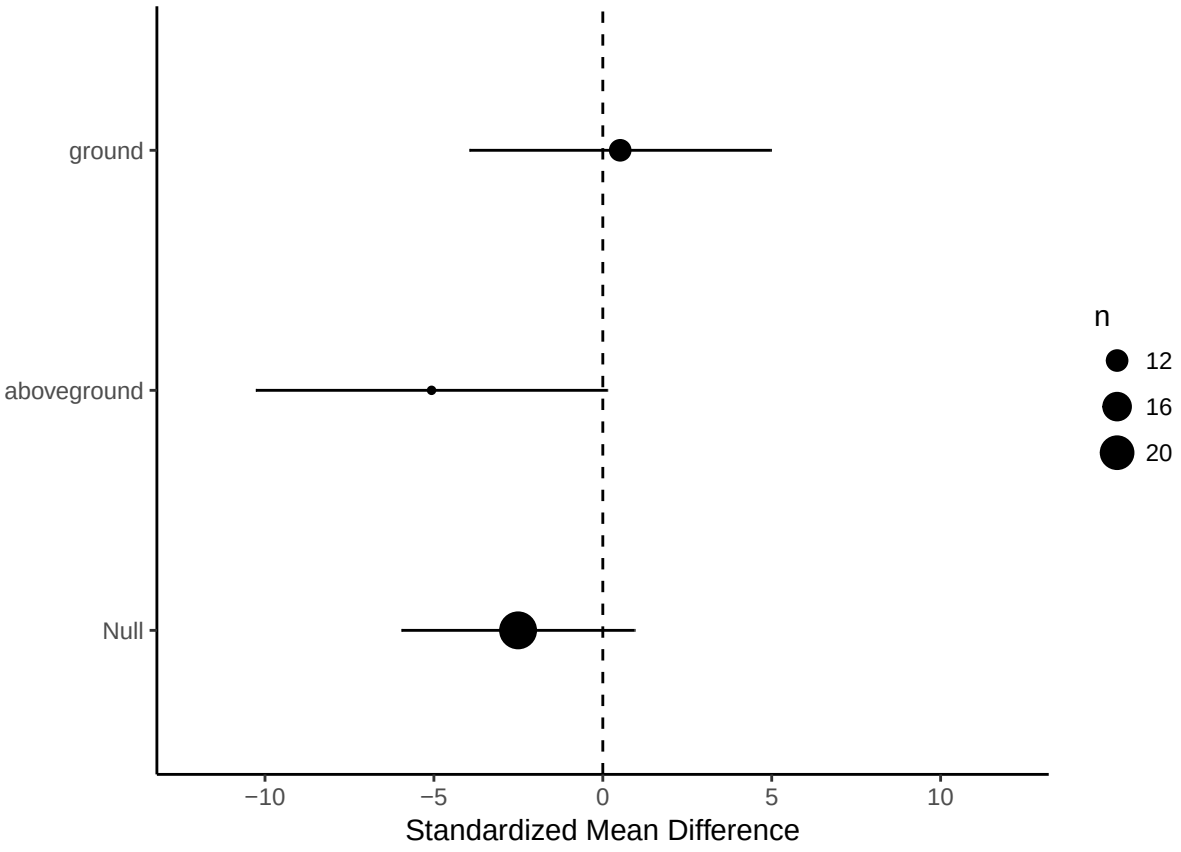
estimate	ci.ub	ci.lb	group	p	n
-5.319	-1.556	-9.083	Null	0.006	16
-7.027	-2.746	-11.309	aboveground	0.001	11
-1.689	4.266	-7.644	ground	0.578	5



Nesting Area

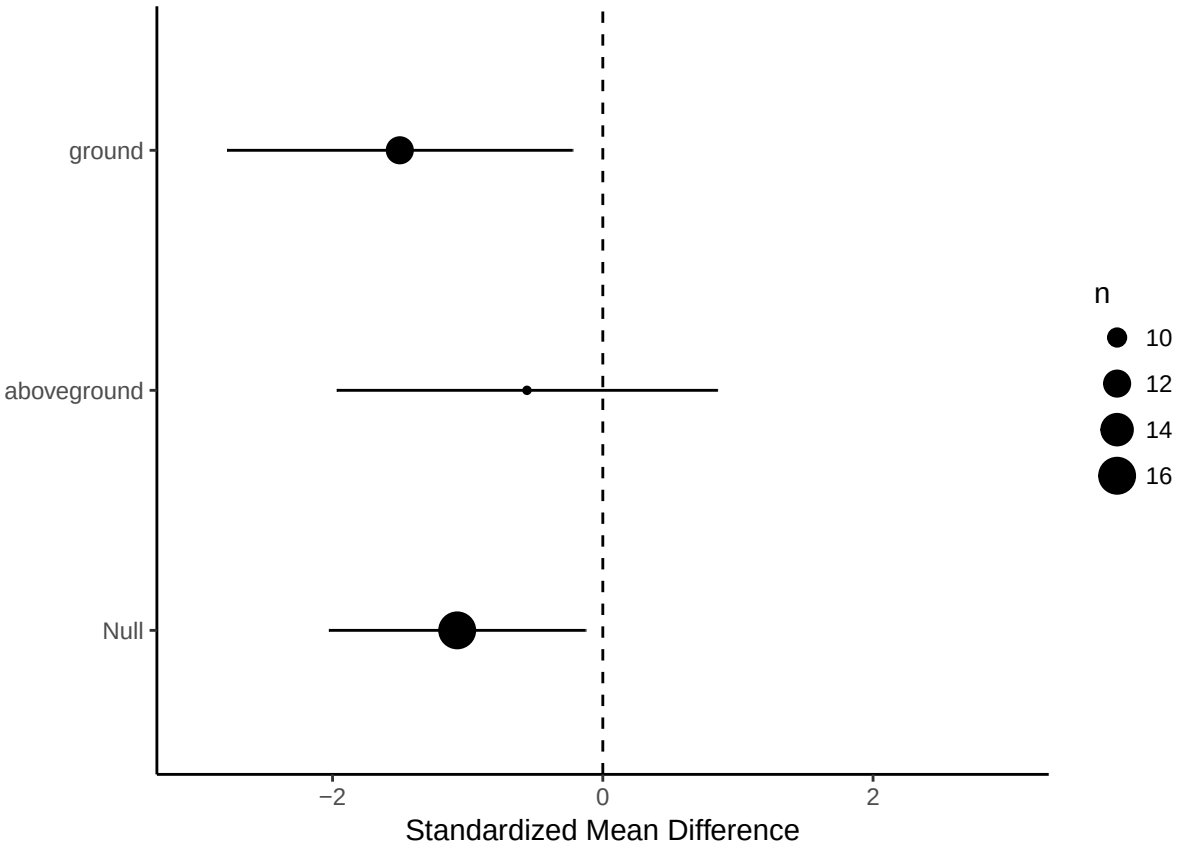
Behavior

estimate	ci.ub	ci.lb	group	p	n
-2.508	0.940	-5.957	Null	0.154	23
-5.070	0.131	-10.270	aboveground	0.056	9
-10.445	1.530	-22.420	both	0.087	2
0.515	4.975	-3.945	ground	0.821	12



Condition

estimate	ci.ub	ci.lb	group	p	n
-1.078	-0.128	-2.027	Null	0.026	16
-0.561	0.846	-1.968	aboveground	0.434	9
-1.502	-0.225	-2.780	ground	0.021	12


ground
aboveground
Null
−2
0
2
Standardized Mean Difference
n
10
12
14
16