

Meta – analytical output for pairwise comparisons of the entire data set using dewlap extension rates (sections 1-3) and head-bob rates (4-7) with specific comparisons of species and urban vs. non-urban populations.

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Dewlap Meta Analyses Outputs for *Anolis sagrei*

1. Dewlap Urban vs. Non Urban

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Urban	0.26667	0.09811	0.43522	0.14673	0.0833 ₃	0.0069 ₄	0.52705	40	0.003
McMann & Patterson 2012*	Urban	1.0600 ₀	0.34488	1.77512	0.00908	0.34167	0.11674	1.52798	20	0.006
McMann & Patterson 2012*	Urban	1.44667	0.89899	1.99434	0.01545	0.26167	0.06847	1.17021	20	< .001
Simon 2007	Non Urban	0.2250 ₀	0.15604	0.29396	0.75497	0.0333 ₃	0.00111	0.16330	24	< .001
Magna 2017	Urban	0.0049 ₂	7.45e-4	0.0090 ₉	3.54044	0.0020 ₀	4.00e-6	0.00916	21	0.023
Magna 2017	Urban	0.0633 ₃	0.03552	0.09115	2.24202	0.01333	1.78e-4	0.06110	21	< .001
Magna 2017	Urban	0.03167	0.00340	0.0599 ₃	2.24201	0.01333	1.78e-4	0.0549 ₈	17	0.030
Magna 2017*	Urban	0.00917	3.76e-4	0.01796	3.38951	0.00417	1.74e-5	0.01768	18	0.042
Cox et al 2009*	Urban	0.01833	0.00753	0.02913	3.30888	0.0050 ₀	2.50e-5	0.01871	14	0.003
Cox et al 2009*	Urban	0.0083 ₃	0.00247	0.01913	3.30888	0.0050 ₀	2.50e-5	0.01871	14	0.119

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patternson 1999*	Urban	0.04987	-0.01298	0.11271	1.05978	0.0265 ₈	7.06e-4	0.07517	8	0.103
Patternson 1999*	Urban	0.03611	0.02053	0.05169	3.12941	0.0065 ₉	4.34e-5	0.01864	8	< .001
Patternson 1999*	Non Urban	0.0459 ₈	0.02527	0.0666 ₈	2.85028	0.0087 ₆	7.67e-5	0.02476	8	0.001
Patternson 1999*	Urban	0.07364	0.05265	0.0946 ₄	2.92857	0.00817	6.67e-5	0.0200 ₀	6	< .001
Tokarz 2003*	Urban	0.03017	0.01871	0.04163	3.26896	0.0053 ₈	2.89e-5	0.02151	16	< .001
Tokarz 2003*	Urban	0.03274	0.01914	0.0463 ₄	3.16475	0.0062 ₉	3.96e-5	0.0235 ₅	14	< .001
Tokarz 2002*	Urban	0.04167	0.02282	0.0605 ₂	2.90654	0.0083 ₃	6.94e-5	0.0263 ₅	10	< .001
Drissens et al 2014*	Urban	0.0200 ₀	0.00322	0.0367 ₈	2.90654	0.0083 ₃	6.94e-5	0.0565 ₂	46	0.021
Drissens et al 2014*	Urban	0.01667	0.00816	0.02518	3.38951	0.00417	1.74e-5	0.0232 ₀	31	< .001
Drissens et al 2014	Urban	0.0366 ₇	0.02365	0.0496 ₉	3.16014	0.0063 ₃	4.01e-5	0.03291	27	< .001
Drissens et al 2014*	Urban	0.01667	0.00821	0.02513	3.38951	0.00417	1.74e-5	0.0250 ₀	36	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Stoud et al 2019*	Urban	0.0062 ₅	0.00386	0.0086 ₄	3.57185	0.00117	1.36e-6	0.0063 ₉	30	< .001
Stoud et al 2019	Non Urban	0.01331	0.00685	0.01977	3.47132	0.00316	9.98e-6	0.01730	30	< .001
Patterson 2002	Urban	0.0459 ₈	0.02527	0.0666 ₈	2.85028	0.0087 ₆	7.67e-5	0.02476	8	0.001
Patterson 2002	Urban	0.0559 ₄	0.01995	0.09194	2.01289	0.01522	2.32e-4	0.0430 ₆	8	0.008
Patterson 2002	Urban	0.07364	0.05265	0.0946 ₄	2.92857	0.00817	6.67e-5	0.0200 ₀	6	< .001
Tokarz et al 2005	Non Urban	0.02198	0.01611	0.02786	3.49517	0.00281	7.89e-6	0.01256	20	< .001
Simon 2002	Non Urban	0.0833 ₃	0.03492	0.13175	1.34496	0.02222	4.94e-4	0.08012	13	0.003
Simon 2002	Non Urban	0.0555 ₆	0.00714	0.10397	1.34496	0.02222	4.94e-4	0.08012	13	0.028
Simon 2002	Non Urban	0.09444	0.03997	0.14891	1.15341	0.0250 ₀	6.25e-4	0.09014	13	0.003
Simon 2002	Non Urban	0.0833 ₃	0.02281	0.14386	0.99504	0.02778	7.72e-4	0.10015	13	0.011
Simon 2002	Non Urban	0.08194	0.06027	0.10362	2.79502	0.00917	8.40e-5	0.0259 ₃	8	< .001
Simon 2002	Non Urban	0.0738 ₉	0.04105	0.10673	2.17266	0.01389	1.93e-4	0.0392 ₈	8	0.001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Calsbeek and Manocha 2006	Non Urban	0.02222	0.00984	0.03460	3.24951	0.00556	3.09e-5	0.01843	11	0.003
Calsbeek and Manocha 2006	Non Urban	0.01111	0.00530	0.01693	3.49712	0.00278	7.72e-6	0.01242	20	< .001
Tokarz and Beck, 1987	Urban	0.03600	0.01448	0.05752	2.71240	0.00978	9.56e-5	0.03387	12	0.004
Tokarz and Beck, 1987	Urban	0.01533	0.00628	0.02438	3.39450	0.00411	1.69e-5	0.01424	12	0.003
Simon 2011	Non Urban	0.04167	-0.01404	0.09737	1.15341	0.02500	6.25e-4	0.08292	11	0.127
Simon 2011	Non Urban	0.06667	-0.04474	0.17807	0.37995	0.05000	0.00250	0.16583	11	0.212
Simon 2011*	Non Urban	0.01333	-0.00405	0.03072	2.90653	0.00833	6.94e-5	0.03819	21	0.125
Simon 2011*	Non Urban	0.00333	-0.00362	0.01029	3.45848	0.00333	1.11e-5	0.01528	21	0.329

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Environment	Overall	0.034 3	0.028 2	0.040 5	0.00314	41	0.00148	0.0671	< .001	0.00275	0.0123
		Urban	0.0315	0.023 5	0.039 4	0.0040 4	25	– 0.00319	0.0661	< .001	0.00320	0.0159
		Non Urban	0.040 7	0.029 9	0.0515	0.00551	16	0.00533	0.0762	< .001	0.00537	0.0216

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	4.4854	12.37379	50.39037
	Urban	4.9587	.	.
	Non Urban	4.0225	.	.
H ²	Overall	12.5449	115.74665	2095.31398
	Urban	13.2425	334.13684	7011.93942

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
I ² (%)	Non Urban	11.4983	28.17537	181.73558
	Overall	92.0286	99.13604	99.95227
	Urban	92.4486	99.70072	99.98574
T	Non Urban	91.3030	96.45080	99.44975
	Overall	0.0165	0.05188	0.22162
	Urban	0.0164	0.08566	0.39298
T ²	Non Urban	0.0190	0.03062	0.07897
	Overall	2.71e-4	0.00269	0.04912
	Urban	2.70e-4	0.00734	0.15443
	Non Urban	3.62e-4	9.38e-4	0.00624

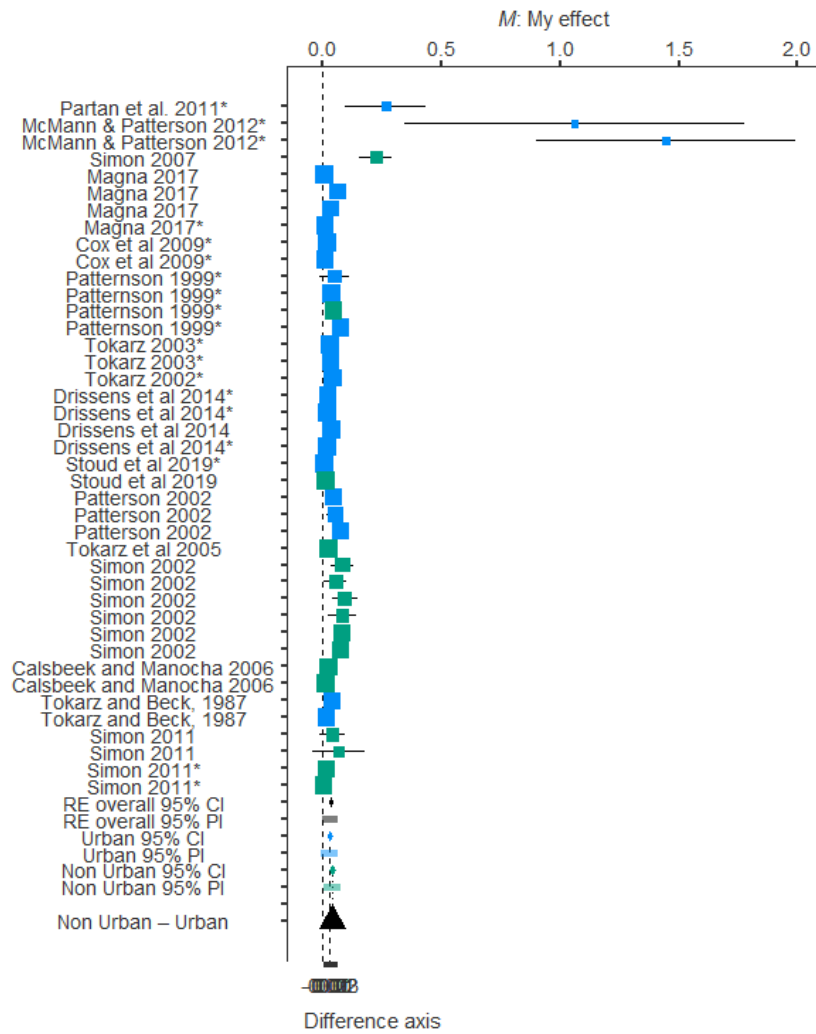
Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Environment	Non Urban	0.0407 ₄	0.02995	0.0515	0.00551	< .001
		Urban	0.03146	0.02353	0.039 ₄	0.0040 ₄	< .001
		Non Urban – Urban	0.0092 ₈	-0.00411	0.0227	0.0068 ₃	0.174

Note. Estimate is based on a random effects (RE) model.

Forest Plot



2. Dewlap Invasive vs. Native

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Invasive	0.26667	0.09811	0.43522	0.14559	0.0833 ₃	0.0069 ₄	0.52705	40	0.003
McMann & Patterson 2012*	Invasive	1.0600 ₀	0.34488	1.77512	0.00900	0.34167	0.11674	1.52798	20	0.006
McMann & Patterson 2012*	Invasive	1.44667	0.89899	1.99434	0.01532	0.26167	0.06847	1.17021	20	< .001
Simon 2007	Native	0.2250 ₀	0.15604	0.29396	0.75038	0.0333 ₃	0.00111	0.16330	24	< .001
Magna 2017	Invasive	0.0049 ₂	7.45e-4	0.0090 ₉	3.54632	0.0020 ₀	4.00e-6	0.00916	21	0.023
Magna 2017	Invasive	0.0633 ₃	0.03552	0.09115	2.23762	0.01333	1.78e-4	0.06110	21	< .001
Magna 2017	Invasive	0.03167	0.00340	0.0599 ₃	2.23761	0.01333	1.78e-4	0.0549 ₈	17	0.030
Magna 2017*	Invasive	0.00917	3.76e-4	0.01796	3.39370	0.00417	1.74e-5	0.01768	18	0.042
Cox et al 2009*	Invasive	0.01833	0.00753	0.02913	3.31223	0.0050 ₀	2.50e-5	0.01871	14	0.003
Cox et al 2009*	Invasive	0.0083 ₃	- 0.00247	0.01913	3.31223	0.0050 ₀	2.50e-5	0.01871	14	0.119
Patternson 1999*	Invasive	0.04987	-0.01298	0.11271	1.05423	0.0265 ₈	7.06e-4	0.07517	8	0.103

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patternson 1999*	Invasive	0.03611	0.02053	0.05169	3.13100	0.0065 ₉	4.34e-5	0.01864	8	< .001
Patternson 1999*	Invasive	0.0459 ₈	0.02527	0.0666 ₈	2.84952	0.0087 ₆	7.67e-5	0.02476	8	0.001
Patternson 1999*	Invasive	0.07364	0.05265	0.0946 ₄	2.92842	0.00817	6.67e-5	0.0200 ₀	6	< .001
Tokarz 2003*	Invasive	0.03017	0.01871	0.04163	3.27190	0.0053 ₈	2.89e-5	0.02151	16	< .001
Tokarz 2003*	Invasive	0.03274	0.01914	0.0463 ₄	3.16668	0.0062 ₉	3.96e-5	0.0235 ₅	14	< .001
Tokarz 2002*	Invasive	0.04167	0.02282	0.0605 ₂	2.90622	0.0083 ₃	6.94e-5	0.0263 ₅	10	< .001
Drissens et al 2014*	Invasive	0.0200 ₀	0.00322	0.0367 ₈	2.90621	0.0083 ₃	6.94e-5	0.0565 ₂	46	0.021
Drissens et al 2014*	Invasive	0.01667	0.00816	0.02518	3.39371	0.00417	1.74e-5	0.0232 ₀	31	< .001
Drissens et al 2014	Invasive	0.0366 ₇	0.02365	0.0496 ₉	3.16202	0.0063 ₃	4.01e-5	0.03291	27	< .001
Drissens et al 2014*	Invasive	0.01667	0.00821	0.02513	3.39371	0.00417	1.74e-5	0.0250 ₀	36	< .001
Stoud et al 2019*	Invasive	0.0062 ₅	0.00386	0.0086 ₄	3.57809	0.00117	1.36e-6	0.0063 ₉	30	< .001
Stoud et al 2019	Invasive	0.01331	0.00685	0.01977	3.47641	0.00316	9.98e-6	0.01730	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patterson 2002	Invasive	0.0459 ₈	0.02527	0.0666 ₈	2.84952	0.0087 ₆	7.67e-5	0.02476	8	0.001
Patterson 2002	Invasive	0.0559 ₄	0.01995	0.09194	2.00766	0.01522	2.32e-4	0.0430 ₆	8	0.008
Patterson 2002	Invasive	0.07364	0.05265	0.0946 ₄	2.92842	0.00817	6.67e-5	0.0200 ₀	6	< .001
Tokarz et al 2005	Invasive	0.02198	0.01611	0.02786	3.50053	0.00281	7.89e-6	0.01256	20	< .001
Simon 2002	Native	0.0833 ₃	0.03492	0.13175	1.33897	0.02222	4.94e-4	0.08012	13	0.003
Simon 2002	Native	0.0555 ₆	0.00714	0.10397	1.33897	0.02222	4.94e-4	0.08012	13	0.028
Simon 2002	Invasive	0.09444	0.03997	0.14891	1.14766	0.0250 ₀	6.25e-4	0.09014	13	0.003
Simon 2002	Invasive	0.0833 ₃	0.02281	0.14386	0.98965	0.02778	7.72e-4	0.10015	13	0.011
Simon 2002	Native	0.08194	0.06027	0.10362	2.79384	0.00917	8.40e-5	0.0259 ₃	8	< .001
Simon 2002	Native	0.0738 ₉	0.04105	0.10673	2.16798	0.01389	1.93e-4	0.0392 ₈	8	0.001
Calsbeek and Manocha 2006	Native	0.02222	0.00984	0.0346 ₀	3.25226	0.0055 ₆	3.09e-5	0.01843	11	0.003
Calsbeek and Manocha 2006	Native	0.01111	0.00530	0.01693	3.50251	0.0027 ₈	7.72e-6	0.01242	20	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Tokarz and Beck, 1987	Invasive	0.0360 0	0.01448	0.05752	2.71063	0.0097 8	9.56e-5	0.03387	12	0.004
Tokarz and Beck, 1987	Invasive	0.01533	0.00628	0.0243 8	3.39875	0.00411	1.69e-5	0.01424	12	0.003
Simon 2011	Native	0.04167	-0.01404	0.09737	1.14766	0.0250 0	6.25e-4	0.0829 2	11	0.127
Simon 2011	Native	0.0666 7	-0.04474	0.17807	0.37725	0.0500 0	0.0025 0	0.16583	11	0.212
Simon 2011*	Native	0.01333	- 0.00405	0.0307 2	2.90621	0.0083 3	6.94e-5	0.03819	21	0.125
Simon 2011*	Native	0.0033 3	- 0.00362	0.01029	3.46343	0.0033 3	1.11e-5	0.01528	21	0.329

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Invasive Status	Overall	0.034 3	0.028 2	0.040 5	0.00314	41	0.00148	0.0671	< .001	0.00275	0.0123

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
		Invasive	0.032 ₃	0.0251	0.039 ₆	0.0037 ₀	30	0.0020 ₀	0.066 ₇	< .001	0.00297	0.0145
		Native	0.042 ₅	0.029 ₂	0.0557	0.0067 ₆	11	0.00639	0.078 ₅	< .001	0.00727	0.0265

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	4.4854	12.37379	50.3904
	Invasive	4.8906	.	.
	Native	3.6445	.	.
H ²	Overall	12.5449	115.74665	2095.3140
	Invasive	12.3755	161.74809	4967.2946
	Native	14.1752	24.22389	219.1147
I ² (%)	Overall	92.0286	99.13604	99.9523

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
T	Invasive	91.9195	99.38175	99.9799
	Native	92.9454	95.87184	99.5436
	Overall	0.0165	0.05188	0.2216
	Invasive	0.0155	0.05822	0.3236
T ²	Native	0.0257	0.03410	0.1045
	Overall	2.71e-4	0.00269	0.0491
	Invasive	2.40e-4	0.00339	0.1047
	Native	6.60e-4	0.00116	0.0109

Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

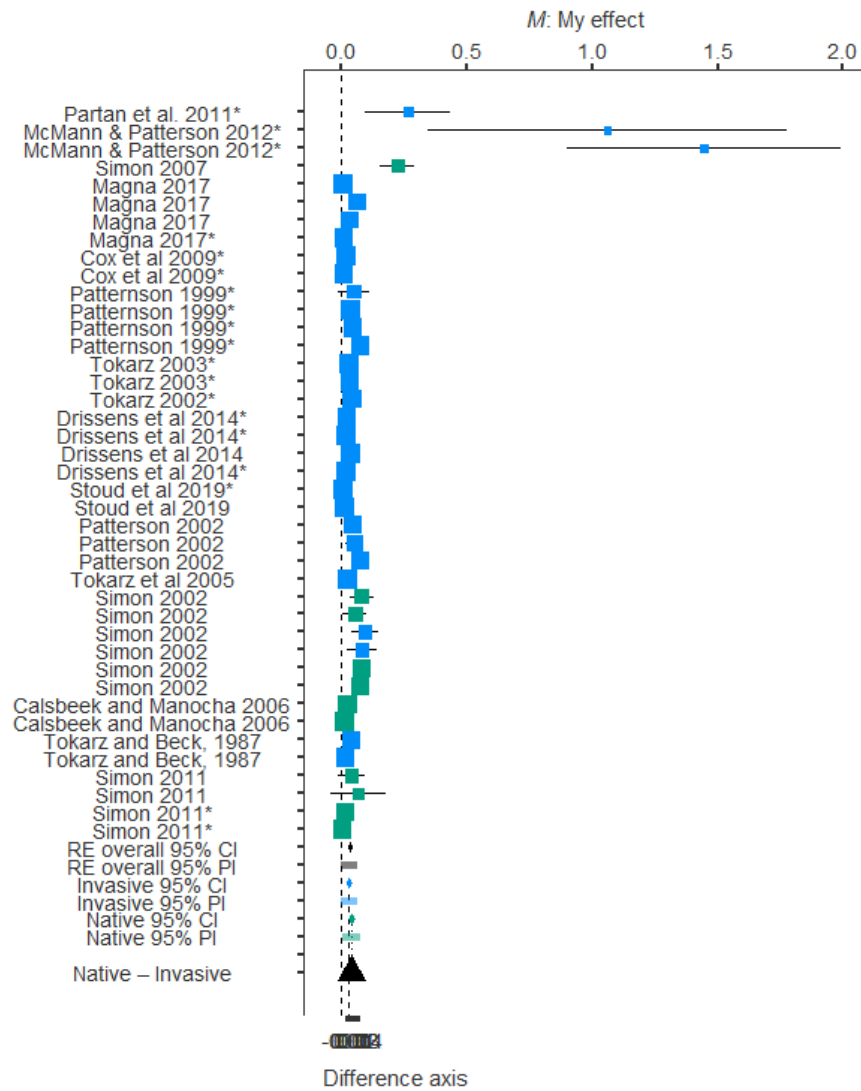
Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Invasive Status	Native	0.042 ₅	0.02921	0.0557	0.0067 ₆	< .001

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
		Invasive	0.032 3	0.02508	0.039 6	0.0037 0	< .001
		Native – Invasive	0.0101	– 0.00497	0.025 2	0.00771	0.189

Note. Estimate is based on a random effects (RE) model.

Forest Plot



3. Dewlap Field vs. Mesocosm

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Mesocosm	0.26667	0.09811	0.43522	0.15198	0.0833 ₃	0.0069 ₄	0.52705	40	0.003
McMann & Patterson 2012*	Field	1.0600 ₀	0.34488	1.77512	0.00942	0.34167	0.11674	1.52798	20	0.006
McMann & Patterson 2012*	Field	1.44667	0.89899	1.99434	0.01603	0.26167	0.06847	1.17021	20	< .001
Simon 2007	Field	0.2250 ₀	0.15604	0.29396	0.77596	0.0333 ₃	0.00111	0.16330	24	< .001
Magna 2017	Mesocosm	0.0049 ₂	7.45e-4	0.0090 ₉	3.51429	0.0020 ₀	4.00e-6	0.00916	21	0.023
Magna 2017	Mesocosm	0.0633 ₃	0.03552	0.09115	2.26156	0.01333	1.78e-4	0.06110	21	< .001
Magna 2017	Mesocosm	0.03167	0.00340	0.0599 ₃	2.26155	0.01333	1.78e-4	0.0549 ₈	17	0.030
Magna 2017*	Mesocosm	0.00917	3.76e-4	0.01796	3.37073	0.00417	1.74e-5	0.01768	18	0.042
Cox et al 2009*	Mesocosm	0.01833	0.00753	0.02913	3.29382	0.0050 ₀	2.50e-5	0.01871	14	0.003
Cox et al 2009*	Mesocosm	0.0083 ₃	- 0.00247	0.01913	3.29382	0.0050 ₀	2.50e-5	0.01871	14	0.119
Patternson 1999*	Field	0.04987	-0.01298	0.11271	1.08505	0.0265 ₈	7.06e-4	0.07517	8	0.103

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patternson 1999*	Field	0.03611	0.02053	0.05169	3.12207	0.0065 ₉	4.34e-5	0.01864	8	< .001
Patternson 1999*	Field	0.0459 ₈	0.02527	0.0666 ₈	2.85344	0.0087 ₆	7.67e-5	0.02476	8	0.001
Patternson 1999*	Field	0.07364	0.05265	0.0946 ₄	2.92897	0.00817	6.67e-5	0.0200 ₀	6	< .001
Tokarz 2003*	Mesocosm	0.03017	0.01871	0.04163	3.25568	0.0053 ₈	2.89e-5	0.02151	16	< .001
Tokarz 2003*	Mesocosm	0.03274	0.01914	0.0463 ₄	3.15595	0.0062 ₉	3.96e-5	0.0235 ₅	14	< .001
Tokarz 2002*	Mesocosm	0.04167	0.02282	0.0605 ₂	2.90773	0.0083 ₃	6.94e-5	0.0263 ₅	10	< .001
Drissens et al 2014*	Mesocosm	0.0200 ₀	0.00322	0.0367 ₈	2.90773	0.0083 ₃	6.94e-5	0.0565 ₂	46	0.021
Drissens et al 2014*	Mesocosm	0.01667	0.00816	0.02518	3.37074	0.00417	1.74e-5	0.0232 ₀	31	< .001
Drissens et al 2014	Mesocosm	0.0366 ₇	0.02365	0.0496 ₉	3.15153	0.0063 ₃	4.01e-5	0.03291	27	< .001
Drissens et al 2014*	Mesocosm	0.01667	0.00821	0.02513	3.37074	0.00417	1.74e-5	0.0250 ₀	36	< .001
Stoud et al 2019*	Field	0.0062 ₅	0.00386	0.0086 ₄	3.54410	0.00117	1.36e-6	0.0063 ₉	30	< .001
Stoud et al 2019	Field	0.01331	0.00685	0.01977	3.44861	0.00316	9.98e-6	0.01730	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patterson 2002	Mesocosm	0.0459 ₈	0.02527	0.0666 ₈	2.85344	0.0087 ₆	7.67e-5	0.02476	8	0.001
Patterson 2002	Mesocosm	0.0559 ₄	0.01995	0.09194	2.03626	0.01522	2.32e-4	0.0430 ₆	8	0.008
Patterson 2002	Mesocosm	0.07364	0.05265	0.0946 ₄	2.92897	0.00817	6.67e-5	0.0200 ₀	6	< .001
Tokarz et al 2005	Mesocosm	0.02198	0.01611	0.02786	3.47129	0.00281	7.89e-6	0.01256	20	< .001
Simon 2002	Field	0.0833 ₃	0.03492	0.13175	1.37206	0.02222	4.94e-4	0.08012	13	0.003
Simon 2002	Field	0.0555 ₆	0.00714	0.10397	1.37206	0.02222	4.94e-4	0.08012	13	0.028
Simon 2002	Field	0.09444	0.03997	0.14891	1.17950	0.0250 ₀	6.25e-4	0.09014	13	0.003
Simon 2002	Field	0.0833 ₃	0.02281	0.14386	1.01959	0.02778	7.72e-4	0.10015	13	0.011
Simon 2002	Field	0.08194	0.06027	0.10362	2.80004	0.00917	8.40e-5	0.0259 ₃	8	< .001
Simon 2002	Field	0.0738 ₉	0.04105	0.10673	2.19350	0.01389	1.93e-4	0.0392 ₈	8	0.001
Calsbeek and Manocha 2006	Field	0.02222	0.00984	0.0346 ₀	3.23709	0.0055 ₆	3.09e-5	0.01843	11	0.003
Calsbeek and Manocha 2006	Field	0.01111	0.00530	0.01693	3.47315	0.0027 ₈	7.72e-6	0.01242	20	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Tokarz and Beck, 1987	Mesocosm	0.0360 0	0.01448	0.05752	2.72006	0.0097 8	9.56e-5	0.03387	12	0.004
Tokarz and Beck, 1987	Mesocosm	0.01533	0.00628	0.0243 8	3.37549	0.00411	1.69e-5	0.01424	12	0.003
Simon 2011	Field	0.04167	-0.01404	0.09737	1.17950	0.0250 0	6.25e-4	0.0829 2	11	0.127
Simon 2011	Field	0.0666 7	-0.04474	0.17807	0.39239	0.0500 0	0.0025 0	0.16583	11	0.212
Simon 2011*	Field	0.01333	- 0.00405	0.0307 2	2.90772	0.0083 3	6.94e-5	0.03819	21	0.125
Simon 2011*	Field	0.0033 3	- 0.00362	0.01029	3.43640	0.0033 3	1.11e-5	0.01528	21	0.329

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Setup	Overall	0.034 3	0.028 2	0.040 5	0.00314	41	0.00148	0.0671	< .001	0.00275	0.0123

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
		Mesocosm	0.029 3	0.020 7	0.0378	0.0043 7	20	- 0.00628	0.064 8	< .001	0.00424	0.0171
		Field	0.042 6	0.032 6	0.052 6	0.0051 0	21	0.00669	0.078 5	< .001	0.00361	0.0200

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	4.4854	12.37379	50.39037
	Mesocosm	4.0472	.	.
	Field	5.5446	.	.
H ²	Overall	12.5449	115.74665	2095.31398
	Mesocosm	8.8757	9.37347	86.90676
	Field	15.7152	464.67168	7239.51909
I ² (%)	Overall	92.0286	99.13604	99.95227

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
T	Mesocosm	88.7333	89.33159	98.84934
	Field	93.6367	99.78479	99.98619
	Overall	0.0165	0.05188	0.22162
	Mesocosm	0.0142	0.01465	0.04692
T ²	Field	0.0206	0.11576	0.45737
	Overall	2.71e-4	0.00269	0.04912
	Mesocosm	2.02e-4	2.15e-4	0.00220
	Field	4.25e-4	0.01340	0.20919

Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

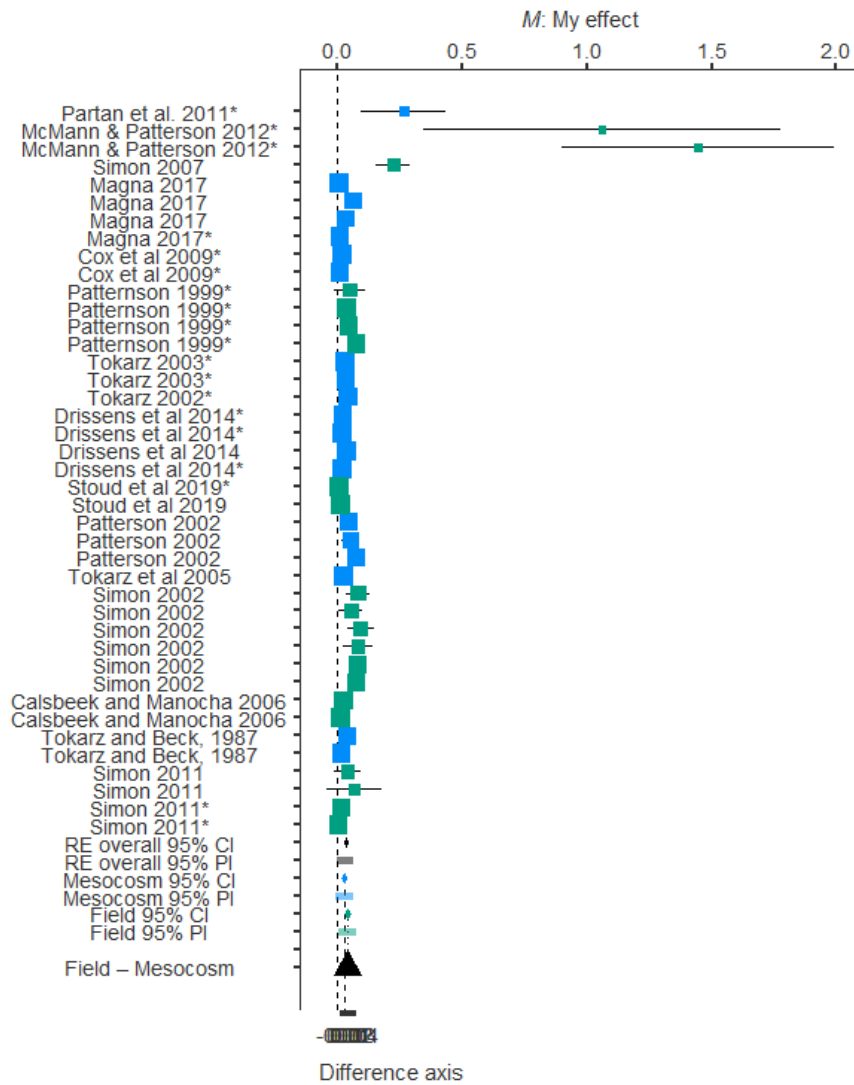
Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Setup	Field	0.042 6	0.0326	0.052 6	0.0051 0	< .001

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
		Mesocosm	0.029 ₃	0.0207	0.0378	0.0043 ₇	< .001
		Field – Mesocosm	0.0133	1.71e-4	0.026 ₅	0.0067 ₂	0.047

Note. Estimate is based on a random effects (RE) model.

Forest Plot



Head-bob Meta Analyses Outputs for *Anolis sagrei*

4. Head-bob Urban vs. Non Urban

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Urban	0.1500 0	0.03201	0.26799	0.1668	0.0583 3	0.0034 0	0.36893	40	0.014
McMann & Patterson 2012*	Urban	0.0650 0	0.05942	0.0705 8	4.1750	0.0026 7	7.11e-6	0.01193	20	< .001
McMann & Patterson 2012*	Urban	0.16500	0.09872	0.23128	0.5190	0.03167	0.0010 0	0.14162	20	< .001
Simon 2007*	Non Urban	0.25333	0.14990	0.35677	0.2240	0.0500 0	0.0025 0	0.24495	24	< .001
Magna 2017*	Urban	0.0046 7	0.00206	0.00727	4.3457	0.00125	1.56e-6	0.0057 3	21	0.001
Magna 2017*	Urban	0.0033 3	0.00157	0.0051 0	4.3736	8.33e-4	6.94e-7	0.0034 4	17	0.001
Magna 2017*	Urban	0.01167	0.00645	0.01688	4.2007	0.0025 0	6.25e-6	0.01146	21	< .001
Magna 2017*	Urban	0.0105 0	0.00520	0.01580	4.2006	0.0025 0	6.25e-6	0.01031	17	< .001
Magna 2017*	Urban	0.0050 0	0.00148	0.0085 2	4.3071	0.00167	2.78e-6	0.0070 7	18	0.008

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
McMann et al 2003	Urban	0.01767	0.01494	0.0203 ₉	4.3388	0.00133	1.78e-6	0.0073 ₀	30	< .001
Edwards and Lailvoux 2012	Urban	0.0582 ₄	0.03482	0.08166	2.2272	0.01143	1.31e-4	0.06157	29	< .001
Edwards and Lailvoux 2012	Non Urban	0.05201	0.03866	0.0653 ₆	3.3396	0.0065 ₂	4.25e-5	0.0350 ₉	29	< .001
Patternson 1999	Urban	0.0120 ₀	0.00509	0.01891	4.1103	0.0030 ₆	9.34e-6	0.0096 ₆	10	0.003
Patternson 1999	Urban	0.01094	0.00441	0.01748	4.1389	0.0028 ₉	8.34e-6	0.00914	10	0.004
Patternson 1999	Urban	0.0040 ₃	0.00151	0.0065 ₅	4.3593	0.00107	1.14e-6	0.0030 ₂	8	0.007
Patternson 1999	Urban	0.0065 ₃	0.00212	0.01095	4.2850	0.00187	3.48e-6	0.0052 ₈	8	0.010
Patternson 1999	Non Urban	0.0093 ₆	0.00208	0.01663	4.1065	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patternson 1999	Urban	0.01357	0.00628	0.0208 ₅	4.1482	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Tokarz 2003	Urban	0.0022 ₉	3.87e-4	0.0042 ₀	4.3702	8.95e-4	8.00e-7	0.0035 ₈	16	0.022
Stoud et al 2019	Urban	0.02123	0.01194	0.03051	3.8106	0.0045 ₄	2.06e-5	0.0248 ₈	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Stoud et al 2019*	Non Urban	0.0292 ₅	0.01902	0.0394 ₈	3.7060	0.0050 ₀	2.50e-5	0.02739	30	< .001
Patterson 2002*	Urban	0.0093 ₆	0.00208	0.01663	4.1065	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patterson 2002*	Urban	0.00812	0.00321	0.01304	4.2592	0.0020 ₈	4.32e-6	0.0058 ₈	8	0.006
Patterson 2002*	Urban	0.01357	0.00628	0.0208 ₅	4.1482	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Simon 2002*	Non Urban	0.0666 ₇	0.03382	0.09951	1.8038	0.01389	1.93e-4	0.0392 ₈	8	0.002
Simon 2002*	Non Urban	0.00611	0.00374 ⁻	0.01596	3.8927	0.00417	1.74e-5	0.01179	8	0.186
Simon 2011*	Non Urban	0.09167	0.05453	0.12880	1.4322	0.01667	2.78e-4	0.0552 ₈	11	< .001
Simon 2011*	Non Urban	0.0333 ₃	-0.01866	0.0853 ₂	0.8695	0.0233 ₃	5.44e-4	0.07739	11	0.184
Simon 2011*	Non Urban	0.0983 ₃	0.07052	0.12615	1.8913	0.01333	1.78e-4	0.06110	21	< .001
Simon 2011*	Non Urban	0.04667	0.03971	0.0536 ₂	4.0602	0.0033 ₃	1.11e-5	0.01528	21	< .001
Partan et al. 2011*	Urban	0.14167	0.02689 ⁻	0.31022	0.0834	0.0833 ₃	0.0069 ₄	0.52705	40	0.097

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Environment	Overall	0.022 ₈	0.0177	0.0278	0.0025 ₇	31	0.00199	0.0475	< .001	0.00147	0.0101
		Urban	0.0156	0.0101	0.0211	0.00281	21	0.00775	0.039 ₀	< .001	0.00151	0.0110
		Non Urban	0.0417	0.032 ₃	0.0512	0.0048 ₃	10	0.01714	0.066 ₃	< .001	0.00679	0.0189

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	6.8484	16.31560	33.67699
	Urban	7.3032	.	.
	Non Urban	2.7870	.	.
H ²	Overall	33.0636	213.68952	980.62991
	Urban	33.9860	127.55331	1073.20195

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
I ² (%)	Non Urban	19.9804	30.83240	444.27281
	Overall	96.9755	99.53203	99.89802
	Urban	97.0576	99.21601	99.90682
T	Non Urban	94.9951	96.75666	99.77491
	Overall	0.0124	0.03183	0.06832
	Urban	0.0105	0.02066	0.06014
T ²	Non Urban	0.0257	0.03220	0.12411
	Overall	1.53e-4	0.00101	0.00467
	Urban	1.11e-4	4.27e-4	0.00362
	Non Urban	6.60e-4	0.00104	0.01540

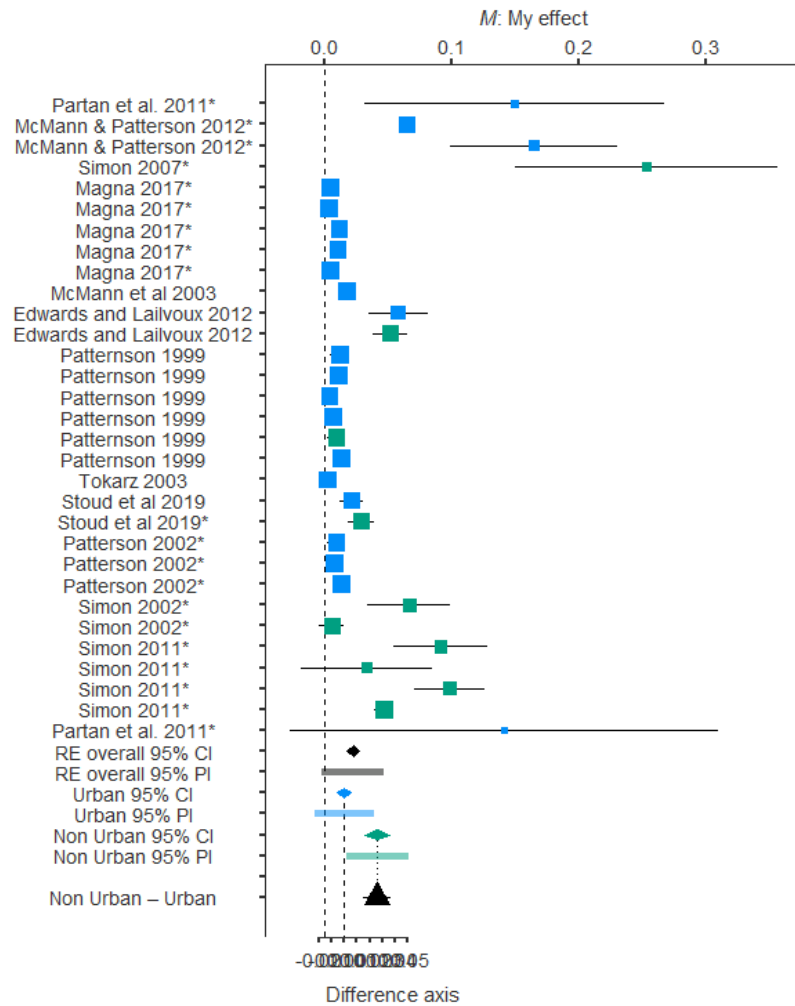
Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Environment	Non Urban	0.0417	0.032 ₃	0.0512	0.0048 ₃	< .001
		Urban	0.0156	0.0101	0.0211	0.00281	< .001
		Non Urban – Urban	0.0261	0.0152	0.0371	0.0055 ₉	< .001

Note. Estimate is based on a random effects (RE) model.

Forest Plot



5. Head-bob Rate Comparisons for Male vs. Female

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Male	0.1500 ₀	0.03201	0.26799	0.204	0.0583 ₃	0.0034 ₀	0.36893	40	0.014
McMann & Patterson 2012*	Male	0.0650 ₀	0.05942	0.0705 ₈	4.115	0.0026 ₇	7.11e-6	0.01193	20	< .001
McMann & Patterson 2012*	Male	0.16500	0.09872	0.23128	0.621	0.03167	0.0010 ₀	0.14162	20	< .001
Simon 2007*	Male	0.25333	0.14990	0.35677	0.273	0.0500 ₀	0.0025 ₀	0.24495	24	< .001
Magna 2017*	Female	0.0046 ₇	0.00206	0.00727	4.248	0.00125	1.56e-6	0.0057 ₃	21	0.001
Magna 2017*	Female	0.0033 ₃	0.00157	0.0051 ₀	4.270	8.33e-4	6.94e-7	0.0034 ₄	17	0.001
Magna 2017*	Male	0.01167	0.00645	0.01688	4.135	0.0025 ₀	6.25e-6	0.01146	21	< .001
Magna 2017*	Male	0.0105 ₀	0.00520	0.01580	4.135	0.0025 ₀	6.25e-6	0.01031	17	< .001
Magna 2017*	Male	0.0050 ₀	0.00148	0.0085 ₂	4.218	0.00167	2.78e-6	0.0070 ₇	18	0.008
McMann et al 2003	Male	0.01767	0.01494	0.0203 ₉	4.243	0.00133	1.78e-6	0.0073 ₀	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Edwards and Lailvoux 2012	Male	0.0582 ₄	0.03482	0.08166	2.423	0.01143	1.31e-4	0.06157	29	< .001
Edwards and Lailvoux 2012	Male	0.05201	0.03866	0.0653 ₆	3.430	0.0065 ₂	4.25e-5	0.0350 ₉	29	< .001
Patternson 1999	Male	0.0120 ₀	0.00509	0.01891	4.064	0.0030 ₆	9.34e-6	0.0096 ₆	10	0.003
Patternson 1999	Male	0.01094	0.00441	0.01748	4.086	0.0028 ₉	8.34e-6	0.00914	10	0.004
Patternson 1999	Male	0.0040 ₃	0.00151	0.0065 ₅	4.258	0.00107	1.14e-6	0.0030 ₂	8	0.007
Patternson 1999	Male	0.0065 ₃	0.00212	0.01095	4.201	0.00187	3.48e-6	0.0052 ₈	8	0.010
Patternson 1999	Male	0.0093 ₆	0.00208	0.01663	4.061	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patternson 1999	Male	0.01357	0.00628	0.0208 ₅	4.094	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Tokarz 2003	Male	0.0022 ₉	3.87e-4	0.0042 ₀	4.267	8.95e-4	8.00e-7	0.0035 ₈	16	0.022
Stoud et al 2019	Male	0.02123	0.01194	0.03051	3.823	0.0045 ₄	2.06e-5	0.0248 ₈	30	< .001
Stoud et al 2019*	Male	0.0292 ₅	0.01902	0.0394 ₈	3.737	0.0050 ₀	2.50e-5	0.02739	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patterson 2002*	Male	0.0093 ₆	0.00208	0.01663	4.061	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patterson 2002*	Male	0.00812	0.00321	0.01304	4.181	0.0020 ₈	4.32e-6	0.0058 ₈	8	0.006
Patterson 2002*	Male	0.01357	0.00628	0.0208 ₅	4.094	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Simon 2002*	Male	0.0666 ₇	0.03382	0.09951	2.007	0.01389	1.93e-4	0.0392 ₈	8	0.002
Simon 2002*	Male	0.00611	0.00374 ⁻	0.01596	3.889	0.00417	1.74e-5	0.01179	8	0.186
Simon 2011*	Male	0.09167	0.05453	0.12880	1.627	0.01667	2.78e-4	0.0552 ₈	11	< .001
Simon 2011*	Male	0.0333 ₃	-0.01866	0.0853 ₂	1.019	0.0233 ₃	5.44e-4	0.07739	11	0.184
Simon 2011*	Male	0.0983 ₃	0.07052	0.12615	2.095	0.01333	1.78e-4	0.06110	21	< .001
Simon 2011*	Male	0.04667	0.03971	0.0536 ₂	4.024	0.0033 ₃	1.11e-5	0.01528	21	< .001
Partan et al. 2011*	Male	0.14167	0.02689 ⁻	0.31022	0.102	0.0833 ₃	0.0069 ₄	0.52705	40	0.097

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Sex	Overall	0.02275	0.0177	0.0278	0.00257	31	-0.00199	0.0475	< .001	0.00147	0.0101
		Male	0.02498	0.0194	0.0305	0.00282	29	-0.00116	0.0511	< .001	0.00175	0.0111
		Female	0.00400	-0.0141	0.0221	0.00925	2	-0.02732	0.0353	0.665	0.00272	0.0362

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	6.8484	16.31560	33.67699
	Male	6.3104	.	.
	Female	13.3349	.	.
H ²	Overall	33.0636	213.68952	980.62991
	Male	32.9947	161.70902	792.64696
	Female	1.0000	1.00000	816.55669

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
I ² (%)	Overall	96.9755	99.53203	99.89802
	Male	96.9692	99.38161	99.87384
	Female	0.0000	0.00000	99.87753
T	Overall	0.0124	0.03183	0.06832
	Male	0.0143	0.03203	0.07108
	Female	0.0000	0.00000	0.03034
T ²	Overall	1.53e-4	0.00101	0.00467
	Male	2.04e-4	0.00103	0.00505
	Female	0.0000	0.00000	9.20e-4

Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

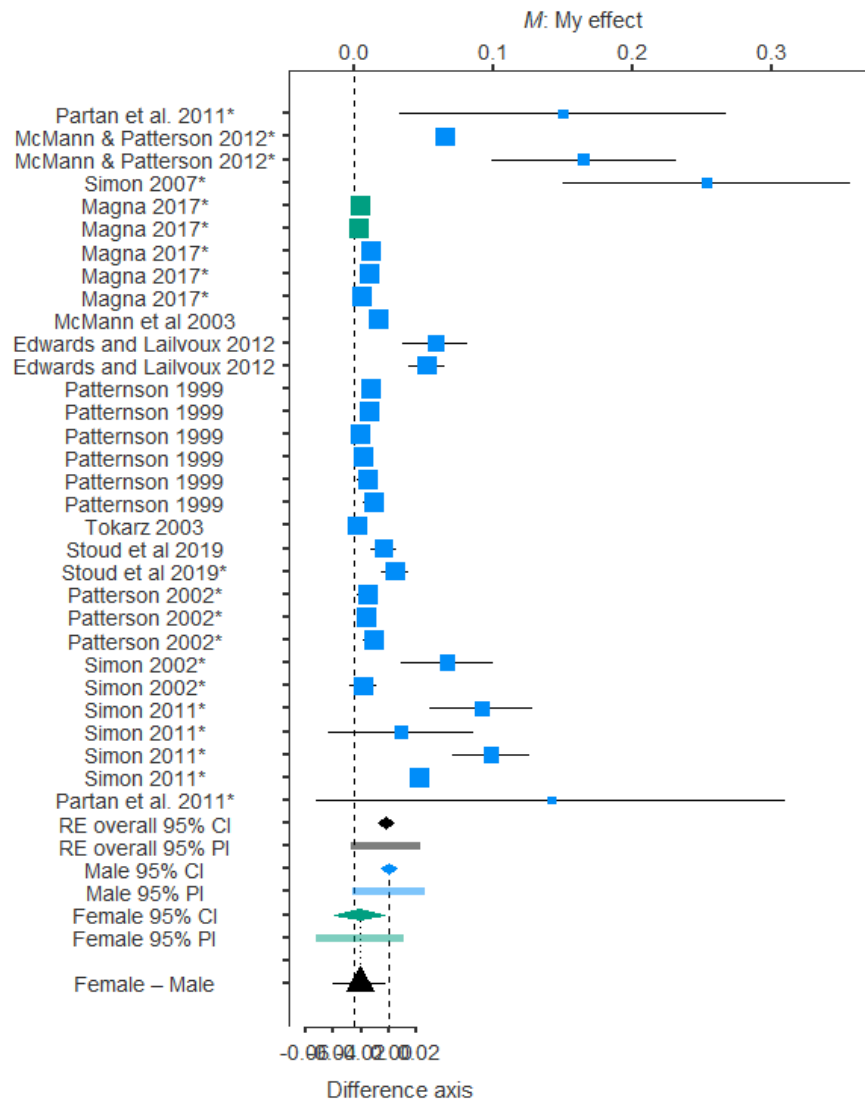
Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Sex	Female	0.00400	-0.0141	0.02212	0.00925	0.665

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
		Male	0.02498	0.0194	0.03051	0.0028 2	< .001
		Female – Male	0.02098 [–]	0.0399 [–]	0.00203 [–]	0.0096 7	0.030

Note. Estimate is based on a random effects (RE) model.

Forest Plot



6. Head-bob Invasive vs. Native

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Invasive	0.1500 0	0.03201	0.26799	0.1669	0.0583 3	0.0034 0	0.36893	40	0.014
McMann & Patterson 2012*	Invasive	0.0650 0	0.05942	0.0705 8	4.1748	0.0026 7	7.11e-6	0.01193	20	< .001
McMann & Patterson 2012*	Invasive	0.16500	0.09872	0.23128	0.5193	0.03167	0.0010 0	0.14162	20	< .001
Simon 2007*	Native	0.25333	0.14990	0.35677	0.2242	0.0500 0	0.0025 0	0.24495	24	< .001
Magna 2017*	Invasive	0.0046 7	0.00206	0.00727	4.3453	0.00125	1.56e-6	0.0057 3	21	0.001
Magna 2017*	Invasive	0.0033 3	0.00157	0.0051 0	4.3732	8.33e-4	6.94e-7	0.0034 4	17	0.001
Magna 2017*	Invasive	0.01167	0.00645	0.01688	4.2004	0.0025 0	6.25e-6	0.01146	21	< .001
Magna 2017*	Invasive	0.0105 0	0.00520	0.01580	4.2004	0.0025 0	6.25e-6	0.01031	17	< .001
Magna 2017*	Invasive	0.0050 0	0.00148	0.0085 2	4.3068	0.00167	2.78e-6	0.0070 7	18	0.008
McMann et al 2003	Invasive	0.01767	0.01494	0.0203 9	4.3384	0.00133	1.78e-6	0.0073 0	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Edwards and Lailvoux 2012	Invasive	0.0582 ₄	0.03482	0.08166	2.2279	0.01143	1.31e-4	0.06157	29	< .001
Edwards and Lailvoux 2012	Invasive	0.05201	0.03866	0.0653 ₆	3.3400	0.0065 ₂	4.25e-5	0.0350 ₉	29	< .001
Patternson 1999	Invasive	0.0120 ₀	0.00509	0.01891	4.1102	0.0030 ₆	9.34e-6	0.0096 ₆	10	0.003
Patternson 1999	Invasive	0.01094	0.00441	0.01748	4.1387	0.0028 ₉	8.34e-6	0.00914	10	0.004
Patternson 1999	Invasive	0.0040 ₃	0.00151	0.0065 ₅	4.3589	0.00107	1.14e-6	0.0030 ₂	8	0.007
Patternson 1999	Invasive	0.0065 ₃	0.00212	0.01095	4.2847	0.00187	3.48e-6	0.0052 ₈	8	0.010
Patternson 1999	Invasive	0.0093 ₆	0.00208	0.01663	4.1063	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patternson 1999	Invasive	0.01357	0.00628	0.0208 ₅	4.1480	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Tokarz 2003	Invasive	0.0022 ₉	3.87e-4	0.0042 ₀	4.3698	8.95e-4	8.00e-7	0.0035 ₈	16	0.022
Stoud et al 2019	Invasive	0.02123	0.01194	0.03051	3.8107	0.0045 ₄	2.06e-5	0.0248 ₈	30	< .001
Stoud et al 2019*	Invasive	0.0292 ₅	0.01902	0.0394 ₈	3.7061	0.0050 ₀	2.50e-5	0.02739	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patterson 2002*	Invasive	0.0093 ₆	0.00208	0.01663	4.1063	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patterson 2002*	Invasive	0.00812	0.00321	0.01304	4.2590	0.0020 ₈	4.32e-6	0.0058 ₈	8	0.006
Patterson 2002*	Invasive	0.01357	0.00628	0.0208 ₅	4.1480	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Simon 2002*	Native	0.0666 ₇	0.03382	0.09951	1.8045	0.01389	1.93e-4	0.0392 ₈	8	0.002
Simon 2002*	Native	0.00611	0.00374 ⁻	0.01596	3.8928	0.00417	1.74e-5	0.01179	8	0.186
Simon 2011*	Native	0.09167	0.05453	0.12880	1.4329	0.01667	2.78e-4	0.0552 ₈	11	< .001
Simon 2011*	Native	0.0333 ₃	-0.01866	0.0853 ₂	0.8700	0.0233 ₃	5.44e-4	0.07739	11	0.184
Simon 2011*	Native	0.0983 ₃	0.07052	0.12615	1.8920	0.01333	1.78e-4	0.06110	21	< .001
Simon 2011*	Native	0.04667	0.03971	0.0536 ₂	4.0600	0.0033 ₃	1.11e-5	0.01528	21	< .001
Partan et al. 2011*	Invasive	0.14167	0.02689 ⁻	0.31022	0.0834	0.0833 ₃	0.0069 ₄	0.52705	40	0.097

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Invasive Status	Overall	0.022 8	0.0177	0.0278	0.0025 7	31	– 0.00199	0.0475	< .001	0.00147	0.0101
		Invasive	0.0173	0.0122	0.022 5	0.0026 2	24	– 0.00596	0.040 6	< .001	0.00149	0.0103
		Native	0.052 0	0.039 3	0.064 6	0.0064 5	7	0.02597	0.078 0	< .001	0.00967	0.0253

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	6.84844	16.31560	33.67699
	Invasive	6.89958	.	.
	Native	2.61567	.	.
H ²	Overall	33.06360	213.68952	980.62991
	Invasive	32.38053	97.25096	761.11197

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
I ² (%)	Native	19.74773	20.16814	470.63109
	Overall	96.97553	99.53203	99.89802
	Invasive	96.91172	98.97173	99.86861
T	Native	94.93613	95.04168	99.78752
	Overall	0.01236	0.03183	0.06832
	Invasive	0.01086	0.01903	0.05347
T ²	Native	0.03454	0.03493	0.17288
	Overall	1.53e-4	0.00101	0.00467
	Invasive	1.18e-4	3.62e-4	0.00286
	Native	0.00119	0.00122	0.02989

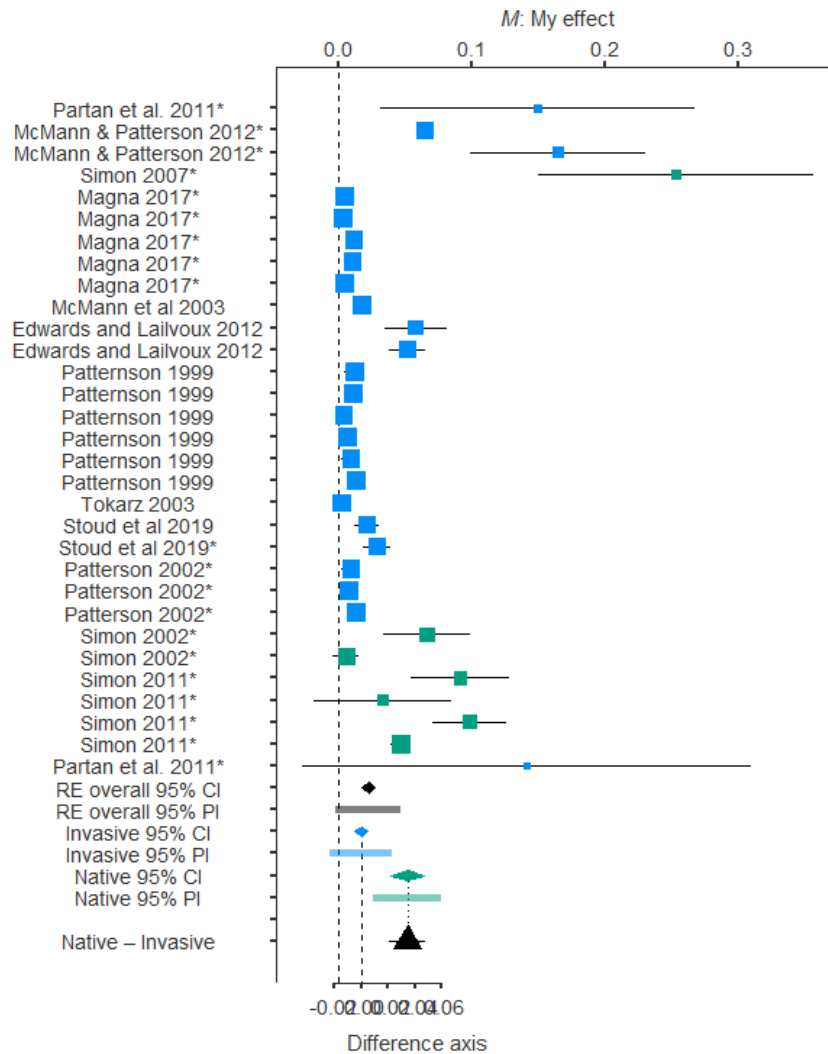
Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Invasive Status	Native	0.052 0	0.039 3	0.064 6	0.0064 5	< .001
		Invasive	0.0173	0.0122	0.022 5	0.0026 2	< .001
		Native – Invasive	0.034 6	0.0210	0.048 3	0.0069 7	< .001

Note. Estimate is based on a random effects (RE) model.

Forest Plot



7. Head-bob Field vs. Mesocosm

Meta-Analysis: Means

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Partan et al. 2011*	Mesocosm	0.1500 0	0.03201	0.26799	0.1707	0.0583 3	0.0034 0	0.36893	40	0.014
McMann & Patterson 2012*	Field	0.0650 0	0.05942	0.0705 8	4.1682	0.0026 7	7.11e-6	0.01193	20	< .001
McMann & Patterson 2012*	Field	0.16500	0.09872	0.23128	0.5298	0.03167	0.0010 0	0.14162	20	< .001
Simon 2007*	Field	0.25333	0.14990	0.35677	0.2291	0.0500 0	0.0025 0	0.24495	24	< .001
Magna 2017*	Mesocosm	0.0046 7	0.00206	0.00727	4.3341	0.00125	1.56e-6	0.0057 3	21	0.001
Magna 2017*	Mesocosm	0.0033 3	0.00157	0.0051 0	4.3612	8.33e-4	6.94e-7	0.0034 4	17	0.001
Magna 2017*	Mesocosm	0.01167	0.00645	0.01688	4.1932	0.0025 0	6.25e-6	0.01146	21	< .001
Magna 2017*	Mesocosm	0.0105 0	0.00520	0.01580	4.1931	0.0025 0	6.25e-6	0.01031	17	< .001
Magna 2017*	Mesocosm	0.0050 0	0.00148	0.0085 2	4.2967	0.00167	2.78e-6	0.0070 7	18	0.008
McMann et al 2003	Field	0.01767	0.01494	0.0203 9	4.3274	0.00133	1.78e-6	0.0073 0	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Edwards and Lailvoux 2012	Field	0.0582 ₄	0.03482	0.08166	2.2500	0.01143	1.31e-4	0.06157	29	< .001
Edwards and Lailvoux 2012	Field	0.05201	0.03866	0.0653 ₆	3.3511	0.0065 ₂	4.25e-5	0.0350 ₉	29	< .001
Patternson 1999	Field	0.0120 ₀	0.00509	0.01891	4.1052	0.0030 ₆	9.34e-6	0.0096 ₆	10	0.003
Patternson 1999	Field	0.01094	0.00441	0.01748	4.1331	0.0028 ₉	8.34e-6	0.00914	10	0.004
Patternson 1999	Field	0.0040 ₃	0.00151	0.0065 ₅	4.3473	0.00107	1.14e-6	0.0030 ₂	8	0.007
Patternson 1999	Field	0.0065 ₃	0.00212	0.01095	4.2752	0.00187	3.48e-6	0.0052 ₈	8	0.010
Patternson 1999	Field	0.0093 ₆	0.00208	0.01663	4.1015	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patternson 1999	Field	0.01357	0.00628	0.0208 ₅	4.1421	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Tokarz 2003	Mesocosm	0.0022 ₉	3.87e-4	0.0042 ₀	4.3579	8.95e-4	8.00e-7	0.0035 ₈	16	0.022
Stoud et al 2019	Field	0.02123	0.01194	0.03051	3.8128	0.0045 ₄	2.06e-5	0.0248 ₈	30	< .001
Stoud et al 2019*	Field	0.0292 ₅	0.01902	0.0394 ₈	3.7105	0.0050 ₀	2.50e-5	0.02739	30	< .001

Table of Studies

Study label	Moderator level	M	95% CI		RE weight	SE	SE ²	s	N	p, two tailed
			LL	UL						
Patterson 2002*	Mesocosm	0.0093 ₆	0.00208	0.01663	4.1015	0.0030 ₈	9.47e-6	0.0087 ₀	8	0.019
Patterson 2002*	Mesocosm	0.00812	0.00321	0.01304	4.2501	0.0020 ₈	4.32e-6	0.0058 ₈	8	0.006
Patterson 2002*	Mesocosm	0.01357	0.00628	0.0208 ₅	4.1421	0.0028 ₃	8.03e-6	0.0069 ₄	6	0.005
Simon 2002*	Field	0.0666 ₇	0.03382	0.09951	1.8271	0.01389	1.93e-4	0.0392 ₈	8	0.002
Simon 2002*	Field	0.00611	0.00374 ⁻	0.01596	3.8930	0.00417	1.74e-5	0.01179	8	0.186
Simon 2011*	Field	0.09167	0.05453	0.12880	1.4540	0.01667	2.78e-4	0.0552 ₈	11	< .001
Simon 2011*	Field	0.0333 ₃	-0.01866	0.0853 ₂	0.8857	0.0233 ₃	5.44e-4	0.07739	11	0.184
Simon 2011*	Field	0.0983 ₃	0.07052	0.12615	1.9146	0.01333	1.78e-4	0.06110	21	< .001
Simon 2011*	Field	0.04667	0.03971	0.0536 ₂	4.0563	0.0033 ₃	1.11e-5	0.01528	21	< .001
Partan et al. 2011*	Mesocosm	0.14167	0.02689 ⁻	0.31022	0.0853	0.0833 ₃	0.0069 ₄	0.52705	40	0.097

Meta-Analytic Effect Sizes

Effect	Moderator	Level	M	95% CI		SE	k	95% PI		p, two tailed	FE CI length	RE CI length
				LL	UL			LL	UL			
My effect	Setup	Overall	0.02275	0.0177	0.0278	0.0025 7	31	– 0.00199	0.0475	< .001	0.00147	0.0101
		Mesocosm	0.0084 7	7.03e– 4	0.0162	0.0039 6	11	– 0.01582	0.032 8	0.033	0.00185	0.0155
		Field	0.03102	0.0249	0.0372	0.00313	20	0.00720	0.054 8	< .001	0.00243	0.0123

Note. Estimate is based on a random effects (RE) model.

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
Diamond Ratio	Overall	6.84844	16.31560	33.67699
	Mesocosm	8.38008	.	.
	Field	5.06480	.	.
H ²	Overall	33.06360	213.68952	980.62991
	Mesocosm	4.67743	38.62078	2035.71403

Effect Size Heterogeneity

Measure	Level	Estimate	95% CI	
			LL	UL
I ² (%)	Field	39.97628	126.19988	763.51048
	Overall	96.97553	99.53203	99.89802
	Mesocosm	78.62073	97.41072	99.95088
T	Field	97.49852	99.20761	99.86903
	Overall	0.01236	0.03183	0.06832
	Mesocosm	0.00324	0.01035	0.07615
T ²	Field	0.01865	0.03343	0.08250
	Overall	1.53e-4	0.00101	0.00467
	Mesocosm	1.05e-5	1.07e-4	0.00580
	Field	3.48e-4	0.00112	0.00681

Note. As of version 1.0.2 esci has implemented an improved method for calculating the CI for the diamond ratio; these will no longer match those presented in the 2nd edition of Introduction to the New Statistics.

Moderator Analysis

Effect	Moderator	Level	M	95% CI		SE	p, two tailed
				LL	UL		
My effect	Setup	Field	0.03102	0.0249	0.0372	0.00313	< .001
		Mesocosm	0.0084 ₇	7.03e-4	0.0162	0.0039 ₆	0.033
		Field – Mesocosm	0.0225 ₅	0.0126	0.032 ₅	0.0050 ₅	< .001

Note. Estimate is based on a random effects (RE) model.

Forest Plot

