

Are we accurately estimating the potential role of pollution in the decline of species at risk in Canada?

Supplementary Material 4: ANOVA and Tukey’s post-hoc test for differences between taxonomic groups in Threats Calculator scope (scope_{TC}) of pollution (pollution overall and each category separately).

Table S4a. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution as a whole

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	27011	3001.21	3.1955	0.001957
residuals	99	92980	939.19		

Table S4b. Results of Tukey’s post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the assessed scope of pollution (all categories). Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-20.325	13.417	-1.515	1
birds vs. amphibians	10.375	14.537	0.714	1
freshwater fishes vs. amphibians	3.942	13.417	0.294	1
lichens vs. amphibians	-9.125	17.471	-0.522	1
mammals vs. amphibians	-23.433	13.771	-1.702	1
molluscs vs. amphibians	5.075	14.537	0.349	1
mosses vs. amphibians	-37.792	20.748	-1.821	1
reptiles vs. amphibians	-1.51	13.771	-0.11	1
vascular plants vs. amphibians	-33.89	13.139	-2.579	0.5118
birds vs. arthropods	30.7	12.511	2.454	0.7147
freshwater fishes vs. arthropods	24.267	11.19	2.169	1
lichens vs. arthropods	11.2	15.826	0.708	1
mammals vs. arthropods	-3.108	11.613	-0.268	1
molluscs vs. arthropods	25.4	12.511	2.03	1
mosses vs. arthropods	-17.467	19.382	-0.901	1
reptiles vs. arthropods	18.815	11.613	1.62	1
vascular plants vs. arthropods	-13.565	10.856	-1.249	1
freshwater fishes vs. birds	-6.433	12.511	-0.514	1
lichens vs. birds	-19.5	16.786	-1.162	1
mammals vs. birds	-33.808	12.89	-2.623	0.4546

comparison	Estimate	Std. Error	t value	Pr(> t)
molluscs vs. birds	-5.3	13.705	-0.387	1
mosses vs. birds	-48.167	20.174	-2.388	0.8486
reptiles vs. birds	-11.885	12.89	-0.922	1
vascular plants vs. birds	-44.265	12.213	-3.624	0.0207
lichens vs. freshwater fishes	-13.067	15.826	-0.826	1
mammals vs. freshwater fishes	-27.374	11.613	-2.357	0.917
molluscs vs. freshwater fishes	1.133	12.511	0.091	1
mosses vs. freshwater fishes	-41.733	19.382	-2.153	1
reptiles vs. freshwater fishes	-5.451	11.613	-0.469	1
vascular plants vs. freshwater fishes	-37.831	10.856	-3.485	0.0331
mammals vs. lichens	-14.308	16.127	-0.887	1
molluscs vs. lichens	14.2	16.786	0.846	1
mosses vs. lichens	-28.667	22.381	-1.281	1
reptiles vs. lichens	7.615	16.127	0.472	1
vascular plants vs. lichens	-24.765	15.591	-1.588	1
molluscs vs. mammals	28.508	12.89	2.212	1
mosses vs. mammals	-14.359	19.629	-0.732	1
reptiles vs. mammals	21.923	12.02	1.824	1
vascular plants vs. mammals	-10.457	11.291	-0.926	1
mosses vs. molluscs	-42.867	20.174	-2.125	1
reptiles vs. molluscs	-6.585	12.89	-0.511	1
vascular plants vs. molluscs	-38.965	12.213	-3.19	0.0857
reptiles vs. mosses	36.282	19.629	1.848	1
vascular plants vs. mosses	3.902	19.191	0.203	1
vascular plants vs. reptiles	-32.38	11.291	-2.868	0.2274

Figure S4a: Assessed scope of pollution category 9.1 – *Household Sewage and Urban Waste Water*, by taxonomic group

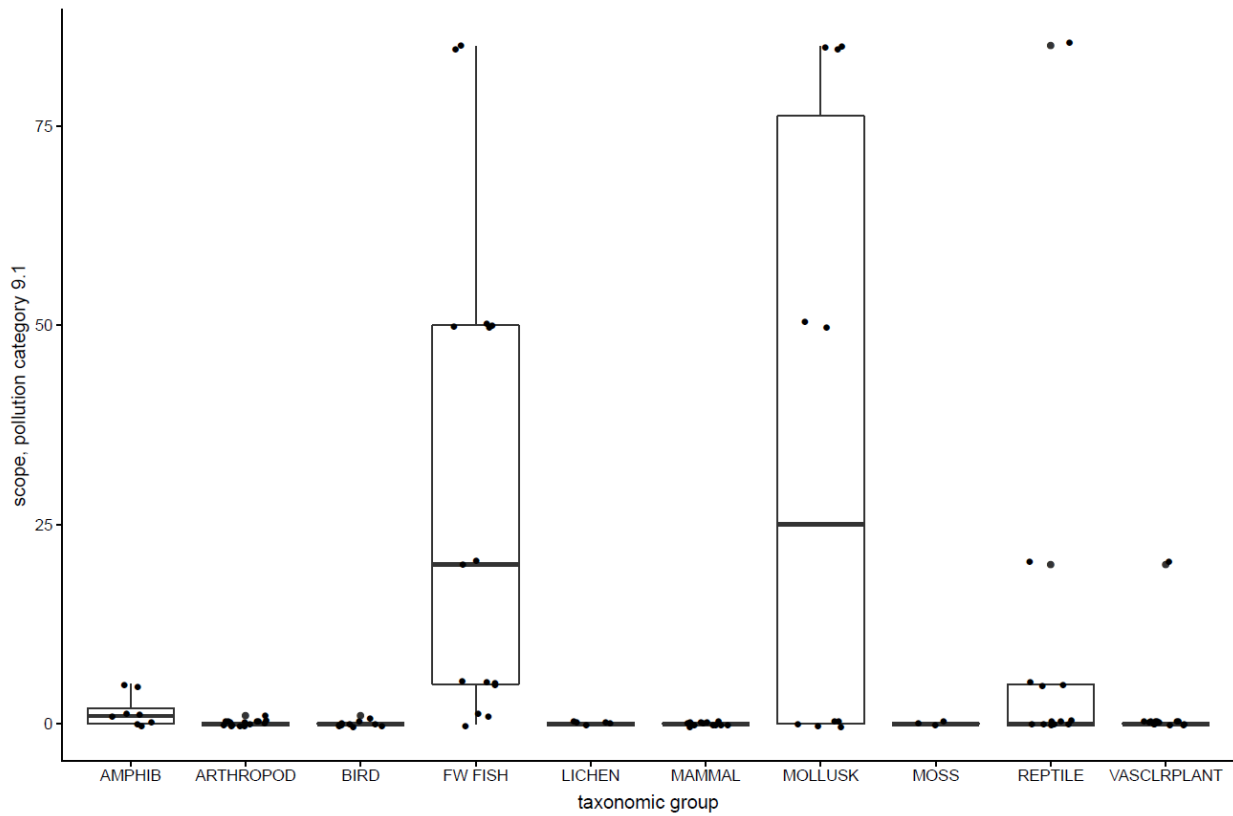


Table S4c. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution category 9.1

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	18056	2006.16	5.844	1.666e-06
residuals	99	33985	342.29		

Table S4d. Results of Tukey's post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the scope of pollution category 9.1.

Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-1.56	8.11	-0.192	1
birds vs. amphibians	-1.53	8.79	-0.174	1
freshwater fishes vs. amphibians	27.17	8.11	3.35	0.051478
lichens vs. amphibians	-1.63	10.56	-0.154	1
mammals vs. amphibians	-1.63	8.33	-0.195	1
molluscs vs. amphibians	33.87	8.79	3.854	0.009281
mosses vs. amphibians	-1.63	12.54	-0.13	1
reptiles vs. amphibians	7.61	8.33	0.914	1
vascular plants vs. amphibians	-0.45	7.94	-0.056	1
birds vs. arthropods	0.03	7.56	0.004	1
freshwater fishes vs. arthropods	28.73	6.77	4.247	0.002203
lichens vs. arthropods	-0.07	9.57	-0.007	1
mammals vs. arthropods	-0.07	7.02	-0.009	1
molluscs vs. arthropods	35.43	7.56	4.684	0.000403
mosses vs. arthropods	-0.07	11.72	-0.006	1
reptiles vs. arthropods	9.16	7.02	1.305	1
vascular plants vs. arthropods	1.11	6.56	0.169	1
freshwater fishes vs. birds	28.70	7.56	3.794	0.011479
lichens vs. birds	-0.10	10.15	-0.01	1
mammals vs. birds	-0.10	7.79	-0.013	1
molluscs vs. birds	35.40	8.29	4.272	0.002003
mosses vs. birds	-0.10	12.20	-0.008	1
reptiles vs. birds	9.13	7.79	1.172	1
vascular plants vs. birds	1.08	7.38	0.146	1
lichens vs. freshwater fishes	-28.80	9.57	-3.01	0.149101
mammals vs. freshwater fishes	-28.80	7.02	-4.102	0.003785
molluscs vs. freshwater fishes	6.70	7.56	0.886	1
mosses vs. freshwater fishes	-28.80	11.72	-2.458	0.707398
reptiles vs. freshwater fishes	-19.57	7.02	-2.787	0.286764
vascular plants vs. freshwater fishes	-27.62	6.56	-4.209	0.002546
mammals vs. lichens	0.00	9.75	0	1
molluscs vs. lichens	35.50	10.15	3.498	0.031652
mosses vs. lichens	0.00	13.53	0	1
reptiles vs. lichens	9.23	9.75	0.947	1
vascular plants vs. lichens	1.18	9.43	0.125	1
molluscs vs. mammals	35.50	7.79	4.555	0.000672
mosses vs. mammals	0.00	11.87	0	1
reptiles vs. mammals	9.23	7.27	1.27	1

comparison	Estimate	Std. Error	t value	Pr(> t)
vascular plants vs. mammals	1.18	6.83	0.172	1
mosses vs. molluscs	-35.50	12.20	-2.911	0.200504
reptiles vs. molluscs	-26.27	7.79	-3.371	0.048153
vascular plants vs. molluscs	-34.32	7.38	-4.648	0.000465
reptiles vs. mosses	9.23	11.87	0.778	1
vascular plants vs. mosses	1.18	11.60	0.101	1
vascular plants vs. reptiles	-8.05	6.83	-1.18	1

Figure S4b: Assessed scope of pollution category 9.2 – *Industrial and Military Effluents*, by taxonomic group

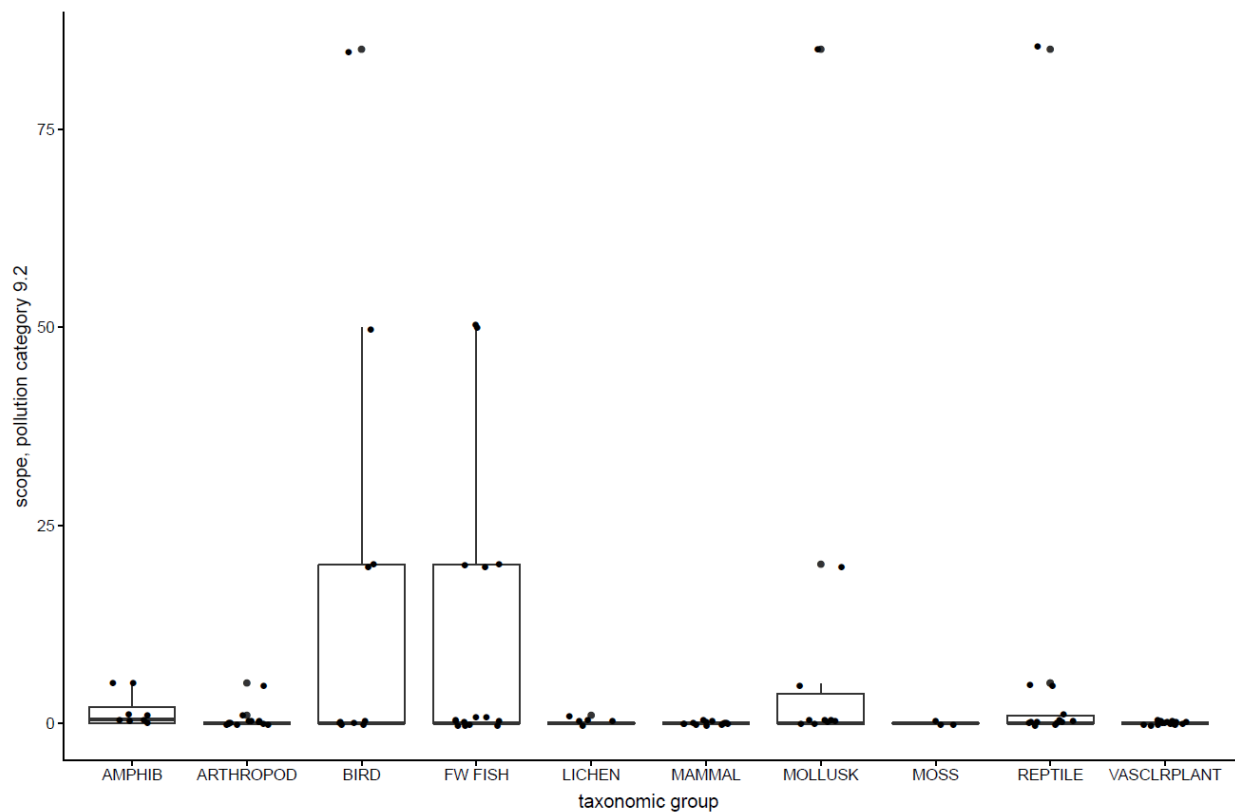


Table S4d. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution category 9.2

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	3854	428.22	1.6971	0.09964
residuals	99	24980	525.33		

Table S4e. Results of Tukey's post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the scope of pollution category 9.2.

Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-1.10	6.95	-0.158	1
birds vs. amphibians	16.00	7.54	2.123	1
freshwater fishes vs. amphibians	9.30	6.95	1.337	1
lichens vs. amphibians	-1.30	9.06	-0.144	1
mammals vs. amphibians	-1.50	7.14	-0.21	1
molluscs vs. amphibians	9.50	7.54	1.261	1
mosses vs. amphibians	-1.50	10.75	-0.139	1
reptiles vs. amphibians	5.89	7.14	0.824	1
vascular plants vs. amphibians	-1.50	6.81	-0.22	1
birds vs. arthropods	17.10	6.49	2.637	0.437
freshwater fishes vs. arthropods	10.40	5.80	1.793	1
lichens vs. arthropods	-0.20	8.20	-0.024	1
mammals vs. arthropods	-0.40	6.02	-0.066	1
molluscs vs. arthropods	10.60	6.49	1.635	1
mosses vs. arthropods	-0.40	10.05	-0.04	1
reptiles vs. arthropods	6.99	6.02	1.16	1
vascular plants vs. arthropods	-0.40	5.63	-0.071	1
freshwater fishes vs. birds	-6.70	6.49	-1.033	1
lichens vs. birds	-17.30	8.70	-1.988	1
mammals vs. birds	-17.50	6.68	-2.619	0.459
molluscs vs. birds	-6.50	7.10	-0.915	1
mosses vs. birds	-17.50	10.46	-1.674	1
reptiles vs. birds	-10.12	6.68	-1.514	1
vascular plants vs. birds	-17.50	6.33	-2.764	0.306
lichens vs. freshwater fishes	-10.60	8.20	-1.292	1
mammals vs. freshwater fishes	-10.80	6.02	-1.794	1
molluscs vs. freshwater fishes	0.20	6.49	0.031	1
mosses vs. freshwater fishes	-10.80	10.05	-1.075	1
reptiles vs. freshwater fishes	-3.42	6.02	-0.567	1
vascular plants vs. freshwater fishes	-10.80	5.63	-1.919	1
mammals vs. lichens	-0.20	8.36	-0.024	1
molluscs vs. lichens	10.80	8.70	1.241	1
mosses vs. lichens	-0.20	11.60	-0.017	1
reptiles vs. lichens	7.19	8.36	0.859	1
vascular plants vs. lichens	-0.20	8.08	-0.025	1
molluscs vs. mammals	11.00	6.68	1.646	1
mosses vs. mammals	0.00	10.17	0	1
reptiles vs. mammals	7.39	6.23	1.185	1

comparison	Estimate	Std. Error	t value	Pr(> t)
vascular plants vs. mammals	0.00	5.85	0	1
mosses vs. molluscs	-11.00	10.46	-1.052	1
reptiles vs. molluscs	-3.62	6.68	-0.541	1
vascular plants vs. molluscs	-11.00	6.33	-1.738	1
reptiles vs. mosses	7.39	10.17	0.726	1
vascular plants vs. mosses	0.00	9.95	0	1
vascular plants vs. reptiles	-7.39	5.85	-1.262	1

Figure S4c: Assessed scope of pollution category 9.3 –*Agricultural Effluents*, by taxonomic group

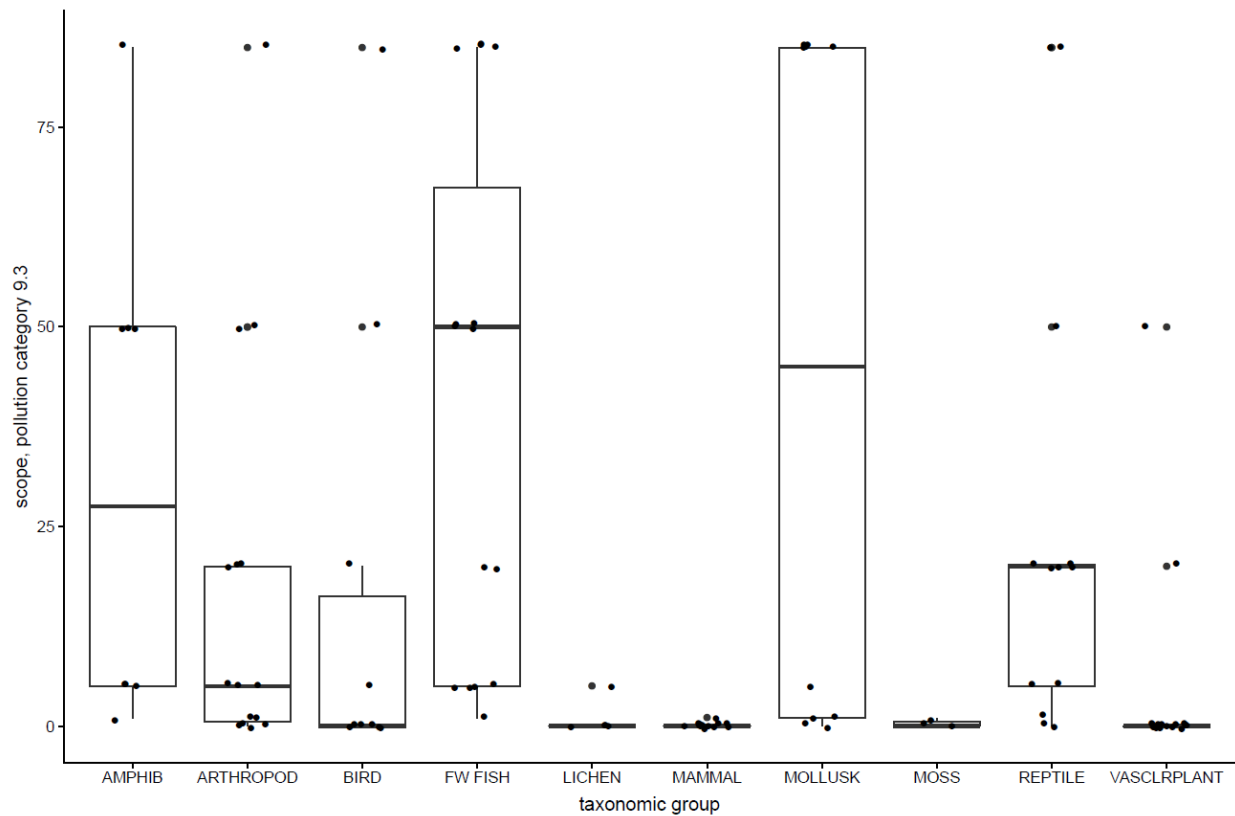


Table S4f. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution category 9.3

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	25475	28630.59	4.0144	0.000213
residuals	99	69859	705.64		

Table S4g. Results of Tukey's post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the scope of pollution category 9.3.

Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-13.91	11.63	-1.196	1
birds vs. amphibians	-15.38	12.60	-1.22	1
freshwater fishes vs. amphibians	8.69	11.63	0.747	1
lichens vs. amphibians	-30.38	15.14	-2.006	1
mammals vs. amphibians	-31.30	11.94	-2.622	0.45547
molluscs vs. amphibians	11.83	12.60	0.938	1
mosses vs. amphibians	-31.04	17.98	-1.726	1
reptiles vs. amphibians	-5.91	11.94	-0.495	1
vascular plants vs. amphibians	-27.26	11.39	-2.393	0.83629
birds vs. arthropods	-1.47	10.84	-0.135	1
freshwater fishes vs. arthropods	22.60	9.70	2.33	0.98277
lichens vs. arthropods	-16.47	13.72	-1.2	1
mammals vs. arthropods	-17.39	10.07	-1.728	1
molluscs vs. arthropods	25.73	10.84	2.373	0.88114
mosses vs. arthropods	-17.13	16.80	-1.02	1
reptiles vs. arthropods	7.99	10.07	0.794	1
vascular plants vs. arthropods	-13.35	9.41	-1.419	1
freshwater fishes vs. birds	24.07	10.84	2.219	1
lichens vs. birds	-15.00	14.55	-1.031	1
mammals vs. birds	-15.92	11.17	-1.425	1
molluscs vs. birds	27.20	11.88	2.29	1
mosses vs. birds	-15.67	17.49	-0.896	1
reptiles vs. birds	9.46	11.17	0.847	1
vascular plants vs. birds	-11.88	10.59	-1.122	1
lichens vs. freshwater fishes	-39.07	13.72	-2.848	0.24083
mammals vs. freshwater fishes	-39.99	10.07	-3.973	0.00607
molluscs vs. freshwater fishes	3.13	10.84	0.289	1
mosses vs. freshwater fishes	-39.73	16.80	-2.365	0.89908
reptiles vs. freshwater fishes	-14.61	10.07	-1.451	1
vascular plants vs. freshwater fishes	-35.95	9.41	-3.82	0.01048
mammals vs. lichens	-0.92	13.98	-0.066	1
molluscs vs. lichens	42.20	14.55	2.9	0.20663
mosses vs. lichens	-0.67	19.40	-0.034	1
reptiles vs. lichens	24.46	13.98	1.75	1
vascular plants vs. lichens	3.12	13.51	0.231	1
molluscs vs. mammals	43.12	11.17	3.859	0.00912
mosses vs. mammals	0.26	17.01	0.015	1
reptiles vs. mammals	25.38	10.42	2.436	0.74808

comparison	Estimate	Std. Error	t value	Pr(> t)
vascular plants vs. mammals	4.04	9.79	0.413	1
mosses vs. molluscs	-42.87	17.49	-2.451	0.7192
reptiles vs. molluscs	-17.74	11.17	-1.588	1
vascular plants vs. molluscs	-39.08	10.59	-3.692	0.01641
reptiles vs. mosses	25.13	17.01	1.477	1
vascular plants vs. mosses	3.78	16.64	0.227	1
vascular plants vs. reptiles	-21.34	9.79	-2.181	1

Figure S4d: Assessed scope of pollution category 9.4 –*Garbage and Solid Waste*, by taxonomic group

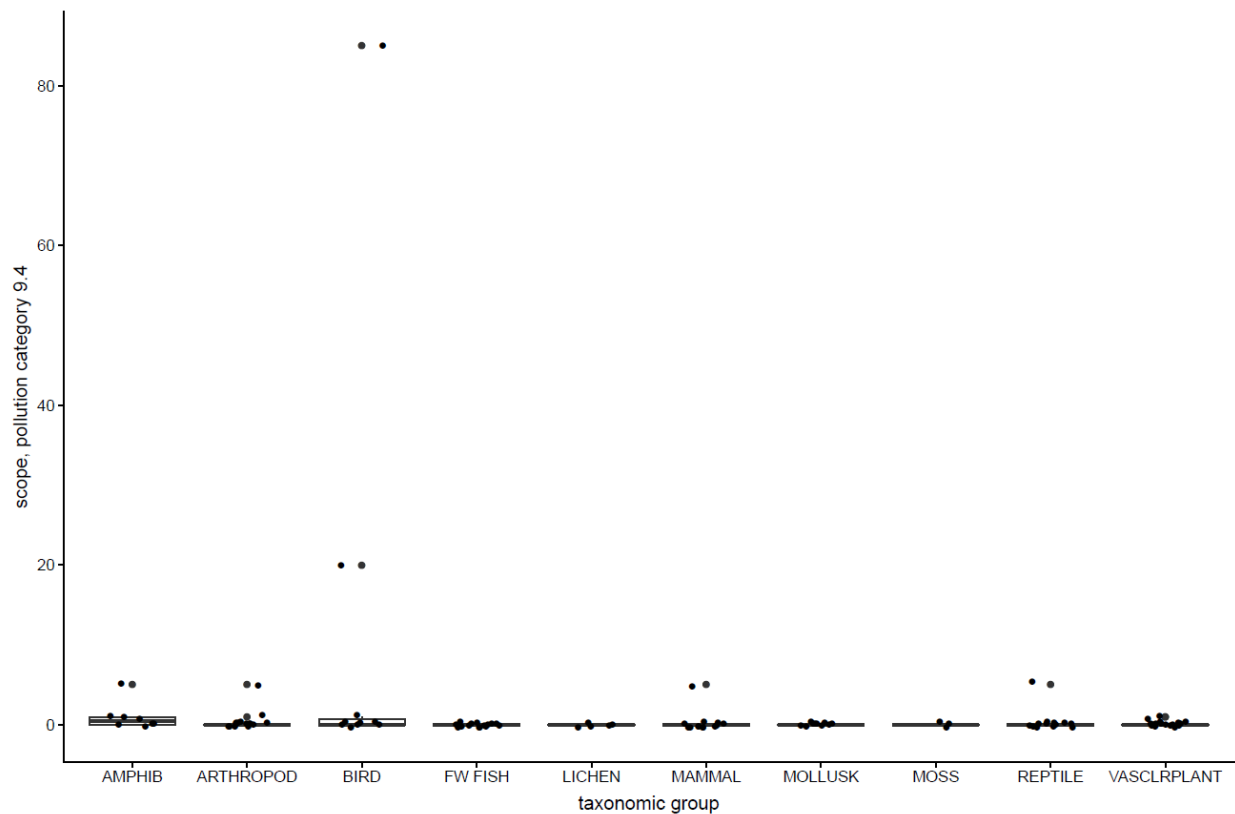


Table S4h. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution category 9.4

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	978.2	108.692	1.6319	0.1164
residuals	99	6593.9	66.605		

Table S4i. Results of Tukey’s post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the scope of pollution category 9.4.

Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-0.60	3.57	-0.168	1
birds vs. amphibians	9.60	3.87	2.48	0.6674
freshwater fishes vs. amphibians	-1.00	3.57	-0.28	1
lichens vs. amphibians	-1.00	4.65	-0.215	1
mammals vs. amphibians	-0.62	3.67	-0.168	1
molluscs vs. amphibians	-1.00	3.87	-0.258	1
mosses vs. amphibians	-1.00	5.53	-0.181	1
reptiles vs. amphibians	-0.62	3.67	-0.168	1
vascular plants vs. amphibians	-0.88	3.50	-0.252	1
birds vs. arthropods	10.20	3.33	3.061	0.1276
freshwater fishes vs. arthropods	-0.40	2.98	-0.134	1
lichens vs. arthropods	-0.40	4.21	-0.095	1
mammals vs. arthropods	-0.02	3.09	-0.005	1
molluscs vs. arthropods	-0.40	3.33	-0.12	1
mosses vs. arthropods	-0.40	5.16	-0.077	1
reptiles vs. arthropods	-0.02	3.09	-0.005	1
vascular plants vs. arthropods	-0.28	2.89	-0.098	1
freshwater fishes vs. birds	-10.60	3.33	-3.181	0.0881
lichens vs. birds	-10.60	4.47	-2.371	0.8847
mammals vs. birds	-10.22	3.43	-2.976	0.1652
molluscs vs. birds	-10.60	3.65	-2.904	0.2043
mosses vs. birds	-10.60	5.37	-1.973	1
reptiles vs. birds	-10.22	3.43	-2.976	0.1652
vascular plants vs. birds	-10.48	3.25	-3.223	0.0773
lichens vs. freshwater fishes	0.00	4.21	0	1
mammals vs. freshwater fishes	0.38	3.09	0.124	1
molluscs vs. freshwater fishes	0.00	3.33	0	1
mosses vs. freshwater fishes	0.00	5.16	0	1
reptiles vs. freshwater fishes	0.38	3.09	0.124	1
vascular plants vs. freshwater fishes	0.12	2.89	0.041	1
mammals vs. lichens	0.38	4.30	0.09	1
molluscs vs. lichens	0.00	4.47	0	1
mosses vs. lichens	0.00	5.96	0	1
reptiles vs. lichens	0.38	4.30	0.09	1
vascular plants vs. lichens	0.12	4.15	0.028	1
molluscs vs. mammals	-0.38	3.43	-0.112	1
mosses vs. mammals	-0.38	5.23	-0.074	1
reptiles vs. mammals	0.00	3.20	0	1

comparison	Estimate	Std. Error	t value	Pr(> t)
vascular plants vs. mammals	-0.27	3.01	-0.089	1
mosses vs. molluscs	0.00	5.37	0	1
reptiles vs. molluscs	0.38	3.43	0.112	1
vascular plants vs. molluscs	0.12	3.25	0.036	1
reptiles vs. mosses	0.38	5.23	0.074	1
vascular plants vs. mosses	0.12	5.11	0.023	1
vascular plants vs. reptiles	-0.27	3.01	-0.089	1

Figure S4e: Assessed scope of pollution category 9.5 – *Air-borne Pollutants*, by taxonomic group

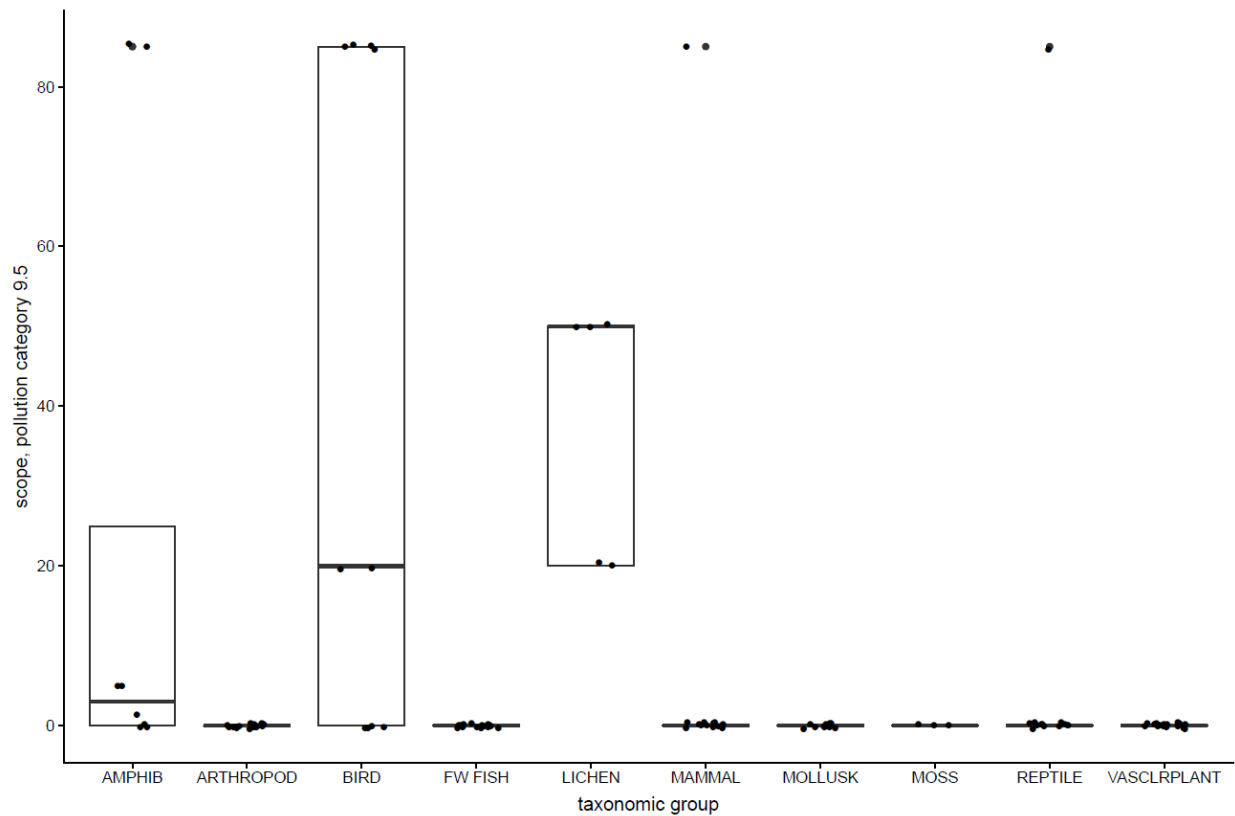


Table S4j. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution category 9.5

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	19085	2120.52	5.2372	8.061e-06
residuals	99	40084	404.89		

Table S4k. Results of Tukey's post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the scope of pollution category 9.5.

Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-22.62	8.81	-2.568	0.527111
birds vs. amphibians	15.38	9.55	1.611	1
freshwater fishes vs. amphibians	-22.62	8.81	-2.568	0.527111
lichens vs. amphibians	15.38	11.47	1.34	1
mammals vs. amphibians	-16.09	9.04	-1.779	1
molluscs vs. amphibians	-22.62	9.55	-2.37	0.886708
mosses vs. amphibians	-22.62	13.62	-1.661	1
reptiles vs. amphibians	-16.09	9.04	-1.779	1
vascular plants vs. amphibians	-22.62	8.63	-2.623	0.454823
birds vs. arthropods	38.00	8.22	4.626	0.000509
freshwater fishes vs. arthropods	0.00	7.35	0	1
lichens vs. arthropods	38.00	10.39	3.657	0.01849
mammals vs. arthropods	6.54	7.63	0.858	1
molluscs vs. arthropods	0.00	8.22	0	1
mosses vs. arthropods	0.00	12.73	0	1
reptiles vs. arthropods	6.54	7.63	0.858	1
vascular plants vs. arthropods	0.00	7.13	0	1
freshwater fishes vs. birds	-38.00	8.22	-4.626	0.000509
lichens vs. birds	0.00	11.02	0	1
mammals vs. birds	-31.46	8.46	-3.717	0.015023
molluscs vs. birds	-38.00	9.00	-4.223	0.002414
mosses vs. birds	-38.00	13.25	-2.869	0.22664
reptiles vs. birds	-31.46	8.46	-3.717	0.015023
vascular plants vs. birds	-38.00	8.02	-4.739	0.000324
lichens vs. freshwater fishes	38.00	10.39	3.657	0.01849
mammals vs. freshwater fishes	6.54	7.63	0.858	1
molluscs vs. freshwater fishes	0.00	8.22	0	1
mosses vs. freshwater fishes	0.00	12.73	0	1
reptiles vs. freshwater fishes	6.54	7.63	0.858	1
vascular plants vs. freshwater fishes	0.00	7.13	0	1
mammals vs. lichens	-31.46	10.59	-2.971	0.167553
molluscs vs. lichens	-38.00	11.02	-3.448	0.037397
mosses vs. lichens	-38.00	14.69	-2.586	0.50256
reptiles vs. lichens	-31.46	10.59	-2.971	0.167553
vascular plants vs. lichens	-38.00	10.24	-3.712	0.015296
molluscs vs. mammals	-6.54	8.46	-0.773	1
mosses vs. mammals	-6.54	12.89	-0.507	1
reptiles vs. mammals	0.00	7.89	0	1

comparison	Estimate	Std. Error	t value	Pr(> t)
vascular plants vs. mammals	-6.54	7.41	-0.882	1
mosses vs. molluscs	0.00	13.25	0	1
reptiles vs. molluscs	6.54	8.46	0.773	1
vascular plants vs. molluscs	0.00	8.02	0	1
reptiles vs. mosses	6.54	12.89	0.507	1
vascular plants vs. mosses	0.00	12.60	0	1
vascular plants vs. reptiles	-6.54	7.41	-0.882	1

Figure S4f: Assessed scope of pollution category 9.6 – *Excess Energy*, by taxonomic group

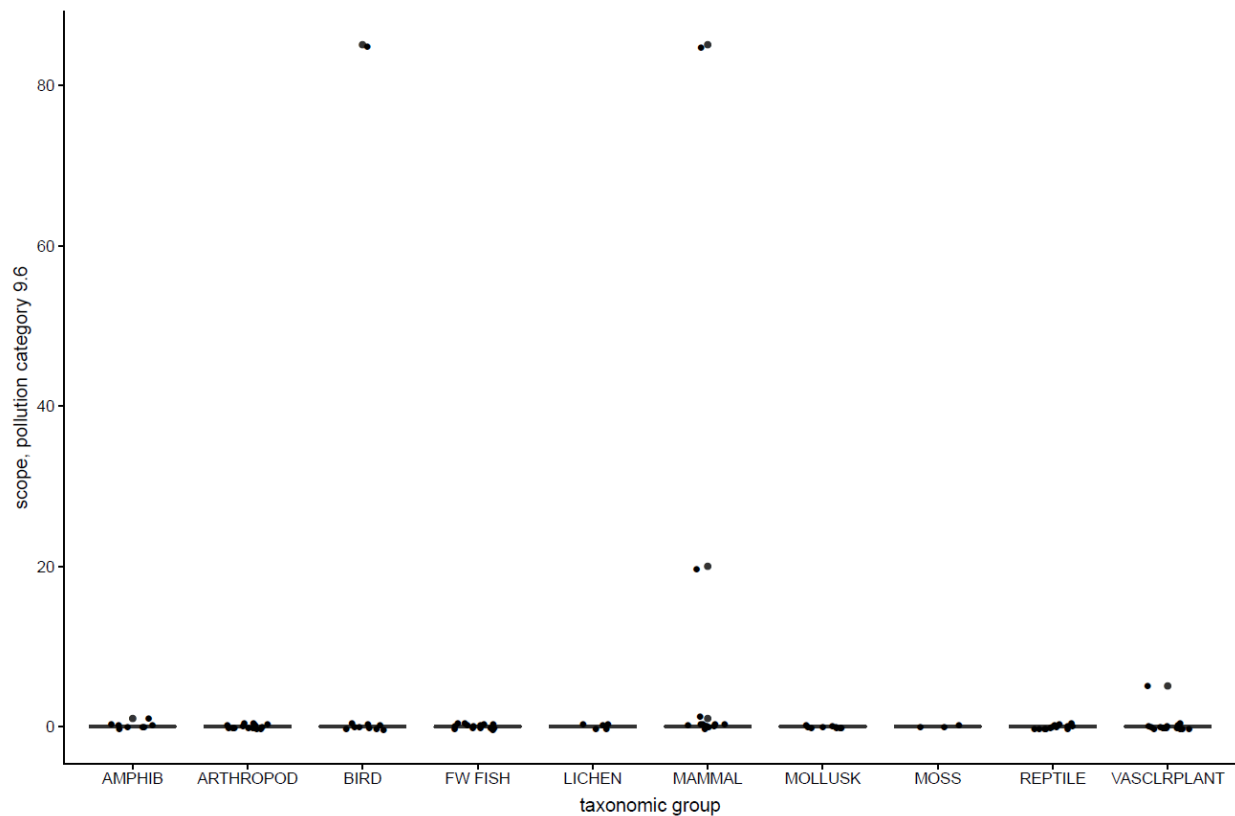


Table S4l. Analysis of Variance Table for effect of taxonomic group on assessed scope of pollution category 9.6

	degrees of freedom	sum of squares	mean square	F value	p(>F)
taxonomic group	9	1232.4	136.93	1.0201	0.4294
residuals	99	13288.6	134.23		

Table S4m. Results of Tukey's post-hoc pairwise comparison of means, with Bonferroni correction, for differences between taxonomic groups in the scope of pollution category 9.6.

Pairs with significant differences ($\Pr(>|t|) < 0.05$) are bold.

comparison	Estimate	Std. Error	t value	Pr(> t)
arthropods vs. amphibians	-0.13	5.07	-0.025	1
birds vs. amphibians	8.38	5.50	1.524	1
freshwater fishes vs. amphibians	-0.13	5.07	-0.025	1
lichens vs. amphibians	-0.13	6.61	-0.019	1
mammals vs. amphibians	8.03	5.21	1.542	1
molluscs vs. amphibians	-0.13	5.50	-0.023	1
mosses vs. amphibians	-0.13	7.84	-0.016	1
reptiles vs. amphibians	-0.13	5.21	-0.024	1
vascular plants vs. amphibians	0.17	4.97	0.034	1
birds vs. arthropods	8.50	4.73	1.797	1
freshwater fishes vs. arthropods	0.00	4.23	0	1
lichens vs. arthropods	0.00	5.98	0	1
mammals vs. arthropods	8.15	4.39	1.857	1
molluscs vs. arthropods	0.00	4.73	0	1
mosses vs. arthropods	0.00	7.33	0	1
reptiles vs. arthropods	0.00	4.39	0	1
vascular plants vs. arthropods	0.29	4.10	0.072	1
freshwater fishes vs. birds	-8.50	4.73	-1.797	1
lichens vs. birds	-8.50	6.35	-1.339	1
mammals vs. birds	-0.35	4.87	-0.071	1
molluscs vs. birds	-8.50	5.18	-1.641	1
mosses vs. birds	-8.50	7.63	-1.115	1
reptiles vs. birds	-8.50	4.87	-1.744	1
vascular plants vs. birds	-8.21	4.62	-1.777	1
lichens vs. freshwater fishes	0.00	5.98	0	1
mammals vs. freshwater fishes	8.15	4.39	1.857	1
molluscs vs. freshwater fishes	0.00	4.73	0	1
mosses vs. freshwater fishes	0.00	7.33	0	1
reptiles vs. freshwater fishes	0.00	4.39	0	1
vascular plants vs. freshwater fishes	0.29	4.10	0.072	1
mammals vs. lichens	8.15	6.10	1.337	1
molluscs vs. lichens	0.00	6.35	0	1
mosses vs. lichens	0.00	8.46	0	1
reptiles vs. lichens	0.00	6.10	0	1
vascular plants vs. lichens	0.29	5.89	0.05	1
molluscs vs. mammals	-8.15	4.87	-1.673	1
mosses vs. mammals	-8.15	7.42	-1.099	1
reptiles vs. mammals	-8.15	4.54	-1.794	1

comparison	Estimate	Std. Error	t value	Pr(> t)
vascular plants vs. mammals	-7.86	4.27	-1.841	1
mosses vs. molluscs	0.00	7.63	0	1
reptiles vs. molluscs	0.00	4.87	0	1
vascular plants vs. molluscs	0.29	4.62	0.064	1
reptiles vs. mosses	0.00	7.42	0	1
vascular plants vs. mosses	0.29	7.26	0.041	1
vascular plants vs. reptiles	0.29	4.27	0.069	1