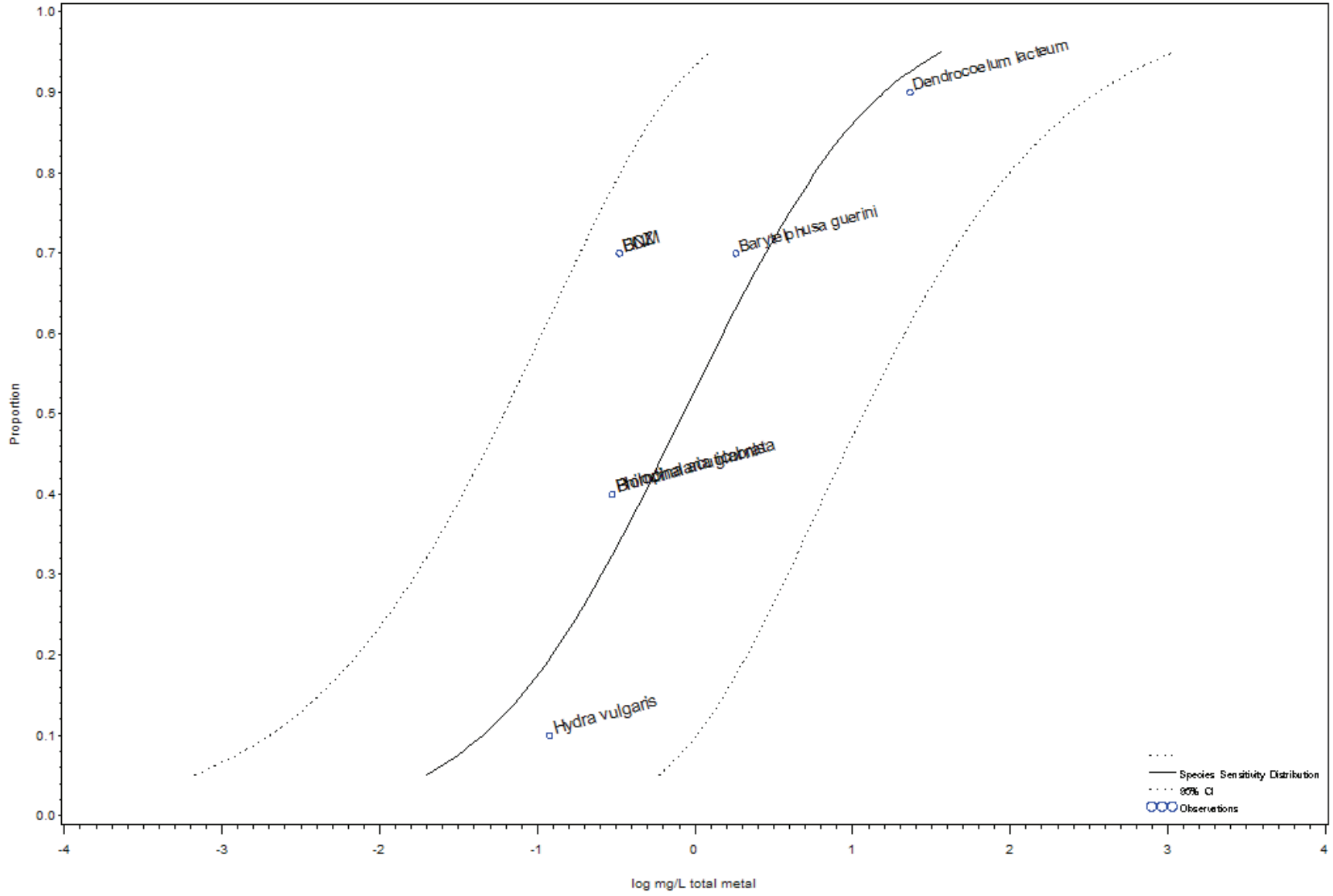
APPENDIX C

Non-Arthropod Invertebrate Species Sensitivity Distributions

Cadmium SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 32) data for non-arthropod Invertebrate species exposed to cadmium in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	GrandMean	CorrSSQ	DF	MSE
5	1.00857	5.07225	0.91148	-0.068129	3.30472	3	0.10883

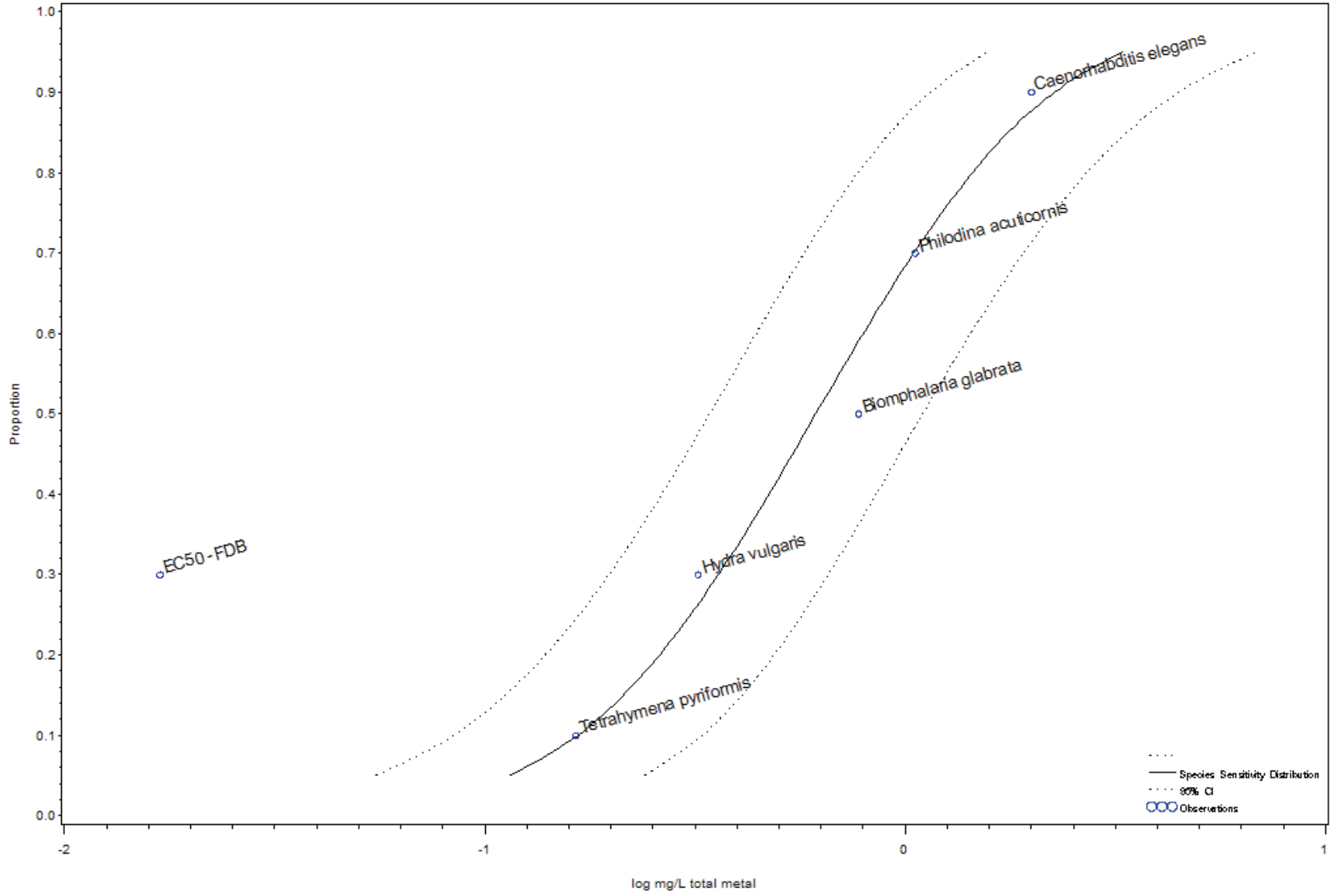
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0198	0.245	0.00161	-1.70252	-0.61167	-2.79338	12.2457
0.10	3.71845	0.0455	0.456	0.00454	-1.34231	-0.34125	-2.34336	9.9245
0.20	4.15838	0.1241	1.020	0.01510	-0.90611	0.00872	-1.82095	8.0976
0.25	4.32551	0.1818	1.411	0.02342	-0.74040	0.14957	-1.63037	7.6331
0.30	4.47560	0.2561	1.907	0.03440	-0.59159	0.28028	-1.46345	7.3107
0.50	5.00000	0.8479	5.910	0.12166	-0.07164	0.77158	-0.91486	6.8263
0.75	5.67449	3.9548	30.630	0.51062	0.59712	1.48615	-0.29190	7.6160
0.90	6.28155	15.8135	157.936	1.58334	1.19903	2.19848	0.19957	9.8873
0.95	6.64485	36.2447	444.848	2.95310	1.55924	2.64821	0.47028	12.1920

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.7	5.52440	Barytelphusa guerini	1.82	0.26007	.	.
0.7	.	-->BCM	.	-0.47804	.	.
0.7	.	-->ENZ	.	-0.47804	.	.
0.4	4.74665	Biomphalaria glabrata	0.30	-0.52288	.	.
0.9	6.28155	Dendrocoelum lacteum	23.22	1.36586	.	.
0.1	3.71845	Hydra vulgaris	0.12	-0.92082	.	.
0.4	4.74665	Philodina acuticornis	0.30	-0.52288	0	0

Cadmium SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 33) data for non-arthropod Invertebrate species exposed to cadmium in moderately hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	2.26165	5.47893	0.97892	-0.21176	0.73389	3	0.026947

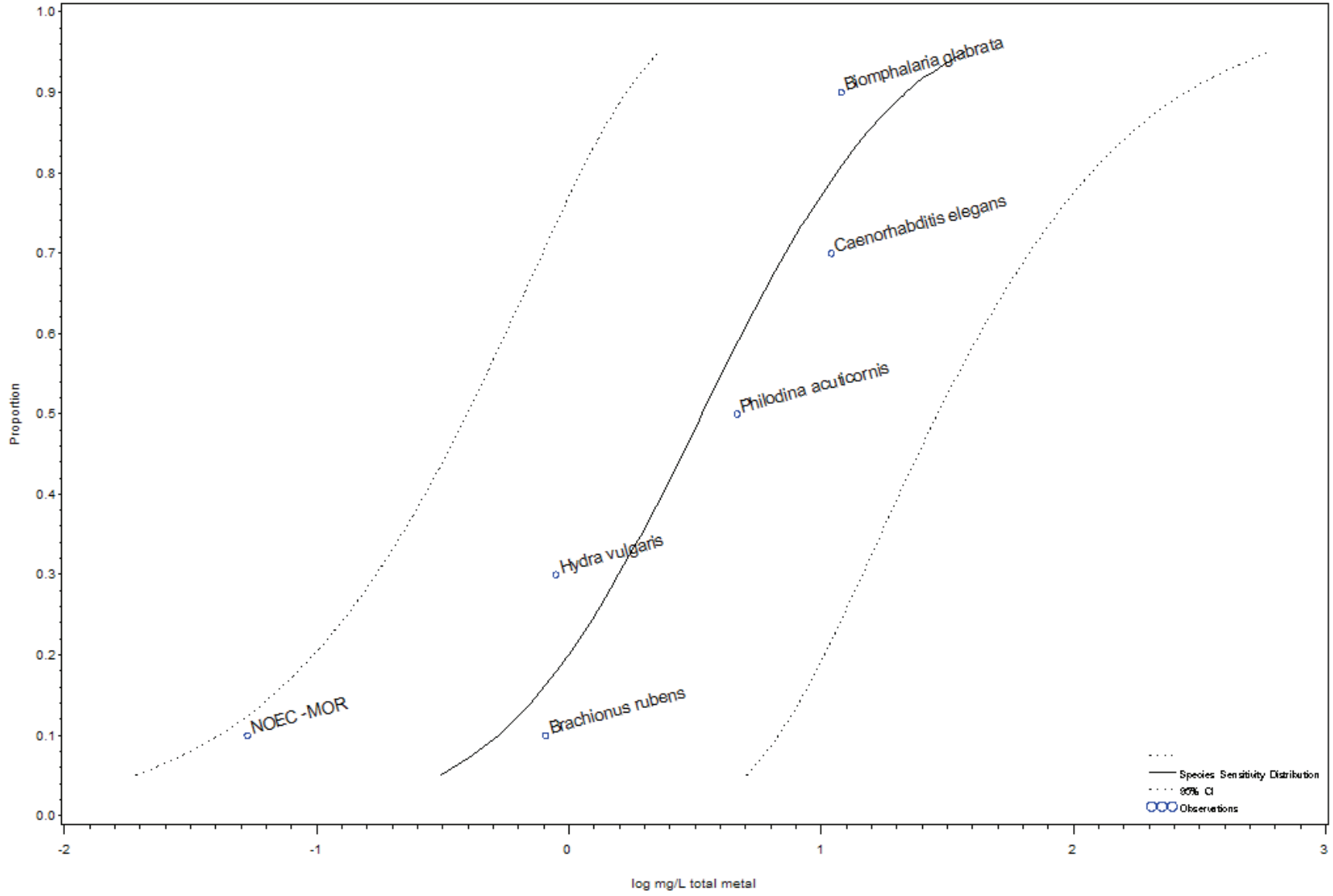
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.11507	0.19847	0.06672	-0.93904	-0.70231	-1.17578	1.14498
0.10	3.71845	0.16657	0.27553	0.10070	-0.77841	-0.55983	-0.99699	1.04964
0.20	4.15838	0.26068	0.41438	0.16399	-0.58389	-0.38260	-0.78518	0.96053
0.25	4.32551	0.30903	0.48567	0.19664	-0.50999	-0.31365	-0.70633	0.93528
0.30	4.47560	0.36006	0.56119	0.23101	-0.44363	-0.25089	-0.63637	0.91704
0.50	5.00000	0.61410	0.94483	0.39914	-0.21176	-0.02465	-0.39888	0.88861
0.75	5.67449	1.22030	1.91780	0.77648	0.08647	0.28280	-0.10987	0.93528
0.90	6.28155	2.26403	3.74510	1.36868	0.35488	0.57346	0.13630	1.04964
0.95	6.64485	3.27732	5.65261	1.90015	0.51552	0.75225	0.27879	1.14498

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.5	5.00000	Biomphalaria glabrata	0.77730	-0.10941	0.19052	1.74131
0.9	6.28155	Caenorhabditis elegans	2.00000	0.30103	0.00000	0.00000
0.3	4.47560	Hydra vulgaris	0.32171	-0.49253	0.20611	0.41847
0.3	.	-->EC50 -FDB	.	-1.77196	.	.
0.7	5.52440	Philodina acuticornis	1.05830	0.02461	0.17185	6.98337
0.1	3.71845	Tetrahymena pyriformis	0.16500	-0.78252	.	.

Cadmium SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 34) data for non-arthropod Invertebrate species exposed to cadmium in moderately hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.58695	4.15949	0.85906	0.52964	1.30808	3	0.18016

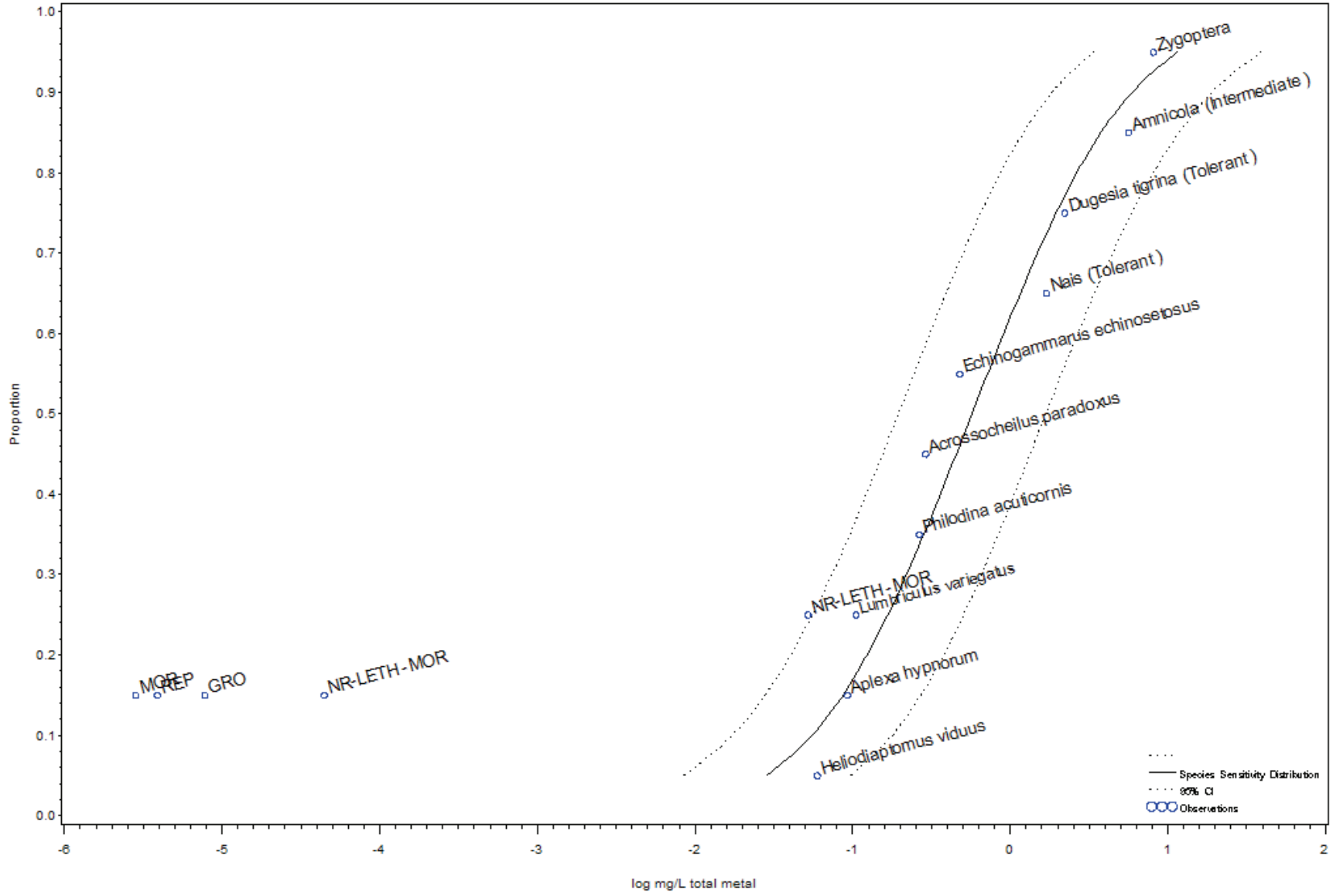
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.3113	2.444	0.03965	-0.50685	0.38804	-1.40174	7.72295
0.10	3.71845	0.5273	3.487	0.07975	-0.27792	0.54242	-1.09826	6.46088
0.20	4.15838	0.9984	5.598	0.17805	-0.00070	0.74805	-0.74945	5.42888
0.25	4.32551	1.2724	6.803	0.23796	0.10462	0.83273	-0.62350	5.16001
0.30	4.47560	1.5819	8.171	0.30626	0.19919	0.91229	-0.51390	4.97172
0.50	5.00000	3.3856	16.564	0.69203	0.52964	1.21916	-0.15988	4.68794
0.75	5.67449	9.0087	48.170	1.68481	0.95466	1.68278	0.22655	5.16001
0.90	6.28155	21.7369	143.727	3.28744	1.33720	2.15754	0.51686	6.46088
0.95	6.64485	36.8239	289.080	4.69075	1.56613	2.46102	0.67124	7.72295

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Biomphalaria glabrata	12.0577	1.08126	0.42926	0.39700
0.1	3.71845	Brachionus rubens	0.8100	-0.09151	.	.
0.1	.	-->NOEC -MOR	.	-1.27297	.	.
0.7	5.52440	Caenorhabditis elegans	11.0111	1.04183	0.38190	0.36656
0.3	4.47560	Hydra vulgaris	0.8900	-0.05061	.	.
0.5	5.00000	Philodina acuticornis	4.6476	0.66723	0.01982	0.02970

Cadmium SSD for non-Arthropod invertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 35) data for non-arthropod Invertebrate species exposed to cadmium in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
10	1.26388	5.30603	0.94580	-0.24214	5.20911	8	0.059611

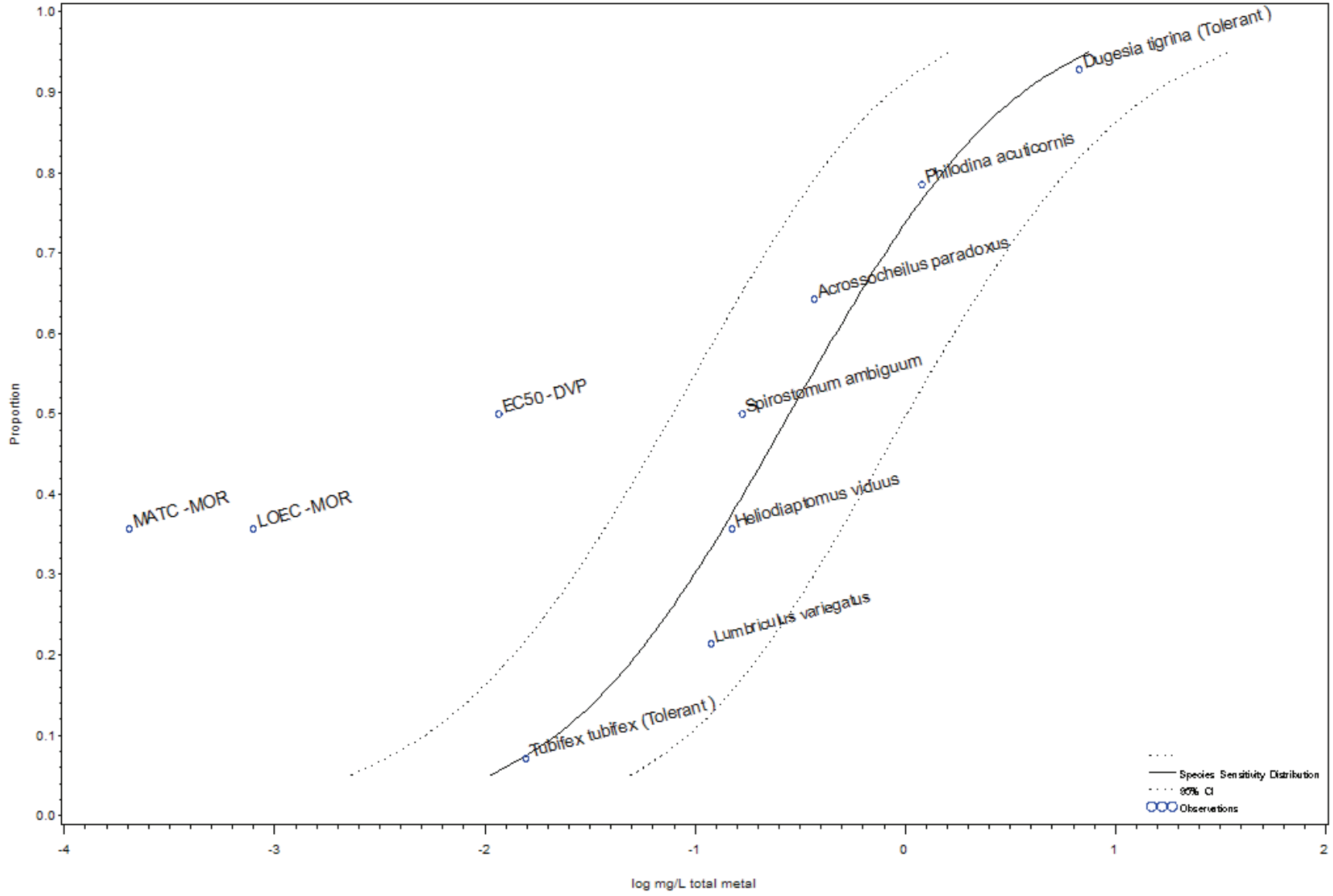
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0286	0.0768	0.01066	-1.54357	-1.11473	-1.97241	2.31181
0.10	3.71845	0.0554	0.1422	0.02161	-1.25612	-0.84696	-1.66528	2.17565
0.20	4.15838	0.1236	0.3041	0.05022	-0.90804	-0.51698	-1.29910	2.05433
0.25	4.32551	0.1676	0.4076	0.06890	-0.77580	-0.38980	-1.16181	2.02109
0.30	4.47560	0.2203	0.5313	0.09132	-0.65705	-0.27468	-1.03942	1.99738
0.50	5.00000	0.5726	1.3634	0.24050	-0.24214	0.13462	-0.61889	1.96098
0.75	5.67449	1.9567	4.7592	0.80450	0.29153	0.67753	-0.09448	2.02109
0.90	6.28155	5.9135	15.1708	2.30506	0.77185	1.18101	0.36268	2.17565
0.95	6.64485	11.4629	30.7705	4.27030	1.05930	1.48813	0.63046	2.31181

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.45	4.87434	Acrossocheilus paradoxus	0.29180	-0.53491	.	.
0.85	6.03643	Amnicola (Intermediate)	5.64978	0.75203	0.24360	0.32392
0.15	3.96357	Aplexa hypnorum	0.09300	-1.03152	.	.
0.15	.	-->GRO	.	-5.10845	0.32920	.
0.15	.	-->MOR	.	-5.54560	0.75686	.
0.15	.	-->NR-LETH -MOR	.	-4.35053	.	.
0.15	.	-->REP	.	-5.40806	0.45772	.
0.75	5.67449	Dugesia tigrina (Tolerant)	2.22486	0.34730	0.00690	0.01987
0.55	5.12566	Echinogammarus echinosetosus	0.48000	-0.31876	.	.
0.05	3.35515	Heliodiaptomus viduus	0.06000	-1.22185	.	.
0.25	4.32551	Lumbriculus variegatus	0.10536	-0.97734	0.21698	0.22201
0.25	.	-->NR-LETH -MOR	.	-1.28013	.	.
0.65	5.38532	Nais (Tolerant)	1.70000	0.23045	.	.
0.35	4.61468	Philodina acuticornis	0.26591	-0.57526	0.33966	0.59045
0.95	6.64485	Zygoptera	8.10000	0.90849	.	.

Cadmium SSD for non-Arthropod invertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 36) data for non-arthropod Invertebrate species exposed to cadmium in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	1.15591	5.63468	0.95272	-0.54908	4.14660	5	0.054985

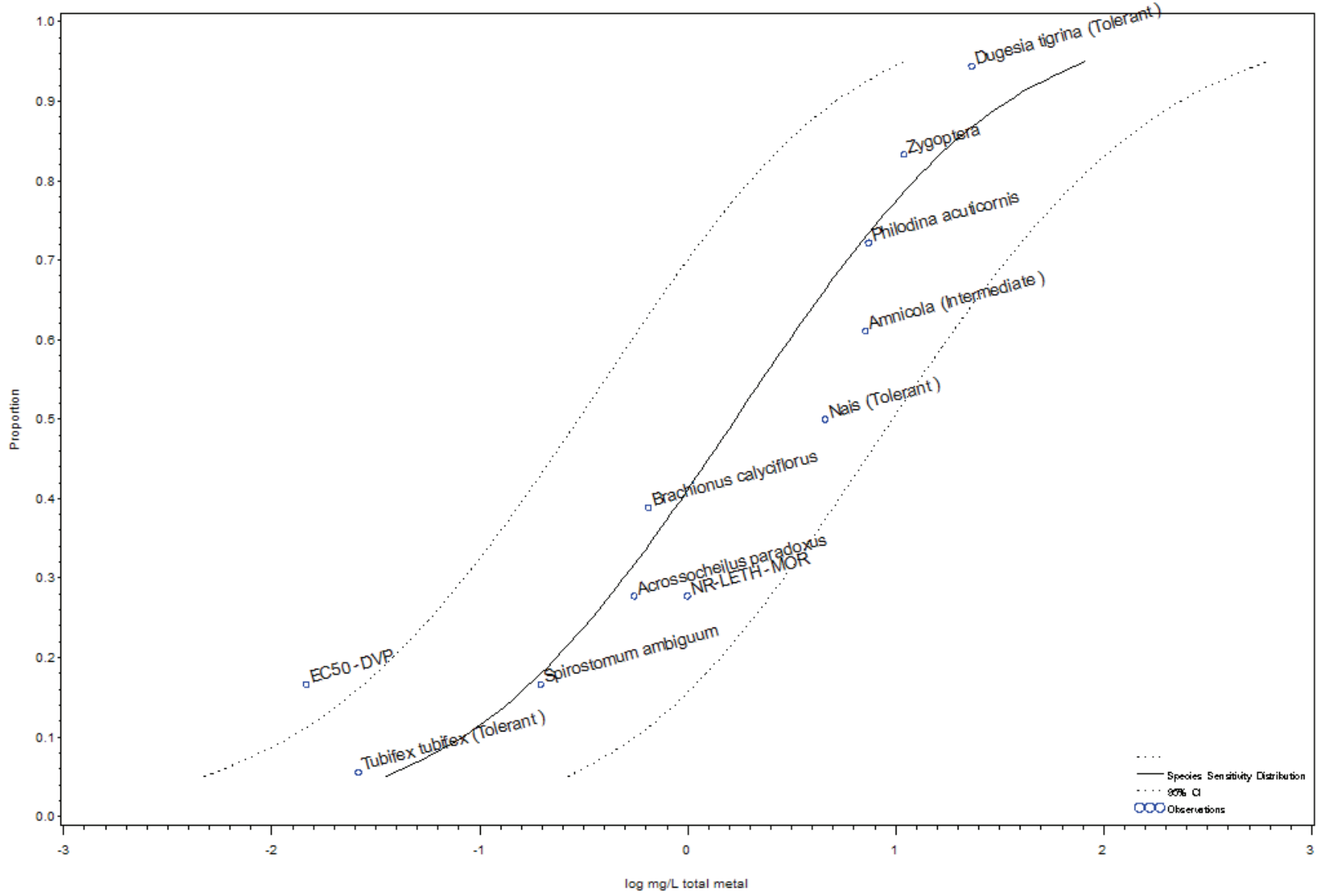
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.01066	0.0355	0.00321	-1.97208	-1.44999	-2.49416	3.02666
0.10	3.71845	0.02199	0.0680	0.00711	-1.65777	-1.16736	-2.14819	2.76993
0.20	4.15838	0.05282	0.1526	0.01828	-1.27718	-0.81639	-1.73798	2.54321
0.25	4.32551	0.07369	0.2089	0.02600	-1.13259	-0.68017	-1.58502	2.48134
0.30	4.47560	0.09937	0.2777	0.03555	-1.00275	-0.55636	-1.44913	2.43727
0.50	5.00000	0.28244	0.7725	0.10326	-0.54908	-0.11208	-0.98607	2.36967
0.75	5.67449	1.08253	3.0681	0.38196	0.03444	0.48687	-0.41799	2.48134
0.90	6.28155	3.62764	11.2211	1.17277	0.55962	1.05003	0.06921	2.76993
0.95	6.64485	7.48039	24.8889	2.24825	0.87392	1.39601	0.35184	3.02666

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.64286	5.36611	Acrossocheilus paradoxus	0.37050	-0.43121	.	.
0.92857	6.46523	Dugesia tigrina (Tolerant)	6.75000	0.82930	.	.
0.35714	4.63389	Heliodiaptomus viduus	0.15000	-0.82391	.	.
0.35714	.	-->LOEC -MOR	.	-3.10109	.	.
0.35714	.	-->MATC -MOR	.	-3.68888	.	.
0.21429	4.20836	Lumbriculus variegatus	0.12000	-0.92082	.	.
0.78571	5.79164	Philodina acuticornis	1.20380	0.08055	0.26309	3.26593
0.50000	5.00000	Spirostomum ambiguum	0.16800	-0.77469	.	.
0.50000	.	-->EC50 -DVP	.	-1.93102	.	.
0.07143	3.53477	Tubifex tubifex (Tolerant)	0.01575	-1.80276	0.65461	0.36312

Cadmium SSD for non-Arthropod invertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 37) data for non-arthropod Invertebrate species exposed to cadmium in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	0.97833	4.77525	0.92125	0.22973	7.51026	7	0.087779

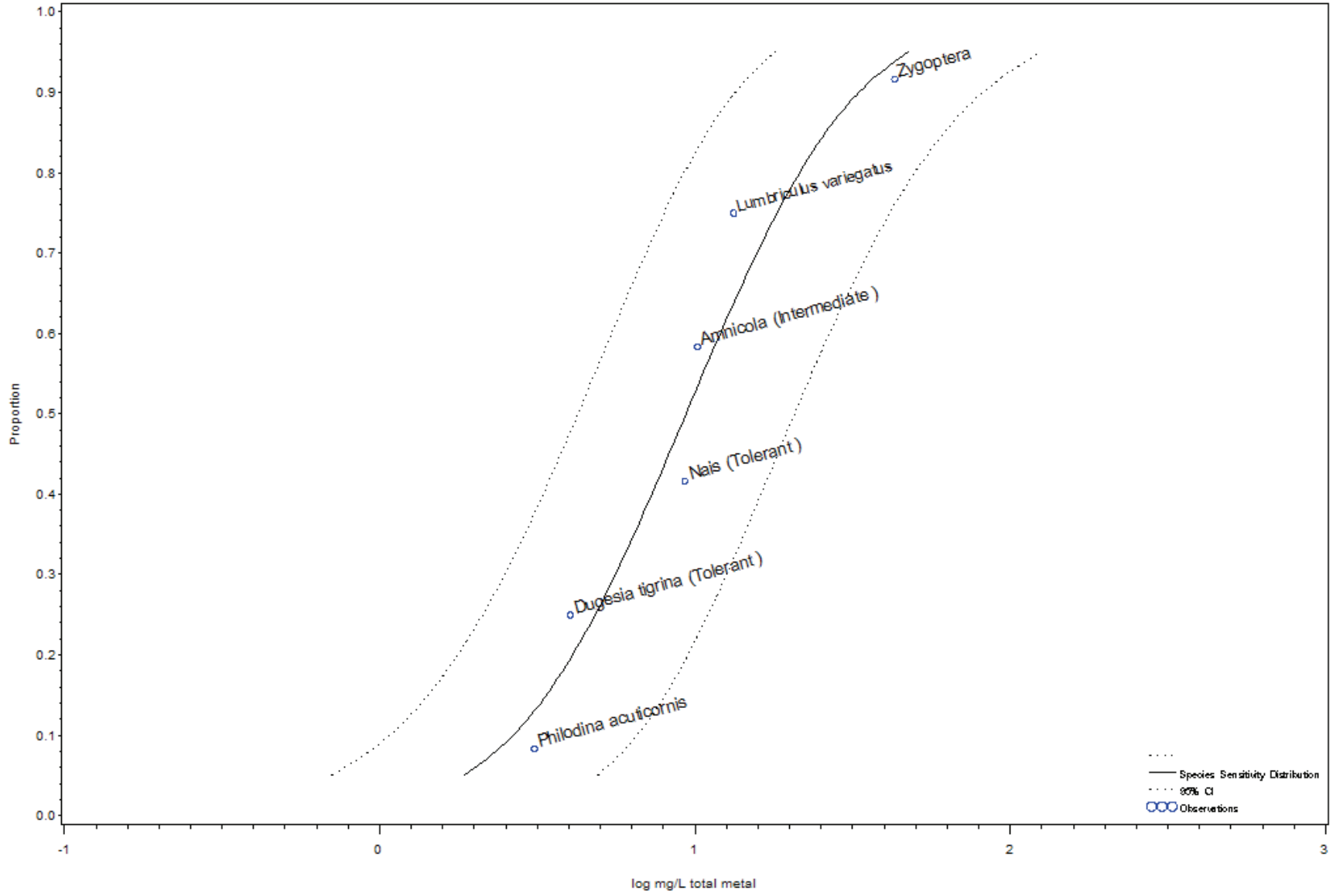
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0354	0.177	0.0071	-1.45156	-0.75180	-2.15133	4.80950
0.10	3.71845	0.0831	0.384	0.0180	-1.08021	-0.41615	-1.74428	4.39711
0.20	4.15838	0.2341	1.001	0.0548	-0.63054	0.00050	-1.26157	4.04211
0.25	4.32551	0.3470	1.452	0.0829	-0.45970	0.16207	-1.08148	3.94683
0.30	4.47560	0.4940	2.036	0.1198	-0.30629	0.30882	-0.92140	3.87942
0.50	5.00000	1.6972	6.831	0.4216	0.22973	0.83451	-0.37506	3.77675
0.75	5.67449	8.3015	34.748	1.9833	0.91916	1.54093	0.29739	3.94683
0.90	6.28155	34.6472	159.857	7.5094	1.53967	2.20373	0.87561	4.39711
0.95	6.64485	81.4739	408.114	16.2651	1.91102	2.61078	1.21126	4.80950

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.27778	4.41054	Acrossocheilus paradoxus	0.5546	-0.25602	.	.
0.27778	.	-->NR-LETH -MOR	.	0.00000	.	.
0.61111	5.28222	Amnicola (Intermediate)	7.1770	0.85595	0.20983	0.24515
0.38889	4.71778	Brachionus calyciflorus	0.6500	-0.18709	.	.
0.94444	6.59322	Dugesia tigrina (Tolerant)	23.3000	1.36736	.	.
0.50000	5.00000	Nais (Tolerant)	4.6000	0.66276	.	.
0.72222	5.58946	Philodina acuticornis	7.4255	0.87073	0.15058	0.17293
0.16667	4.03258	Spirostomum ambiguum	0.1970	-0.70553	.	.
0.16667	.	-->EC50 -DVP	.	-1.83258	.	.
0.05556	3.40678	Tubifex tubifex (Tolerant)	0.0262	-1.58199	0.73725	0.46602
0.05556	.	-->PHY	.	-7.00207	.	.
0.83333	5.96742	Zygoptera	11.0000	1.04139	.	.

Chromium SSD for non-Arthropod invertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 64) data for non-arthropod Invertebrate species exposed to Chromium in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	2.33919	2.72636	0.94051	0.97198	0.82913	4	0.071737

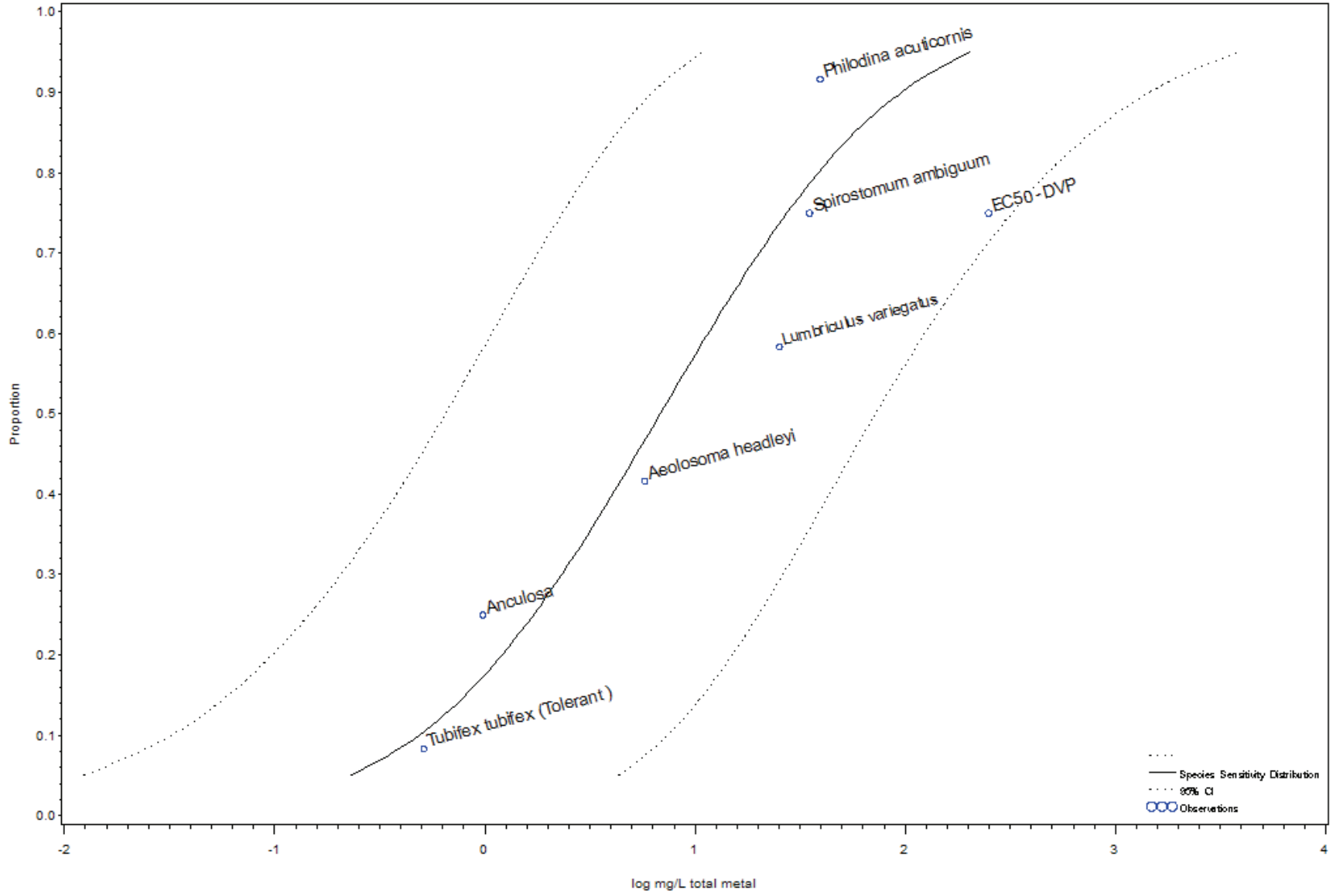
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.8570	3.9166	0.8804	0.26881	0.59291	-0.05530	1.63503
0.10	3.71845	2.6553	5.3201	1.3253	0.42412	0.72592	0.12232	1.50444
0.20	4.15838	4.0944	7.8150	2.1451	0.61219	0.89293	0.33144	1.38481
0.25	4.32551	4.8265	9.0863	2.5638	0.68363	0.95839	0.40888	1.35139
0.30	4.47560	5.5950	10.4283	3.0018	0.74780	1.01821	0.47738	1.32736
0.50	5.00000	9.3751	17.2041	5.1088	0.97198	1.23563	0.70832	1.29014
0.75	5.67449	18.2104	34.2825	9.6732	1.26032	1.53507	0.98557	1.35139
0.90	6.28155	33.1007	66.3191	16.5210	1.51984	1.82164	1.21804	1.50444
0.95	6.64485	47.3313	99.8292	22.4409	1.67515	1.99926	1.35104	1.63503

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.58333	5.21043	Amnicola (Intermediate)	10.2059	1.00885	0.11960	0.11855
0.25000	4.32551	Dugesia tigrina (Tolerant)	4.0257	0.60484	0.36555	0.60438
0.75000	5.67449	Lumbriculus variegatus	13.3000	1.12385	.	.
0.41667	4.78957	Nais (Tolerant)	9.3000	0.96848	.	.
0.08333	3.61701	Philodina acuticornis	3.1000	0.49136	0.00000	0.00000
0.91667	6.38299	Zygoptera	43.1000	1.63448	.	.

Chromium SSD for non-Arthropod invertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 65) data for non-arthropod Invertebrate species exposed to Chromium in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	1.11857	4.06569	0.87917	0.83527	3.38949	4	0.14572

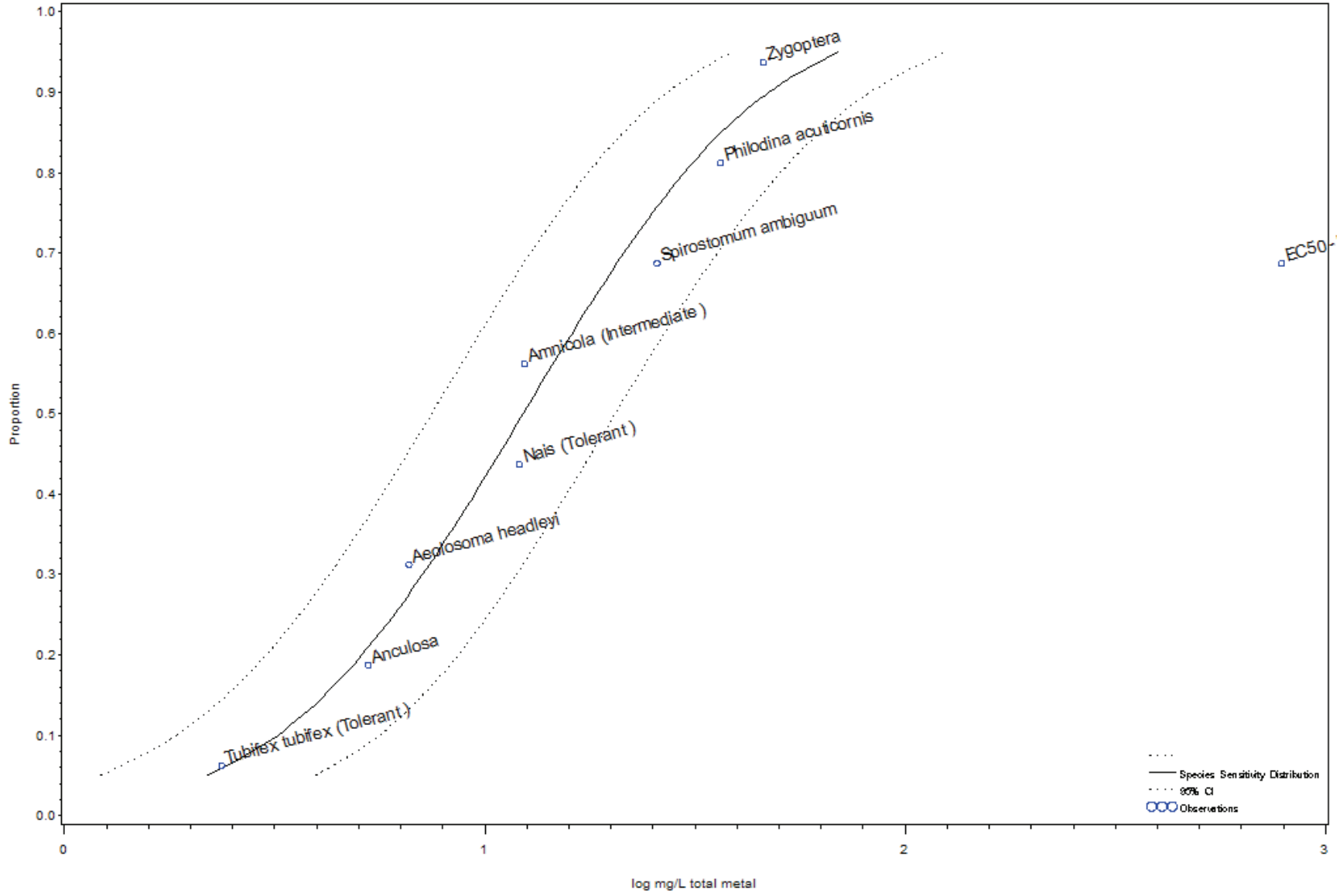
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.232	2.20	0.0244	-0.63523	0.34210	-1.61255	9.38592
0.10	3.71845	0.489	3.95	0.0606	-0.31044	0.59647	-1.21734	7.94667
0.20	4.15838	1.210	8.38	0.1749	0.08286	0.92304	-0.75732	6.77669
0.25	4.32551	1.707	11.31	0.2577	0.23228	1.05342	-0.58887	6.47341
0.30	4.47560	2.325	14.92	0.3623	0.36646	1.17381	-0.44090	6.26150
0.50	5.00000	6.843	41.79	1.1206	0.83527	1.62108	0.04946	5.94302
0.75	5.67449	27.432	181.72	4.1411	1.43826	2.25941	0.61712	6.47341
0.90	6.28155	95.714	772.47	11.8596	1.98097	2.88788	1.07407	7.94667
0.95	6.64485	202.193	1919.07	21.3030	2.30577	3.28309	1.32844	9.38592

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.41667	4.78957	Aeolosoma headleyi	5.7966	0.76317	0.11586	0.1518
0.25000	4.32551	Anculosa	0.9798	-0.00886	0.12452	14.0467
0.58333	5.21043	Lumbriculus variegatus	25.3000	1.40312	.	.
0.91667	6.38299	Philodina acuticornis	39.4968	1.59656	0.14483	0.0907
0.75000	5.67449	Spirostomum ambiguum	35.2000	1.54654	.	.
0.75000	.	-->EC50 -DVP	.	2.39790	.	.
0.08333	3.61701	Tubifex tubifex (Tolerant)	0.5141	-0.28892	0.78979	2.7336

Chromium SSD for non-Arthropod invertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 66) data for non-arthropod Invertebrate species exposed to Chromium in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
8	2.19414	2.60555	0.97001	1.09130	1.37180	6	0.034036

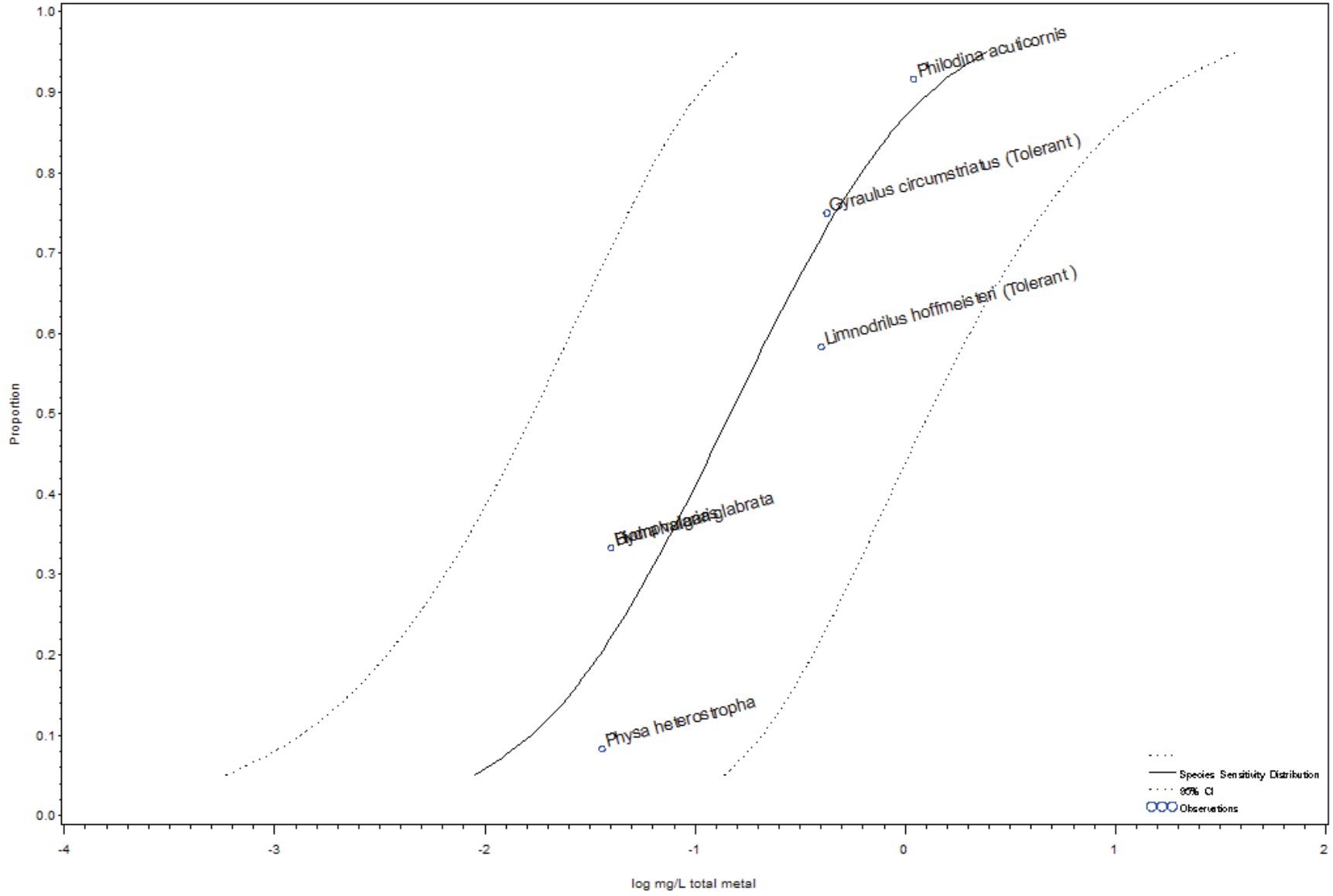
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	2.1960	3.500	1.3779	0.34164	0.54405	0.13923	0.96623
0.10	3.71845	3.2153	4.997	2.0688	0.50722	0.69871	0.31572	0.91073
0.20	4.15838	5.1018	7.746	3.3601	0.70772	0.88909	0.52635	0.85974
0.25	4.32551	6.0798	9.171	4.0306	0.78389	0.96242	0.60537	0.84549
0.30	4.47560	7.1170	10.685	4.7404	0.85230	1.02877	0.67582	0.83526
0.50	5.00000	12.3395	18.391	8.2794	1.09130	1.26460	0.91800	0.81942
0.75	5.67449	25.0439	37.777	16.6026	1.39870	1.57723	1.22018	0.84549
0.90	6.28155	47.3562	73.599	30.4705	1.67538	1.86687	1.48388	0.91073
0.95	6.64485	69.3354	110.500	43.5058	1.84096	2.04336	1.63855	0.96623

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.3125	4.51122	Aeolosoma headleyi	6.6091	0.82014	0.10176	0.12407
0.5625	5.15731	Amnicola (Intermediate)	12.4515	1.09522	0.12250	0.11185
0.1875	4.11285	Anculosa	5.2915	0.72358	0.03480	0.04810
0.4375	4.84269	Nais (Tolerant)	12.1000	1.08279	.	.
0.8125	5.88715	Philodina acuticornis	36.4308	1.56147	0.08737	0.05595
0.6875	5.48878	Spirostomum ambiguum	25.7000	1.40993	.	.
0.6875	.	-->EC50 -DVP	.	2.89591	.	.
0.0625	3.46588	Tubifex tubifex (Tolerant)	2.3686	0.37449	1.24165	3.31560
0.9375	6.53412	Zygoptera	46.0000	1.66276	.	.

Copper SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 91) data for non-arthropod Invertebrate species exposed to copper in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	1.35177	6.12250	0.84621	-0.82750	2.17449	4	0.18053

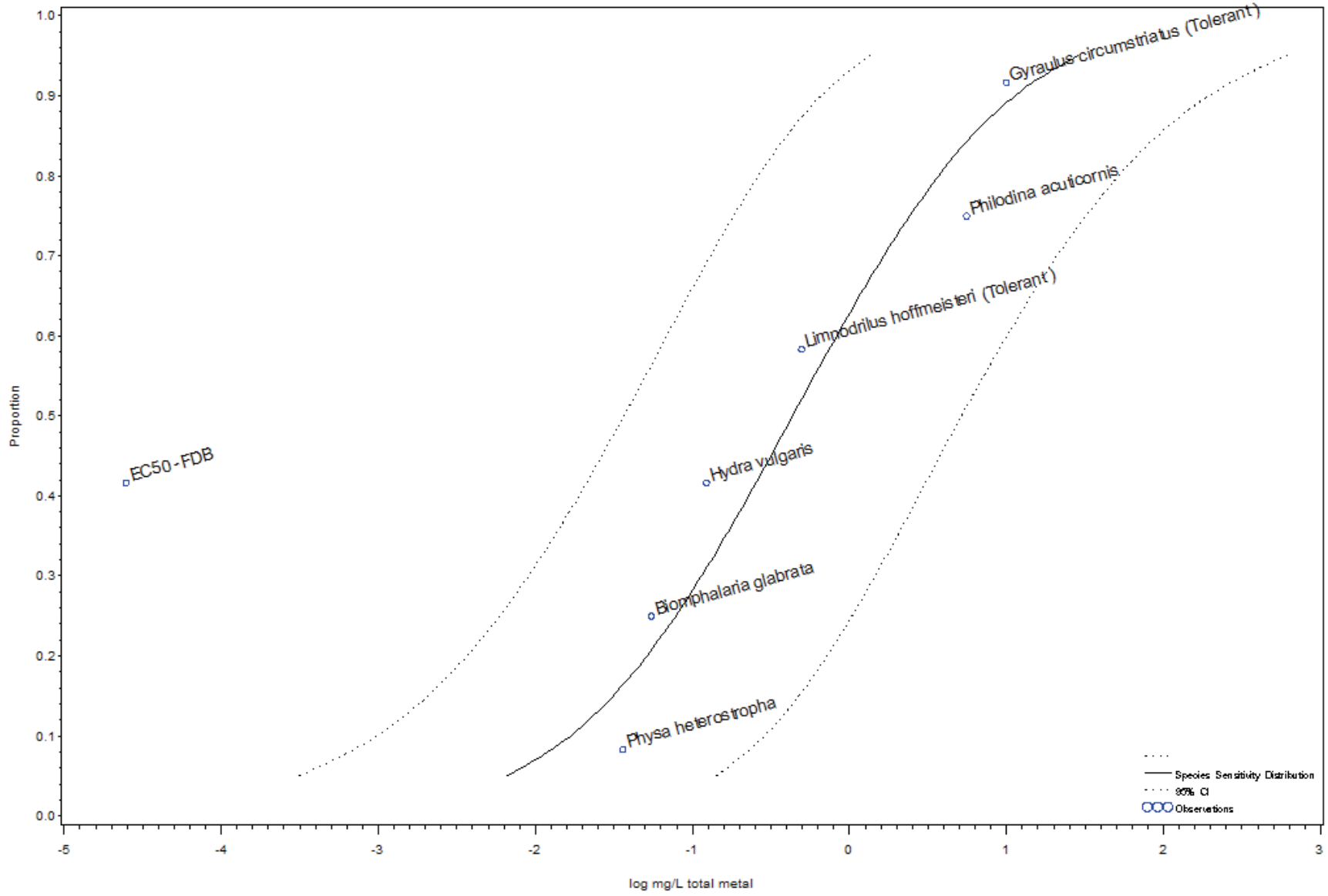
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00897	0.0732	0.00110	-2.04721	-1.13559	-2.95884	8.03625
0.10	3.71845	0.01666	0.1160	0.00239	-1.77845	-0.93548	-2.62142	6.82221
0.20	4.15838	0.03524	0.2111	0.00588	-1.45300	-0.67541	-2.23060	5.82543
0.25	4.32551	0.04684	0.2688	0.00816	-1.32936	-0.57050	-2.08823	5.56509
0.30	4.47560	0.06049	0.3365	0.01087	-1.21833	-0.47308	-1.96359	5.38251
0.50	5.00000	0.14778	0.7823	0.02791	-0.83040	-0.10661	-1.55418	5.10510
0.75	5.67449	0.46620	2.6708	0.08138	-0.33143	0.42665	-1.08950	5.55440
0.90	6.28155	1.31118	9.1051	0.18882	0.11766	0.95929	-0.72396	6.80023
0.95	6.64485	2.43457	19.7903	0.29950	0.38642	1.29645	-0.52361	8.00587

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.33333	4.56927	Biomphalaria glabrata	0.04000	-1.39794	.	.
0.75000	5.67449	Gyraulus circumstriatus (Tolerant)	0.42500	-0.37161	.	.
0.33333	4.56927	Hydra vulgaris	0.04000	-1.39794	.	.
0.58333	5.21043	Limnodrilus hoffmeisteri (Tolerant)	0.40000	-0.39794	.	.
0.91667	6.38299	Philodina acuticornis	1.10000	0.04139	0.00000	0.00000
0.08333	3.61701	Physa heterostropha	0.03623	-1.44098	0.38968	0.27043

Copper SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 92) data for non-arthropod Invertebrate species exposed to copper in moderately hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	0.90598	5.32714	0.91254	-0.36109	5.36291	4	0.10547

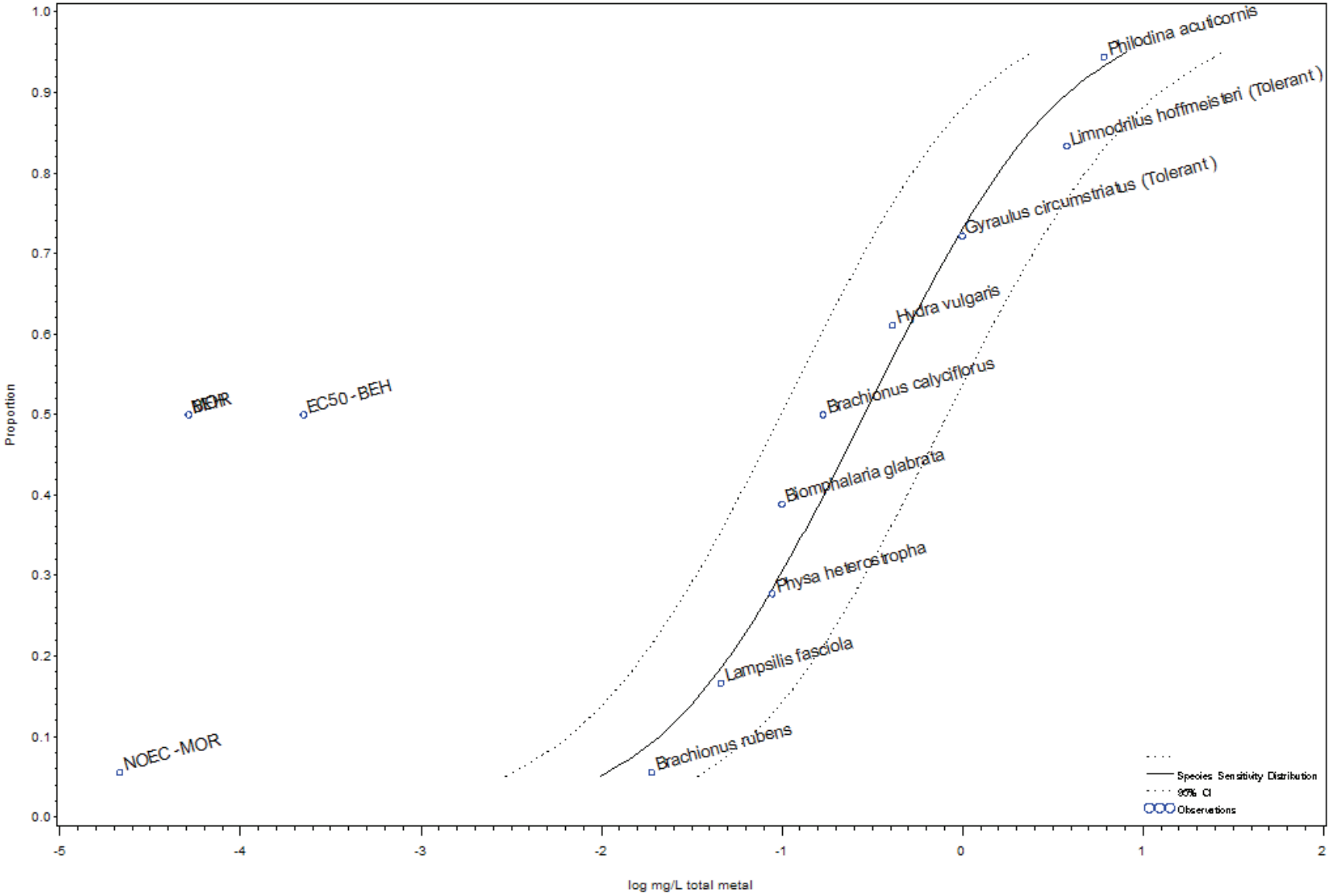
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0067	0.070	0.00064	-2.17664	-1.15669	-3.19659	10.3746
0.10	3.71845	0.0168	0.149	0.00189	-1.77563	-0.82735	-2.72392	8.7648
0.20	4.15838	0.0513	0.389	0.00675	-1.29005	-0.40953	-2.17057	7.4633
0.25	4.32551	0.0784	0.570	0.01079	-1.10557	-0.24435	-1.96680	7.1271
0.30	4.47560	0.1148	0.808	0.01632	-0.93991	-0.09266	-1.78716	6.8926
0.50	5.00000	0.4354	2.913	0.06508	-0.36109	0.46435	-1.18653	6.5407
0.75	5.67449	2.4177	17.564	0.33279	0.38340	1.24462	-0.47783	7.1271
0.90	6.28155	11.3099	100.402	1.27400	1.05346	2.00174	0.10517	8.7648
0.95	6.64485	28.4748	298.135	2.71963	1.45446	2.47441	0.43451	10.3746

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.25000	4.32551	Biomphalaria glabrata	0.0548	-1.26144	0.05599	0.04439
0.91667	6.38299	Gyraulus circumstriatus (Tolerant)	10.0000	1.00000	0.00000	0.00000
0.41667	4.78957	Hydra vulgaris	0.1233	-0.90908	0.26563	0.29220
0.41667	.	-->EC50 -FDB	.	-4.60517	.	.
0.58333	5.21043	Limnodrilus hoffmeisteri (Tolerant)	0.4978	-0.30295	0.10437	0.34452
0.75000	5.67449	Philodina acuticornis	5.5964	0.74791	0.02194	0.02934
0.08333	3.61701	Physa heterostropha	0.0362	-1.44098	0.34854	0.24188

Copper SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 93) data for non-arthropod Invertebrate species exposed to copper in moderately hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
9	1.12916	5.61505	0.96095	-0.54470	5.88078	7	0.043529

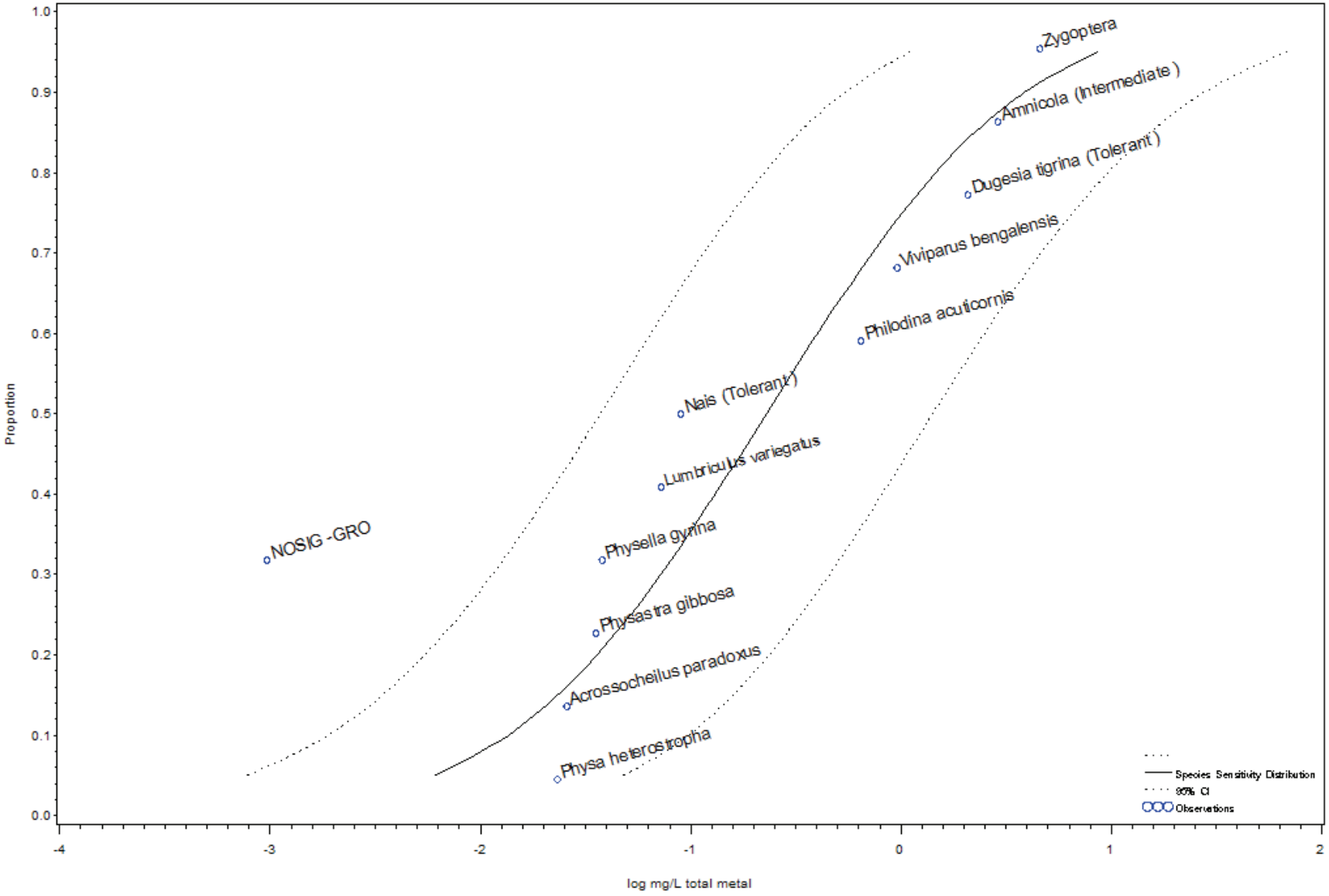
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00997	0.0265	0.00375	-2.00140	-1.57669	-2.42611	2.28287
0.10	3.71845	0.02091	0.0530	0.00825	-1.67966	-1.27592	-2.08339	2.13889
0.20	4.15838	0.05128	0.1243	0.02116	-1.29005	-0.90568	-1.67442	2.01037
0.25	4.32551	0.07210	0.1725	0.03013	-1.14204	-0.76310	-1.52098	1.97510
0.30	4.47560	0.09792	0.2322	0.04129	-1.00911	-0.63407	-1.38415	1.94994
0.50	5.00000	0.28530	0.6673	0.12198	-0.54470	-0.17570	-0.91370	1.91127
0.75	5.67449	1.12886	2.7013	0.47174	0.05264	0.43158	-0.32630	1.97510
0.90	6.28155	3.89280	9.8628	1.53648	0.59026	0.99400	0.18653	2.13889
0.95	6.64485	8.16597	21.7129	3.07112	0.91201	1.33672	0.48730	2.28287

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.38889	4.71778	Biomphalaria glabrata	0.10027	-0.99885	0.12813	0.12828
0.50000	5.00000	Brachionus calyciflorus	0.16994	-0.76970	0.49425	0.64213
0.50000	.	-->BEH	.	-4.28672	.	.
0.50000	.	-->EC50 -BEH	.	-3.64883	0.19027	.
0.50000	.	-->MOR	.	-4.28672	.	.
0.05556	3.40678	Brachionus rubens	0.01900	-1.72125	.	.
0.05556	.	-->NOEC -MOR	.	-4.66705	0.00000	.
0.72222	5.58946	Gyraulus circumstriatus (Tolerant)	1.00000	0.00000	.	.
0.61111	5.28222	Hydra vulgaris	0.41000	-0.38722	.	.
0.16667	4.03258	Lampsilis fasciola	0.04600	-1.33724	.	.
0.83333	5.96742	Limnodrilus hoffmeisteri (Tolerant)	3.80000	0.57978	.	.
0.94444	6.59322	Philodina acuticornis	6.09262	0.78480	0.03023	0.03852
0.27778	4.41054	Physa heterostropha	0.08859	-1.05262	0.36018	0.34218

Copper SSD for non-Arthropod invertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 94) data for non-arthropod Invertebrate species exposed to copper in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	1.04396	5.66793	0.88805	-0.63980	7.98015	9	0.12183

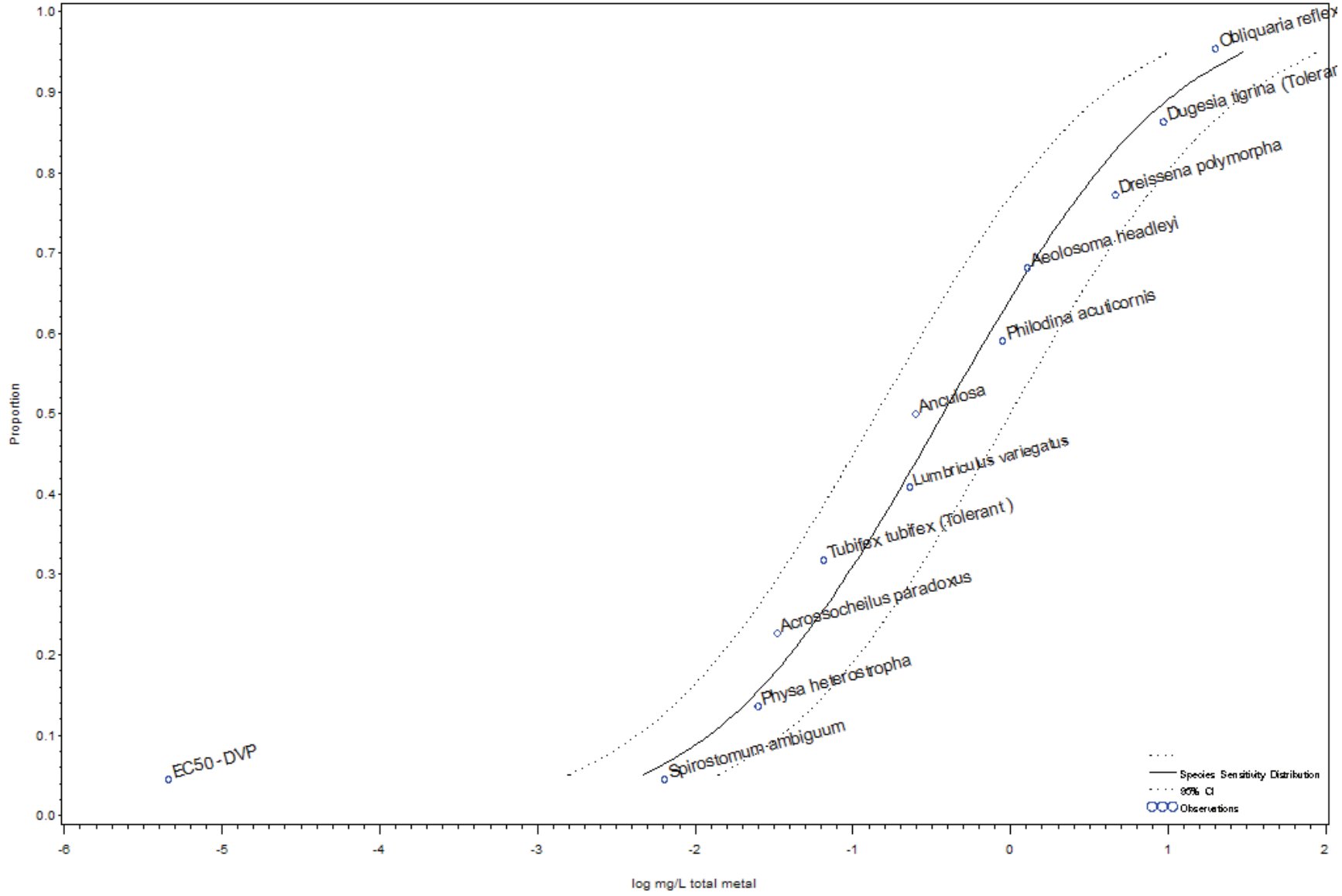
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.00609	0.0324	0.00115	-2.21539	-1.48970	-2.94107	5.12917
0.10	3.71845	0.01357	0.0670	0.00275	-1.86738	-1.17406	-2.56071	4.73285
0.20	4.15838	0.03581	0.1651	0.00777	-1.44598	-0.78238	-2.10958	4.39194
0.25	4.32551	0.05177	0.2341	0.01145	-1.28589	-0.63059	-1.94119	4.30054
0.30	4.47560	0.07209	0.3215	0.01616	-1.14212	-0.49277	-1.79146	4.23589
0.50	5.00000	0.22919	1.0008	0.05249	-0.63980	0.00033	-1.27994	4.13749
0.75	5.67449	1.01457	4.5876	0.22438	0.00628	0.66158	-0.64902	4.30054
0.90	6.28155	3.87062	19.1033	0.78425	0.58778	1.28111	-0.10555	4.73285
0.95	6.64485	8.62548	45.8638	1.62217	0.93578	1.66147	0.21010	5.12917

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.13636	3.90320	Acrossocheilus paradoxus	0.02580	-1.58838	.	.
0.86364	6.09680	Amnicola (Intermediate)	2.89310	0.46136	0.71718	1.55447
0.77273	5.74786	Dugesia tigrina (Tolerant)	2.08243	0.31857	0.09984	0.31340
0.40909	4.77012	Lumbriculus variegatus	0.07246	-1.13992	0.44691	0.39205
0.50000	5.00000	Nais (Tolerant)	0.09000	-1.04576	.	.
0.59091	5.22988	Philodina acuticornis	0.64807	-0.18838	0.04734	0.25130
0.04545	3.30938	Physa heterostropha	0.02332	-1.63220	0.23148	0.14182
0.22727	4.25214	Physastra gibbosa	0.03565	-1.44793	0.08586	0.05930
0.31818	4.52721	Physella gyrina	0.03800	-1.42022	.	.
0.31818	.	-->NOSIG -GRO	.	-3.01492	.	.
0.68182	5.47279	Viviparus bengalensis	0.96000	-0.01773	.	.
0.95455	6.69062	Zygoptera	4.60000	0.66276	.	.

Copper SSD for non-Arthropod invertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 95) data for non-arthropod Invertebrate species exposed to copper in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	0.86445	5.36895	0.97792	-0.42680	12.8166	9	0.024031

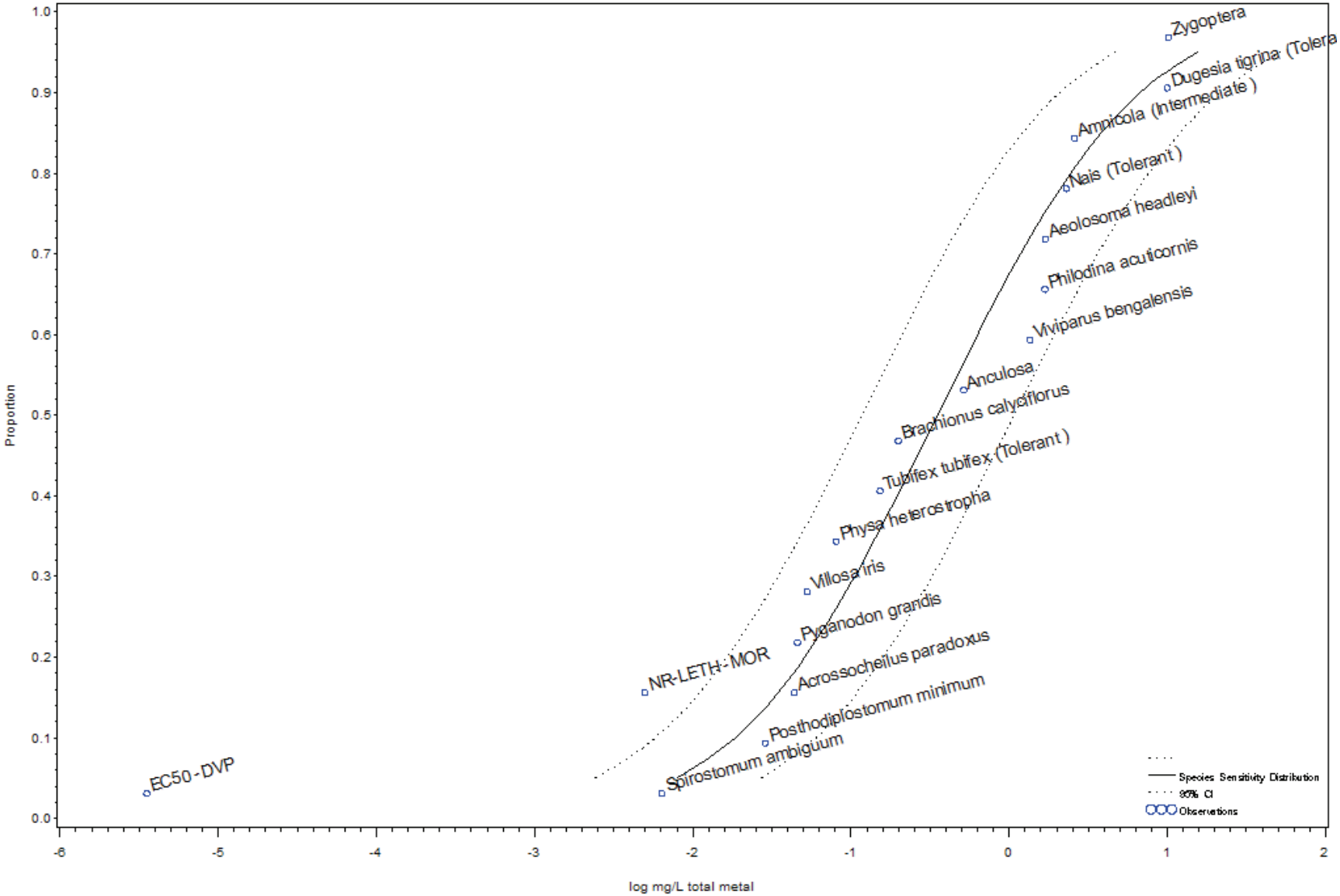
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0047	0.0114	0.0019	-2.32959	-1.94434	-2.71483	2.01613
0.10	3.71845	0.0123	0.0288	0.0053	-1.90932	-1.53996	-2.27867	1.91351
0.20	4.15838	0.0398	0.0900	0.0176	-1.40040	-1.04560	-1.75520	1.82181
0.25	4.32551	0.0621	0.1392	0.0277	-1.20706	-0.85632	-1.55780	1.79664
0.30	4.47560	0.0926	0.2063	0.0416	-1.03344	-0.68560	-1.38127	1.77869
0.50	5.00000	0.3743	0.8252	0.1698	-0.42680	-0.08346	-0.77015	1.75112
0.75	5.67449	2.2566	5.0605	1.0063	0.35345	0.70420	0.00271	1.79664
0.90	6.28155	11.3686	26.6108	4.8569	1.05571	1.42506	0.68636	1.91351
0.95	6.64485	29.9212	72.6483	12.3234	1.47598	1.86123	1.09073	2.01613

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.22727	4.25214	Acrossocheilus paradoxus	0.0333	-1.47756	.	.
0.68182	5.47279	Aeolosoma headleyi	1.2845	0.10874	0.15378	1.41421
0.50000	5.00000	Anculosa	0.2510	-0.60033	0.10953	0.18245
0.77273	5.74786	Dreissena polymorpha	4.6390	0.66642	0.09102	0.13658
0.86364	6.09680	Dugesia tigrina (Tolerant)	9.3600	0.97128	.	.
0.40909	4.77012	Lumbriculus variegatus	0.2300	-0.63827	.	.
0.95455	6.69062	Obliquaria reflexa	20.0000	1.30103	.	.
0.59091	5.22988	Philodina acuticornis	0.8944	-0.04846	0.06853	1.41421
0.13636	3.90320	Physa heterostropha	0.0251	-1.60075	0.15299	0.09557
0.04545	3.30938	Spirostomum ambiguum	0.0064	-2.19382	.	.
0.04545	.	-->EC50 -DVP	.	-5.33914	.	.
0.31818	4.52721	Tubifex tubifex (Tolerant)	0.0656	-1.18313	0.87529	0.73981

Copper SSD for non-Arthropod invertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 96) data for non-arthropod Invertebrate species exposed to copper in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
16	1.00209	5.45206	0.95475	-0.45112	14.0513	14	0.047767

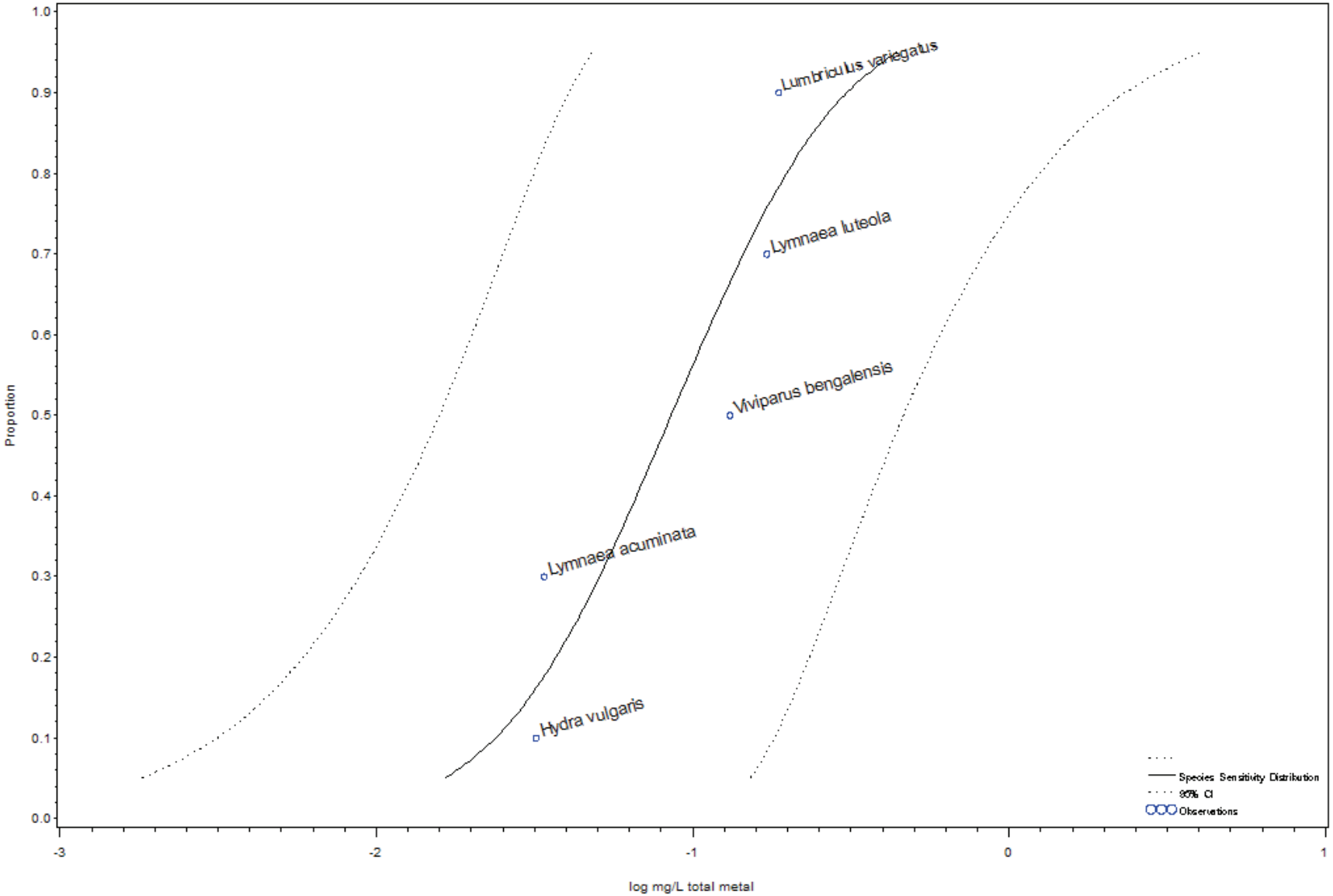
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0081	0.0218	0.00300	-2.09254	-1.66232	-2.52275	2.32149
0.10	3.71845	0.0186	0.0487	0.00713	-1.72999	-1.31290	-2.14708	2.22995
0.20	4.15838	0.0512	0.1301	0.02013	-1.29098	-0.88577	-1.69619	2.14884
0.25	4.32551	0.0751	0.1896	0.02978	-1.12420	-0.72227	-1.52612	2.12670
0.30	4.47560	0.1061	0.2662	0.04227	-0.97442	-0.57484	-1.37400	2.11095
0.50	5.00000	0.3539	0.8807	0.14221	-0.45112	-0.05515	-0.84708	2.08682
0.75	5.67449	1.6671	4.2062	0.66075	0.22196	0.62389	-0.17996	2.12670
0.90	6.28155	6.7260	17.5730	2.57436	0.82776	1.24485	0.41067	2.22995
0.95	6.64485	15.4989	41.7360	5.75559	1.19030	1.62051	0.76009	2.32149

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.15625	3.99001	Acrossocheilus paradoxus	0.0440	-1.35655	.	.
0.15625	.	-->NR-LETH -MOR	.	-2.30259	.	.
0.71875	5.57913	Aeolosoma headleyi	1.6971	0.22970	0.03617	0.15747
0.84375	6.00999	Amnicola (Intermediate)	2.5981	0.41465	0.33738	0.81364
0.53125	5.07841	Anculosa	0.5185	-0.28529	0.04734	0.16593
0.46875	4.92159	Brachionus calyciflorus	0.2000	-0.69897	.	.
0.90625	6.31801	Dugesia tigrina (Tolerant)	10.0000	1.00000	.	.
0.78125	5.77642	Nais (Tolerant)	2.3000	0.36173	.	.
0.65625	5.40225	Philodina acuticornis	1.6882	0.22742	0.07259	0.31920
0.34375	4.59775	Physa heterostropha	0.0811	-1.09095	0.34831	0.31927
0.09375	3.68199	Posthodiplostomum minimum	0.0288	-1.53994	0.06376	0.04141
0.21875	4.22358	Pyganodon grandis	0.0460	-1.33724	.	.
0.03125	3.13727	Spirostomum ambiguum	0.0064	-2.19382	.	.
0.03125	.	-->EC50 -DVP	.	-5.44914	.	.
0.40625	4.76280	Tubifex tubifex (Tolerant)	0.1533	-0.81457	1.05031	1.28941
0.28125	4.42087	Villosa iris	0.0529	-1.27620	0.13649	0.10695
0.59375	5.23720	Viviparus bengalensis	1.3600	0.13354	.	.
0.96875	6.86273	Zygoptera	10.2000	1.00860	.	.

Copper SSD for non-Arthropod invertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 97) data for non-arthropod Invertebrate species exposed to copper in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	2.31042	7.46606	0.81506	-1.06737	0.58552	3	0.23640

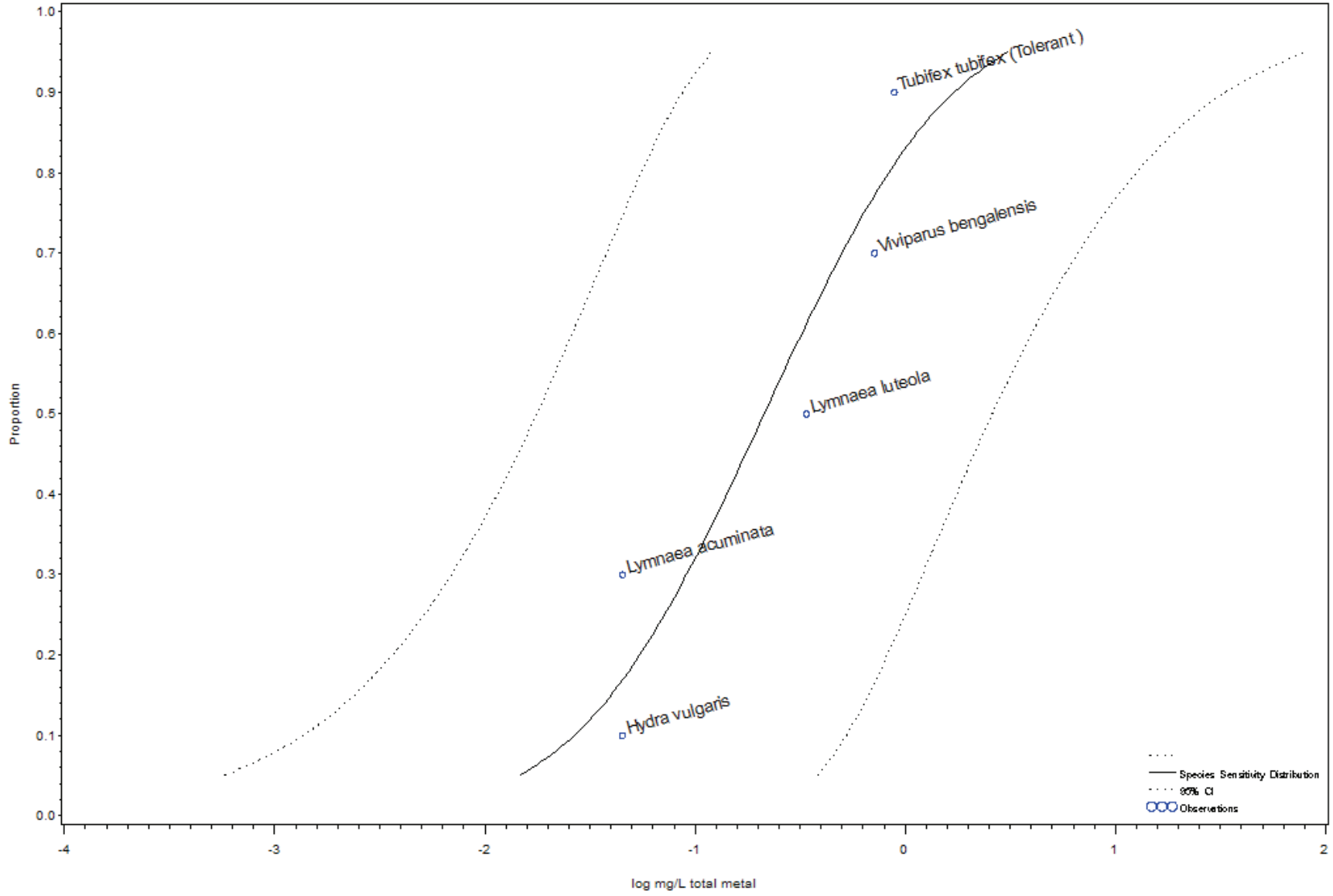
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.01662	0.08560	0.003228	-1.77929	-1.06750	-2.49108	4.95561
0.10	3.71845	0.02388	0.10678	0.005338	-1.62205	-0.97150	-2.27260	4.24889
0.20	4.15838	0.03701	0.14451	0.009480	-1.43164	-0.84010	-2.02317	3.64810
0.25	4.32551	0.04372	0.16413	0.011647	-1.35930	-0.78482	-1.93378	3.48750
0.30	4.47560	0.05078	0.18523	0.013919	-1.29434	-0.73228	-1.85640	3.37390
0.50	5.00000	0.08563	0.29865	0.024554	-1.06737	-0.52484	-1.60989	3.20082
0.75	5.67449	0.16771	0.62958	0.044677	-0.77543	-0.20095	-1.34991	3.48750
0.90	6.28155	0.30713	1.37362	0.068671	-0.51268	0.13787	-1.16323	4.24889
0.95	6.64485	0.44113	2.27172	0.085659	-0.35544	0.35635	-1.06723	4.95561

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.1	3.71845	Hydra vulgaris	0.03200	-1.49485	.	.
0.9	6.28155	Lumbriculus variegatus	0.18735	-0.72735	0.22445	0.30859
0.3	4.47560	Lymnaea acuminata	0.03400	-1.46852	0.00000	0.00000
0.7	5.52440	Lymnaea luteola	0.17200	-0.76447	.	.
0.5	5.00000	Viviparus bengalensis	0.13133	-0.88164	0.41411	0.46971

Copper SSD for non-Arthropod invertebrates - in very hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 98) data for non-arthropod Invertebrate species exposed to copper in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.42132	5.95184	0.84737	-0.66968	1.60851	3	0.19510

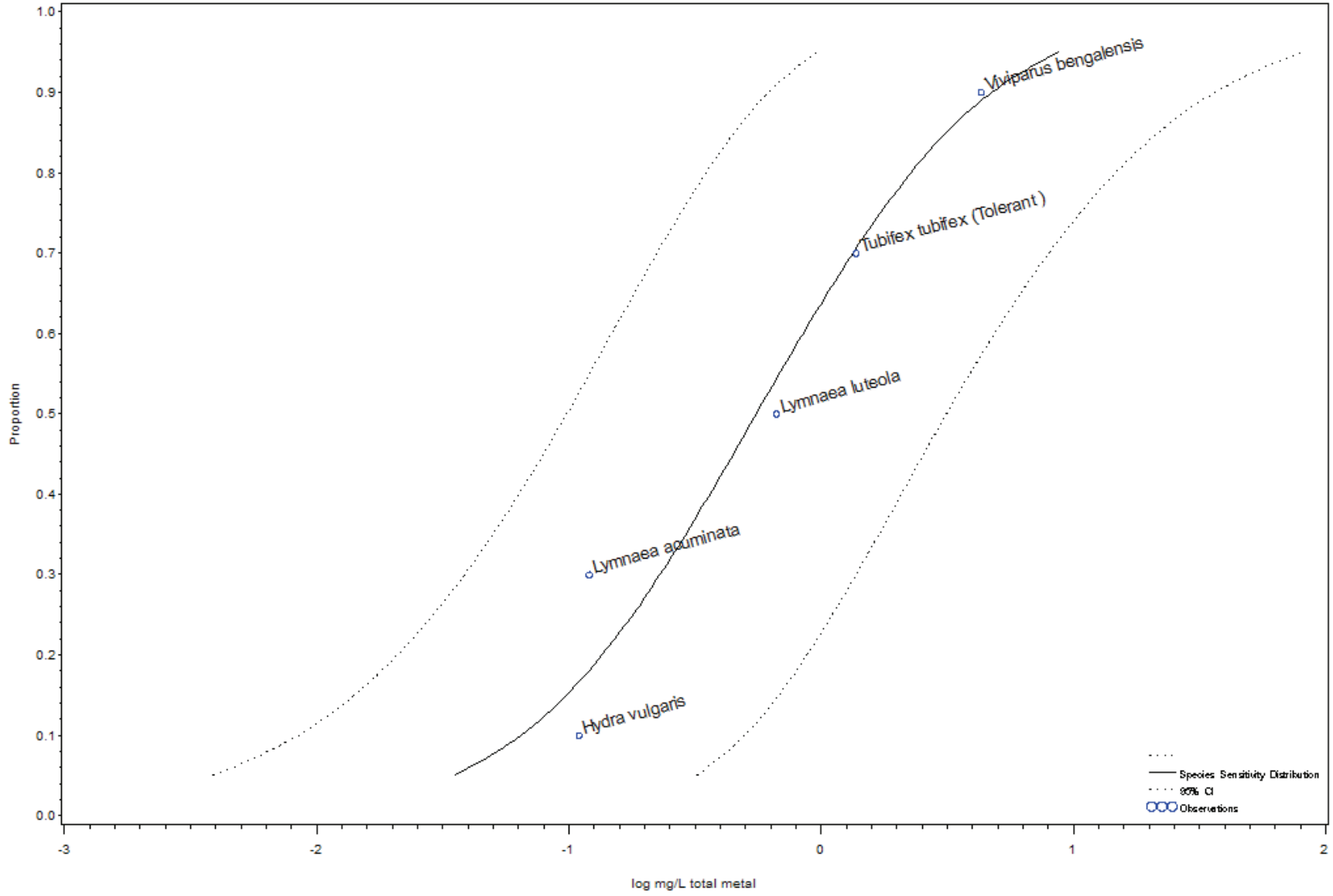
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.01490	0.1643	0.00135	-1.82696	-0.78426	-2.86965	10.9423
0.10	3.71845	0.02683	0.2420	0.00298	-1.57135	-0.61626	-2.52644	8.9067
0.20	4.15838	0.05472	0.4065	0.00737	-1.26183	-0.39093	-2.13272	7.2937
0.25	4.32551	0.07174	0.5039	0.01021	-1.14424	-0.29763	-1.99084	6.8820
0.30	4.47560	0.09149	0.6170	0.01357	-1.03864	-0.20971	-1.86757	6.5959
0.50	5.00000	0.21395	1.3535	0.03382	-0.66968	0.13147	-1.47084	6.1684
0.75	5.67449	0.63807	4.4820	0.09084	-0.19513	0.65147	-1.04174	6.8820
0.90	6.28155	1.70600	15.3840	0.18918	0.23198	1.18707	-0.72311	8.9067
0.95	6.64485	3.07318	33.9062	0.27855	0.48759	1.53028	-0.55510	10.9423

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.1	3.71845	Hydra vulgaris	0.04530	-1.34391	0.10791	0.08030
0.3	4.47560	Lymnaea acuminata	0.04541	-1.34285	0.05723	0.04262
0.5	5.00000	Lymnaea luteola	0.34100	-0.46725	.	.
0.9	6.28155	Tubifex tubifex (Tolerant)	0.89000	-0.05061	.	.
0.7	5.52440	Viviparus bengalensis	0.71811	-0.14381	0.73971	5.14376

Copper SSD for non-Arthropod invertebrates - in very hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 99) data for non-arthropod Invertebrate species exposed to copper in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.37463	5.35153	0.93113	-0.25573	1.88961	3	0.088035

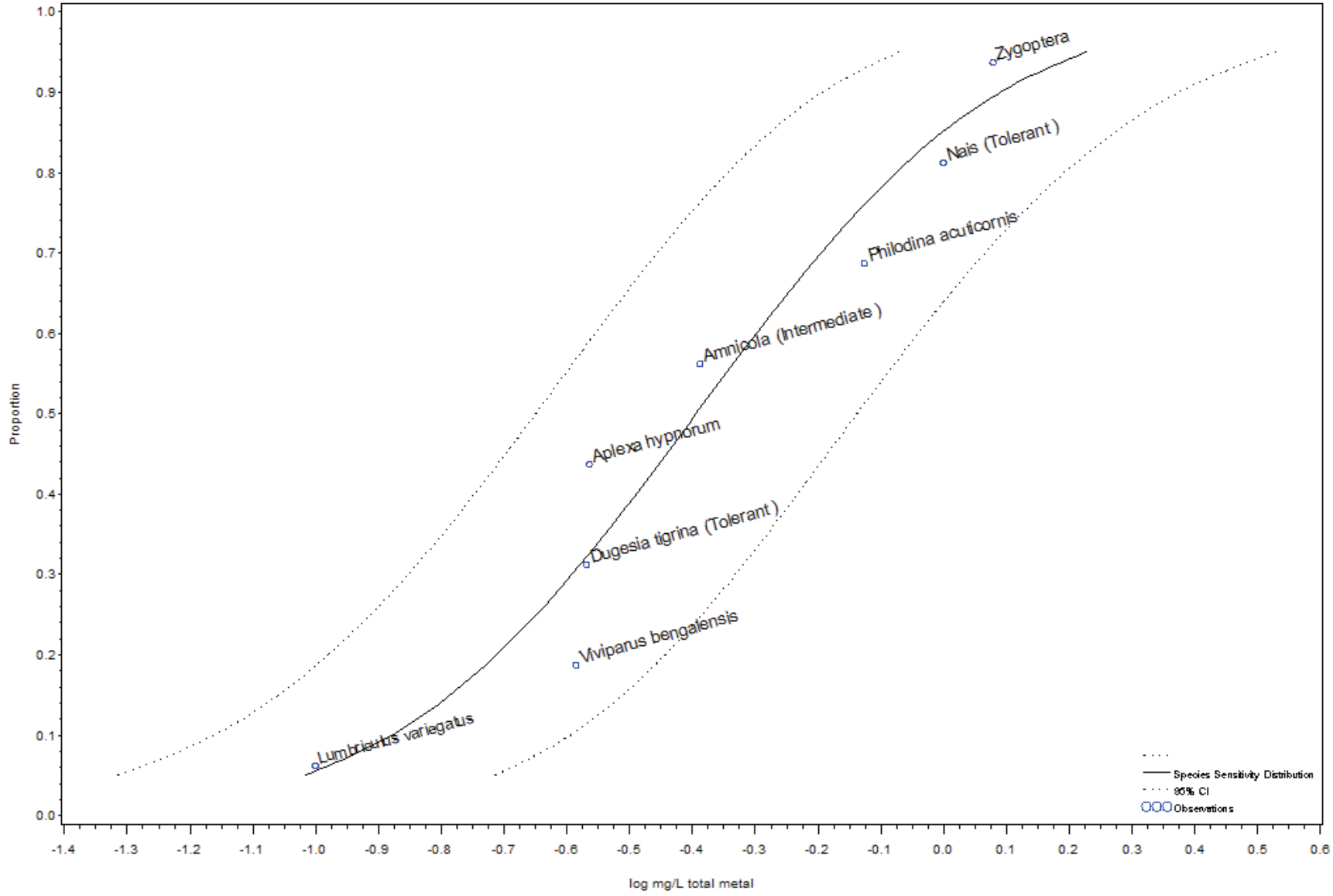
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.03529	0.1813	0.00687	-1.45231	-0.74157	-2.16304	4.94263
0.10	3.71845	0.06486	0.2927	0.01437	-1.18802	-0.53356	-1.84247	4.29133
0.20	4.15838	0.13553	0.5404	0.03399	-0.86798	-0.26730	-1.46866	3.73652
0.25	4.32551	0.17931	0.6900	0.04660	-0.74640	-0.16116	-1.33164	3.58817
0.30	4.47560	0.23056	0.8646	0.06148	-0.63721	-0.06319	-1.21124	3.48326
0.50	5.00000	0.55497	1.9986	0.15411	-0.25573	0.30072	-0.81217	3.32349
0.75	5.67449	1.71768	6.6097	0.44638	0.23494	0.82018	-0.35030	3.58817
0.90	6.28155	4.74853	21.4297	1.05221	0.67656	1.33102	0.02210	4.29133
0.95	6.64485	8.72669	44.8315	1.69870	0.94085	1.65158	0.23012	4.94263

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.1	3.71845	Hydra vulgaris	0.11000	-0.95861	.	.
0.3	4.47560	Lymnaea acuminata	0.12070	-0.91830	0.12661	0.13787
0.5	5.00000	Lymnaea luteola	0.66549	-0.17686	0.18676	1.05603
0.7	5.52440	Tubifex tubifex (Tolerant)	1.38000	0.13988	.	.
0.9	6.28155	Viviparus bengalensis	4.31766	0.63525	0.44705	0.70374

Mercury SSD for non-Arthropod invertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 132) data for non-arthropod Invertebrate species exposed to mercury in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
8	2.64598	6.04238	0.94001	-0.39395	0.91412	6	0.068069

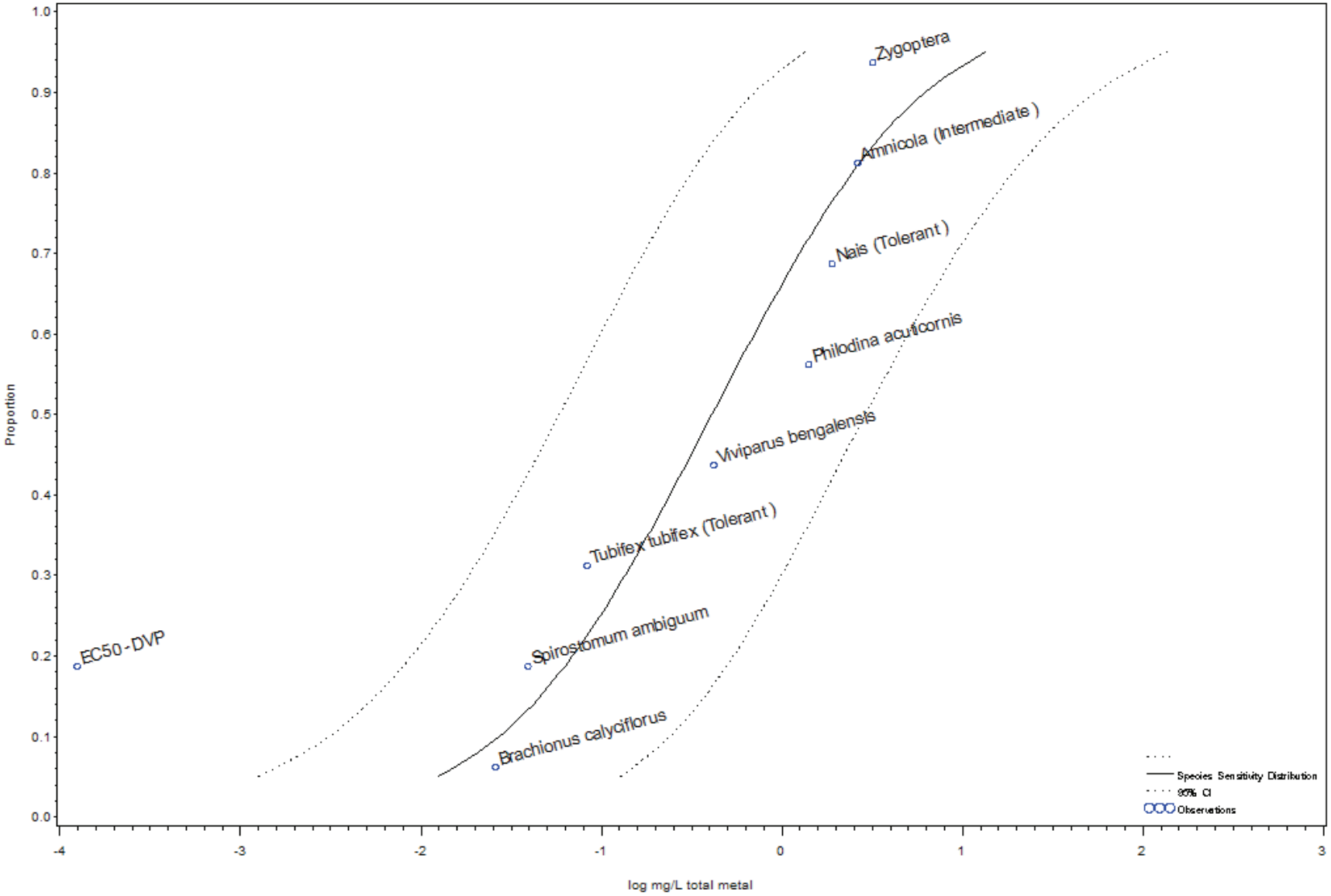
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.09647	0.16702	0.05572	-1.01559	-0.77722	-1.25396	1.15368
0.10	3.71845	0.13235	0.22229	0.07880	-0.87828	-0.65307	-1.10350	1.08426
0.20	4.15838	0.19408	0.31693	0.11885	-0.71202	-0.49903	-0.92501	1.02063
0.25	4.32551	0.22446	0.36366	0.13855	-0.64886	-0.43931	-0.85840	1.00288
0.30	4.47560	0.25578	0.41204	0.15878	-0.59213	-0.38506	-0.79920	0.99013
0.50	5.00000	0.40370	0.64458	0.25283	-0.39395	-0.19072	-0.59717	0.97042
0.75	5.67449	0.72605	1.17628	0.44814	-0.13904	0.07051	-0.34858	1.00288
0.90	6.28155	1.23138	2.06827	0.73313	0.09039	0.31561	-0.13482	1.08426
0.95	6.64485	1.68926	2.92459	0.97572	0.22770	0.46606	-0.01067	1.15368

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.5625	5.15731	Amnicola (Intermediate)	0.40988	-0.38735	1.00348	2.59065
0.4375	4.84269	Aplexa hypnorum	0.27300	-0.56384	.	.
0.3125	4.51122	Dugesia tigrina (Tolerant)	0.27000	-0.56864	.	.
0.0625	3.46588	Lumbriculus variegatus	0.10000	-1.00000	.	.
0.8125	5.88715	Nais (Tolerant)	1.00000	0.00000	.	.
0.6875	5.48878	Philodina acuticornis	0.74833	-0.12591	0.04101	0.32569
0.1875	4.11285	Viviparus bengalensis	0.26000	-0.58503	.	.
0.9375	6.53412	Zygoptera	1.20000	0.07918	.	.

Mercury SSD for non-Arthropod invertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 133) data for non-arthropod Invertebrate species exposed to mercury in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
8	1.08625	5.41961	0.88906	-0.38630	5.13003	6	0.12589

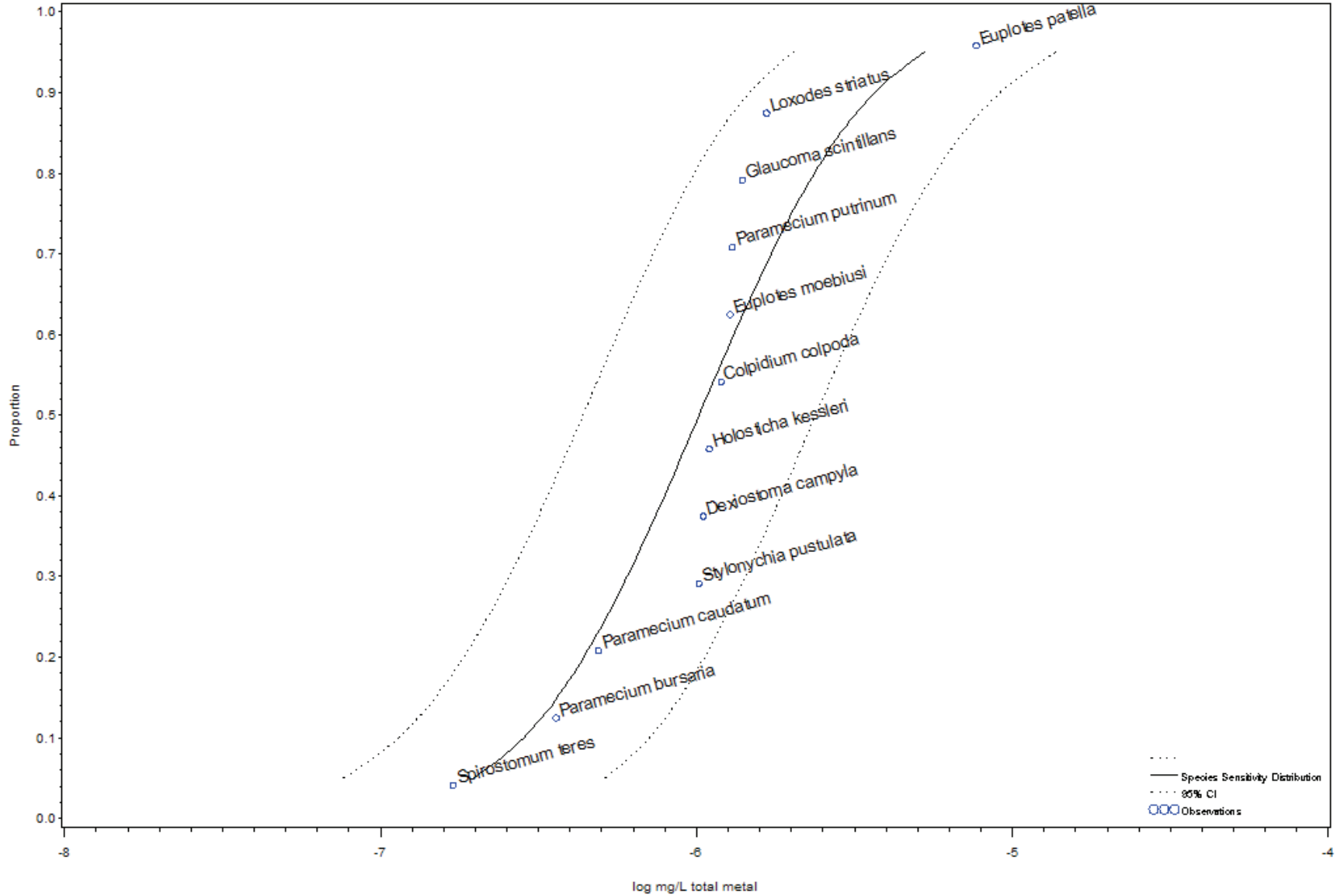
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.0126	0.0786	0.00201	-1.90055	-1.10476	-2.69635	6.08870
0.10	3.71845	0.0272	0.1527	0.00483	-1.56610	-0.81608	-2.31611	5.44582
0.20	4.15838	0.0690	0.3518	0.01354	-1.16110	-0.45373	-1.86846	4.90138
0.25	4.32551	0.0983	0.4876	0.01983	-1.00723	-0.31190	-1.70257	4.75669
0.30	4.47560	0.1352	0.6571	0.02781	-0.86906	-0.18239	-1.55574	4.65467
0.50	5.00000	0.4109	1.9361	0.08719	-0.38630	0.28692	-1.05951	4.49988
0.75	5.67449	1.7165	8.5109	0.34618	0.23464	0.92998	-0.46070	4.75669
0.90	6.28155	6.2159	34.9557	1.10531	0.79350	1.54352	0.04348	5.44582
0.95	6.64485	13.4263	83.8976	2.14865	1.12796	1.92375	0.33217	6.08870

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.8125	5.88715	Amnicola (Intermediate)	2.63249	0.42037	0.53595	1.27496
0.0625	3.46588	Brachionus calyciflorus	0.02600	-1.58503	.	.
0.6875	5.48878	Nais (Tolerant)	1.90000	0.27875	.	.
0.5625	5.15731	Philodina acuticornis	1.41421	0.15051	0.21286	1.41421
0.1875	4.11285	Spirostomum ambiguum	0.03930	-1.40561	.	.
0.1875	.	-->EC50 -DVP	.	-3.90207	.	.
0.3125	4.51122	Tubifex tubifex (Tolerant)	0.08360	-1.07778	0.11764	0.10915
0.4375	4.84269	Viviparus bengalensis	0.42000	-0.37675	.	.
0.9375	6.53412	Zygoptera	3.20000	0.50515	.	.

Nickel SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 147) data for non-arthropod Invertebrate species exposed to nickel in moderately hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
12	2.30770	18.8263	0.87555	-5.99135	1.77396	10	0.13428

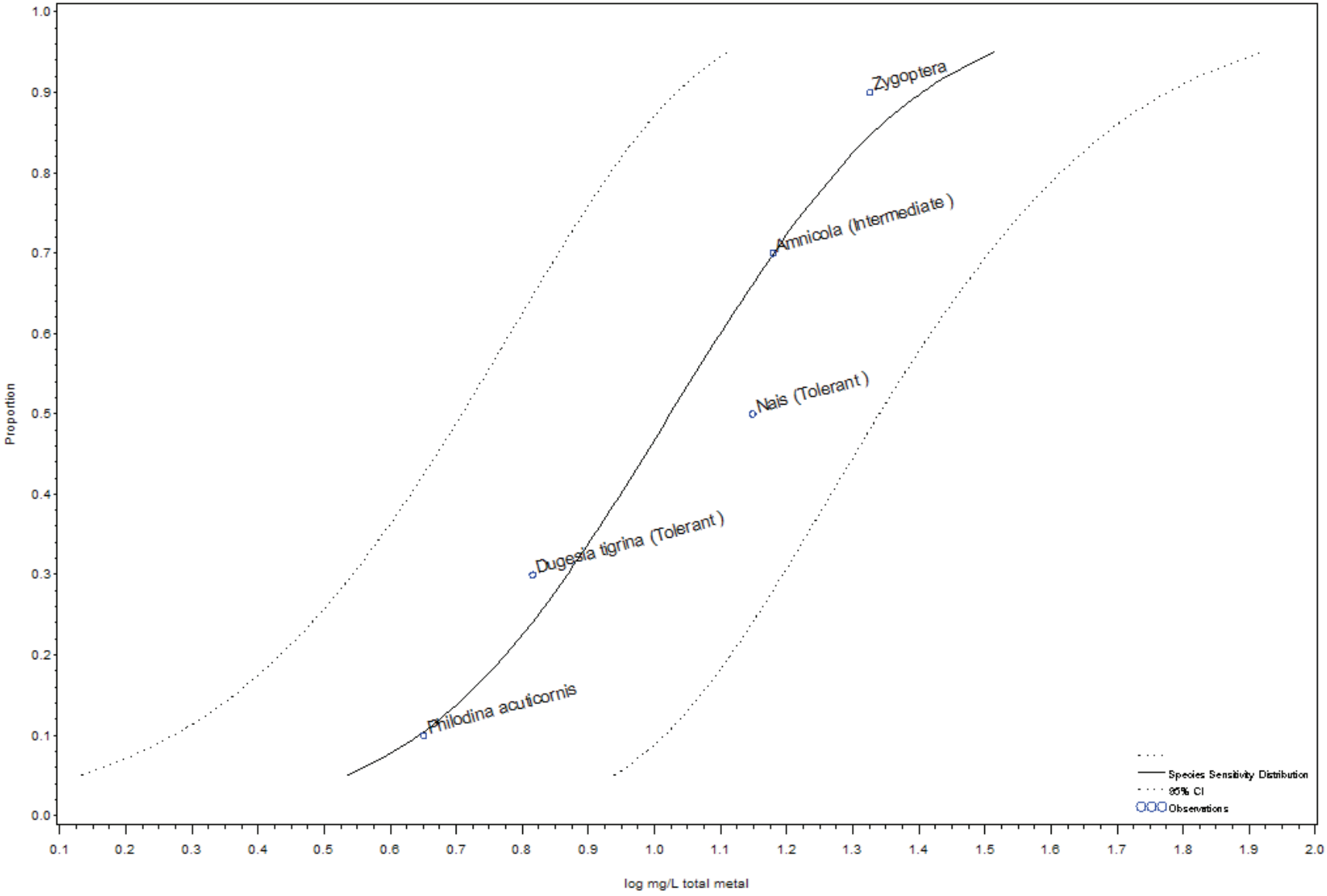
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	.000000198	.000000429	.000000091	-6.70412	-6.36729	-7.04095	1.71141
0.10	3.71845	.000000284	.000000597	.000000135	-6.54669	-6.22399	-6.86938	1.62664
0.20	4.15838	.000000441	.000000899	.000000216	-6.35605	-6.04630	-6.66580	1.55048
0.25	4.32551	.000000520	.000001053	.000000257	-6.28363	-5.97749	-6.58977	1.52952
0.30	4.47560	.000000605	.000001216	.000000301	-6.21859	-5.91504	-6.52214	1.51454
0.50	5.00000	.000001020	.000002033	.000000512	-5.99135	-5.69180	-6.29090	1.49151
0.75	5.67449	.000002000	.000004046	.000000988	-5.69907	-5.39293	-6.00521	1.52952
0.90	6.28155	.000003664	.000007703	.000001743	-5.43601	-5.11332	-5.75871	1.62664
0.95	6.64485	.000005265	.000011435	.000002424	-5.27858	-4.94175	-5.61541	1.71141

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.54167	5.10463	Colpidium colpoda	.00000120	-5.92082	.	.
0.37500	4.68136	Dexiostoma campyla	.00000105	-5.97881	.	.
0.62500	5.31864	Euplotes moebiusi	.00000128	-5.89279	.	.
0.95833	6.73166	Euplotes patella	.00000770	-5.11351	.	.
0.79167	5.81222	Glaucoma scintillans	.00000140	-5.85387	.	.
0.45833	4.89537	Holosticha kessleri	.00000110	-5.95861	.	.
0.87500	6.15035	Loxodes striatus	.00000167	-5.77728	.	.
0.12500	3.84965	Paramecium bursaria	.00000036	-6.44370	.	.
0.20833	4.18778	Paramecium caudatum	.00000049	-6.30980	.	.
0.70833	5.54852	Paramecium putrinum	.00000130	-5.88606	.	.
0.04167	3.26834	Spirostomum teres	.00000017	-6.76955	.	.
0.29167	4.45148	Stylonychia pustulata	.00000102	-5.99140	.	.

Nickel SSD for non-Arthropod invertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 148) data for non-arthropod Invertebrate species exposed to nickel in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	3.36670	1.55115	0.92726	1.02440	0.31371	3	0.092975

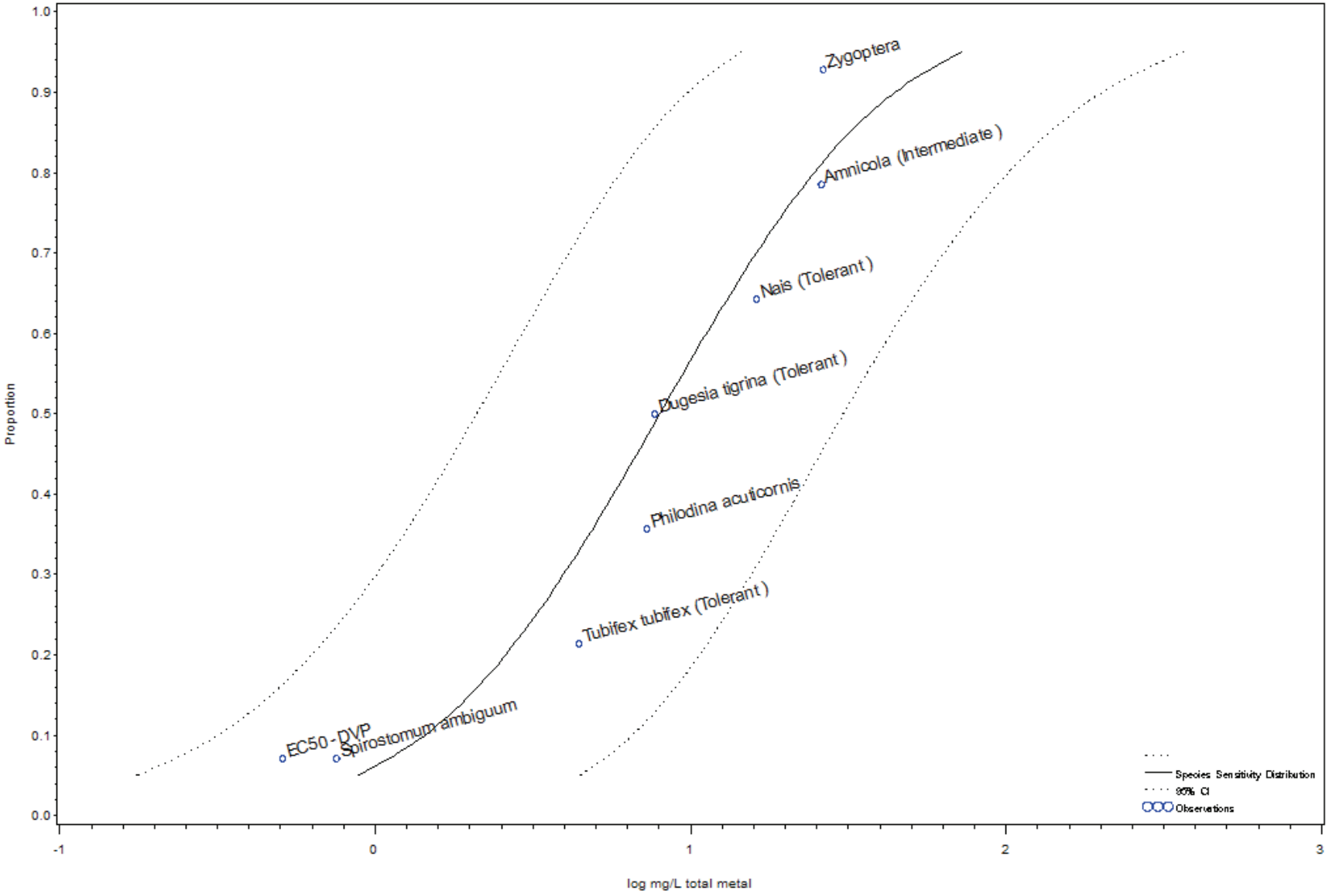
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	3.4343	6.8281	1.7273	0.53583	0.83430	0.23737	1.48526
0.10	3.71845	4.4029	8.2892	2.3387	0.64374	0.91851	0.36897	1.35148
0.20	4.15838	5.9486	10.6300	3.3288	0.77441	1.02653	0.52229	1.22738
0.25	4.32551	6.6689	11.7401	3.7883	0.82406	1.06967	0.57844	1.19237
0.30	4.47560	7.3899	12.8685	4.2437	0.86864	1.10953	0.62775	1.16711
0.50	5.00000	10.5779	18.1085	6.1789	1.02440	1.25788	0.79091	1.12779
0.75	5.67449	16.7780	29.5362	9.5307	1.22474	1.47035	0.97912	1.19237
0.90	6.28155	25.4128	47.8433	13.4984	1.40505	1.67982	1.13028	1.35148
0.95	6.64485	32.5809	64.7779	16.3870	1.51296	1.81143	1.21450	1.48526

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.7	5.52440	Amnicola (Intermediate)	15.1191	1.17953	0.13633	0.11558
0.3	4.47560	Dugesia tigrina (Tolerant)	6.5452	0.81592	0.57896	0.70957
0.5	5.00000	Nais (Tolerant)	14.1000	1.14922	.	.
0.1	3.71845	Philodina acuticornis	4.4770	0.65098	0.24595	0.37782
0.9	6.28155	Zygoptera	21.2000	1.32634	.	.

Nickel SSD for non-Arthropod invertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 149) data for non-arthropod Invertebrate species exposed to nickel in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
7	1.71987	3.44755	0.88643	0.90265	1.74271	5	0.13208

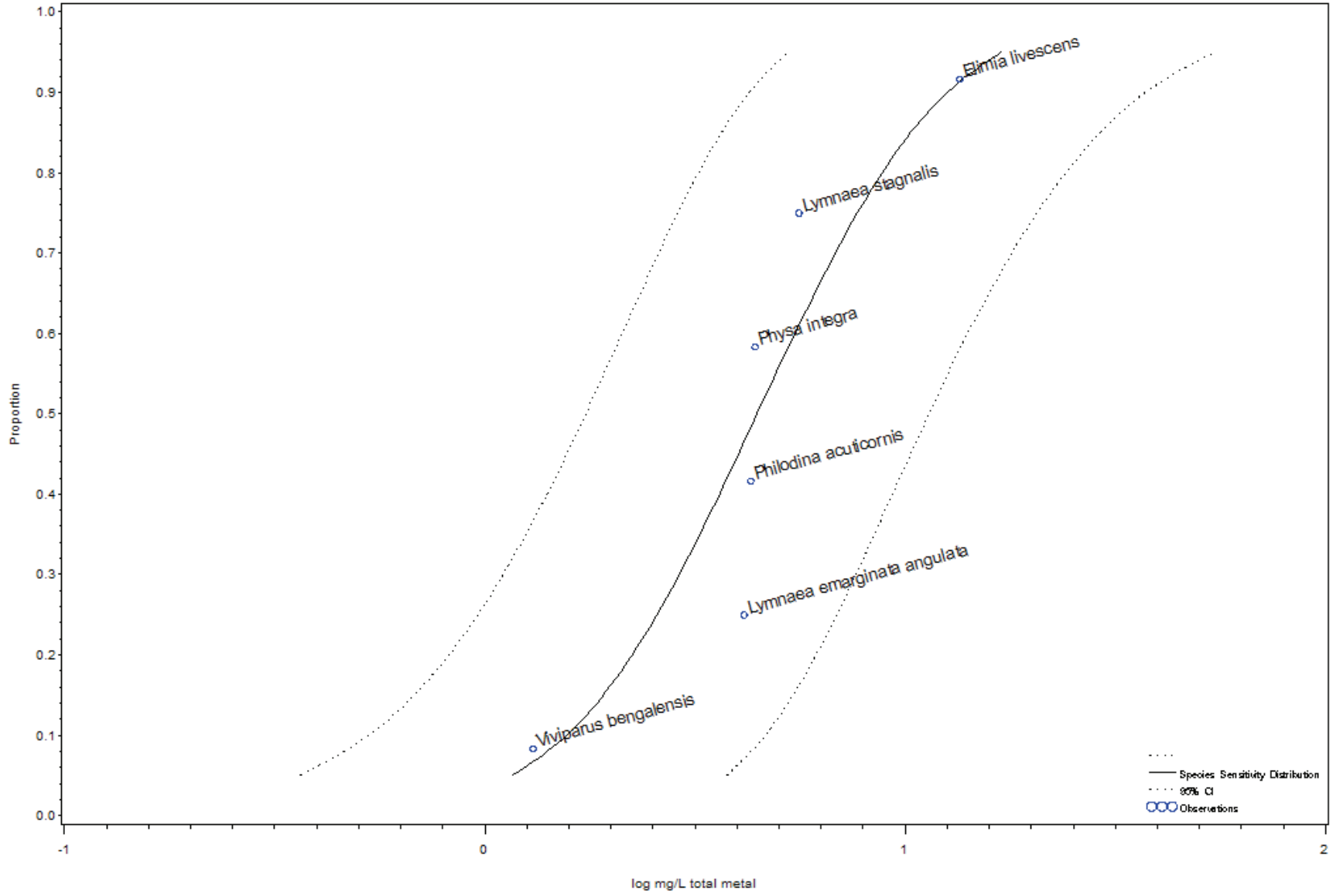
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.8836	3.134	0.2491	-0.05373	0.49616	-0.60362	3.26532
0.10	3.71845	1.4372	4.702	0.4393	0.15751	0.67228	-0.35725	2.96598
0.20	4.15838	2.5900	7.854	0.8541	0.41330	0.89510	-0.06850	2.70272
0.25	4.32551	3.2395	9.615	1.0915	0.51048	0.98294	0.03802	2.63103
0.30	4.47560	3.9605	11.573	1.3553	0.59775	1.06346	0.13204	2.58001
0.50	5.00000	7.9920	22.796	2.8019	0.90265	1.35786	0.44745	2.50181
0.75	5.67449	19.7165	58.518	6.6431	1.29483	1.76729	0.82237	2.63103
0.90	6.28155	44.4425	145.400	13.5842	1.64780	2.16256	1.13303	2.96598
0.95	6.64485	72.2831	256.405	20.3773	1.85904	2.40893	1.30915	3.26532

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.78571	5.79164	Amnicola (Intermediate)	26.0000	1.41497	.	.
0.50000	5.00000	Dugesia tigrina (Tolerant)	7.7000	0.88649	.	.
0.64286	5.36611	Nais (Tolerant)	16.2000	1.20952	.	.
0.35714	4.63389	Philodina acuticornis	7.2725	0.86168	0.01307	0.01517
0.07143	3.53477	Spirostomum ambiguum	0.7560	-0.12148	.	.
0.07143	.	-->EC50 -DVP	.	-0.29169	.	.
0.21429	4.20836	Tubifex tubifex (Tolerant)	4.4238	0.64579	1.36002	2.10597
0.92857	6.46523	Zygoptera	26.4000	1.42160	.	.

Zinc SSD for non-Arthropod invertebrates - in hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 184) data for non-arthropod Invertebrate species exposed to zinc in hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	2.83181	3.16451	0.87669	0.64817	0.52735	4	0.14871

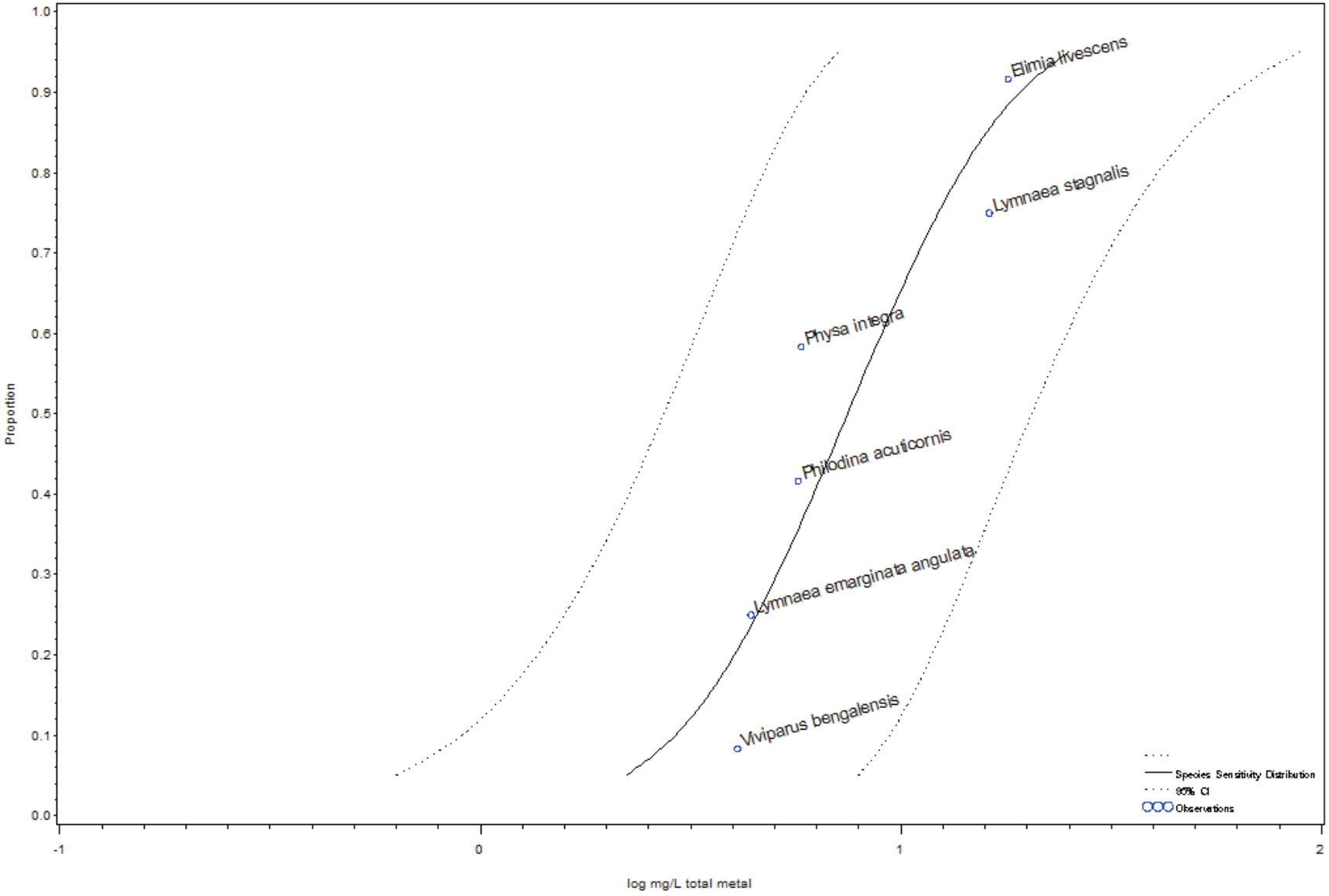
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	1.1677	2.8675	0.47548	0.06732	0.45750	-0.32287	2.04854
0.10	3.71845	1.5690	3.6110	0.68170	0.19561	0.55763	-0.16640	1.86704
0.20	4.15838	2.2437	4.8561	1.03667	0.35097	0.68629	0.01564	1.70229
0.25	4.32551	2.5703	5.4663	1.20859	0.40998	0.73769	0.08228	1.65649
0.30	4.47560	2.9039	6.0978	1.38292	0.46299	0.78517	0.14080	1.62363
0.50	5.00000	4.4480	9.1566	2.16072	0.64817	0.96174	0.33460	1.57281
0.75	5.67449	7.6975	16.3703	3.61946	0.88635	1.21406	0.55864	1.65649
0.90	6.28155	12.6102	29.0228	5.47906	1.10072	1.46274	0.73871	1.86704
0.95	6.64485	16.9440	41.6102	6.89971	1.22902	1.61920	0.83883	2.04854

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.91667	6.38299	Elimia livescens	13.5000	1.13033	.	.
0.25000	4.32551	Lymnaea emarginata angulata	4.1500	0.61805	.	.
0.75000	5.67449	Lymnaea stagnalis	5.6000	0.74819	.	.
0.41667	4.78957	Philodina acuticornis	4.3000	0.63347	.	.
0.58333	5.21043	Physa integra	4.4000	0.64345	.	.
0.08333	3.61701	Viviparus bengalensis	1.3047	0.11551	0.18524	1.60364

Zinc SSD for non-Arthropod invertebrates - in hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 185) data for non-arthropod Invertebrate species exposed to zinc in hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
6	3.13180	2.26453	0.82714	0.87345	0.40680	4	0.20846

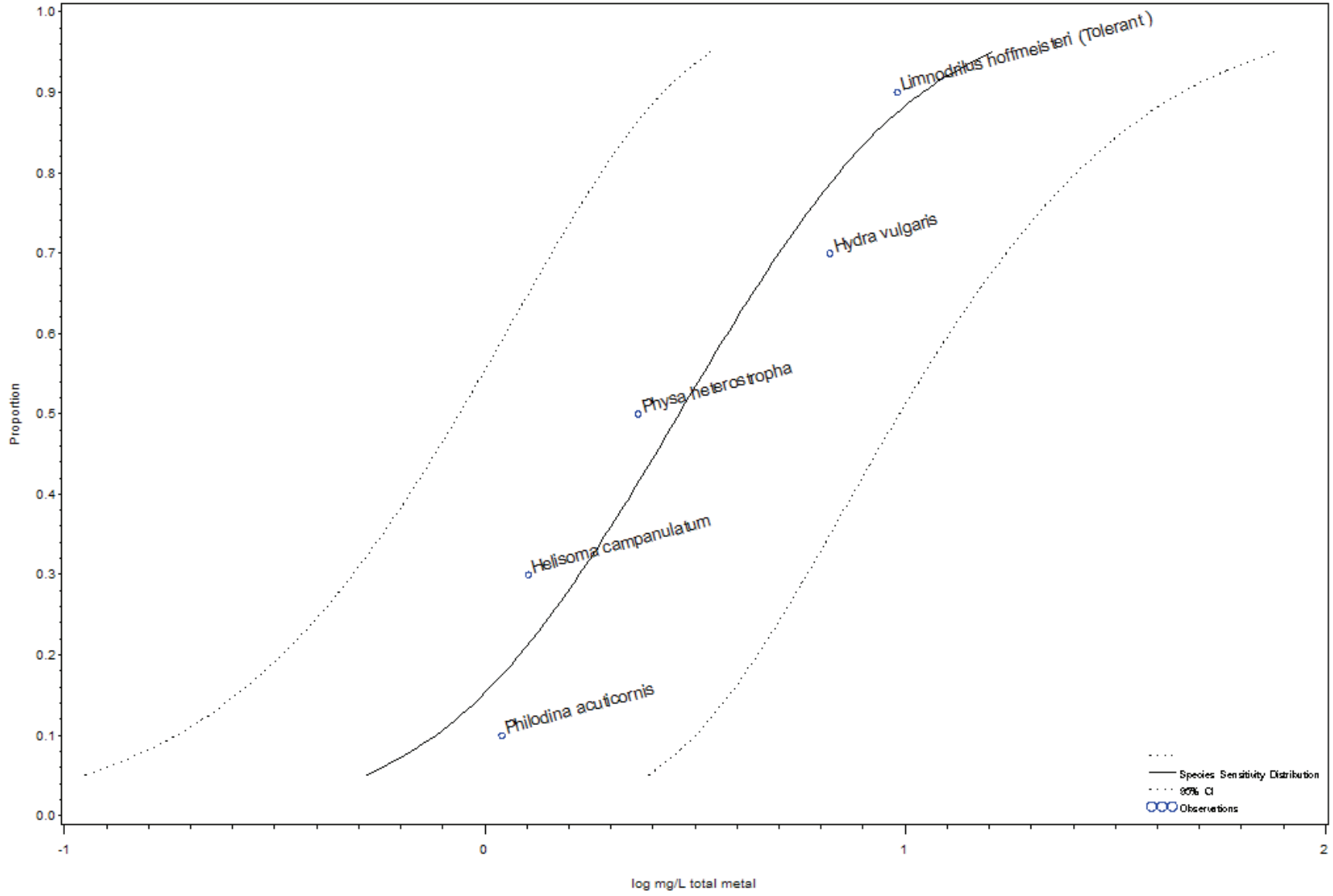
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	2.2297	5.8934	0.84355	0.34824	0.77037	-0.07389	2.26486
0.10	3.71845	2.9123	7.1564	1.18519	0.46424	0.85470	0.07379	2.05032
0.20	4.15838	4.0245	9.2267	1.75541	0.60471	0.96505	0.24438	1.85646
0.25	4.32551	4.5507	10.2282	2.02469	0.65808	1.00980	0.30636	1.80269
0.30	4.47560	5.0816	11.2584	2.29368	0.70600	1.05148	0.36053	1.76413
0.50	5.00000	7.4722	16.1862	3.44944	0.87345	1.20915	0.53775	1.70456
0.75	5.67449	12.2692	27.5762	5.45877	1.08881	1.44053	0.73709	1.80269
0.90	6.28155	19.1713	47.1093	7.80187	1.28265	1.67311	0.89220	2.05032
0.95	6.64485	25.0413	66.1890	9.47387	1.39866	1.82079	0.97653	2.26486

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.91667	6.38299	Elimia livescens	18.0000	1.25527	.	.
0.25000	4.32551	Lymnaea emarginata angulata	4.4000	0.64345	.	.
0.75000	5.67449	Lymnaea stagnalis	16.2462	1.21075	0.52294	0.43191
0.41667	4.78957	Philodina acuticornis	5.7000	0.75587	.	.
0.58333	5.21043	Physa integra	5.8000	0.76343	.	.
0.08333	3.61701	Viviparus bengalensis	4.0917	0.61190	0.09331	0.15249

Zinc SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 186) data for non-arthropod Invertebrate species exposed to zinc in moderately hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	2.21459	3.97518	0.91351	0.46276	0.71427	3	0.11055

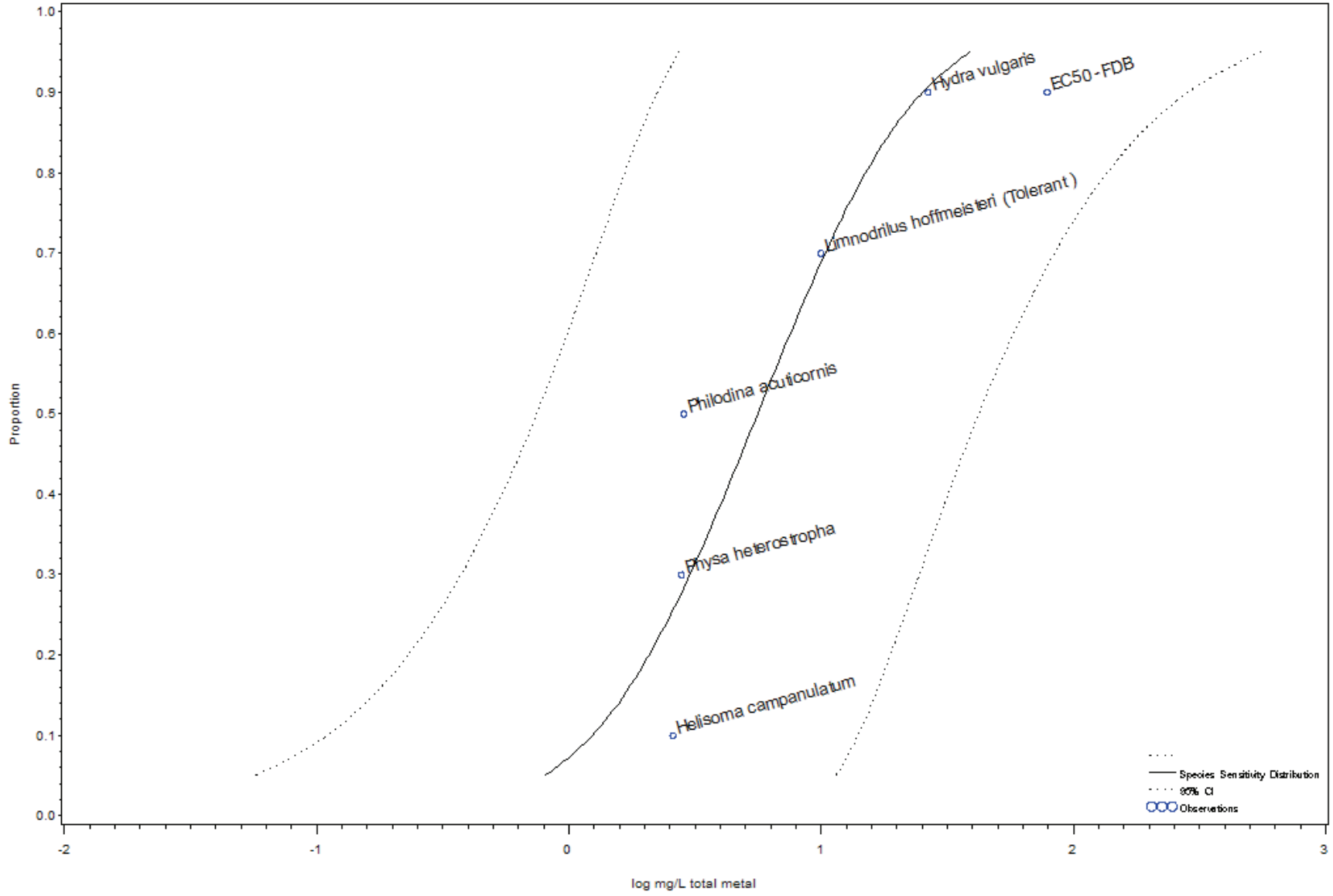
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.5248	1.6453	0.16742	-0.27998	0.21623	-0.77619	2.81579
0.10	3.71845	0.7657	2.1903	0.26769	-0.11593	0.34051	-0.57236	2.51088
0.20	4.15838	1.2098	3.1704	0.46167	0.08272	0.50111	-0.33566	2.23892
0.25	4.32551	1.4394	3.6783	0.56330	0.15819	0.56565	-0.24926	2.16404
0.30	4.47560	1.6825	4.2216	0.67059	0.22597	0.62547	-0.17354	2.11048
0.50	5.00000	2.9024	7.0763	1.19045	0.46276	0.84981	0.07571	2.02793
0.75	5.67449	5.8523	14.9548	2.29019	0.76733	1.17478	0.35987	2.16404
0.90	6.28155	11.0013	31.4690	3.84598	1.04144	1.49788	0.58501	2.51088
0.95	6.64485	16.0507	50.3156	5.12018	1.20549	1.70170	0.70929	2.81579

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.3	4.47560	Helisoma campanulatum	1.27000	0.10380	.	.
0.7	5.52440	Hydra vulgaris	6.63000	0.82151	.	.
0.9	6.28155	Limnodrilus hoffmeisteri (Tolerant)	9.59435	0.98202	0.04405	0.04486
0.1	3.71845	Philodina acuticornis	1.10000	0.04139	.	.
0.5	5.00000	Physa heterostropha	2.31776	0.36507	0.19038	0.52149

Zinc SSD for non-Arthropod invertebrates - in moderately hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 187) data for non-arthropod Invertebrate species exposed to zinc in moderately hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.95879	3.53388	0.81019	0.74848	0.80975	3	0.24262

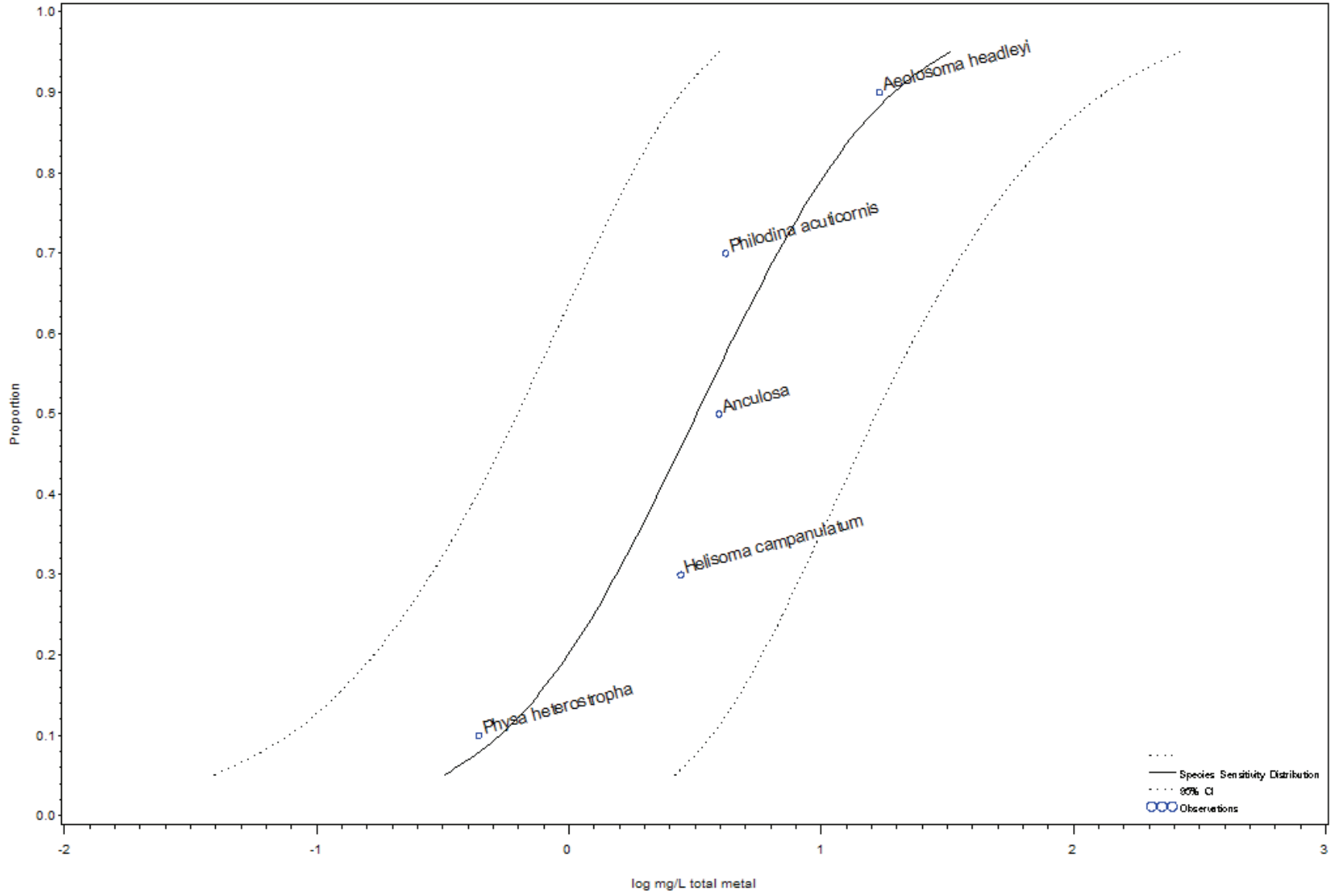
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.8105	5.759	0.11407	-0.09125	0.76035	-0.94284	6.96480
0.10	3.71845	1.2423	7.452	0.20709	0.09423	0.87229	-0.68383	5.83204
0.20	4.15838	2.0836	10.617	0.40893	0.31882	1.02599	-0.38835	4.89906
0.25	4.32551	2.5360	12.326	0.52175	0.40414	1.09082	-0.28254	4.65475
0.30	4.47560	3.0253	14.207	0.64419	0.48077	1.15251	-0.19098	4.48329
0.50	5.00000	5.6038	24.932	1.25955	0.74848	1.39675	0.10022	4.22427
0.75	5.67449	12.3829	60.187	2.54767	1.09282	1.77950	0.40614	4.65475
0.90	6.28155	25.2778	151.635	4.21385	1.40274	2.18080	0.62468	5.83204
0.95	6.64485	38.7447	275.302	5.45274	1.58821	2.43981	0.73661	6.96480

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.1	3.71845	Helisoma campanulatum	2.5920	0.41363	0.43816	1.05931
0.9	6.28155	Hydra vulgaris	26.6300	1.42537	.	.
0.9	.	-->EC50 -FDB	.	1.89762	.	.
0.7	5.52440	Limnodrilus hoffmeisteri (Tolerant)	10.0000	1.00000	0.00000	0.00000
0.5	5.00000	Philodina acuticornis	2.8544	0.45552	0.21420	0.47024
0.3	4.47560	Physa heterostropha	2.8047	0.44789	0.11436	0.25533

Zinc SSD for non-Arthropod invertebrates - in soft water at T<=15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 188) data for non-arthropod Invertebrate species exposed to zinc in soft water at T<=15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.64300	4.16493	0.91197	0.50826	1.29551	3	0.11252

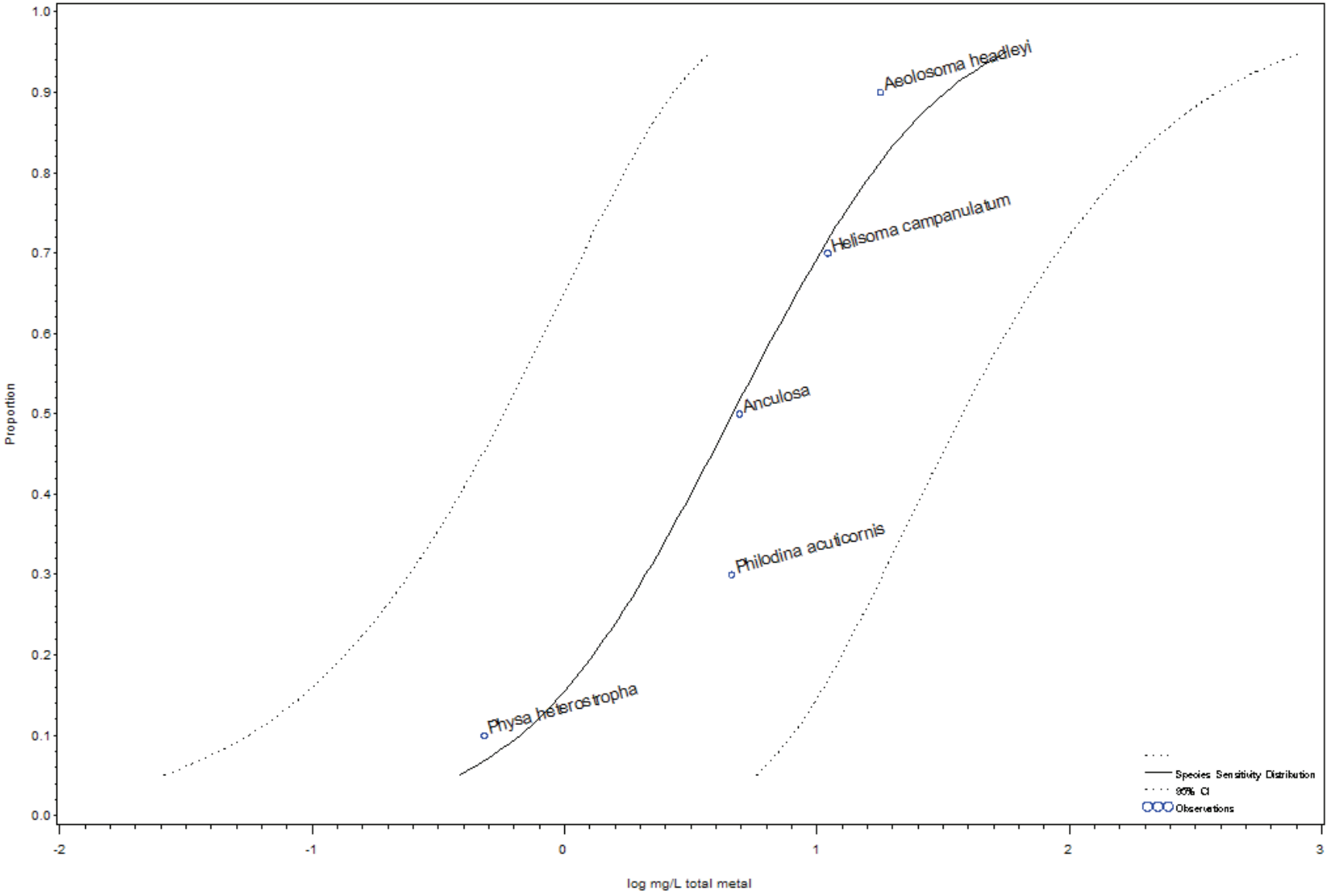
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.3215	1.521	0.06794	-0.49287	0.18212	-1.16786	4.52007
0.10	3.71845	0.5349	2.234	0.12806	-0.27175	0.34909	-0.89258	3.93727
0.20	4.15838	0.9909	3.673	0.26730	-0.00399	0.56503	-0.57300	3.43716
0.25	4.32551	1.2524	4.486	0.34963	0.09774	0.65186	-0.45639	3.30279
0.30	4.47560	1.5456	5.400	0.44237	0.18909	0.73238	-0.35421	3.20758
0.50	5.00000	3.2230	10.829	0.95925	0.50826	1.03459	-0.01807	3.06228
0.75	5.67449	8.2943	29.710	2.31558	0.91878	1.47290	0.36466	3.30279
0.90	6.28155	19.4207	81.114	4.64978	1.28827	1.90910	0.66743	3.93727
0.95	6.64485	32.3137	152.890	6.82959	1.50939	2.18438	0.83439	4.52007

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Aeolosoma headleyi	17.0650	1.23211	0.03430	0.02784
0.5	5.00000	Anculosa	3.9541	0.59705	0.13014	0.21797
0.3	4.47560	Helisoma campanulatum	2.7834	0.44457	0.65379	1.47061
0.7	5.52440	Philodina acuticornis	4.2000	0.62325	.	.
0.1	3.71845	Physa heterostropha	0.4409	-0.35568	0.11687	0.32857

Zinc SSD for non-Arthropod invertebrates - in soft water at T<=15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 189) data for non-arthropod Invertebrate species exposed to zinc in soft water at T<=15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	1.52103	3.98454	0.87720	0.66761	1.45397	3	0.15697

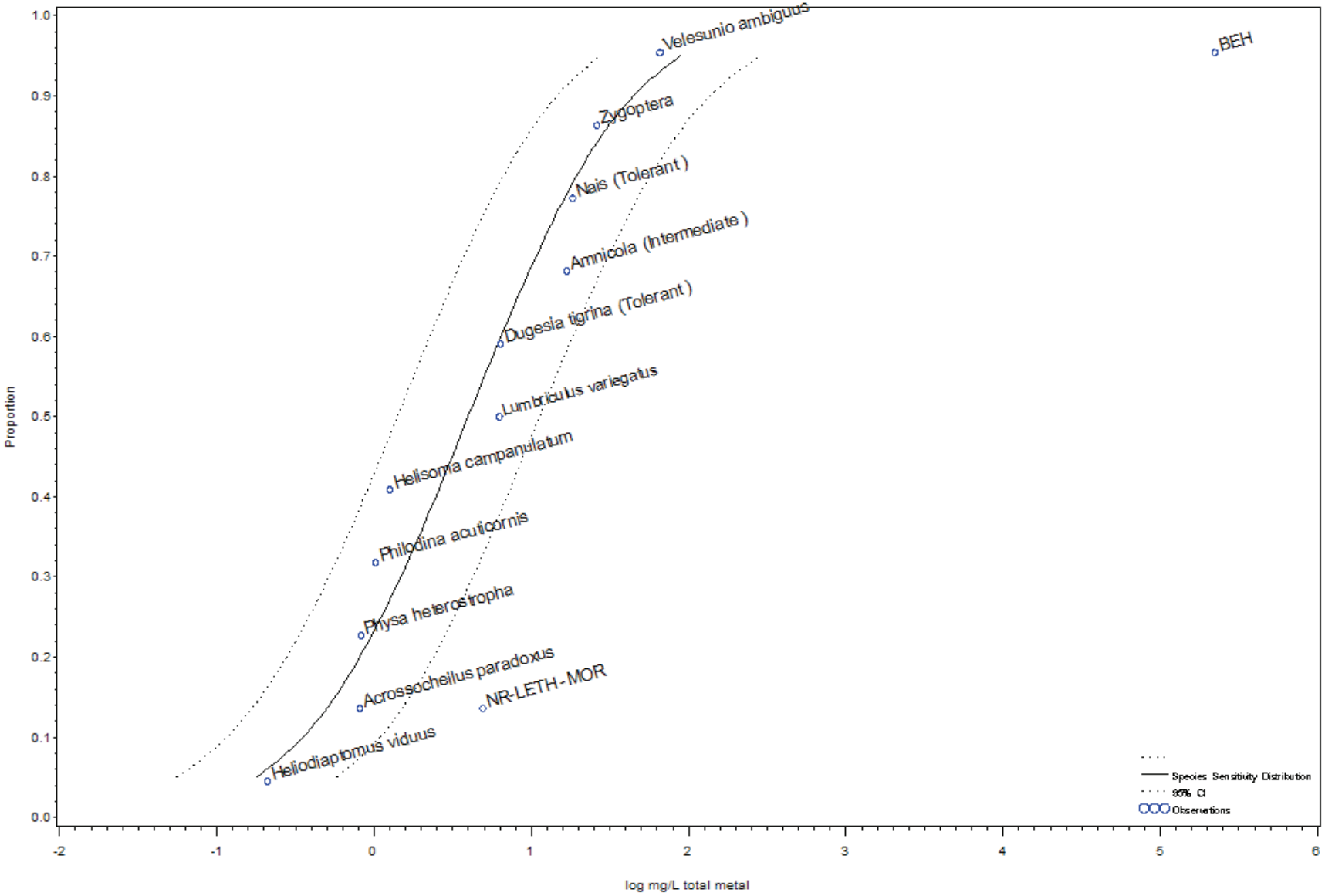
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.3857	2.845	0.05228	-0.41380	0.45404	-1.28163	7.24072
0.10	3.71845	0.6684	4.183	0.10680	-0.17494	0.62154	-0.97142	6.09886
0.20	4.15838	1.3010	6.955	0.24336	0.11429	0.84233	-0.61375	5.15907
0.25	4.32551	1.6756	8.561	0.32797	0.22417	0.93250	-0.48417	4.91323
0.30	4.47560	2.1030	10.395	0.42545	0.32284	1.01684	-0.37116	4.74079
0.50	5.00000	4.6517	21.833	0.99107	0.66761	1.33911	-0.00389	4.48050
0.75	5.67449	12.9137	65.976	2.52766	1.11105	1.81938	0.40272	4.91323
0.90	6.28155	32.3714	202.601	5.17228	1.51016	2.30664	0.71368	6.09886
0.95	6.64485	56.1066	413.858	7.60634	1.74901	2.61685	0.88118	7.24072

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.9	6.28155	Aeolosoma headleyi	17.9037	1.25294	0.044831	0.03578
0.5	5.00000	Anculosa	4.9530	0.69487	0.099757	0.14356
0.7	5.52440	Helisoma campanulatum	11.0700	1.04415	.	.
0.3	4.47560	Philodina acuticornis	4.6000	0.66276	.	.
0.1	3.71845	Physa heterostropha	0.4823	-0.31667	0.064824	0.20470

Zinc SSD for non-Arthropod invertebrates - in soft water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 190) data for non-arthropod Invertebrate species exposed to zinc in soft water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	1.22096	4.26794	0.94992	0.59958	6.24065	9	0.054498

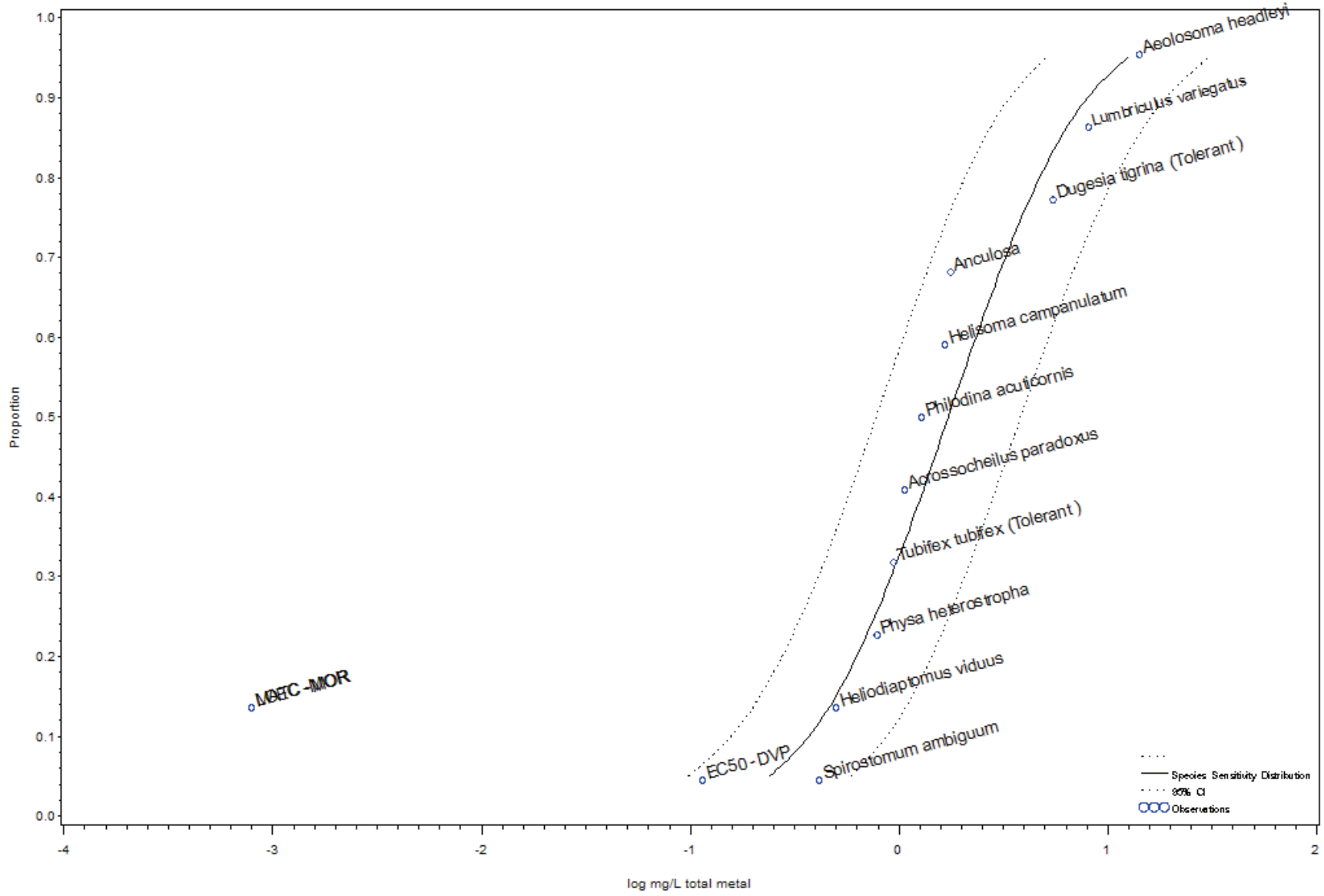
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.1788	0.462	0.0692	-0.74760	-0.33561	-1.15960	2.19495
0.10	3.71845	0.3548	0.880	0.1430	-0.45005	-0.05546	-0.84464	2.07767
0.20	4.15838	0.8133	1.945	0.3401	-0.08973	0.28890	-0.46837	1.97313
0.25	4.32551	1.1147	2.638	0.4709	0.04715	0.42134	-0.32704	1.94448
0.30	4.47560	1.4794	3.476	0.6296	0.17008	0.54108	-0.20092	1.92405
0.50	5.00000	3.9772	9.240	1.7120	0.59958	0.96565	0.23350	1.89270
0.75	5.67449	14.1906	33.589	5.9953	1.15200	1.52619	0.77781	1.94448
0.90	6.28155	44.5864	110.609	17.9728	1.64920	2.04379	1.25462	2.07767
0.95	6.64485	88.4620	228.428	34.2582	1.94676	2.35875	1.53476	2.19495

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.13636	3.90320	Acrossocheilus paradoxus	0.8133	-0.08975	.	.
0.13636	.	-->NR-LETH -MOR	.	0.69315	.	.
0.68182	5.47279	Amnicola (Intermediate)	16.8167	1.22574	0.11259	0.0919
0.59091	5.22988	Dugesia tigrina (Tolerant)	6.3680	0.80401	0.09224	0.1147
0.04545	3.30938	Heliodiaptomus viduus	0.2100	-0.67778	.	.
0.40909	4.77012	Helisoma campanulatum	1.2700	0.10380	.	.
0.50000	5.00000	Lumbriculus variegatus	6.3000	0.79934	.	.
0.77273	5.74786	Nais (Tolerant)	18.4000	1.26482	.	.
0.31818	4.52721	Philodina acuticornis	1.0235	0.01011	0.41695	41.2549
0.22727	4.25214	Physa heterostropha	0.8264	-0.08279	0.17707	2.1389
0.95455	6.69062	Velesunio ambiguus	66.0000	1.81954	.	.
0.95455	.	-->BEH	.	5.34711	.	.
0.86364	6.09680	Zygoptera	26.2000	1.41830	.	.

Zinc SSD for non-Arthropod invertebrates - in soft water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 191) data for non-arthropod Invertebrate species exposed to zinc in soft water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
11	1.92076	4.54698	0.92728	0.23586	2.46156	9	0.079134

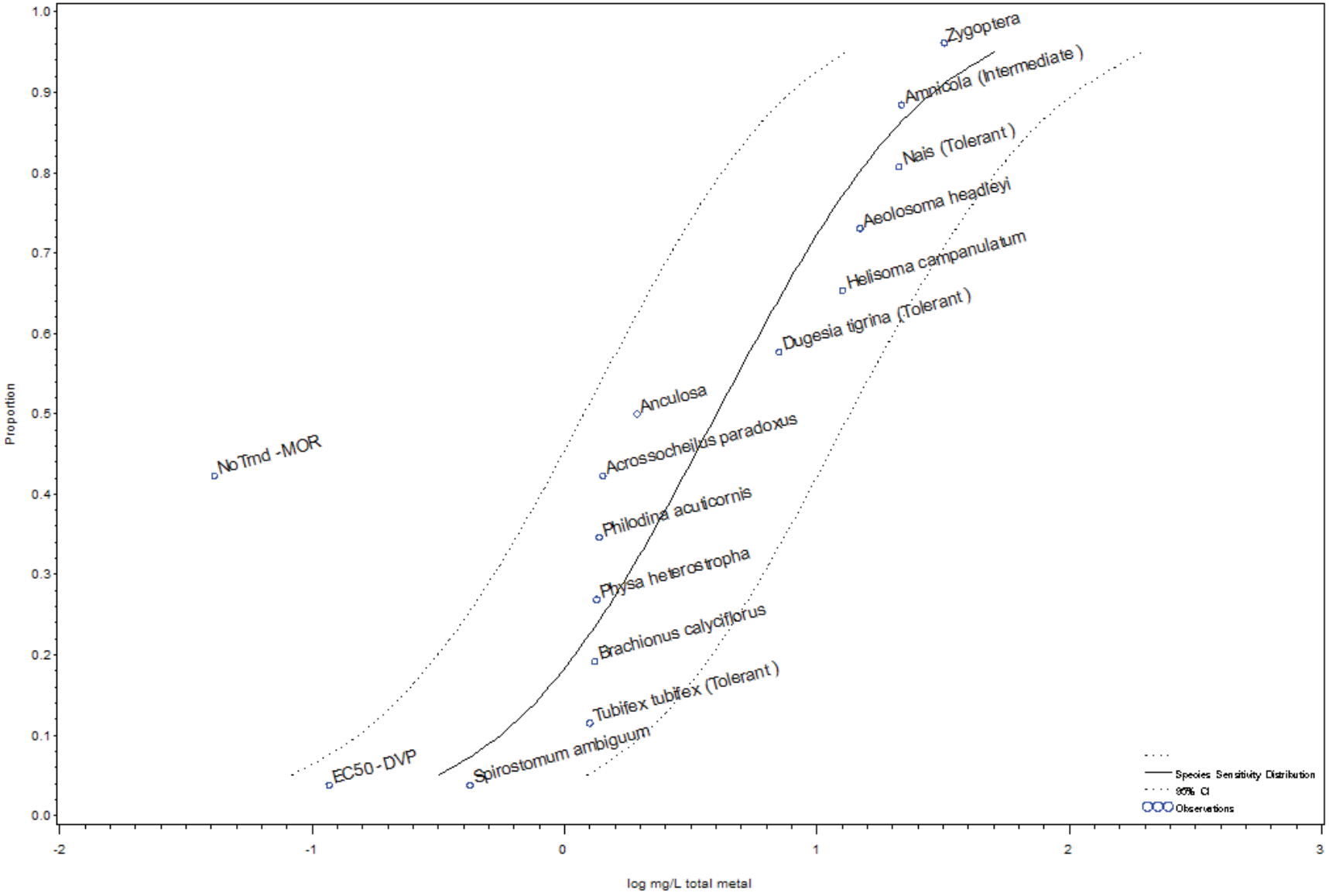
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.2396	0.4965	0.11564	-0.62050	-0.30411	-0.93689	1.58937
0.10	3.71845	0.3704	0.7437	0.18445	-0.43136	-0.12859	-0.73412	1.50998
0.20	4.15838	0.6276	1.2245	0.32168	-0.20232	0.08794	-0.49258	1.43846
0.25	4.32551	0.7668	1.4841	0.39621	-0.11530	0.17147	-0.40208	1.41874
0.30	4.47560	0.9180	1.7665	0.47705	-0.03716	0.24711	-0.32144	1.40464
0.50	5.00000	1.7213	3.2830	0.90250	0.23586	0.51626	-0.04455	1.38294
0.75	5.67449	3.8638	7.4780	1.99636	0.58701	0.87379	0.30024	1.41874
0.90	6.28155	7.9996	16.0630	3.98387	0.90307	1.20583	0.60030	1.50998
0.95	6.64485	12.3655	25.6212	5.96790	1.09221	1.40860	0.77582	1.58937

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.40909	4.77012	Acrossocheilus paradoxus	1.0664	0.02792	.	.
0.95455	6.69062	Aeolosoma headleyi	14.2302	1.15321	0.03236	0.0281
0.68182	5.47279	Anculosa	1.7706	0.24812	0.04332	0.1746
0.77273	5.74786	Dugesia tigrina (Tolerant)	5.4800	0.73878	.	.
0.13636	3.90320	Heliodiaptomus viduus	0.5000	-0.30103	.	.
0.13636	.	-->LOEC -MOR	.	-3.10109	.	.
0.13636	.	-->MATC -MOR	.	-3.10109	.	.
0.59091	5.22988	Helisoma campanulatum	1.6681	0.22221	0.07347	0.3306
0.86364	6.09680	Lumbriculus variegatus	8.1000	0.90849	.	.
0.50000	5.00000	Philodina acuticornis	1.2852	0.10897	0.46095	4.2300
0.22727	4.25214	Physa heterostropha	0.7862	-0.10444	0.25310	2.4234
0.04545	3.30938	Spirostomum ambiguum	0.4140	-0.38300	.	.
0.04545	.	-->EC50 -DVP	.	-0.94161	.	.
0.31818	4.52721	Tubifex tubifex (Tolerant)	0.9445	-0.02482	0.80932	32.6086

Zinc SSD for non-Arthropod invertebrates - in soft water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 192) data for non-arthropod Invertebrate species exposed to zinc in soft water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
13	1.49451	4.09725	0.88899	0.60404	4.69130	11	0.11895

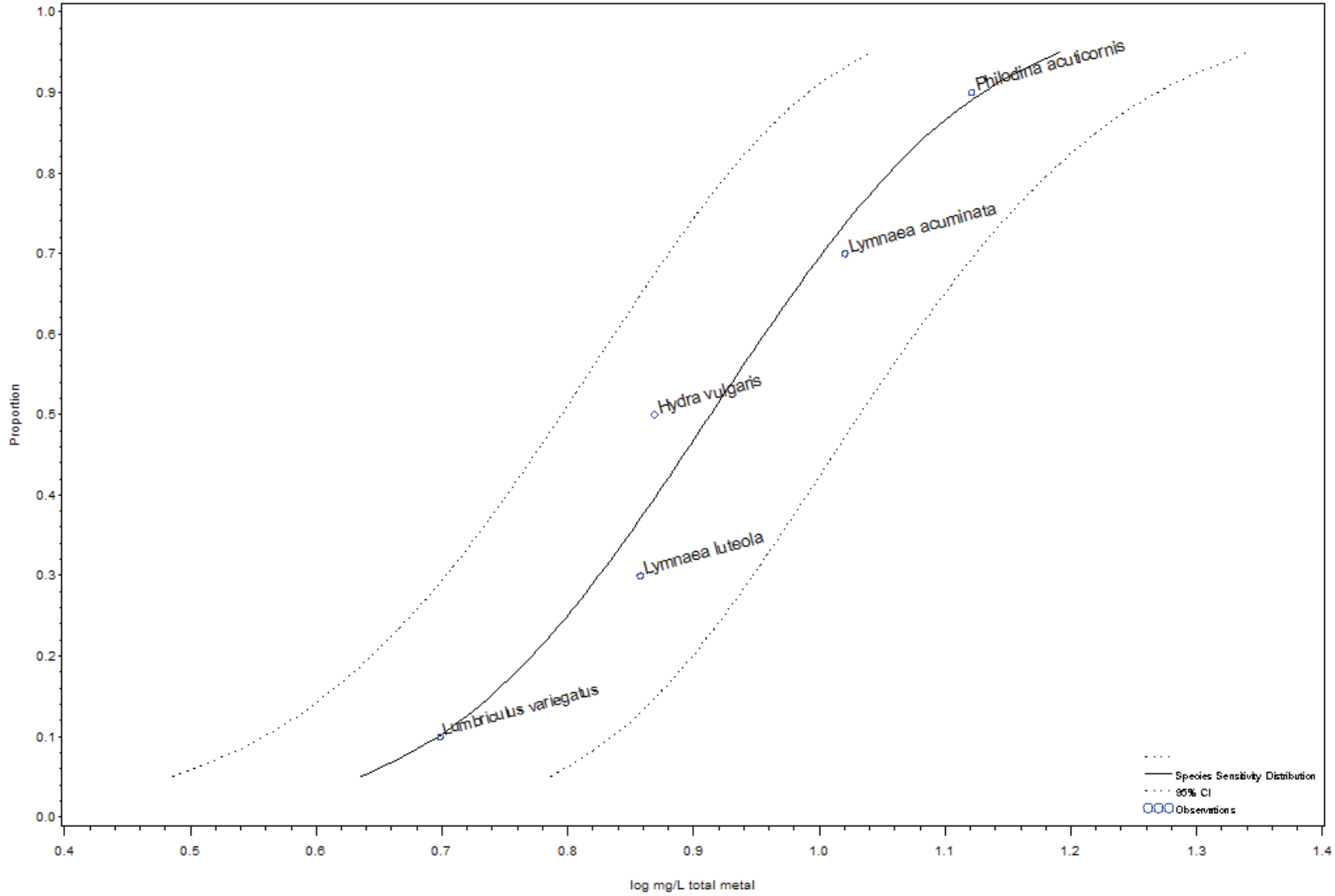
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	0.3187	0.960	0.1058	-0.49656	-0.01768	-0.97543	2.68017
0.10	3.71845	0.5579	1.610	0.1933	-0.25346	0.20686	-0.71379	2.53969
0.20	4.15838	1.0988	3.050	0.3958	0.04090	0.48428	-0.40248	2.41548
0.25	4.32551	1.4214	3.903	0.5177	0.15273	0.59140	-0.28594	2.38162
0.30	4.47560	1.7912	4.880	0.6574	0.25316	0.68845	-0.18214	2.35752
0.50	5.00000	4.0183	10.817	1.4926	0.60404	1.03413	0.17395	2.32061
0.75	5.67449	11.3593	31.190	4.1370	1.05535	1.49402	0.61668	2.38162
0.90	6.28155	28.9431	83.535	10.0282	1.46154	1.92187	1.00122	2.53969
0.95	6.64485	50.6565	152.585	16.8174	1.70464	2.18351	1.22576	2.68017

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.42308	4.80597	Acrossocheilus paradoxus	1.4229	0.15317	.	.
0.42308	.	-->NoTrend -MOR	.	-1.38629	.	.
0.73077	5.61514	Aeolosoma headleyi	14.8835	1.17271	0.02888	0.02462
0.88462	6.19838	Amnicola (Intermediate)	21.7274	1.33701	0.15797	0.11815
0.50000	5.00000	Anculosa	1.9442	0.28875	0.04734	0.16395
0.19231	4.13058	Brachionus calyciflorus	1.3200	0.12057	.	.
0.57692	5.19403	Dugesia tigrina (Tolerant)	7.1000	0.85126	.	.
0.65385	5.39573	Helisoma campanulatum	12.6600	1.10243	.	.
0.80769	5.86942	Nais (Tolerant)	21.2000	1.32634	.	.
0.34615	4.60427	Philodina acuticornis	1.3760	0.13861	0.49638	3.58123
0.26923	4.38486	Physa heterostropha	1.3445	0.12855	0.43052	3.34909
0.03846	3.23117	Spirostomum ambiguum	0.4230	-0.37366	.	.
0.03846	.	-->EC50 -DVP	.	-0.93140	.	.
0.11538	3.80162	Tubifex tubifex (Tolerant)	1.2637	0.10164	0.88699	8.72664
0.11538	.	-->PHY	.	-2.39690	.	.
0.96154	6.76883	Zygoptera	32.0000	1.50515	.	.

Zinc SSD for non-Arthropod invertebrates - in very hard water at T>15C over long (3-30 days) exposure



Species Sensitivity Distribution (SSD 193) data for non-arthropod Invertebrate species exposed to zinc in very hard water at T>15C over long (3-30 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	5.92338	-0.41194	0.96828	0.91366	0.10583	3	0.040549

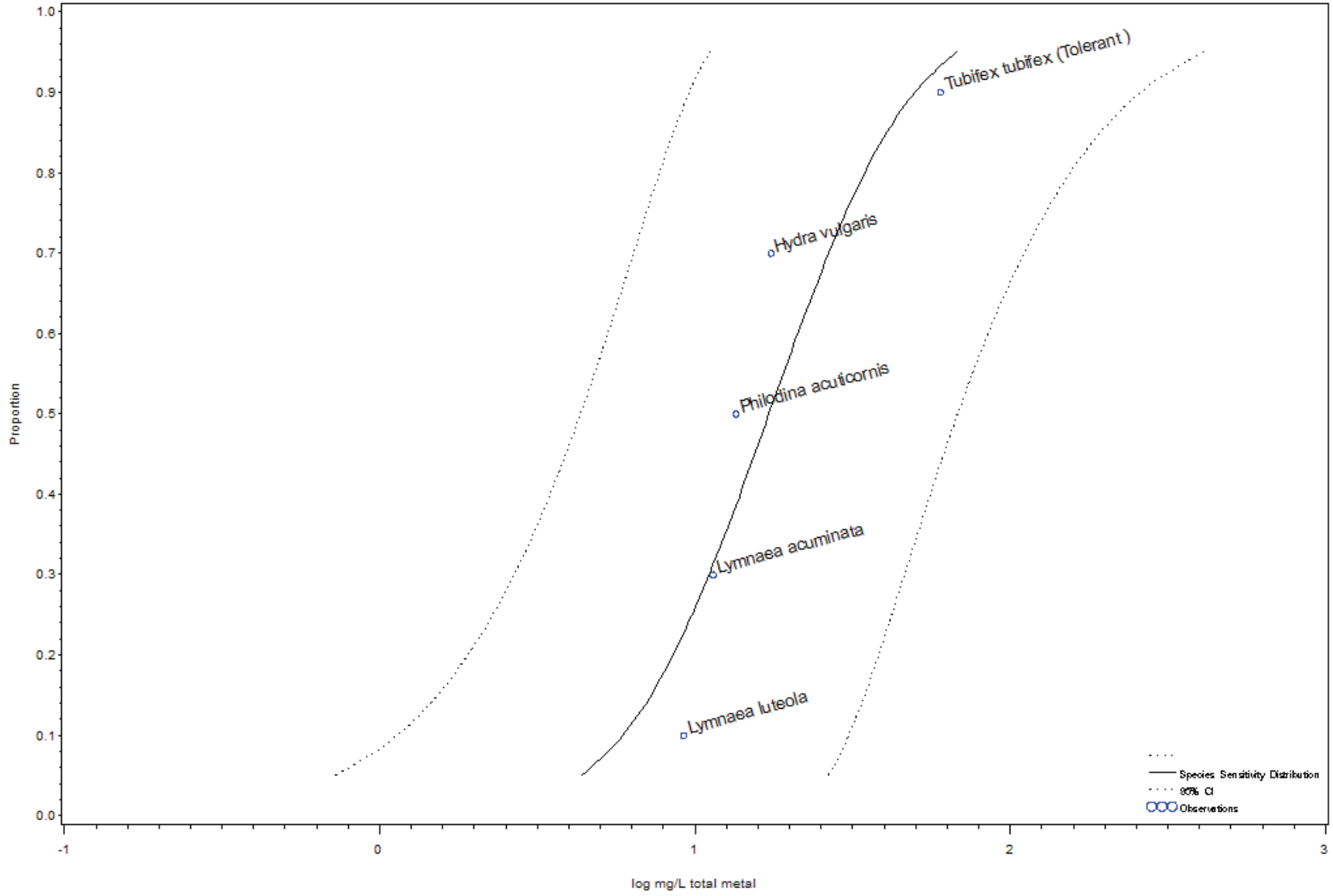
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	4.3248	5.5857	3.3486	0.63597	0.74707	0.52486	0.51726
0.10	3.71845	4.9808	6.3071	3.9335	0.69730	0.79983	0.59478	0.47655
0.20	4.15838	5.9098	7.3438	4.7558	0.77157	0.86592	0.67722	0.43792
0.25	4.32551	6.3065	7.7946	5.1025	0.79979	0.89179	0.70778	0.42687
0.30	4.47560	6.6854	8.2306	5.4303	0.82513	0.91543	0.73482	0.41886
0.50	5.00000	8.1970	10.0299	6.6991	0.91366	1.00130	0.82602	0.40634
0.75	5.67449	10.6543	13.1683	8.6203	1.02753	1.11953	0.93552	0.42687
0.90	6.28155	13.4900	17.0820	10.6533	1.13001	1.23254	1.02749	0.47655
0.95	6.64485	15.5362	20.0655	12.0293	1.19135	1.30245	1.08024	0.51726

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.5	5.00000	Hydra vulgaris	7.4000	0.86923	.	.
0.1	3.71845	Lumbriculus variegatus	5.0000	0.69897	0.00000	0.00000
0.7	5.52440	Lymnaea acuminata	10.4900	1.02078	.	.
0.3	4.47560	Lymnaea luteola	7.2088	0.85786	0.14830	0.17287
0.9	6.28155	Philodina acuticornis	13.2265	1.12144	0.64193	0.57241

Zinc SSD for non-Arthropod invertebrates - in very hard water at T>15C over moderate (1-3 days) exposure



Species Sensitivity Distribution (SSD 194) data for non-arthropod Invertebrate species exposed to zinc in very hard water at T>15C over moderate (1-3 days) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	2.76903	1.58052	0.82354	1.23490	0.41188	3	0.22555

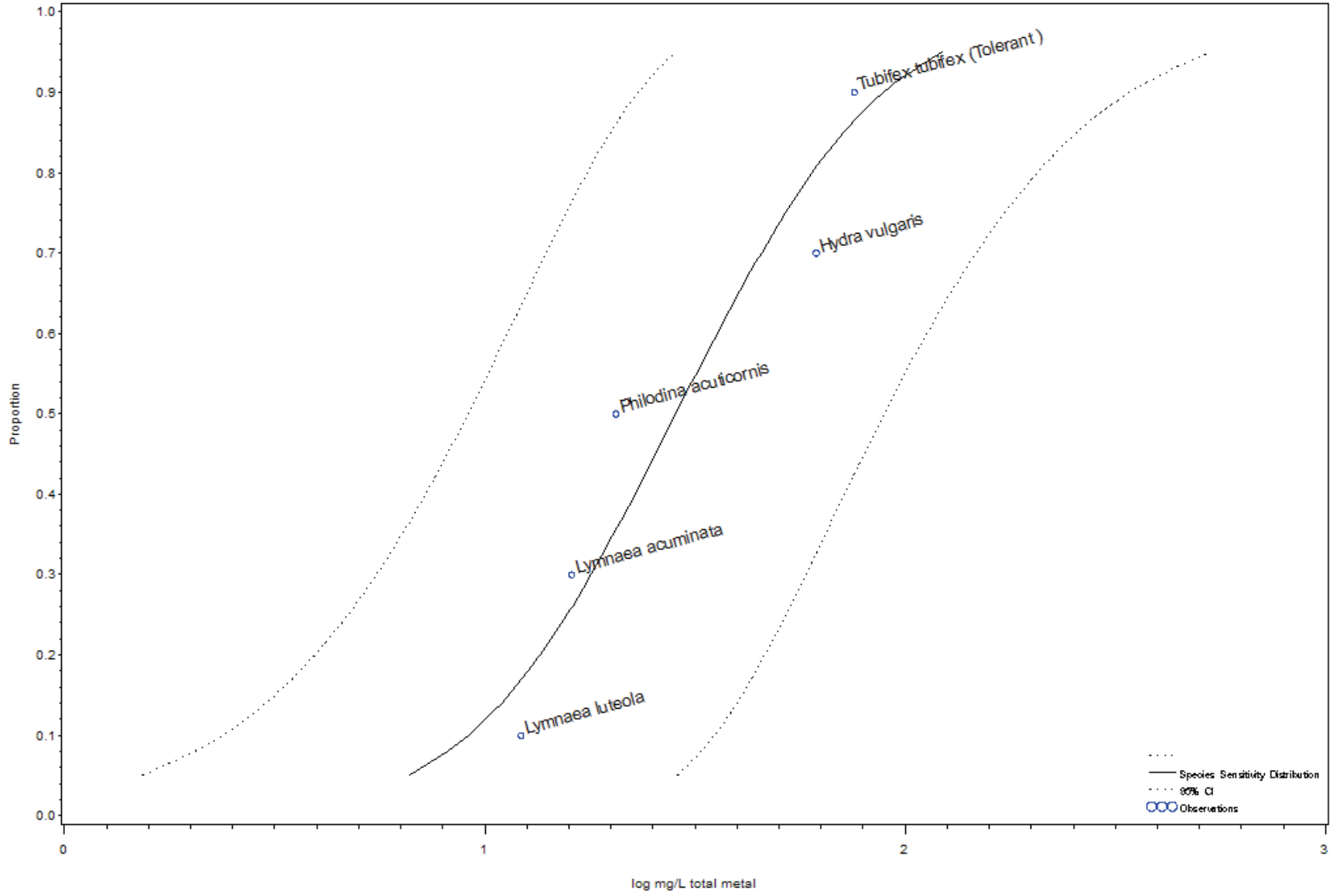
Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	4.3741	16.586	1.1535	0.64089	1.21975	0.06203	3.52821
0.10	3.71845	5.9168	20.020	1.7487	0.77209	1.30146	0.24272	3.08798
0.20	4.15838	8.5303	25.863	2.8135	0.93096	1.41268	0.44925	2.70205
0.25	4.32551	9.8021	28.792	3.3371	0.99132	1.45927	0.52337	2.59684
0.30	4.47560	11.1051	31.875	3.8690	1.04552	1.50344	0.58760	2.52185
0.50	5.00000	17.1753	47.541	6.2051	1.23490	1.67706	0.79275	2.40668
0.75	5.67449	30.0946	88.397	10.2457	1.47849	1.94644	1.01054	2.59684
0.90	6.28155	49.8565	168.691	14.7351	1.69772	2.22709	1.16835	3.08798
0.95	6.64485	67.4410	255.732	17.7854	1.82892	2.40778	1.25006	3.52821

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.7	5.52440	Hydra vulgaris	17.4410	1.24157	0.20179	0.16253
0.3	4.47560	Lymnaea acuminata	11.4412	1.05847	0.01583	0.01496
0.1	3.71845	Lymnaea luteola	9.2168	0.96458	0.13904	0.14415
0.5	5.00000	Philodina acuticornis	13.4990	1.13030	0.66601	0.58923
0.9	6.28155	Tubifex tubifex (Tolerant)	60.2000	1.77960	.	.

Zinc SSD for non-Arthropod invertebrates - in very hard water at T>15C over short (<=1 day) exposure



Species Sensitivity Distribution (SSD 195) data for non-arthropod Invertebrate species exposed to zinc in very hard water at T>15C over short (<=1 day) exposure

Model Parameters

Num Species	Slope	Intercept	R_squared	Grand Mean	CorrSSQ	DF	MSE
5	2.59535	1.22343	0.89392	1.45513	0.50891	3	0.13559

Predicted Values

Proportion Species	Probt	Central Tendency	UpperCI	LowerCI	log Central Tendency	log UpperCI	log LowerCI	Relative CIBreadth
0.05	3.35515	6.628	19.602	2.2409	0.82136	1.29229	0.35043	2.61944
0.10	3.71845	9.148	24.775	3.3781	0.96134	1.39401	0.52867	2.33885
0.20	4.15838	13.516	33.640	5.4305	1.13085	1.52686	0.73484	2.08712
0.25	4.32551	15.676	38.081	6.4533	1.19524	1.58071	0.80978	2.01753
0.30	4.47560	17.909	42.743	7.5038	1.25307	1.63087	0.87528	1.96769
0.50	5.00000	28.519	66.206	12.2846	1.45513	1.82089	1.08936	1.89073
0.75	5.67449	51.881	126.030	21.3574	1.71501	2.10047	1.32955	2.01753
0.90	6.28155	88.903	240.758	32.8283	1.94891	2.38158	1.51625	2.33885
0.95	6.64485	122.715	362.935	41.4919	2.08890	2.55983	1.61796	2.61944

Data Summary

Proportion Species	PR0BIT	taxa	Geometric Mean	LogMean	Standard Deviation	CV
0.7	5.52440	Hydra vulgaris	61.5200	1.78902	.	.
0.3	4.47560	Lymnaea acuminata	16.1300	1.20763	.	.
0.1	3.71845	Lymnaea luteola	12.2162	1.08694	0.18094	0.16646
0.5	5.00000	Philodina acuticornis	20.5297	1.31238	0.30357	0.23131
0.9	6.28155	Tubifex tubifex (Tolerant)	75.8000	1.87967	.	.