

- 1 Table A1. Summary of the PERMANOVA results for the feeding guild abundances. Sample size $n = 3$ for all groups in pairwise comparisons
- 2 except for NT800 in 2012 when $n = 2$. Bolded values indicate significant differences for 2012 and 2013 when α is below 0.005, 2014 when α is
- 3 below 0.0024.

	df	Carnivore			Deposit			Omnivore			Suspension feeder			Chemosymbiotic		
		SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>
Time Point	2	87.085	0.89508	0.415	71.892	1.454	0.244	129.92	0.6445	0.576	860.1	1.1643	0.347	214.8	0.7025	0.537
Station	6	7391.1	25.322	0.001	2861	19.29	0.001	7445.5	12.312	0.001	3217	1.4517	0.15	7228.8	8.4258	0.001
Time Point x Station	8	250.64	0.64402	0.739	322.3	1.6294	0.149	421.65	0.5229	0.887	2117.1	0.7165	0.873	2863.6	2.3414	0.03
Residual	33	1605.3		815.91			3326.1			12189			5045			
Total	49	9491		4390.7			11410			19031			16131			
	Carnivore			Deposit			Omnivore			Suspension			Chemosymbiotic			
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	
Groups	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	
S42, NT800	-	0.798	0.745	-	0.546	0.28	-	0.499	0.119	-	0.083	0.784	-	0.528	0.354	
S42, XC2	-	-	0.001	-	-	0.002	-	-	0.022	-	-	0.108	-	-	0.449	
S42, XC3	-	-	0.047	-	-	0.011	-	-	0.063	-	-	0.55	-	-	0.035	
NT800, XC2	-	-	0.008	-	-	0.01	-	-	0.162	-	-	0.355	-	-	0.888	
NT800, XC3	-	-	0.317	-	-	0.033	-	-	0.265	-	-	0.83	-	-	0.008	
XC2, XC3	0.028	-	0.002	0.373	-	0.276	0.03	-	0.595	0.686	-	0.17	0.829	-	0.011	
PCB06, S36	0.086	0.041	0.01	0.003	0.324	0.237	0.016	0.739	0.412	0.482	0.75	0.763	0.051	0.205	0.036	
PCB06, XC4	0.001	0.005	0.015	0.014	0.005	0.003	0.093	0.046	0.074	0.057	0.063	0.365	0.038	0.043	0.045	
PCB06, XC2	0.928	-	0.01	0.24	-	0.034	0.492	-	0.43	0.315	-	0.517	0.553	-	0.205	
PCB06, XC3	0.035	-	0.004	0.2	-	0.183	0.024	-	0.349	0.365	-	0.553	0.711	-	0.029	
PCB06, S42	-	0.097	0.001	-	0.113	0.066	-	0.406	0.642	-	0.013	0.332	-	0.496	0.659	
PCB06, NT800	-	0.132	0.024	-	0.278	0.284	-	0.065	0.735	-	0.24	0.611	-	0.296	0.133	
S36, XC4	0.004	0.085	0.126	0.09	0.003	0.061	0.033	0.062	0.036	0.026	0.433	0.351	Neg	0.41	Neg	
S36, XC2	0.061	-	0.003	0.065	-	0.022	0.012	-	0.611	0.499	-	0.208	0.043	-	0.776	
S36, XC3	0.349	-	0.18	0.89	-	0.055	0.768	-	0.835	0.524	-	0.724	0.048	-	0.002	
S36, S42	-	0.559	0.639	-	0.352	0.865	-	0.689	0.03	-	0.274	0.359	-	0.08	0.229	
S36, NT800	-	0.847	0.932	-	0.683	0.585	-	0.329	0.163	-	0.802	0.719	-	0.085	0.867	
XC4, XC2	0.001	-	0.005	0.027	-	0.001	0.076	-	0.033	0.071	-	0.338	0.034	-	0.766	
XC4, XC3	0.012	-	0.042	0.158	-	0.001	0.027	-	0.034	0.518	-	0.4	0.041	-	0.002	
XC4, S42	-	0.034	0.083	-	0.001	0.003	-	0.096	0.078	-	0.434	0.433	-	0.011	0.211	
XC4, NT800	-	0.131	0.131	-	0.002	0.006	-	0.224	0.047	-	0.315	0.489	-	0.015	0.843	

4 Table A1 continued

Groups	Carnivore			Deposit			Omnivore			Suspension			Chemosymbiotic		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t
S42, NT800	-	0.2969	0.32351	-	0.68605	1.288	-	0.71462	1.9468	-	2.5098	0.37622	-	0.72555	1.0313
S42, XC2	-	-	13.839	-	-	6.7212	-	-	3.6863	-	-	2.0119	-	-	0.8339
S42, XC3	-	-	2.9198	-	-	4.8479	-	-	2.3004	-	-	0.6993	-	-	2.8024
NT800, XC2	-	-	4.9191	-	-	4.847	-	-	1.7558	-	-	1.0565	-	-	0.15852
NT800, XC3	-	-	1.144	-	-	3.3085	-	-	1.2665	-	-	0.35358	-	-	4.0578
XC2, XC3	3.4554	-	9.1197	0.99908	-	1.2612	3.7184	-	0.59672	0.44587	-	1.6788	0.27414	-	3.6112
PCB06, S36	2.2546	3.1214	4.8989	9.6524	1.0932	1.3995	3.9359	0.38756	0.97193	0.79117	0.38679	0.3463	2.5647	1.4455	2.9634
PCB06, XC4	6.5664	5.8176	4.1935	3.9794	6.0605	6.3958	2.1452	2.7896	2.1805	2.815	2.4428	1.0176	2.5647	2.6815	2.9634
PCB06, XC2	0.10812	-	4.7136	1.3398	-	2.9477	0.72974	-	0.82967	1.1763	-	0.72895	0.6752	-	1.4677
PCB06, XC3	3.1995	-	7.5095	1.6135	-	1.717	3.3516	-	0.98609	1.0386	-	0.62025	0.41525	-	3.2944
PCB06, S42	-	2.2859	19.415	-	2.0281	2.4399	-	0.98712	0.4938	-	3.8173	1.151	-	0.7669	0.50522
PCB06, NT800	-	2.0861	3.5237	-	1.3065	1.2468	-	2.7753	0.37287	-	1.4871	0.58434	-	1.2855	1.7513
S36, XC4	5.6219	2.331	1.9084	2.2892	7.152	2.6086	3.0734	2.3913	3.2512	3.4654	0.87454	1.0192	Neg	0.91821	Neg
S36, XC2	2.4648	-	6.5354	2.5894	-	3.6156	5.0252	-	0.58061	0.73942	-	1.4881	3.0389	-	0.36426
S36, XC3	1.1363	-	1.651	0.1666	-	2.7245	0.32586	-	0.26288	0.74513	-	0.39355	2.7241	-	7.9155
S36, S42	-	0.66184	0.56813	-	1.1277	0.19713	-	0.44394	3.2158	-	1.2921	1.0524	-	2.2799	1.4605
S36, NT800	-	0.21323	0.1105	-	0.46946	0.58079	-	1.1287	1.6851	-	0.34004	0.52051	-	2.5479	0.25235
XC4, XC2	6.8769	-	4.9962	3.1617	-	12.827	2.37	-	3.217	2.3256	-	1.1411	3.0389	-	0.36426
XC4, XC3	4.8888	-	2.8242	1.5798	-	9.841	3.0018	-	3.1031	0.73793	-	0.97821	2.7241	-	7.9155
XC4, S42	-	2.9585	2.3512	-	9.066	5.6238	-	2.1756	2.3821	-	0.86184	0.91543	-	3.9111	1.4605
XC4, NT800	-	1.9683	1.8364	-	11.322	6.1099	-	1.5352	2.8899	-	1.1973	0.85393	-	4.5886	0.25235

6 Table A2. Summary of PERMANOVA test of Deepwater Horizon macrofaunal indicator proportions. Sample size $n = 3$ for all groups
 7 in pairwise comparisons except for NT800 in 2012 where $n = 2$. Bolded values indicate significant differences for 2012 and 2013 when
 8 α is below 0.005, 2014 when α is below 0.0024.

		Cosmopolitan			Tolerant			Possibly tolerant			Possibly sensitive			Sensitive		
	df	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>	SS	Pseudo-F	<i>P</i>
Time Point	2	1.0225	0.91342	0.424	105.03	2.1075	0.135	4.69E-02	0.21704	0.786	24.899	0.34496	0.72	39.798	1.5825	0.217
Site	6	53.009	15.785	0.001	3509.3	23.471	0.001	3.3309	5.1431	0.002	408.58	5.6608	0.001	1699.4	22.524	0.001
Time Point x Site	8	4.8096	1.0741	0.432	198.77	0.99708	0.461	1.5565	1.8025	0.115	142.96	1.9806	0.08	26.49	2.2515	0.027
Residual	33	18.47			822.33			3.562			72.178			414.95		
Total	49	77.268			4926.4			8.7291						2702.8		
		Cosmopolitan			Tolerant			Possibly tolerant			Possibly sensitive			Sensitive		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	
Groups	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	
S42, NT800	-	0.004	0.528	-	0.792	0.311	-	0.031	0.592	-	0.828	0.449	-	0.233	0.182	
S42, XC2	-	-	0.21	-	-	0.908	-	-	0.088	-	-	0.206	-	-	0.01	
S42, XC3	-	-	0.185	-	-	0.004	-	-	0.699	-	-	0.106	-	-	0.117	
NT800, XC2	-	-	0.183	-	-	0.181	-	-	0.224	-	-	0.097	-	-	0.001	
NT800, XC3	-	-	0.868	-	-	0.004	-	-	0.35	-	-	0.625	-	-	0.052	
XC2, XC3	0.002	-	0.046	0.095	-	0.003	0.231	-	0.01	0.925	-	0.003	0.025	-	0.44	
PCB06, S36	0.498	0.866	0.022	0.319	0.348	0.916	0.31	0.993	0.043	0.532	0.006	0.098	0.266	0.115	0.032	
PCB06, XC4	0.038	0.015	0.134	0.172	0.016	0.38	0.032	0.118	0.006	0.074	0.298	0.302	0.045	0.101	0.08	
PCB06, XC2	0.015	-	0.102	0.185	-	0.405	0.248	-	0.13	0.291	-	0.205	0.2	-	0.016	
PCB06, XC3	0.514	-	0.163	0.009	-	0.03	0.78	-	0.062	0.669	-	0.092	0.011	-	0.364	
PCB06, S42	-	0.009	0.697	-	0.071	0.437	-	0.01	0.336	-	0.654	0.972	-	0.334	0.212	
PCB06, NT800	-	0.769	0.596	-	0.07	0.161	-	0.674	0.766	-	0.568	0.451	-	0.187	0.028	
S36, XC4	0.014	0.02	0.481	0.024	0.035	0.256	0.408	0.335	0.003	0.198	0.047	0.813	0.071	0.806	0.743	
S36, XC2	0.008	-	0.025	0.474	-	0.087	0.827	-	0.005	0.334	-	0.019	0.026	-	0.002	
S36, XC3	0.04	-	0.585	0.001	-	0.007	0.311	-	0.873	0.454	-	0.548	0.001	-	0.051	
S36, S42	-	0.019	0.073	-	0.013	0.18	-	0.219	0.738	-	0.007	0.112	-	0.191	0.2	
S36, NT800	-	0.756	0.678	-	0.027	0.051	-	0.879	0.353	-	0.019	0.489	-	0.697	0.671	
XC4, XC2	0.007	-	0.051	0.023	-	0.062	0.096	-	0.001	0.045	-	0.071	0.008	-	0.007	
XC4, XC3	0.042	-	0.322	0.049	-	0.083	0.003	-	0.024	0.078	-	0.869	0.001	-	0.067	
XC4, S42	-	0.001	0.113	-	0.004	0.094	-	0.709	0.131	-	0.214	0.256	-	0.213	0.286	
XC4, NT800	-	0.006	0.406	-	0.003	0.034	-	0.164	0.068	-	0.308	0.696	-	0.585	0.643	

Table A2 continued.

	Cosmopolitan			Tolerant			Possibly tolerant			Possibly sensitive			Sensitive		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Groups	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t
S42, NT800	-	7.1211	0.73724	-	0.27449	1.2339	-	3.8353	0.56391	-	0.26499	0.83871	-	1.4462	1.6147
S42, XC2	-	-	1.5164	-	-	0.11015	-	-	2.4167	-	-	1.4851	-	-	5.832
S42, XC3	-	-	1.6196	-	-	5.5833	-	-	0.42339	-	-	2.1372	-	-	1.919
NT800, XC2	-	-	1.7034	-	-	1.5591	-	-	1.4305	-	-	2.0456	-	-	11.861
NT800, XC3	-	-	0.16994	-	-	5.9755	-	-	1.0696	-	-	0.56234	-	-	2.7896
XC2, XC3	7.3925	-	2.8934	6.1445	-	6.7572	1.435	-	5.0172	0.12574	-	5.8066	3.1882	-	0.89733
PCB06, S36	0.69589	0.15737	3.5815	1.1518	1.1057	0.13206	1.1323	0.013835	2.7798	0.68601	7.033	1.9901	1.3335	2.0486	3.3243
PCB06, XC4	2.9815	4.2377	1.9345	1.719	3.925	0.98993	3.1566	2.0557	6.1909	2.4549	1.2607	1.2463	2.7378	2.0238	2.2683
PCB06, XC2	3.8542	-	2.1241	1.5755	-	0.94255	1.2578	-	1.9503	1.1698	-	1.5565	1.4676	-	3.8696
PCB06, XC3	0.75542	-	1.768	4.4572	-	3.2071	0.26815	-	2.6225	0.47767	-	2.0782	4.704	-	1.066
PCB06, S42	-	4.935	0.44319	-	2.496	0.89108	-	5.1514	1.1463	-	0.47058	0.053222	-	1.1963	1.4594
PCB06, NT800	-	0.31054	0.58196	-	2.8155	1.719	-	0.4435	0.33419	-	0.62711	0.79856	-	1.6901	3.4302
S36, XC4	4.1591	3.5156	0.83798	3.5228	2.8547	1.2855	0.88549	1.0869	5.7123	1.5145	2.8576	0.26979	2.4767	0.2523	0.3408
S36, XC2	4.5118	-	3.6089	0.82716	-	2.3443	0.24494	-	5.5642	1.1288	-	3.9707	3.2714	-	9.8345
S36, XC3	2.84	-	0.64547	8.3732	-	4.893	1.1172	-	0.19316	0.82566	-	0.62912	8.0896	-	2.8386
S36, S42	-	3.8185	2.4615	-	3.605	1.6466	-	1.4616	0.3483	-	6.0143	2.0361	-	1.6463	1.6872
S36, NT800	-	0.39055	0.46781	-	4.0919	2.713	-	0.171	1.0229	-	4.4391	0.80142	-	0.47065	0.4291
XC4, XC2	6.6893	-	2.8653	3.339	-	2.4828	2.01	-	9.9192	2.7677	-	2.4264	4.7085	-	4.9844
XC4, XC3	3.1852	-	1.0832	2.8204	-	2.2905	5.2825	-	3.6463	2.2706	-	0.25748	9.7557	-	2.5242
XC4, S42	-	14.275	1.9785	-	6.4175	2.2305	-	0.39734	1.962	-	1.4457	1.2827	-	1.5851	1.2741
XC4, NT800	-	6.6029	0.94467	-	8.7495	2.9867	-	1.7881	2.4216	-	1.2607	0.43632	-	0.64718	0.51872

Figure A1) Time-series sites in relation to benthic DwH faunal impact interpolation maps. A) Based on data from Montagna et al. (2013), the interpolated area of deep sea impact are based on PC1 station scores of infaunal (meiofauna and macrofauna) data covering 70,166 km². Orange (167 km²) are moderately impacted and red (24 km²) are severely impacted. High diversity and low chemical loads (yellow/green) are unimpacted. B) Based on data from Montagna et al. (2020) and contour colors follow Montagna et al. (2013).

