

**Table S13:** Indicator species analysis for five-month heatwave variation—*Indval* [8].

Heatwave	Assay	OTU	Taxa	Indicator value	$\rho$ value
Before	Cnidaria	165	Pythiales	0.7778	0.001
Before	Copepod 1	74	<i>Paracalanus Indicus</i>	0.6061	0.002
Before	Copepod 2	14	Calanoida	0.4972	0.023
Before	Copepod 1	57	Arthropoda	0.4855	0.018
Before	Copepod 1	13	Paracalanidae	0.4638	0.015
Before	Universal	23	Alveolata	0.4628	0.030
Before	Cnidaria	87	Chlorophyta	0.4098	0.047
Before	Cnidaria	21	Hydrozoa	0.3984	0.030
Before	Copepod 1	114	Arthropoda	0.3644	0.031
Before	Copepod 2	11	Arthropoda	0.3065	0.036
Before	Mollusca	216	Arthropoda	0.3065	0.037
Before	Cnidaria	168	Plantae	0.2908	0.049
Before	Copepod 3	285	Calanoida	0.2222	0.033
Before	Copepod 1	110	Gastropoda	0.2222	0.033
Before	Copepod 1	133	Gastropoda	0.2222	0.035
Before	Mollusca	252	Polychaeta	0.2222	0.037
During	Mollusca	179	Hexanauplia	0.6502	0.001
During	Copepod 3	41	Actinopterygii	0.6052	0.004
During	Mollusca	201	<i>Euchaeta longicornis</i>	0.5715	0.002
During	Cnidaria	125	Plantae	0.5426	0.007
During	Copepod 3	95	Arthropoda	0.5426	0.010
During	Fish	5	<i>Parapriacanthus elongatus</i>	0.5256	0.017
During	Mollusca	242	<i>Euphausia hemigibba</i>	0.5063	0.004
During	Universal	71	<i>Temora sp.</i>	0.5055	0.011
During	Mollusca	87	<i>Copilia mirabilis (v)</i>	0.4980	0.019
During	Cnidaria	160	Arthropoda	0.4959	0.018
During	Mollusca	37	<i>Turritopsis sp. (Two - 98%)</i>	0.4867	0.019
During	Mollusca	57	Arthropoda	0.4862	0.026
During	Copepod 3	130	<i>Subeucalanus sp. (Two - 100%(v))</i>	0.4827	0.024
During	Copepod 3	22	<i>Calcinus dapsiles</i>	0.4779	0.025
During	Mollusca	145	<i>Euphasia recurva (v)</i>	0.4684	0.011
During	Mollusca	280	<i>Undinula vulgaris</i>	0.4671	0.009
During	Cnidaria	158	Corycaeidae	0.4647	0.025
During	Cnidaria	11	Hydrozoa	0.4624	0.011
During	Cnidaria	44	Malacostraca	0.4566	0.041
During	Mollusca	76	<i>Subeucalanus sp. (two - 99%)</i>	0.4488	0.033
During	Cnidaria	10	Animalia	0.4413	0.049
During	Mollusca	267	Malacostraca	0.4321	0.029
During	Copepod 3	106	Arthropoda	0.4201	0.050
During	Crustacea	88	Animalia	0.4198	0.025
During	Mollusca	186	Eukaryota	0.4000	0.005
During	Mollusca	197	Gastropoda	0.4000	0.008
During	Mollusca	307	Eukaryota	0.4000	0.008
During	Mollusca	7	Parazoanthidae (Many - 99%)	0.4000	0.008
During	Mollusca	224	Gastropoda	0.4000	0.010
During	Mollusca	209	Arthropoda	0.4000	0.010
During	Mollusca	80	Aglajidae	0.4000	0.011

Heatwave	Assay	OTU	Taxa	Indicator value	p value
During	Copepod 3	91	<i>Euphausia recurva</i> (v)	0.3813	0.040
During	Universal	33	Heterobranchia	0.3770	0.013
During	Mollusca	15	<i>Watersipora subovoidea</i>	0.3770	0.013
During	Cnidaria	203	Animalia	0.3770	0.014
During	Mollusca	278	Calanoida	0.3770	0.014
During	Cnidaria	128	<i>Subeucalanus mucronatus</i> (v)	0.3770	0.016
During	Copepod 3	126	<i>Stylocheiron</i> sp.	0.3770	0.018
During	Mollusca	152	<i>Subeucalanus mucronatus</i> (v)	0.3770	0.021
During	Cnidaria	81	Echinodermata	0.3717	0.050
During	Copepod 3	246	Calanoida	0.3565	0.020
During	Cnidaria	201	Eukaryota	0.3565	0.022
During	Cnidaria	73	Unknown	0.3565	0.037
During	Cnidaria	105	Hydrozoa	0.3565	0.037
During	Copepod 2	107	Mollusca	0.3381	0.027
During	Mollusca	211	Arthropoda	0.3381	0.029
During	Mollusca	108	Annelida	0.3381	0.037
During	Crustacea	13	Animalia	0.3381	0.038
During	Cnidaria	46	<i>Pleurobranchus hilli</i>	0.3381	0.040
During	Mollusca	135	Caenogastropoda	0.3381	0.043
During	Universal	59	<i>Creseis</i> sp.	0.3381	0.044
During	Mollusca	5	<i>Cliona</i> sp.	0.3216	0.037
During	Copepod 1	60	Arthropoda	0.3216	0.037
During	Copepod 3	300	<i>Clausocalanus</i> sp.	0.3216	0.040
During	Crustacea	67	Eukaryota	0.3216	0.047
During	Universal	87	Chromista	0.3216	0.050
During	Copepod 3	150	Arthropoda	0.3130	0.019
During	Mollusca	121	Mollusca	0.3130	0.026
During	Copepod 3	264	<i>Euphausia hemigibba</i>	0.2988	0.033
During	Mollusca	185	Gastropoda	0.2988	0.048
After	Mollusca	4	Eukaryota	0.8780	0.001
After	Mollusca	64	<i>Oncaea</i> sp. (Two - 100%)	0.7073	0.001
After	Cnidaria	16	Chlorophyta	0.6681	0.001
After	Cnidaria	5	Prasinophyceae	0.6585	0.001
After	Copepod 3	28	Muricidae	0.6352	0.001
After	Copepod 1	33	Gastropoda	0.6341	0.002
After	Copepod 1	36	Arthropoda	0.5746	0.002
After	Copepod 1	4	<i>Oncaea waldemari</i> (v)	0.5463	0.002
After	Cnidaria	104	Chlorophyta	0.5158	0.018
After	Universal	13	Chlorophyta	0.5131	0.002
After	Mollusca	75	Arthropoda	0.5122	0.014
After	Copepod 3	50	<i>Paracalanus aculeatus</i>	0.4920	0.016
After	Copepod 1	30	Neogastropoda	0.4878	0.015
After	Copepod 2	25	<i>Paracalanus</i> sp. (Two at 100%)	0.4696	0.034
After	Copepod 3	89	Arthropoda	0.4634	0.026
After	Copepod 1	44	Triconia sp.	0.4634	0.029
After	Universal	14	Chlorellaceae (Many at 99%)	0.4445	0.036
After	Mollusca	45	Animalia	0.4390	0.038
After	Mollusca	96	Animalia	0.4146	0.031
After	Copepod 3	107	Calanoida	0.4146	0.032

Heatwave	Assay	OTU	Taxa	Indicator value	<i>p</i> value
After	Mollusca	128	Eukaryota	0.4146	0.034
After	Cnidaria	155	Eukaryota	0.4146	0.038
After	Copepod 3	44	Animalia	0.4125	0.016
After	Copepod 3	148	Decapoda	0.3902	0.033
After	Copepod 3	92	Gastropoda	0.3902	0.039
After	Copepod 3	138	Calanoida	0.3902	0.050

(v) Matched to vouchered specimen sequence