Supplementary Material

Table S1. Salp video specimens analyzed with video specifications, as well as mean morphological and kinematic attributes.

Video file	Type	FPS	Species	Architecture	Number of measurements	Timespan of measurements (s)	Number of zooids	Mean zooid length (mm)	Mean zooid width (mm)	Pulsation rate (pulses/s)	Mean swimming speed (mm/s)
A001C0113_20210709170400_0001	3D	120	*Brooksia rostrata*	Bipinnate	9	1.51	34	7.144	2.693	2.5	30.25
A001C0114_20210709170545_0001	3D	120	*Brooksia rostrata*	Bipinnate	9	1.50	33	6.902	3.4	3	28.32
A001C0143_20210709181838_0001_1	3D	120	*Brooksia rostrata*	Bipinnate	9	1.50	11	7.963	4.026	2.75	58.79
A001C0223_20210917230616_0001	3D	120	*Brooksia rostrata*	Bipinnate	9	1.51	35	4.363	2.306	2.56	34.83
A001C0294_20210920202610_0001	3D	120	*Brooksia rostrata*	Bipinnate	9	1.51	17	10.592	4.322	2.25	19.94
A001C0284_20210919222752_0001	3D	120	*Ritteriella amboinensis*	Bipinnate	7	1.17	47	13.449	7.488	2.8	68.65
A001C0288_20210919223646_0001	3D	120	*Ritteriella amboinensis*	Bipinnate	9	1.51	6	13.729	6.186	1.73	38.26
A001C0321_20210921220020_0001	3D	120	*Ritteriella amboinensis*	Bipinnate	7	1.17	2	69.473	33.031	0.75	52.90
A001C0322_20210921220127_0001	3D	120	*Ritteriella amboinensis*	Bipinnate	14	2.33	21	26.047	9.561	2.75	33.12
A001C0323_20210921220235_0001	3D	120	*Ritteriella amboinensis*	Bipinnate	15	2.50	21	22.705	10.298	2.2	22.47
A001C0331_20210921221849_0001	3D	120	*Ritteriella amboinensis*	Bipinnate	9	1.50	19	21.485	12.129	3	55.50
A001C0332_20210921222049_0001_2	3D	120	*Ritteriella amboinensis*	Bipinnate	7	1.17	19	20.047	13.747	1.5	35.01
A001C0332_20210921222049_0001_1	3D	120	*Ritteriella amboinensis*	Bipinnate	1	0.17	19	21.48	12.695	1.5	20.09
A002C0018_20220420225725_0001	3D	60	*Ritteriella amboinensis*	Bipinnate	8	2.67	10	22.403	11.767	1.14	56.31
A001C0348_20210922220852_0001	3D	120	*Ritteriella* sp.	Bipinnate	9	1.50	38	16.593	7.375	1.5	61.56
A001C0349_20210922220958_0001	3D	120	*Ritteriella* sp.	Bipinnate	20	3.34	31	23.682	16.25	1.25	33.81
A001C0349_20210922220958_0001	3D	120	*Ritteriella* sp.	Bipinnate	20	3.34	31	23.682	16.25	1.13	33.81
A001C0344_20210922220308_0001	3D	120	*Cyclosalpa polae*	Cluster	10	2.51	7	17.275	12.861	1	55.48
A002C0047_20220421225032_0001	3D	60	*Cyclosalpa polae*	Cluster	9	4.51	2	17.091	33.996	1.33	39.73
A001C0247_20210918223147_0001_1	3D	120	*Cyclosalpa sewelli*	Cluster	7	1.17	7	17.764	8.919	1.2	46.27
A001C0262_20210919202019_0001	3D	120	*Cyclosalpa sewelli*	Cluster	9	1.50	7	12.584	3.675	1.33	21.10
A001C0274_20210919203457_0001	3D	120	*Cyclosalpa sewelli*	Cluster	9	1.50	7	17.705	13.97	2	14.06
A001C0283_20210919222440_0001	3D	120	*Cyclosalpa sewelli*	Cluster	9	1.51	6	9.458	5.528	1.5	49.58
A001C0326_20210921220800_0001	3D	120	*Cyclosalpa sewelli*	Cluster	9	1.51	2	17.069	7.959	1.25	8.99
A001C0358_20210922222944_0001	3D	120	*Cyclosalpa sewelli*	Cluster	9	1.50	10	15.668	10.298	1.25	20.66
GX010177_Helicosalpa_Trim	2D	60	*Helicosalpa virgula*	Helical	7	1.20	60	11.5	6.4	3.33	49.86
A001C0093_20210708143858_0001	3D	60	*Iasis cylindrica*	Linear	9	3.01	75	4.011	2.27	2.75	49.83
A001C0143_20210709181838_0001_2	3D	120	*Iasis cylindrica*	Linear	6	1.00	49	4.399	3.081	3	48.77
A001C0147_20210709182345_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	30	NA	NA	2.17	43.20
A001C0164_20210709183900_0001_1	3D	120	*Iasis cylindrica*	Linear	13	2.21	44	NA	NA	3	51.55
A001C0164_20210709183900_0001_2	3D	120	*Iasis cylindrica*	Linear	9	1.50	9	NA	NA	5	36.22

A001C0165_20210709184012_0001_1	3D	120	*Iasis cylindrica*	Linear	9	1.50	24	NA	NA	2.75	48.29
A001C0165_20210709184012_0001_2	3D	120	*Iasis cylindrica*	Linear	9	1.50	89	NA	NA	2.75	59.70
A001C0166_20210709184051_0001_1	3D	120	*Iasis cylindrica*	Linear	9	1.50	94	NA	NA	3	38.18
A001C0167_20210709184129_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	19	12.936	6.246	3.25	52.55
A001C0169_20210709184226_0001	3D	120	*Iasis cylindrica*	Linear	8	1.33	13	NA	NA	3	101.65
A001C0170_20210709184247_0001_2	3D	120	*Iasis cylindrica*	Linear	9	1.50	46	NA	NA	5.78	58.74
A001C0171_20210709184313_0001_2	3D	120	*Iasis cylindrica*	Linear	9	1.58	153	4.387	3.277	1.83	40.03
A001C0171_20210709184313_0001_3	3D	120	*Iasis cylindrica*	Linear	10	1.67	72	4.384	2.968	1.83	66.49
A001C0172_20210709184345_0001_2	3D	120	*Iasis cylindrica*	Linear	9	1.50	10	8.295	4.276	4	81.51
A001C0173_20210709184408_0001	3D	120	*Iasis cylindrica*	Linear	10	1.67	25	12.964	6.301	5.5	74.50
A001C0173_20210709184408_0001	3D	120	*Iasis cylindrica*	Linear	10	1.67	9	12.964	6.301	5.5	74.50
A001C0178_20210709184853_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	47	11.129	3.892	3.88	49.01
A001C0179_20210709184957_0001	3D	120	*Iasis cylindrica*	Linear	9	1.51	11	12.45	5.628	2.33	71.53
A001C0192_20210710135057_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	3	8.197	3.8	5	73.47
A001C0279_20210919221855_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	12	7.079	2.363	4.67	45.89
A001C0336_20210921222915_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	17	11.806	5.368	4	58.15
A001C0339_20210921223812_0001	3D	120	*Iasis cylindrica*	Linear	9	1.50	12	10.575	5.944	2.57	96.65
A001C0346_20210922220601_0001	3D	120	*Iasis cylindrica*	Linear	18	3.00	36	7.753	5.053	4.8	79.08
A001C0346_20210922220601_0001	3D	120	*Iasis cylindrica*	Linear	18	3.00	36	7.753	5.053	3.89	79.08
A001C0354_20210922222311_0001	3D	120	*Iasis cylindrica*	Linear	9	1.54	19	10.264	6.371	2.83	102.18
A001C0355_20210922222503_0001	3D	120	*Iasis cylindrica*	Linear	7	1.18	77	7.307	4.041	4.17	53.07
A002C0044_20220421224612_0001_1	3D	60	*Iasis cylindrica*	Linear	9	3.01	120	6.143	2.546	2.67	56.34
A002C0044_20220421224612_0001_2	3D	60	*Iasis cylindrica*	Linear	14	2.33	17	12.401	5.106	3.25	69.39
A002C0045_20220421224748_0001	3D	60	*Iasis cylindrica*	Linear	5	1.67	88	9.587	5.544	2.67	61.48
A002C0078_20220422224659_0001	3D	60	*Iasis cylindrica*	Linear	9	3.01	60	7.767	4.856	5.4	43.76
A002C0079_20220422224739_0001	3D	60	*Iasis cylindrica*	Linear	9	3.00	51	NA	NA	NA	35.00
A002C0089_20220422230510_0001	3D	60	*Iasis cylindrica*	Linear	9	3.00	9	9.326	5.86	5.33	54.97
A001C0353_20210922221657_0001	3D	120	*Metcalfina hexagona*	Linear	9	1.50	7	10.879	6.975	3	71.25
A002C0035_20220421223821_0001	3D	60	*Metcalfina hexagona*	Linear	6	2.00	22	30.057	12.198	3	97.43
A002C0071_20220422223546_0001	3D	60	*Metcalfina hexagona*	Linear	18	6.00	9	28.887	17.127	2.1	71.69
A002C0071_20220422223546_0001	3D	60	*Metcalfina hexagona*	Linear	18	6.00	9	28.887	17.127	2.43	71.69
A002C0075_20220422224136_0001_1	3D	60	*Metcalfina hexagona*	Linear	6	2.00	23	28.519	12.844	2.46	131.25
A002C0075_20220422224136_0001_2	3D	60	*Metcalfina hexagona*	Linear	12	4.00	23	26.693	14.766	1.85	160.22
A002C0075_20220422224136_0001_2	3D	60	*Metcalfina hexagona*	Linear	12	4.00	23	26.693	14.766	2.2	160.22
A002C0076_20220422224245_0001	3D	60	*Metcalfina hexagona*	Linear	12	4.01	23	30.239	17.388	2.08	111.52
A002C0076_20220422224245_0001	3D	60	*Metcalfina hexagona*	Linear	12	4.01	23	30.239	17.388	2.1	111.52
A001C0334_20210921222327_0001	3D	120	*Salpa aspera*	Linear	9	1.50	8	27.926	14.631	2.5	145.45
A001C0335_20210921222656_0001	3D	120	*Salpa aspera*	Linear	9	1.50	8	30.132	15.661	2.33	110.41
A002C0042_20220421224445_0001	3D	60	*Salpa aspera*	Linear	6	2.00	7	24.502	18.494	1.78	118.80
A002C0053_20220421225858_0001	3D	60	*Salpa aspera*	Linear	8	2.75	29	19.568	11	2.4	102.55
A002C0062_20220421231037_0001	3D	60	*Salpa aspera*	Linear	9	3.01	2	41.084	15.521	1.29	88.33
A002C0080_20220422224908_0001	3D	60	*Salpa aspera*	Linear	8	2.66	6	28.543	10.405	2.86	117.07
A002C0081_20220422224921_0001	3D	60	*Salpa aspera*	Linear	8	2.67	6	26.068	8.932	1.6	117.48

A001C0205_20210710141212_0001_1	3D	120	*Salpa fusiformis*	Linear	9	1.50	15	10.685	5.114	5.43	31.44
A001C0225_20210917231024_0001	3D	120	*Salpa fusiformis*	Linear	9	1.50	7	9.448	4.298	2	47.47
A001C0230_20210918220927_0001	3D	120	*Salpa fusiformis*	Linear	5	0.83	27	8.428	4.307	4.25	69.08
A001C0350_20210922221154_0001	3D	120	*Salpa fusiformis*	Linear	9	1.50	16	21.126	7.991	2.2	55.35
A002C0059_20220421230521_0001	3D	60	*Salpa fusiformis*	Linear	12	4.01	21	18.078	7.499	2.44	91.67
A002C0059_20220421230521_0001	3D	60	*Salpa fusiformis*	Linear	12	4.01	21	18.078	7.499	2.17	91.67
A002C0072_20220422223646_0001	3D	60	*Salpa fusiformis*	Linear	9	3.00	17	27.564	14.766	3.75	43.57
A002C0095_20220422231109_0001	3D	60	*Salpa fusiformis*	Linear	9	3.01	4	24.133	10.177	2	27.09
A001C0320_20210921215927_0001	3D	120	*Salpa maxima*	Linear	8	1.33	2	48.129	30.804	1	71.99
A002C0019_20220420225823_0001_1	3D	60	*Salpa maxima*	Linear	11	3.67	2	68.311	34.78	0.5	74.01
A002C0019_20220420225823_0001_2	3D	60	*Salpa maxima*	Linear	8	2.67	2	68.311	34.78	0.5	47.55
C0164	2D	120	*Salpa maxima*	Linear	7	0.87	2	NA	NA	NA	30.03
A001C0247_20210918223147_0001_2	3D	120	*Soestia zonaria*	Linear	8	1.34	8	25.304	12.515	1.5	141.34
A001C0252_20210918223920_0001	3D	120	*Soestia zonaria*	Linear	9	1.50	8	NA	NA	1.14	142.34
A001C0357_20210922222753_0001	3D	120	*Soestia zonaria*	Linear	9	1.50	7	6.499	4.37	1.83	84.33
GX010104	2D	240	*Soestia zonaria*	Linear	8	0.50	20	9.162	3.417	3	68.68
C0123_b	2D	30	*Thalia* sp.	Oblique	28	13.13	29	3.508	2.281	4.5	5.84
A001C0341_20210921224426_0001	3D	120	*Pegea* sp.	Transversal	7	1.75	20	31.186	11.264	1.9	15.88
A001C0352_20210922221526_0001	3D	120	*Pegea* sp.	Transversal	11	2.75	4	30.728	16.412	1.5	24.78
C0066	2D	30	*Cyclosalpa affinis*	Whorl	11	5.50	4	41.74	17.384	1.219512195	18.82
c0165_b	2D	30	*Cyclosalpa affinis*	Whorl	4	2.00	6	24.178	8.754	1.5	30.11
A001C0207_20210710141533_0001	3D	120	*Cyclosalpa bakeri*	Whorl	9	2.50	4	8.44	4.664	2.38	11.86
A001C0209_20210710141857_0001	3D	120	*Cyclosalpa bakeri*	Whorl	9	1.50	4	8.702	3.699	2.63	11.49
A001C0210_20210710142059_0001_1	3D	120	*Cyclosalpa bakeri*	Whorl	9	1.50	6	4.519	2.036	4.33	10.46
A001C0211_20210710142218_0001	3D	120	*Cyclosalpa bakeri*	Whorl	9	1.50	6	4.297	2.552	2	6.83
A001C0214_20210710142543_0001	3D	120	*Cyclosalpa bakeri*	Whorl	9	1.50	6	10.659	4.358	3.45	11.08
A001C0330_20210921221301_0001	3D	120	*Cyclosalpa bakeri*	Whorl	11	1.84	11	8.057	3.892	2	8.73
A002C0073_20220422223852_0001	3D	60	*Cyclosalpa bakeri*	Whorl	7	3.50	13	4.545	2.311	1.64	12.49
C0070	2D	30	*Cyclosalpa quadriluminis*	Whorl	6	3.00	8	27.104	12.105	1.33	25.26

Table S2. Salp specimens used in the respirometry experiments with mean physiological attributes.

Specimen	Species	Architecture	Experiment	Date	Activity level	Zooid length (mm)	Number of zooids	Colony volume (ml)	Container volume (ml)	Treatment	Timespan (min)	Temperature range (°C)	Gross respiration rate (mgO2/min)	Control rate (mgO2/min)	Net respiration rate (mgO2/min)	Biovolume-corrected gross respiration rate (pgO2/min/ml)	Biovolume-corrected net respiration rate (pgO2/min/ml)
028-Bros-B-1	*Brooksia rostrata*	Bipinnate	15	6/27/2022	Anesthetized	8	9	0.5	208	Anesthetized	150	1.7	0.00012	0.00008	0.00005	277.12	104.02
035-Bros-B-1	*Brooksia rostrata*	Bipinnate	21	9/12/2022	Anesthetized	4	22	0.2	208	Anesthetized	200	5.1	0.00007	0.00012	-0.00005	364.00	-245.14
039-Bros-B-2	*Brooksia rostrata*	Bipinnate	23	9/14/2022	Anesthetized	4	12	0.2	208	Anesthetized	240	0.8	0.00020	0.00009	0.00011	1005.12	556.50
041-Bros-B-1	*Brooksia rostrata*	Bipinnate	24	9/15/2022	Anesthetized	11	37	11.5	208	Anesthetized	270	0.5	-0.00011	0.00000	-0.00011	-9.52	-9.65
011-BR-B-1	*Brooksia rostrata*	Bipinnate	6	9/22/2021	Moderate	10	14	7.4	208	Intact	295	2.3	-0.00023	-0.00002	-0.00021	-31.60	-28.89
011-BR-B-2	*Brooksia rostrata*	Bipinnate	6	9/22/2021	Moderate	7.5	32	8.9	208	Intact	295	2.3	-0.00029	-0.00002	-0.00027	-31.98	-29.73
015-BR-B-1	*Brooksia rostrata*	Bipinnate	8	4/19/2022	Moderate	10	8	0.8	208	Intact	123	1.5	0.00024	0.00010	0.00014	299.86	172.37
015-BR-B-2	*Brooksia rostrata*	Bipinnate	8	4/19/2022	Moderate	3	14	3.8	208	Intact	123	1.5	0.00040	0.00010	0.00030	106.39	79.28
021-BR-B-1	*Brooksia rostrata*	Bipinnate	11	4/22/2022	Moderate	4	14	0.2	208	Intact	150	1.2	0.00017	0.00006	0.00012	855.52	579.73
025-BR-B-1	*Brooksia rostrata*	Bipinnate	13	4/25/2022	Moderate	4	60	1.0	208	Intact	126	1.2	0.00019	0.00025	-0.00007	187.34	-67.12
031-Bros-B-1	*Brooksia rostrata*	Bipinnate	18	6/30/2022	Moderate	3	7	0.1	208	Intact	180	3.0	0.00005	-0.00003	0.00008	520.00	802.86
07-BR-B-1	*Brooksia rostrata*	Bipinnate	4	9/20/2021	Very active	7	28	8.0	208	Intact	300	NA	-0.00040	-0.00009	-0.00031	-49.29	-38.27
07-BR-B-2	*Brooksia rostrata*	Bipinnate	4	9/20/2021	Very active	8	24	7.9	208	Intact	300	NA	-0.00047	-0.00009	-0.00038	-59.17	-48.00
07-BR-B-3	*Brooksia rostrata*	Bipinnate	4	9/20/2021	Very active	8	19	7.1	208	Intact	300	NA	-0.00038	-0.00009	-0.00029	-53.27	-40.87
029-Bros-B-1	*Brooksia rostrata*	Bipinnate	16	6/28/2022	Active	6	8	0.2	208	Paired	120	2.2	0.00008	0.00006	0.00001	331.59	60.29
029-Bros-B-1	*Brooksia rostrata*	Bipinnate	16	6/28/2022	Active	6	8	0.2	208	Paired	90	0.2	-0.00017	-0.00002	-0.00015	-723.48	-640.00
029-Bros-B-2	*Brooksia rostrata*	Bipinnate	16	6/28/2022	Active	7	17	1.1	208	Paired	120	2.2	0.00011	0.00006	0.00005	100.85	44.12
029-Bros-B-2	*Brooksia rostrata*	Bipinnate	16	6/28/2022	Active	7	17	1.1	208	Paired	90	0.2	-0.00021	-0.00002	-0.00020	-195.39	-177.94
031-Caff-B-1	*Cyclosalpa affinis*	Whorl	18	6/30/2022	Anesthetized	32	8	5.5	208	Anesthetized	180	3.0	-0.00068	-0.00003	-0.00065	-122.91	-117.77
031-Caff-B-2	*Cyclosalpa affinis*	Whorl	18	6/30/2022	Anesthetized	32	6	8.0	208	Anesthetized	180	3.0	-0.00073	-0.00003	-0.00070	-90.69	-87.15
011-CA-B-1	*Cyclosalpa affinis*	Whorl	6	9/22/2021	Active	45	6	24.3	208	Intact	295	2.3	-0.00275	-0.00002	-0.00273	-113.22	-112.40
013-CA-B-1	*Cyclosalpa affinis*	Whorl	7	9/23/2021	Active	35	6	19.1	208	Intact	30	2.0	-0.00208	0.00010	-0.00218	-108.78	-113.80
013-CA-B-2	*Cyclosalpa affinis*	Whorl	7	9/23/2021	Active	35	6	19.1	208	Intact	105	0.8	-0.00188	-0.00025	-0.00163	-98.49	-85.46
013-CA-B-3	*Cyclosalpa affinis*	Whorl	7	9/23/2021	Active	35	6	19.1	208	Intact	156	1.6	-0.00137	-0.00006	-0.00131	-71.51	-68.28
015-CAff-B-1	*Cyclosalpa affinis*	Whorl	8	4/19/2022	Active	50	6	42.0	208	Intact	123	1.5	-0.00694	0.00010	-0.00704	-165.15	-167.58
017-Caff-B-1	*Cyclosalpa affinis*	Whorl	9	4/20/2022	Moderate	35	11	27.5	208	Intact	120	1.4	-0.00467	0.00009	-0.00476	-169.74	-173.09
017-Caff-B-2	*Cyclosalpa affinis*	Whorl	9	4/20/2022	Active	40	8	48.0	980	Intact	120	1.4	-0.00379	0.00009	-0.00389	-79.06	-80.98
07-CA-B-1	*Cyclosalpa affinis*	Whorl	4	9/20/2021	Moderate	40	4	21.4	208	Intact	300	NA	-0.00246	-0.00009	-0.00237	-114.72	-110.57
032-Cbak-B-1	*Cyclosalpa bakeri*	Whorl	19	7/1/2022	Anesthetized	12	5	1.3	208	Anesthetized	180	3.1	0.00020	0.00007	0.00013	150.48	97.73
039-Cbak-B-1	*Cyclosalpa bakeri*	Whorl	23	9/14/2022	Anesthetized	9	4	0.2	208	Anesthetized	240	0.8	0.00019	0.00009	0.00010	968.82	520.20
019-Cbak-B-1	*Cyclosalpa bakeri*	Whorl	10	4/21/2022	Moderate	12	6	3.6	208	Intact	120	1.2	-0.00003	0.00026	-0.00030	-9.52	-82.25

037-Cbak-B-1	*Cyclosalpa bakeri*	Whorl	22	9/13/2022	Low	10	8	1.5	208	Intact	180	0.3	-0.00014	0.00000	-0.00014	-91.02	-93.65
044-Cbak-B-1	*Cyclosalpa bakeri*	Whorl	27	05/06/2023	Moderate	20	9	7.0	208	Paired	264	2.3	-0.00063	-0.00004	-0.00059	-90.69	-84.52
044-Cbak-B-1	*Cyclosalpa bakeri*	Whorl	27	05/06/2023	Moderate	20	9	7.0	208	Paired	155	0.7	-0.00004	0.00007	-0.00011	-5.80	-15.69
044-Cbak-B-2	*Cyclosalpa bakeri*	Whorl	27	05/06/2023	Moderate	17	11	5.1	208	Paired	264	2.3	-0.00058	-0.00004	-0.00054	-114.15	-105.68
044-Cbak-B-2	*Cyclosalpa bakeri*	Whorl	27	05/06/2023	Moderate	17	11	5.1	208	Paired	155	0.7	-0.00004	0.00007	-0.00011	-8.22	-21.80
044-Cbak-B-3	*Cyclosalpa bakeri*	Whorl	27	05/06/2023	Moderate	22	5	2.0	208	Paired	264	2.3	-0.00047	-0.00004	-0.00043	-237.16	-215.58
044-Cbak-B-3	*Cyclosalpa bakeri*	Whorl	27	05/06/2023	Moderate	22	5	2.0	208	Paired	155	0.7	-0.00003	0.00007	-0.00010	-14.67	-49.30
044-Cpol-B-1	*Cyclosalpa polae*	Cluster	27	05/06/2023	Anesthetized	23	7	9.0	980	Anesthetized	352	2.3	-0.00038	-0.00003	-0.00034	-41.69	-38.12
032-Cpol-B-1	*Cyclosalpa polae*	Cluster	19	7/1/2022	Low	28	13	6.0	980	Intact	180	3.1	-0.00094	0.00007	-0.00101	-157.50	-168.93
048-Cpol-B-1	*Cyclosalpa polae*	Cluster	29	05/08/2023	Moderate	21	1	1.0	208	Paired	147	2.1	-0.00010	0.00057	-0.00066	-95.55	-662.51
048-Cpol-B-1	*Cyclosalpa polae*	Cluster	29	05/08/2023	Moderate	21	1	1.0	208	Paired	103	0.6	0.00026	0.00067	-0.00040	263.60	-402.33
050-Cpol-B-1	*Cyclosalpa polae*	Cluster	30	05/09/2023	Moderate	17	4	2.3	208	Paired	200	1.6	-0.00040	0.00064	-0.00104	-175.47	-454.11
050-Cpol-B-1	*Cyclosalpa polae*	Cluster	30	05/09/2023	Moderate	17	4	2.3	208	Paired	97	0.6	0.00010	0.00094	-0.00084	44.46	-363.55
050-Cpol-B-2	*Cyclosalpa polae*	Cluster	30	05/09/2023	Low	25	6	7.6	490	Paired	200	1.6	-0.00132	0.00064	-0.00196	-173.30	-257.62
050-Cpol-B-2	*Cyclosalpa polae*	Cluster	30	05/09/2023	Low	25	6	7.6	490	Paired	97	0.6	-0.00060	0.00094	-0.00154	-79.43	-202.90
052-Cpol-B-1	*Cyclosalpa polae*	Cluster	31	05/10/2023	Moderate	12	8	2.1	208	Paired	157	1.5	-0.00038	0.00036	-0.00074	-181.94	-352.24
052-Cpol-B-1	*Cyclosalpa polae*	Cluster	31	05/10/2023	Moderate	12	8	2.1	208	Paired	137	0.7	0.00005	0.00052	-0.00047	23.54	-224.43
053-Cpol-B-1	*Cyclosalpa polae*	Cluster	31	05/10/2023	Low	14	10	1.8	208	Paired	138	1.9	-0.00026	0.00009	-0.00036	-146.33	-197.99
053-Cpol-B-1	*Cyclosalpa polae*	Cluster	31	05/10/2023	Low	14	10	1.8	208	Paired	122	0.6	-0.00015	0.00008	-0.00023	-82.84	-129.00
031-Cqua-B-1	*Cyclosalpa quadriluminis*	Whorl	18	6/30/2022	Anesthetized	13	16	2.8	208	Anesthetized	180	3.0	-0.00027	-0.00003	-0.00024	-96.39	-86.29
042-Cqua-B-1	*Cyclosalpa quadriluminis*	Whorl	25	9/16/2022	Anesthetized	28	5	28.0	208	Anesthetized	424	1.0	-0.00111	-0.00005	-0.00105	-39.49	-37.67
025-Cqua-B-1	*Cyclosalpa quadriluminis*	Whorl	13	4/25/2022	Moderate	25	4	4.0	208	Intact	126	1.2	-0.00060	0.00025	-0.00085	-148.82	-212.43
041-Cqua-B-1	*Cyclosalpa quadriluminis*	Whorl	24	9/15/2022	Moderate	17	11	5.5	208	Intact	270	0.5	-0.00110	0.00000	-0.00110	-199.57	-199.85
045-Cqua-B-1	*Cyclosalpa quadriluminis*	Whorl	27	05/06/2023	Active	35	6	15.0	490	Intact	228	1.4	-0.00495	-0.00029	-0.00466	-330.02	-310.82
051-Cqua-B-1	*Cyclosalpa quadriluminis*	Whorl	30	05/09/2023	Anesthetized	29	8	21.0	490	Paired	187	1.2	-0.00088	0.00005	-0.00093	-41.91	-44.24
028-Csew-B-1	*Cyclosalpa sewelli*	Cluster	15	6/27/2022	Anesthetized	12	10	2.4	208	Anesthetized	150	1.7	0.00001	0.00008	-0.00007	2.96	-29.50
028-Csew-B-2	*Cyclosalpa sewelli*	Cluster	15	6/27/2022	Anesthetized	8	16	2.5	208	Anesthetized	150	1.7	0.00000	0.00008	-0.00008	0.57	-30.59
039-Csew-B-1	*Cyclosalpa sewelli*	Cluster	23	9/14/2022	Anesthetized	9	15	1.3	208	Anesthetized	240	0.8	0.00013	0.00009	0.00004	100.58	31.56
015-CPol-B-1	*Cyclosalpa sewelli*	Cluster	8	4/19/2022	Moderate	15	7	4.4	208	Intact	123	1.5	-0.00004	0.00010	-0.00014	-9.75	-32.93
023-Cpol-B-1	*Cyclosalpa sewelli*	Cluster	12	4/24/2022	Moderate	35	1	2.4	208	Intact	123	1.1	-0.00025	0.00007	-0.00032	-102.22	-133.20
04-Csew-B-1	*Cyclosalpa sewelli*	Cluster	2	9/19/2021	Low	20	1	10.5	208	Intact	60	NA	-0.00001	0.00049	-0.00050	-1.32	-47.35
09-Csew-B-1	*Cyclosalpa sewelli*	Cluster	5	9/21/2021	Moderate	25	4	13.6	208	Intact	360	1.6	-0.00057	-0.00006	-0.00051	-42.01	-37.36

09-Csew-B-2	*Cyclosalpa sewelli*	Cluster	5	9/21/2021	Moderate	25	6	13.9	208	Intact	360	1.6	-0.00069	-0.00006	-0.00062	-49.20	-44.65
09-Csew-B-3	*Cyclosalpa sewelli*	Cluster	5	9/21/2021	Moderate	20	2	10.7	208	Intact	360	1.6	-0.00027	-0.00006	-0.00021	-25.47	-19.55
09-Csew-B-4	*Cyclosalpa sewelli*	Cluster	5	9/21/2021	Moderate	25	1	13.1	208	Intact	360	1.6	-0.00025	-0.00006	-0.00018	-18.86	-14.04
029-Csew-B-1	*Cyclosalpa sewelli*	Cluster	16	6/28/2022	Moderate	19	5	4.5	208	Paired	120	2.2	-0.00028	0.00006	-0.00034	-61.63	-75.50
029-Csew-B-1	*Cyclosalpa sewelli*	Cluster	16	6/28/2022	Moderate	19	5	4.5	208	Paired	90	0.2	-0.00033	-0.00002	-0.00031	-72.41	-68.15
043-Hvir-B-1	*Helicosalpa virgula*	Helical	26	9/16/2022	Moderate	12	68	13.0	980	Intact	312	0.5	-0.00328	-0.00004	-0.00324	-252.24	-249.06
054-Hvir-B-1	*Helicosalpa virgula*	Helical	31	05/10/2023	Moderate	16	64	16.5	980	Paired	138	1.9	-0.00401	0.00009	-0.00410	-242.74	-248.37
054-Hvir-B-1	*Helicosalpa virgula*	Helical	31	05/10/2023	Moderate	16	64	16.5	980	Paired	122	0.6	-0.00061	0.00008	-0.00069	-36.93	-41.97
030-Icyl-B-1	*Iasis cylindrica*	Linear	17	6/29/2022	Anesthetized	11	9	12.0	208	Anesthetized	142	0.9	-0.00007	0.00002	-0.00009	-6.06	-7.34
032-Icyl-B-1	*Iasis cylindrica*	Linear	19	7/1/2022	Anesthetized	6	26	0.1	208	Anesthetized	180	3.1	0.00013	0.00007	0.00006	1312.38	626.67
033-Icyl-B-1	*Iasis cylindrica*	Linear	20	9/11/2022	Anesthetized	6	11	0.3	208	Anesthetized	180	1.8	0.00016	0.00025	-0.00009	533.71	-303.83
011-WC-B-1	*Iasis cylindrica*	Linear	6	9/22/2021	Very active	15	12	9.7	208	Intact	295	2.3	-0.00113	-0.00002	-0.00111	-116.62	-114.55
014-WC-B-1A	*Iasis cylindrica*	Linear	7	9/23/2021	Very active	10	20	8.3	208	Intact	246	3.9	-0.00141	-0.00014	-0.00127	-168.66	-152.14
014-WC-B-1B	*Iasis cylindrica*	Linear	7	9/23/2021	Very active	10	28	9.6	208	Intact	246	3.9	-0.00213	-0.00014	-0.00199	-221.66	-207.31
014-WC-B-2	*Iasis cylindrica*	Linear	7	9/23/2021	Very active	10	34	10.5	208	Intact	30	2.0	-0.00312	0.00010	-0.00322	-295.85	-304.95
014-WC-B-3	*Iasis cylindrica*	Linear	7	9/23/2021	Very active	10	34	10.5	208	Intact	105	0.8	-0.00261	-0.00025	-0.00236	-247.82	-224.19
014-WC-B-4	*Iasis cylindrica*	Linear	7	9/23/2021	Very active	10	34	10.5	208	Intact	156	1.6	-0.00184	-0.00006	-0.00178	-174.65	-168.79
021-Icyl-B-1	*Iasis cylindrica*	Linear	11	4/22/2022	Moderate	7	21	1.3	208	Intact	150	1.2	-0.00016	0.00006	-0.00021	-121.33	-163.75
021-Icyl-B-2A	*Iasis cylindrica*	Linear	11	4/22/2022	Very active	15	28	6.0	980	Intact	150	1.2	-0.00173	0.00006	-0.00179	-289.10	-298.29
021-Icyl-B-2B	*Iasis cylindrica*	Linear	11	4/22/2022	Very active	15	15	3.0	980	Intact	150	1.2	-0.00011	0.00006	-0.00016	-36.30	-54.68
023-Icyl-B-1	*Iasis cylindrica*	Linear	12	4/24/2022	Active	15	44	14.1	980	Intact	123	1.1	-0.00318	0.00007	-0.00326	-225.69	-230.96
032-Icyl-B2	*Iasis cylindrica*	Linear	19	7/1/2022	Active	7	76	0.5	208	Intact	180	3.1	-0.00064	0.00007	-0.00071	-1277.71	-1414.86
041-Icyl-B-1	*Iasis cylindrica*	Linear	24	9/15/2022	Active	10	10	1.5	208	Paired	105	0.2	-0.00055	0.00004	-0.00059	-367.28	-395.82
041-Icyl-B-1	*Iasis cylindrica*	Linear	24	9/15/2022	Active	10	10	1.5	208	Paired	115	0.2	-0.00030	-0.00001	-0.00029	-199.35	-190.74
048-Ipun-B-1	*Ihlea punctata*	Linear	29	05/08/2023	Moderate	12	68	3.7	980	Paired	147	2.1	-0.00521	0.00057	-0.00578	-1407.69	-1560.92
048-Ipun-B-1	*Ihlea punctata*	Linear	29	05/08/2023	Moderate	12	68	3.7	980	Paired	103	0.6	0.00035	0.00067	-0.00032	94.70	-85.28
039-Mhex-B-1	*Metcalfina hexagona*	Linear	23	9/14/2022	Anesthetized	28	16	22.0	980	Anesthetized	240	0.8	-0.00104	0.00077	-0.00180	-47.07	-81.93
027-Pcon-B-1	*Pegea sp.*	Transversal	14	6/26/2022	Anesthetized	28	2	3.5	208	Anesthetized	120	2.0	-0.00006	0.00004	-0.00010	-18.15	-28.70
030-Pco-B-1	*Pegea sp.*	Transversal	17	6/29/2022	Anesthetized	36	5	15.0	980	Anesthetized	142	0.9	0.00021	0.00002	0.00020	14.32	13.30
035-Pcon-B-1	*Pegea sp.*	Transversal	21	9/12/2022	Anesthetized	35	8	23.0	980	Anesthetized	200	5.1	-0.00153	0.00012	-0.00165	-66.65	-71.95
037-Pcon-B-1	*Pegea sp.*	Transversal	22	9/13/2022	Anesthetized	60	12	80.0	980	Anesthetized	180	0.3	-0.00920	0.00003	-0.00923	-115.01	-115.42
019-Pso-B-1	*Pegea sp.*	Transversal	10	4/21/2022	Moderate	80	5	65.0	980	Intact	120	1.2	-0.01312	0.00026	-0.01338	-201.78	-205.81
019-Pso-B-2	*Pegea sp.*	Transversal	10	4/21/2022	Moderate	65	5	50.0	980	Intact	120	1.2	-0.01116	0.00026	-0.01142	-223.24	-228.48
019-Pso-B-3	*Pegea sp.*	Transversal	10	4/21/2022	Moderate	65	1	18.0	208	Intact	120	1.2	-0.00168	0.00026	-0.00195	-93.56	-108.10
023-Pso-B-1	*Pegea sp.*	Transversal	12	4/24/2022	Moderate	30	22	44.0	980	Intact	123	1.1	-0.00704	0.00007	-0.00712	-160.07	-161.76

025-Pso-B-1	*Pegea sp.*	Transversal	13	4/25/2022	Active	42	7	35.0	980	Intact	126	1.2	-0.00269	0.00176	-0.00444	-76.73	-126.97
031-Pcon-B-2	*Pegea sp.*	Transversal	18	6/30/2022	Moderate	41	3	9.0	980	Intact	180	3.0	-0.00115	-0.00003	-0.00113	-128.33	-125.19
05-PC-B-1	*Pegea sp.*	Transversal	3	9/19/2021	Moderate	25	5	13.8	208	Intact	259	NA	-0.00042	-0.00001	-0.00042	-30.76	-30.39
046-Psp-B-1	*Pegea sp.*	Transversal	28	05/07/2023	Moderate	12	87	4.9	490	Paired	243	1.3	-0.00170	0.00015	-0.00185	-347.02	-377.14
046-Psp-B-1	*Pegea sp.*	Transversal	28	05/07/2023	Moderate	12	87	4.9	490	Paired	74	0.4	-0.00073	0.00017	-0.00090	-149.42	-184.55
052-Psp-B-1	*Pegea sp.*	Transversal	31	05/10/2023	Low	43	8	18.0	980	Paired	157	1.5	-0.00561	0.00036	-0.00597	-311.81	-331.67
052-Psp-B-1	*Pegea sp.*	Transversal	31	05/10/2023	Low	43	8	18.0	980	Paired	137	0.7	0.00015	0.00052	-0.00037	8.11	-20.82
030-Ramb-B-1	*Ritteriella amboinensis*	Bipinnate	17	6/29/2022	Anesthetized	18	3	1.5	208	Anesthetized	142	0.9	0.00010	0.00002	0.00008	66.31	56.09
030-Ramb-B-2	*Ritteriella amboinensis*	Bipinnate	17	6/29/2022	Anesthetized	15	5	0.8	208	Anesthetized	142	0.9	0.00010	0.00002	0.00008	124.46	105.29
030-Ramb-B-4	*Ritteriella amboinensis*	Bipinnate	17	6/29/2022	Anesthetized	22	38	6.3	980	Anesthetized	142	0.9	-0.00036	0.00002	-0.00037	-56.69	-59.13
023-Ramb-B-1	*Ritteriella amboinensis*	Bipinnate	12	4/24/2022	Moderate	40	23	40.0	208	Intact	123	1.1	-0.00164	0.00007	-0.00171	-40.95	-42.81
027-Ramb-B-1	*Ritteriella amboinensis*	Bipinnate	14	6/26/2022	Moderate	28	10	3.5	208	Intact	120	2.0	-0.00009	0.00004	-0.00012	-24.44	-34.99
027-Ramb-B-2	*Ritteriella amboinensis*	Bipinnate	14	6/26/2022	Moderate	15	5	2.5	208	Intact	120	2.0	-0.00003	0.00004	-0.00006	-10.79	-25.57
030-Ramb-B-3	*Ritteriella amboinensis*	Bipinnate	17	6/29/2022	Moderate	17	5	1.4	208	Intact	142	0.9	-0.00002	0.00002	-0.00004	-17.68	-28.64
047-Rret-B-1	*Ritteriella retracta*	Bipinnate	28	05/07/2023	Moderate	31	2	1.2	208	Paired	133	0.6	-0.00095	-0.00134	0.00039	-789.91	323.08
047-Rret-B-1	*Ritteriella retracta*	Bipinnate	28	05/07/2023	Moderate	31	2	1.2	208	Paired	115	0.4	-0.00012	-0.00051	0.00039	-95.94	328.64
050-Rret-B-1	*Ritteriella retracta*	Bipinnate	30	05/09/2023	Low	31	8	7.8	980	Paired	200	1.6	-0.00161	0.00064	-0.00225	-205.81	-287.97
050-Rret-B-1	*Ritteriella retracta*	Bipinnate	30	05/09/2023	Low	31	8	7.8	980	Paired	97	0.6	0.00063	0.00094	-0.00030	81.28	-39.03
022-Rsp-B-1	*Ritteriella retracta*	Bipinnate	20	9/11/2022	Anesthetized	25	25	11.0	980	Anesthetized	180	1.8	-0.00026	0.00025	-0.00051	-23.75	-46.59
037-Rsp-B-1	*Ritteriella retracta*	Bipinnate	22	9/13/2022	Anesthetized	57	8	63.0	980	Anesthetized	180	0.3	-0.00456	0.00003	-0.00460	-72.43	-72.95
025-Rsp-B-1	*Ritteriella retracta*	Bipinnate	21	9/12/2022	Moderate	33	14	18.2	980	Intact	200	5.1	-0.00216	0.00010	-0.00225	-118.46	-123.69
032-Rsp-B-1	*Ritteriella retracta*	Bipinnate	19	7/1/2022	Moderate	30	55	34.0	980	Intact	180	3.1	-0.01511	0.00007	-0.01518	-444.36	-446.38
028-Sasp-B-2	*Salpa aspera*	Linear	15	6/27/2022	Anesthetized	22	57	16.5	980	Anesthetized	150	1.7	-0.00152	0.00008	-0.00159	-91.90	-96.62
032-Sasp-B-1	*Salpa aspera*	Linear	19	7/1/2022	Anesthetized	28	9	6.0	208	Anesthetized	180	3.1	-0.00104	0.00007	-0.00111	-174.16	-185.59
027-Sasp-B-1	*Salpa aspera*	Linear	14	6/26/2022	Active	45	3	8.0	980	Intact	120	2.0	0.00100	0.00004	0.00097	125.43	120.82
027-Sasp-B-2	*Salpa aspera*	Linear	14	6/26/2022	Active	39	13	15.5	980	Intact	120	2.0	-0.00648	0.00004	-0.00652	-418.10	-420.48
028-Sasp-B-1	*Salpa aspera*	Linear	15	6/27/2022	Active	20	10	3.3	208	Intact	150	1.7	-0.00064	0.00008	-0.00072	-195.33	-218.93
049-Sasp-B-1	*Salpa aspera*	Linear	29	05/08/2023	Moderate	38	5	5.4	980	Paired	135	1.7	-0.00179	0.00034	-0.00214	-332.12	-395.96
049-Sasp-B-1	*Salpa aspera*	Linear	29	05/08/2023	Moderate	38	5	5.4	980	Paired	70	0.5	-0.00042	0.00014	-0.00056	-78.48	-104.23
033-Sfus-B-1	*Salpa fusiformis*	Linear	20	9/11/2022	Anesthetized	28	3	1.0	208	Anesthetized	180	1.8	0.00017	0.00025	-0.00008	166.95	-84.31
035-Sfus-B-1	*Salpa fusiformis*	Linear	21	9/12/2022	Anesthetized	15	13	1.6	208	Anesthetized	200	5.1	-0.00013	0.00012	-0.00026	-83.57	-159.71
039-Sfus-B-1	*Salpa fusiformis*	Linear	23	9/14/2022	Anesthetized	13	16	1.0	208	Anesthetized	240	0.8	0.00011	0.00009	0.00002	111.99	22.27
027-Sfus-B-1	*Salpa fusiformis*	Linear	14	6/26/2022	Moderate	15	5	1.6	208	Intact	120	2.0	-0.00006	0.00004	-0.00009	-35.03	-58.11
028-Sfus-B1	*Salpa fusiformis*	Linear	15	6/27/2022	Active	12	19	1.8	980	Intact	150	1.7	0.00035	0.00008	0.00027	192.01	148.73
033-Sfus-B-2	*Salpa fusiformis*	Linear	20	9/11/2022	Moderate	27	11	5.5	208	Intact	180	1.8	-0.00104	0.00025	-0.00129	-188.46	-234.15
053-Sfus-B-1	*Salpa fusiformis*	Linear	31	05/10/2023	Active	14	24	2.0	980	Paired	138	1.9	-0.00024	0.00009	-0.00034	-122.15	-168.65
053-Sfus-B-1	*Salpa fusiformis*	Linear	31	05/10/2023	Active	14	24	2.0	980	Paired	122	0.6	0.00002	0.00008	-0.00007	8.81	-32.73

029-Smax-B-1a	*Salpa maxima*	Linear	16	6/28/2022	Anesthetized	115	3	55.0	980	Anesthetized	120	2.2	-0.00268	0.00006	-0.00274	-48.70	-49.84
037-Smax-B-1	*Salpa maxima*	Linear	22	9/13/2022	Anesthetized	70	1	7.0	208	Anesthetized	180	0.3	0.00099	0.00003	0.00096	141.67	137.02
041-Smax-B-1	*Salpa maxima*	Linear	24	9/15/2022	Anesthetized	65	3	17.0	980	Anesthetized	270	0.5	-0.00264	0.00000	-0.00264	-155.19	-155.28
045-Smax-B-1	*Salpa maxima*	Linear	27	05/06/2023	Anesthetized	47	9	18.0	980	Anesthetized	228	1.4	-0.00212	-0.00029	-0.00183	-117.64	-101.65
031-Smax-B-2	*Salpa maxima*	Linear	18	6/30/2022	Moderate	80	3	20.0	980	Intact	180	3.0	-0.00422	-0.00003	-0.00420	-211.17	-209.75
033-Smax-B-1	*Salpa maxima*	Linear	20	9/11/2022	Moderate	100	5	32.5	980	Intact	180	1.8	-0.01118	0.00025	-0.01143	-343.97	-351.70
041-Smax-B-2	*Salpa maxima*	Linear	24	9/15/2022	Moderate	110	1	20.0	980	Intact	270	0.5	-0.00567	0.00000	-0.00568	-283.73	-283.81
029-Smax-B-1b	*Salpa maxima*	Linear	16	6/28/2022	Active	115	4	53.0	980	Paired	120	2.2	-0.01375	0.00006	-0.01382	-259.48	-260.66
029-Smax-B-1b	*Salpa maxima*	Linear	16	6/28/2022	Active	115	4	53.0	980	Paired	90	0.2	-0.00555	-0.00002	-0.00553	-104.78	-104.42
037-Szon-B-1	*Soestia zonaria*	Linear	22	9/13/2022	Active	21	9	5.4	208	Intact	0	0.0	NA	NA	NA	NA	NA
037-Szon-B-2	*Soestia zonaria*	Linear	22	9/13/2022	Active	21	9	5.4	208	Intact	0	0.0	NA	NA	NA	NA	NA
037-Szon-B-3	*Soestia zonaria*	Linear	22	9/13/2022	Active	21	9	5.4	208	Intact	0	0.0	NA	NA	NA	NA	NA
037-Szon-B-4	*Soestia zonaria*	Linear	22	9/13/2022	Active	21	9	5.4	208	Intact	0	0.0	NA	NA	NA	NA	NA
037-Szon-B-5	*Soestia zonaria*	Linear	22	9/13/2022	Active	21	9	5.4	208	Intact	0	0.0	NA	NA	NA	NA	NA
037-Szon-B-6	*Soestia zonaria*	Linear	22	9/13/2022	Active	21	9	5.4	208	Intact	0	0.0	NA	NA	NA	NA	NA
029-Szon-B-1	*Soestia zonaria*	Linear	16	6/28/2022	Active	7	9	0.7	208	Paired	120	2.2	-0.00003	0.00006	-0.00010	-49.52	-138.67
029-Szon-B-1	*Soestia zonaria*	Linear	16	6/28/2022	Active	7	9	0.7	208	Paired	90	0.2	-0.00012	-0.00002	-0.00010	-168.38	-140.95
047-Szon-B-1	*Soestia zonaria*	Linear	28	05/07/2023	Active	24	10	4.0	490	Paired	133	0.6	-0.00278	-0.00134	-0.00144	-694.72	-360.83
047-Szon-B-1	*Soestia zonaria*	Linear	28	05/07/2023	Active	24	10	4.0	490	Paired	115	0.4	-0.00041	-0.00051	0.00010	-101.81	25.56
050-Tcic-B-1	*Thalia cicar*	Oblique	30	05/09/2023	Low	6	12	0.1	208	Paired	200	1.6	-0.00028	0.00064	-0.00092	-2771.86	-9180.62
050-Tcic-B-1	*Thalia cicar*	Oblique	30	05/09/2023	Low	6	12	0.1	208	Paired	97	0.6	0.00009	0.00094	-0.00085	887.68	-8496.46
053-Tcic-B-1	*Thalia cicar*	Oblique	31	05/10/2023	Low	6	37	0.3	208	Paired	138	1.9	-0.00012	0.00009	-0.00021	-388.90	-698.90
053-Tcic-B-1	*Thalia cicar*	Oblique	31	05/10/2023	Low	6	37	0.3	208	Paired	122	0.6	-0.00003	0.00008	-0.00011	-99.76	-376.74
042-Tlon-B-1	*Thalia sp.*	Oblique	25	9/16/2022	Low	9	7	0.8	208	Intact	424	1.0	-0.00005	-0.00005	0.00000	-59.23	4.47
046-Tlon-B-1	*Thalia sp.*	Oblique	28	05/07/2023	Low	5	20	0.3	208	Paired	243	1.3	-0.00011	0.00015	-0.00026	-379.87	-871.81
046-Tlon-B-1	*Thalia sp.*	Oblique	28	05/07/2023	Low	5	20	0.3	208	Paired	74	0.4	-0.00000	0.00017	-0.00017	-0.00	-573.79
046-Tlon-B-2	*Thalia sp.*	Oblique	28	05/07/2023	Low	4	20	0.2	208	Paired	243	1.3	-0.00004	0.00015	-0.00018	-178.77	-916.69
046-Tlon-B-2	*Thalia sp.*	Oblique	28	05/07/2023	Low	4	20	0.2	208	Paired	74	0.4	-0.00008	0.00017	-0.00025	-390.38	-1251.06
048-Tlon-B-1	*Thalia sp.*	Oblique	29	05/08/2023	Low	5	19	0.3	208	Paired	147	2.1	0.00007	0.00057	-0.00050	228.56	-1661.29
048-Tlon-B-1	*Thalia sp.*	Oblique	29	05/08/2023	Low	5	19	0.3	208	Paired	103	0.6	0.00036	0.00067	-0.00030	1216.12	-1003.64
049-Tlon-B-1	*Thalia sp.*	Oblique	29	05/08/2023	Low	6	15	0.3	208	Paired	135	1.7	0.00009	0.00034	-0.00025	308.97	-840.09
049-Tlon-B-1	*Thalia sp.*	Oblique	29	05/08/2023	Low	6	15	0.3	208	Paired	70	0.5	0.00003	0.00014	-0.00011	93.69	-369.82

Table S3. Summary of numbers of specimens, number of measurements, and descriptive variable averages per species including both the video speed data and the respiration experiments data.

		Speed Measurements from Videos						Respiration Measurements from Experiments				
Species	**Architecture**	**Mean Number of zooids**	**Mean zooid length (mm)**	**Mean Pulsation rate (pulses/s)**	**Mean swimming speed (mm/s)**	**Number of Specimens**	**Number of Measurements**	**Mean Number of zooids**	**Mean zooid length (mm)**	**Mean Colony volume (ml)**	**Number of Specimens**	**Number of Measurements**
Brooksia rostrata	Bipinnate	26	7.4	2.6	34.4	5	45	20.3	6.5	3.7	16	130
Ritteriella amboinensis	Bipinnate	18	25.6	1.9	42.5	9	77	12.7	22.1	8.0	7	44
Ritteriella sp.	Bipinnate	33	21.3	1.3	43.1	3	49	18.7	34.5	22.5	6	42
Cyclosalpa polae	Cluster	5	17.2	1.2	47.6	2	19	7.0	20.0	4.3	7	55
Cyclosalpa sewelli	Cluster	7	15.0	1.4	26.8	6	52	6.2	19.4	7.2	11	88
Helicosalpa virgula	Helical	60	11.5	3.3	49.9	1	7	66.0	14.0	14.8	2	13
Iasis cylindrica	Linear	43	8.9	3.6	61.1	32	308	26.8	10.5	6.5	15	103
Ihlea punctata	Linear	NA	NA	NA	NA	0	0	68	12	3.7	1	7
Metcalfina hexagona	Linear	18	26.8	2.4	109.6	9	105	16.0	28.0	22.0	1	7
Salpa aspera	Linear	9	28.3	2.1	114.3	7	57	16.2	32.0	9.1	6	42
Salpa fusiformis	Linear	16	17.2	3.0	57.2	8	74	13.0	17.7	2.1	7	47
Salpa maxima	Linear	2	61.6	0.7	55.9	4	34	3.6	87.8	27.8	8	52
Soestia zonaria	Linear	11	13.7	1.9	109.2	4	34	9.1	19.6	4.6	8	23
Thalia sp.	Oblique	29	3.5	4.5	5.8	1	28	18.6	5.9	0.3	7	53
Pegea sp.	Transversal	12	31.0	1.7	20.3	2	18	13.1	43.2	29.2	13	91
Cyclosalpa affinis	Whorl	5	33.0	1.4	24.5	2	15	6.7	37.9	23.4	10	65
Cyclosalpa bakeri	Whorl	7	7.0	2.6	10.4	7	63	6.9	14.6	3.0	7	57
Cyclosalpa quadriluminis	Whorl	8	27.1	1.3	25.3	1	6	8.3	24.5	12.7	6	36

Table S4. Tukey's post-hoc pairwise comparisons from an ANOVA on swimming speed across different colonial architectures reporting magnitude of difference and adjusted p-values.

		Speed (mm/s)		Speed (zooids/pulse)	
Architecture		**Difference**	**p-value adj.**	**Difference**	**p-value adj.**
Cluster	Bipinnate	0.082	0.999	-12.900	0.008
Helical	Bipinnate	-0.112	1.000	10.870	0.959
Helical	Cluster	-0.194	1.000	23.769	0.345
Linear	Bipinnate	0.896	0.000	33.971	0.000
Linear	Cluster	0.814	0.000	46.871	0.000
Linear	Helical	1.008	0.478	23.101	0.347
Oblique	Bipinnate	-1.044	0.005	-33.143	0.000
Oblique	Cluster	-1.126	0.003	-20.244	0.017
Oblique	Helical	-0.932	0.691	-44.013	0.006
Oblique	Linear	-1.940	0.000	-67.114	0.000
Transversal	Bipinnate	-0.969	0.015	-22.314	0.004
Transversal	Cluster	-1.050	0.009	-9.415	0.738
Transversal	Helical	-0.856	0.772	-33.184	0.095
Transversal	Linear	-1.864	0.000	-56.286	0.000
Transversal	Oblique	0.075	1.000	10.829	0.804
Whorl	Bipinnate	-0.774	0.001	-25.559	0.000
Whorl	Cluster	-0.856	0.001	-12.659	0.046
Whorl	Helical	-0.662	0.890	-36.429	0.023
Whorl	Linear	-1.670	0.000	-59.530	0.000
Whorl	Oblique	0.270	0.974	7.584	0.891
Whorl	Transversal	0.195	0.996	-3.245	0.999

Color key:

Faster than
Slower than
$p < 0.05$
$p > 0.05$

Table S5. Tukey's post-hoc pairwise comparisons from an ANOVA on COT across different colonial architectures reporting magnitude of difference and adjusted p-values.

		COT per mm		COT per zooid length	
Architecture		**Difference**	**p-value adj.**	**Difference**	**p-value adj.**
Cluster	Bipinnate	0.558	1.000	-16.055	1.000
Helical	Bipinnate	1.220	1.000	-22.338	1.000
Helical	Cluster	0.662	1.000	-6.283	1.000
Linear	Bipinnate	-0.109	1.000	-19.013	1.000
Linear	Cluster	-0.667	1.000	-2.958	1.000
Linear	Helical	-1.329	1.000	3.326	1.000
Oblique	Bipinnate	46.132	0.000	155.555	0.122
Oblique	Cluster	45.574	0.000	171.610	0.006
Oblique	Helical	44.912	0.000	177.893	0.209
Oblique	Linear	46.241	0.000	174.567	0.001
Transversal	Bipinnate	4.999	0.991	100.580	0.498
Transversal	Cluster	4.441	0.976	116.636	0.061
Transversal	Helical	3.778	1.000	122.919	0.581
Transversal	Linear	5.108	0.906	119.593	0.013
Transversal	Oblique	-41.134	0.000	-54.974	0.900
Whorl	Bipinnate	0.180	1.000	-9.487	1.000
Whorl	Cluster	-0.378	1.000	6.568	1.000
Whorl	Helical	-1.041	1.000	12.851	1.000
Whorl	Linear	0.289	1.000	9.526	1.000
Whorl	Oblique	-45.952	0.000	-165.042	0.003
Whorl	Transversal	-4.819	0.931	-110.067	0.032

Color key:

More efficient than
Less efficient than
$p < 0.05$
$p > 0.05$

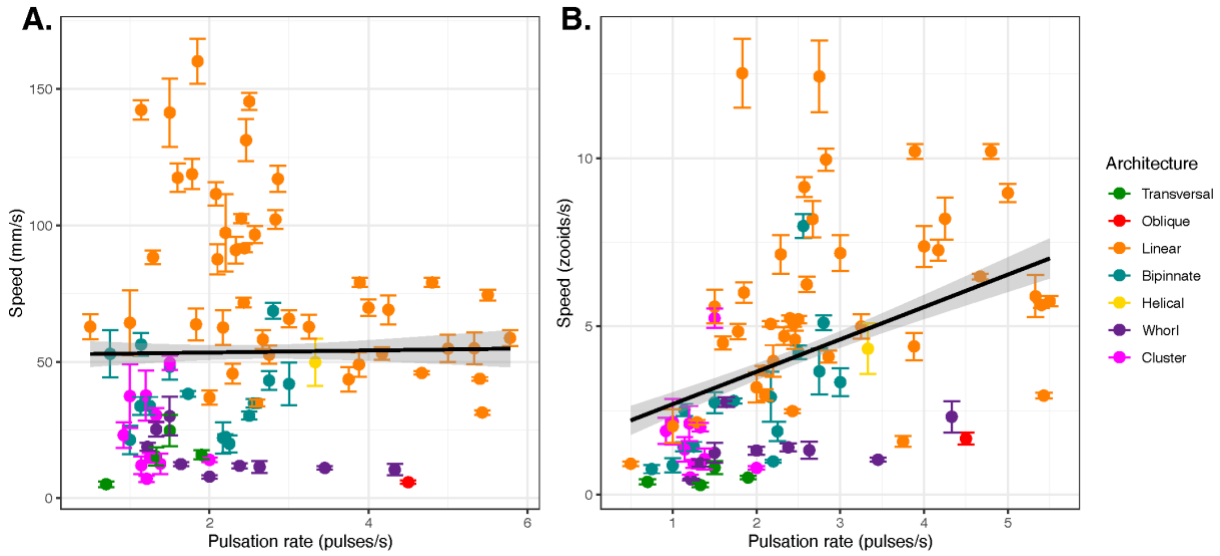

Figure S1. Distribution of salp colony absolute (A) and zooid size-corrected (B) swimming speed across pulsation rates. Lines represent linear regressions with a 95% confidence interval shaded in grey.

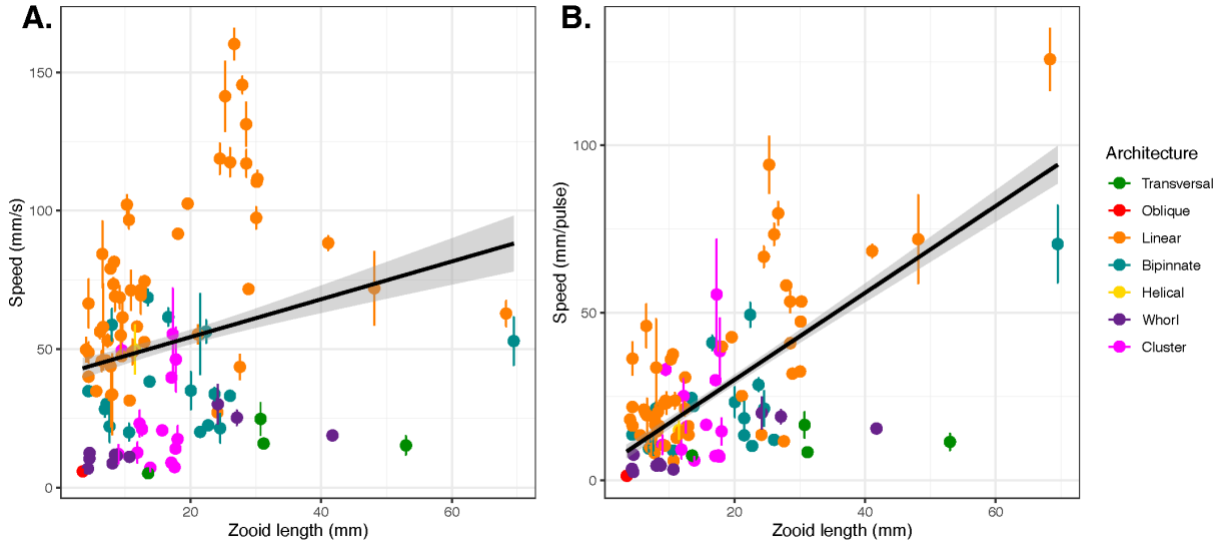

Figure S2. Distribution of salp colony absolute (A) and pulsation rate-corrected (B) swimming speed (specimen means with standard errors) across zooid sizes. Lines represent linear regressions with a 95% confidence interval shaded in grey.

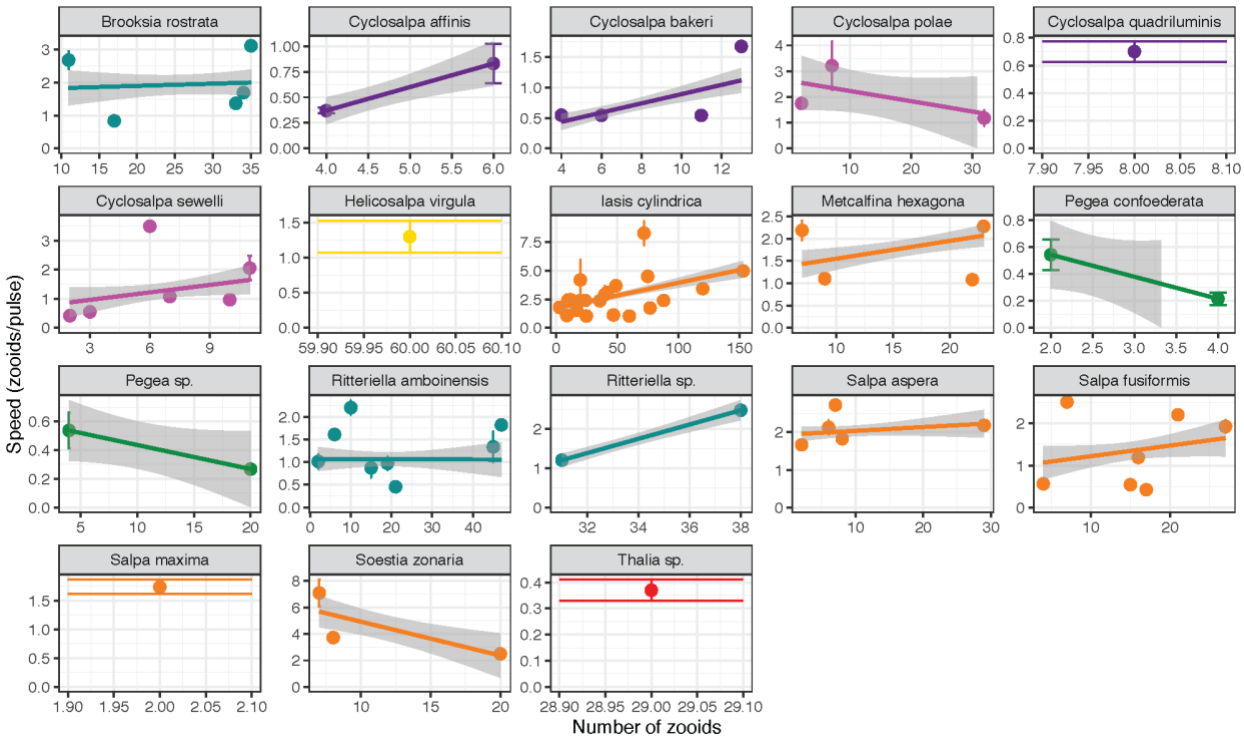

Figure S3 – Linear relationships between relative swimming speed (zooid lengths per pulsation, specimen means with standard errors) and number of zooids in the colony across each salp species. Gray areas represent the 95% confidence intervals of the linear regressions.

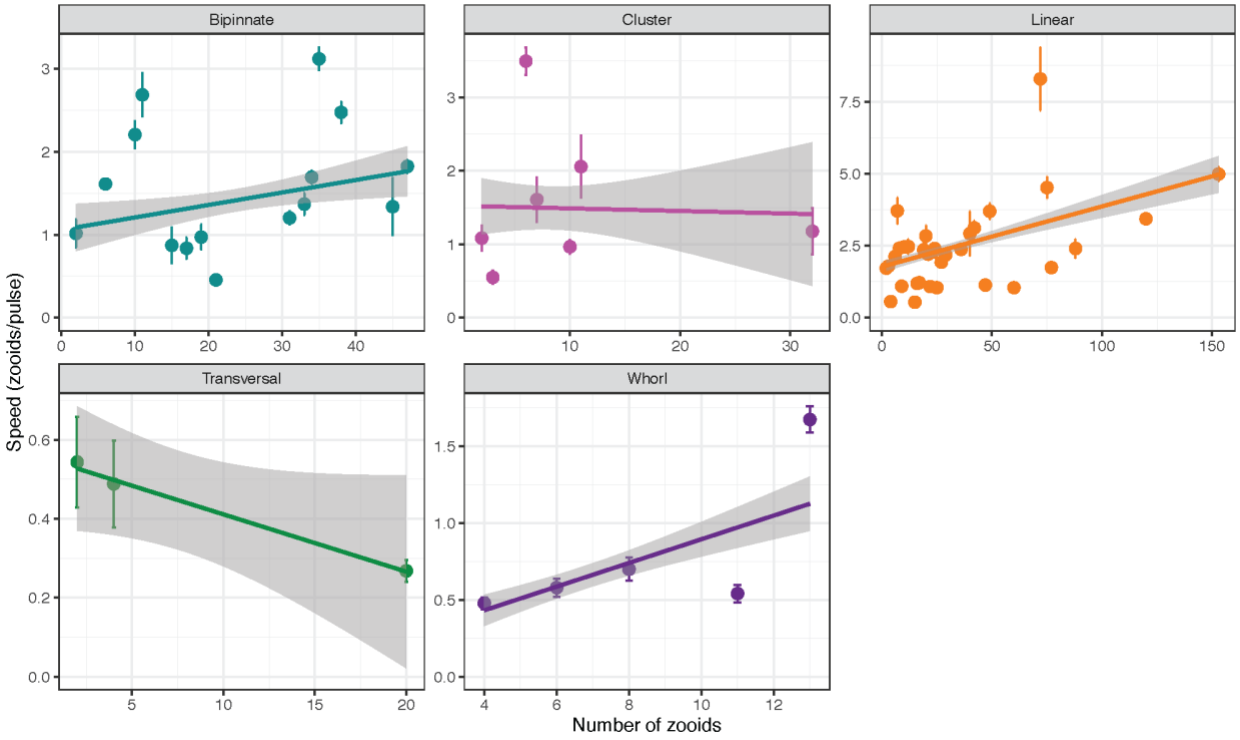

Figure S4. Linear relationships between relative swimming speed (zooid lengths per pulsation, specimen mean with standard errors) and number of zooids in the colony across each colonial architecture. Gray areas represent the 95% confidence intervals of the linear regressions.

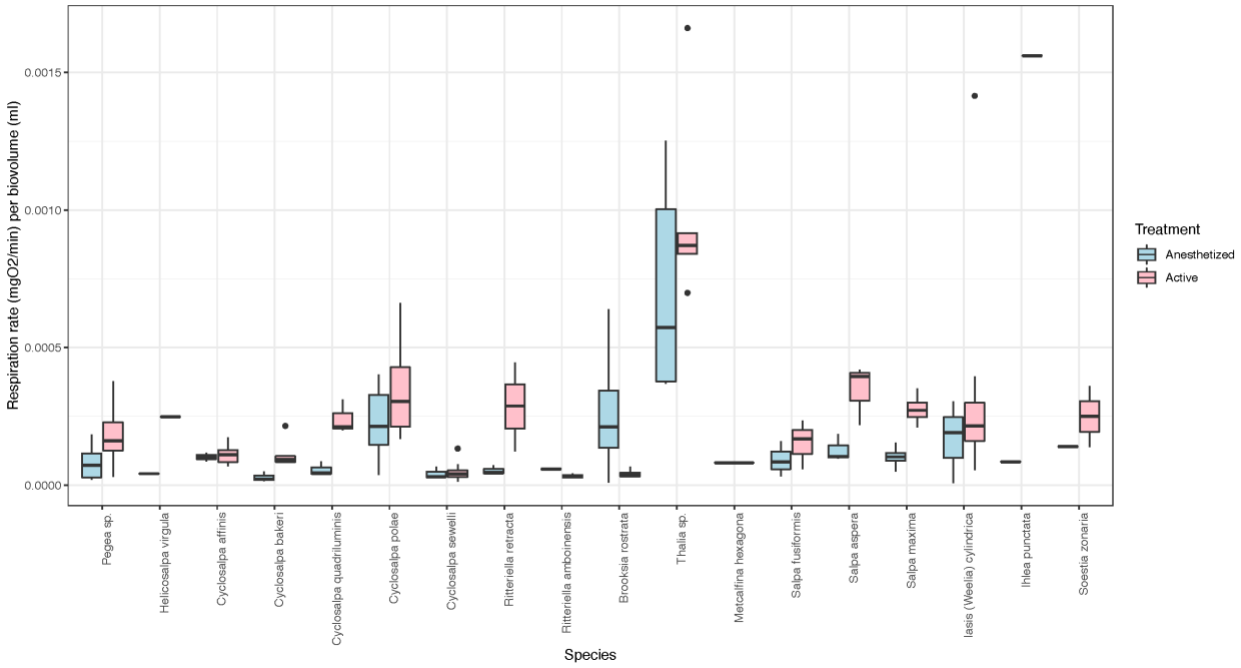

Figure S5. Biovolume-normalized respiration rates of swimming (red) and anesthetized (blue) salp colonies across different species.

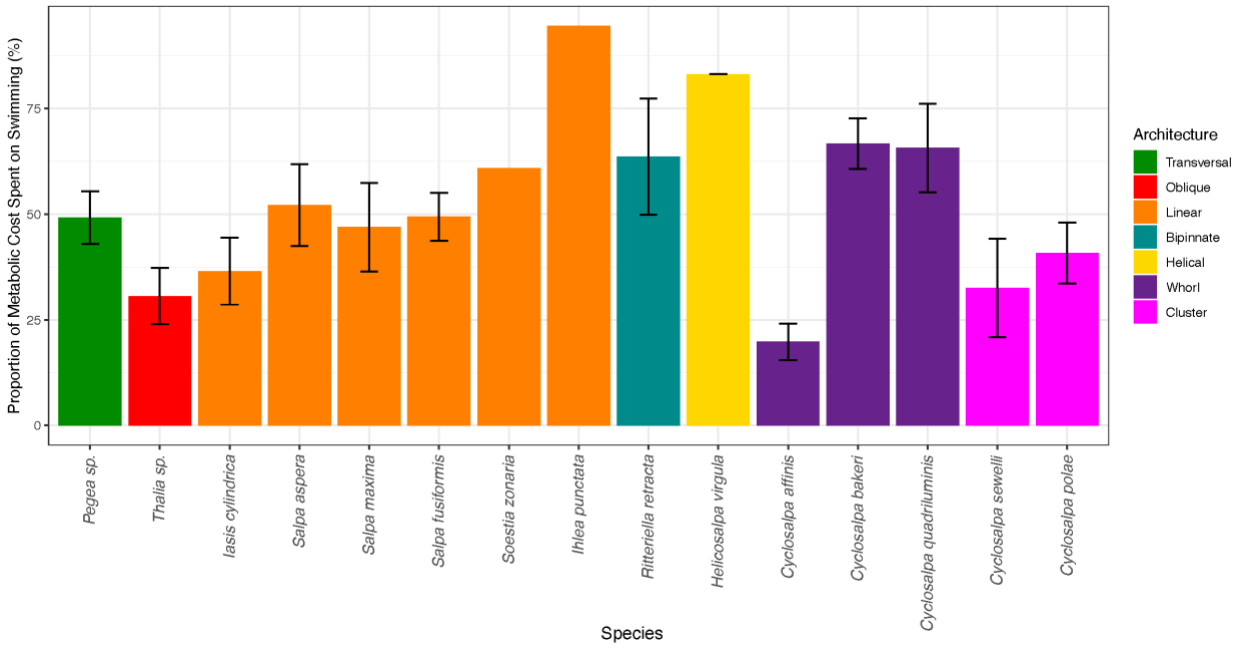

Figure S6. Percentage of the swimming respiration rates matched by the mean anesthetized respiration rate for each salp species. Bars represent species means with black lines representing standard errors. Colors indicate colonial architecture.

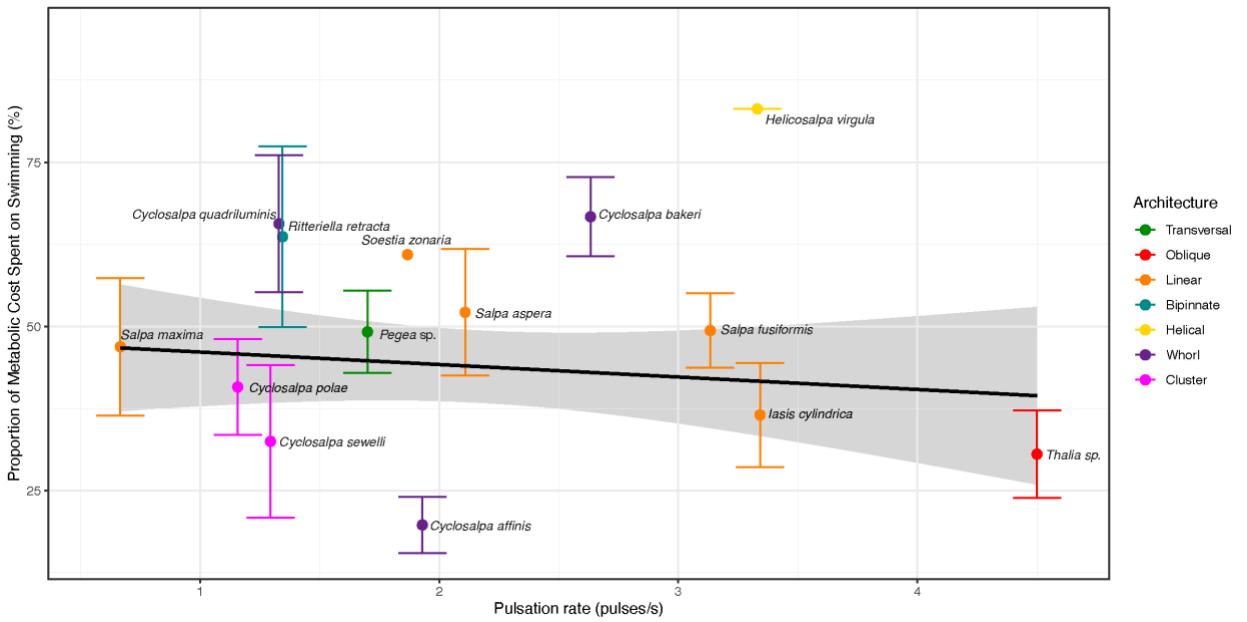

Figure S7. Percentage of the swimming respiration rates matched by the mean anesthetized respiration rate for each salp species (mean points with standard error bars) across species mean observed swimming pulsation rate derived from video data.

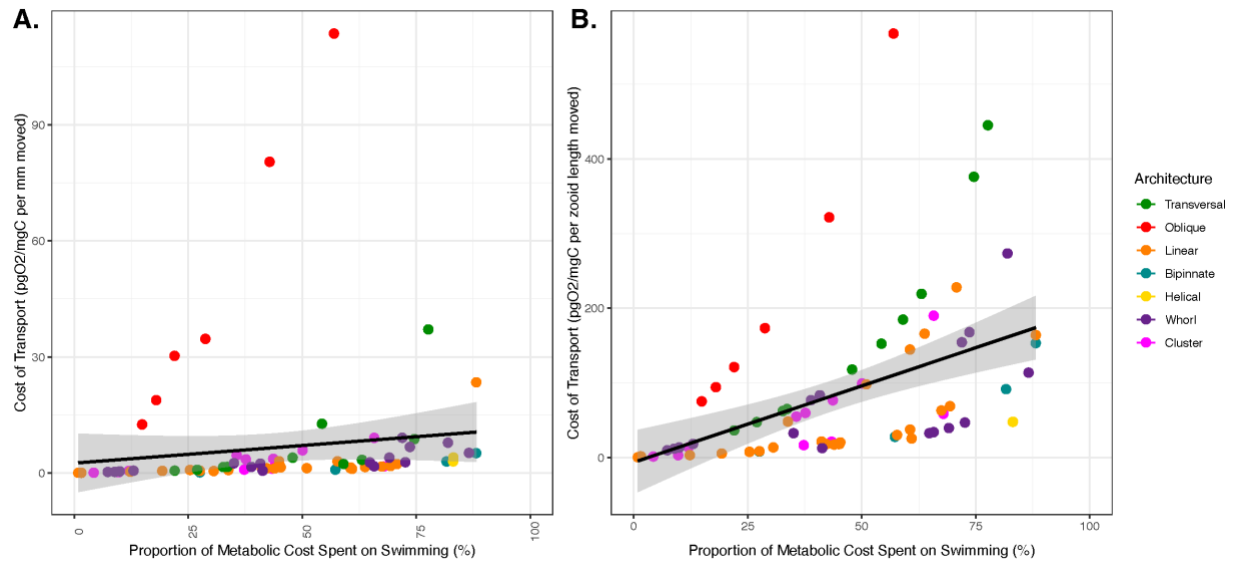

Figure S8. Cost of transport (per mm in A, per zooid length in B) for each salp species across their percent swimming respiration rate matched by the species' mean anesthetized respiration rate. Point color indicates colonial architecture.

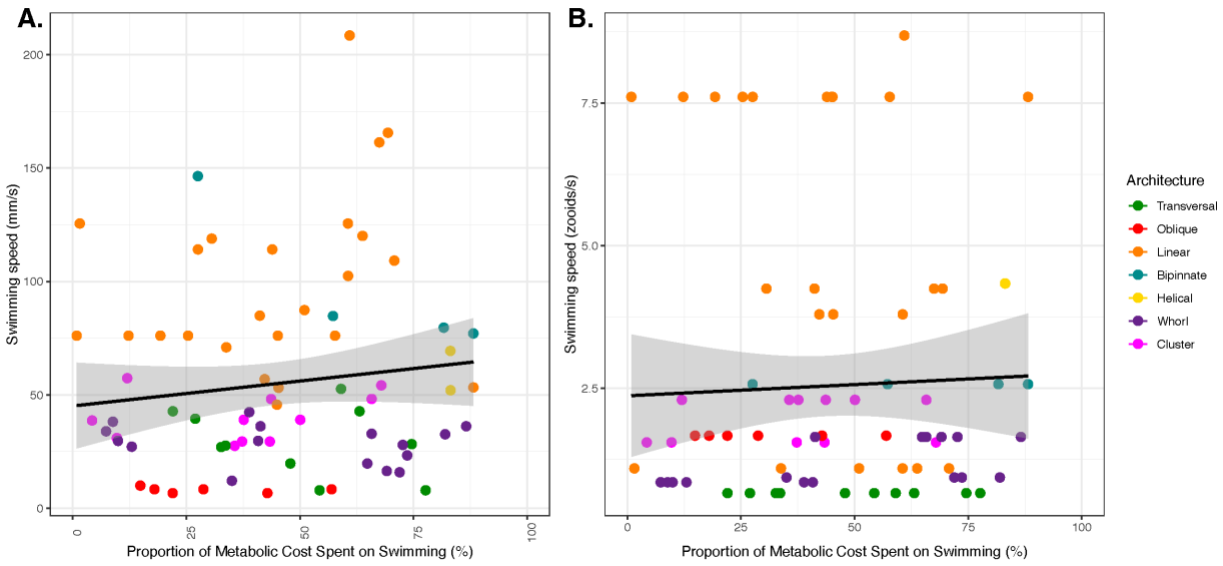

Figure S9. Swimming speed (in mm/s in A, and zooids/s in B) for each salp species across their percent swimming respiration rate matched by the species mean anesthetized respiration rate. Point color indicates colonial architecture.

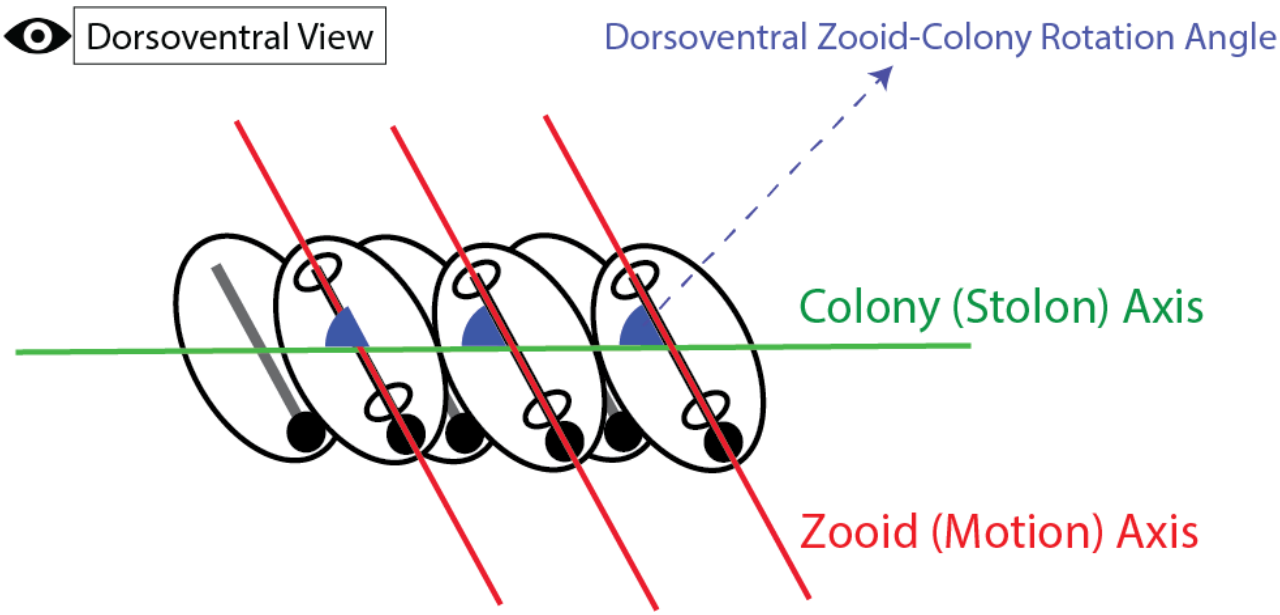

Figure S10. Schematic of an oblique chain from the dorsoventral perspective showing the zooid and stolon axes and the zooid rotation angle (degree of linearity) relative to those axes. Black lines indicate gill bars while gray lines represent endostyles.