

Supplementary material Table 1. Mean values of *Posidonia oceanica* biological variables and environmental parameters measured and recorded during 15 months (April 15, 2015 - July 11, 2016) at 10 m depth in the pristine meadow of the Revellata Bay, in the Gulf of Calvi (Corsica, France). Standard deviation (sd) and number of replicates (nb) are given.

*Posidonia oceanica* biological variables

Date	DMSP ( $\mu\text{mol.g}_{\text{fw}}^{-1}$ )			DMSO ( $\mu\text{mol.g}_{\text{fw}}^{-1}$ )			DMSP:DMSO ratio ( $\mu\text{mol}:\mu\text{mol}$ )		
	mean	sd	nb	mean	sd	nb	mean	sd	nb
2015-04-15	141	10	3	7.1	0.7	3	20.2	1.0	3
2015-04-21	155	35	3	7.4	1.8	3	21.4	1.4	3
2015-04-30	153	28	3	6.4	0.7	3	25.0	6.9	3
2015-05-06	125	7	3	3.9	1.4	3	36.0	13.6	3
2015-05-12	125	45	3	4.9	1.3	3	25.5	5.0	3
2015-05-17	109	9	3	3.7	1.3	3	33.2	11.7	3
2015-05-25	137	29	3	7.3	3.4	3	20.8	6.9	3
2015-06-05	128	5	3	4.8	1.4	3	28.4	6.6	3
2015-06-10	131	18	3	6.5	0.4	3	20.4	1.8	3
2015-06-17	127	24	3	5.5	0.8	3	23.5	4.8	3
2015-06-23	126	28	3	4.1	0.3	3	31.1	4.9	3
2015-07-01	84	11	3	4.1	1.5	3	22.0	6.5	3
2015-07-06	101	17	3	3.6	1.0	3	31.1	9.6	3
2015-07-13	116	31	3	3.6	1.8	3	36.6	14.4	3
2015-07-21	90	10	3	2.9	1.0	3	34.3	13.0	3
2015-07-28	111	30	3	4.4	1.6	3	25.9	4.8	3
2015-08-04	92	18	3	3.0	0.9	3	32.1	7.7	3
2015-08-12	115	37	3	4.1	1.1	3	28.1	6.8	3
2015-08-25	140	48	3	5.8	0.7	3	24.1	7.3	3
2015-09-03	121	66	3	3.9	1.2	3	29.8	7.8	3
2015-09-10	205	58	3	8.2	4.3	3	29.4	7.9	3
2015-09-25	180	31	3	6.0	2.6	3	33.6	9.2	3
2015-10-19	162	19	3	7.7	1.4	3	21.6	2.1	3
2015-10-26	165	25	3	7.2	2.4	3	24.9	9.6	3
2015-11-06	196	20	3	8.6	2.0	3	23.4	4.5	3
2015-12-10	174	25	3	7.1	1.3	3	24.8	3.4	3
2016-01-08	142	18	3	5.2	0.7	3	27.7	4.0	3
2016-01-22	157	31	3	6.5	1.4	3	24.4	2.1	3
2016-02-05	178	-	2	5.8	-	2	31.5	-	2
2016-02-29	136	38	3	4.8	1.3	3	28.9	2.3	3
2016-03-14	166	14	3	5.4	1.3	3	32.2	7.4	3
2016-03-29	127	27	3	4.0	0.6	3	33.3	12.2	3
2016-04-06	153	33	3	4.9	1.0	3	31.6	3.0	3
2016-04-14	149	11	3	6.3	0.8	3	24.1	4.6	3
2016-04-26	92	7	3	2.8	0.5	3	34.6	6.8	3
2016-05-10	129	2	3	4.0	0.6	3	33.9	5.2	3
2016-07-07	77	11	3	1.5	-	2	55.9	-	2
2016-07-12	62	17	3	1.6	0.6	3	39.2	7.5	3

*Posidonia oceanica* biological variables (continued)

Date	ΦPSII			Shoot foliar surface ( $\text{cm}^2$ )			Third leaf foliar surface ( $\text{cm}^2$ )		
	mean	sd	nb	mean	sd	nb	mean	sd	nb
2015-04-15	-	-	-	304	25	6	58	8	6
2015-04-21	-	-	-	268	39	6	55	10	6
2015-04-30	0.64	0.09	6	326	36	6	68	8	6
2015-05-06	0.74	0.02	6	330	49	6	65	14	6
2015-05-12	0.57	0.08	6	305	43	6	71	15	6
2015-05-17	0.61	0.11	6	347	39	6	75	7	6
2015-05-25	0.67	0.05	6	358	69	6	80	14	6
2015-06-05	0.61	0.16	6	309	86	6	70	23	6
2015-06-10	0.73	0.02	6	329	41	6	80	4	6
2015-06-17	0.67	0.08	6	346	64	6	86	11	6
2015-06-23	0.64	0.08	6	327	46	6	88	9	6
2015-07-01	0.59	0.07	6	372	74	6	86	15	6
2015-07-06	0.61	0.09	6	334	62	6	83	14	6
2015-07-13	0.58	0.12	6	341	44	6	88	19	6
2015-07-21	0.60	0.04	6	319	36	6	89	12	6
2015-07-28	0.67	0.04	6	334	46	6	76	19	6
2015-08-04	0.58	0.05	6	298	18	6	70	14	6
2015-08-12	0.55	0.12	6	252	36	6	74	14	6
2015-08-25	0.59	0.08	6	255	38	6	69	14	6
2015-09-03	0.62	0.10	6	207	56	6	49	23	6
2015-09-10	0.63	0.11	6	158	13	6	45	15	6
2015-09-25	0.64	0.10	6	140	31	6	13	3	6
2015-10-19	0.64	0.07	6	136	44	6	20	7	6
2015-10-26	0.41	0.15	6	127	43	6	20	7	6
2015-11-06	0.58	0.17	6	128	29	6	21	6	6

2015-12-10	0.71	0.02	6	131	31	6	25	3	6
2016-01-08	0.64	0.12	6	163	28	6	29	4	6
2016-01-22	0.72	0.02	6	182	39	6	30	9	6
2016-02-05	0.65	0.05	6	198	25	6	34	5	6
2016-02-29	0.72	0.02	6	209	63	5	41	11	5
2016-03-14	0.69	0.03	6	254	45	6	52	7	6
2016-03-29	0.65	0.10	6	301	55	6	56	16	6
2016-04-06	0.68	0.06	6	246	33	6	45	4	6
2016-04-14	0.61	0.06	6	246	65	6	43	11	6
2016-04-26	0.60	0.06	6	319	52	6	65	7	6
2016-05-10	0.70	0.05	6	300	87	6	63	15	6
2016-07-07	0.63	0.07	6	341	52	6	86	17	6
2016-07-12	0.55	0.20	6	294	11	6	64	8	6

Environmental parameters

Date	PAR (DIVING-PAM) ( $\mu\text{mol photons.m}^{-2}.\text{s}^{-1}$ )			PAR (Odyssey) ( $\mu\text{mol photons.m}^{-2}.\text{s}^{-1}$ )			Temperature ( $^{\circ}\text{C}$ )		
	mean	sd	nb	mean	sd	nb	mean	sd	nb
2015-04-15	-	-	-	-	-	-	15.3	0.0	9
2015-04-21	-	-	-	-	-	-	15.0	0.2	9
2015-04-30	19	3	6	319	21	9	17.0	0.0	9
2015-05-06	13	2	6	61	20	9	16.6	0.0	9
2015-05-12	23	7	6	328	18	9	18.4	0.0	9
2015-05-17	25	9	6	308	20	9	19.1	0.1	9
2015-05-25	35	4	6	290	19	19	17.2	0.7	9
2015-06-05	11	3	6	295	17	19	19.2	0.1	9
2015-06-10	10	2	6	184	128	19	20.7	0.2	9
2015-06-17	40	13	6	297	20	19	22.9	0.0	9
2015-06-23	37	16	6	276	27	19	23.4	0.0	19
2015-07-01	44	3	6	302	21	19	23.5	0.1	19
2015-07-06	46	6	6	297	16	19	24.2	0.1	19
2015-07-13	45	15	6	280	40	19	25.8	0.1	19
2015-07-21	58	15	6	298	39	19	27.0	0.0	19
2015-07-28	67	38	6	284	11	19	26.3	0.0	19
2015-08-04	50	36	6	283	16	19	24.3	0.8	19
2015-08-12	103	41	6	248	16	19	25.9	0.1	19
2015-08-25	63	40	6	224	16	19	24.9	0.1	19
2015-09-03	28	9	6	179	40	19	25.3	0.0	19
2015-09-10	56	36	6	207	18	19	24.1	0.0	19
2015-09-25	22	7	6	170	16	19	23.5	0.0	19
2015-10-19	22	19	6	128	18	19	20.2	0.0	19
2015-10-26	64	22	6	91	40	19	19.8	0.0	19
2015-11-06	36	53	6	95	13	19	20.0	0.0	19
2015-12-10	7	4	6	69	4	9	16.8	0.0	19
2016-01-08	20	22	6	74	10	9	15.4	0.0	19
2016-01-22	9	3	6	25	14	9	14.6	0.0	19
2016-02-05	37	22	6	91	4	9	14.4	0.0	19
2016-02-29	20	3	6	120	5	9	14.2	0.0	19
2016-03-14	35	23	6	149	8	9	13.6	0.0	19
2016-03-29	24	8	6	134	33	9	14.3	0.0	19
2016-04-06	11	5	6	161	12	9	15.2	0.0	19
2016-04-14	46	52	6	203	14	9	15.7	0.0	19
2016-04-26	60	57	6	186	30	19	16.2	0.0	19
2016-05-10	30	10	6	247	25	19	17.0	0.0	19
2016-07-07	70	61	6	280	15	19	24.0	0.0	19
2016-07-12	118	56	6	271	32	19	24.3	0.1	19