Data Supplement

Table S1. Time-series (observed values and anomalies) regression analyses on seawater carbonate chemistry, at Point B, 50 m, for salinity (S), temperature (T, ºC), dissolved inorganic carbon (C_T, µmol kg^{-1}), total alkalinity (A_T, µmol kg^{-1}), pH_T, 25 ºC-normalized pH_T (pH_{T25}), calcite (Ω_c) and aragonite (Ω_a) saturation state, and salinity-normalized A_T (nA_T) and C_T (nC_T). Slope is change yr^{-1}. P <<0.001 indicate p-values far smaller than 0.001.

	Variable	*Slope ± SE*	*Intercept ± SE*	*F*	*df*	*Slope P*	R^2
Observed	S	0.0070 ± 0.0021	23.9 ± 4.3	10.667	1, 410	0.001	0.0254
	T	0.13 ± 0.03	-245 ± 68	14.823	1, 406	<<0.001	0.0352
	C_T	1.84 ± 0.28	-1449 ± 561	43.464	1, 409	<<0.001	0.0961
	A_T	1.59 ± 0.17	-641 ± 348	84.03	1, 410	<<0.001	0.1701
	pH_T	-0.0028 ± 0.0003	13.7 ± 0.6	83.722	1, 405	<<0.001	0.1713
	pH_{T25}	-0.0008 ± 0.0004	9.5 ± 0.8	3.835	1, 405	0.051	0.0094
	pCO_2	2.93 ± 0.30	-5543 ± 602	96.034	1, 405	<<0.001	0.1917
	Ω_c	-0.0019 ± 0.0041	8.8 ± 8.3	0.211	1, 405	0.647	0.0005
	Ω_a	-0.0002 ± 0.0029	3.6 ± 5.8	0.004	1, 405	0.951	0
	nA_T	1.11 ± 0.14	327 ± 286	60.307	1, 405	<<0.001	0.1296
	nC_T	1.47 ± 0.28	-721 ± 571	27.017	1, 405	<<0.001	0.0625
Anomaly	S	0.0063 ± 0.0020	-12.8 ± 4.1	9.858	1, 410	0.002	0.0235
	T	0.088 ± 0.019	-177 ± 38	21.927	1, 406	<<0.001	0.0512
	C_T	2.16 ± 0.21	-4344 ± 418	108.105	1, 409	<<0.001	0.2091
	A_T	1.59 ± 0.15	-3192 ± 309	106.947	1, 410	<<0.001	0.2069
	pH_T	-0.0026 ± 0.0002	5.28 ± 0.50	112.111	1, 405	<<0.001	0.2168
	pH_{T25}	-0.0013 ± 0.0003	2.55 ± 0.54	21.863	1, 405	<<0.001	0.0512
	pCO_2	2.79 ± 0.25	-5603 ± 501	125.1	1, 405	<<0.001	0.236
	Ω_c	-0.0070 ± 0.0027	14.0 ± 5.4	6.648	1, 405	0.01	0.0162
	Ω_a	-0.0038 ± 0.0019	7.6 ± 3.7	4.155	1, 405	0.042	0.0102
	nA_T	1.15 ± 0.13	-2309 ± 254	82.309	1, 405	<<0.001	0.1689
	nC_T	1.82 ± 0.19	-3661 ± 376	94.98	1, 405	<<0.001	0.19

Table S2. Monthly means ± SD (*N*) for carbonate chemistry parameters at Point B, at 1 and 50 m for the period 2007-2015, for salinity (S), temperature (T), dissolved inorganic carbon (C_T), total alkalinity (A_T), pH (pH_T, total hydrogen ion scale), pCO_2, and aragonite saturation state (Ω_a).

Month	*S*	*T (ºC)*	*C_T (µmol kg^{-1})*	*A_T (µmol kg^{-1})*	*pH_T*	*pCO_2 (µatm)*	*Ω_a*
			1 m				
Jan	37.89 ± 0.42 (38)	14.38 ± 0.76 (36)	2251 ± 8 (38)	2551 ± 10 (38)	8.13 ± 0.01 (36)	346 ± 10 (36)	3.19 ± 0.09 (36)
Feb	37.95 ± 0.23 (32)	13.58 ± 0.41 (32)	2259 ± 11 (32)	2555 ± 8 (32)	8.14 ± 0.01 (32)	343 ± 10 (32)	3.14 ± 0.06 (32)
Mar	37.86 ± 0.25 (35)	13.67 ± 0.49 (35)	2259 ± 10 (35)	2555 ± 8 (35)	8.14 ± 0.01 (35)	344 ± 10 (35)	3.14 ± 0.06 (35)
Apr	37.76 ± 0.24 (34)	15.04 ± 1.08 (34)	2254 ± 11 (34)	2553 ± 9 (34)	8.12 ± 0.02 (34)	357 ± 16(34)	3.19 ± 0.08 (34)
May	37.64 ± 0.26 (37)	18.08 ± 1.31 (37)	2241 ± 20 (37)	2547 ± 17 (37)	8.09 ± 0.02 (37)	390 ± 21 (37)	3.31 ± 0.09 (37)
Jun	37.74 ± 0.17 (37)	21.29 ± 1.77 (37)	2233 ± 18 (37)	2543 ± 14 (37)	8.05 ± 0.02 (37)	436 ± 29 (37)	3.41 ± 0.11 (37)
Jul	37.93 ± 0.17 (40)	24.06 ± 1.55 (40)	2227 ± 14 (40)	2549 ± 13 (40)	8.02 ± 0.03 (40)	469 ± 33 (40)	3.57 ± 0.10 (40)
Aug	38.08 ± 0.12 (30)	24.77 ± 1.35 (30)	2226 ± 14 (30)	2555 ± 10 (30)	8.02 ± 0.03 (30)	471 ± 37 (30)	3.65 ± 0.10 (30)
Sep	38.21 ± 0.11 (32)	23.48 ± 1.23 (31)	2229 ± 10 (31)	2562 ± 9 (32)	8.04 ± 0.03 (30)	443 ± 33 (30)	3.66 ± 0.09 (30)
Oct	38.19 ± 0.10 (33)	20.82 ± 1.09 (33)	2226 ± 10 (33)	2561 ± 9 (33)	8.08 ± 0.02 (33)	394 ± 18 (33)	3.63 ± 0.08 (33)
Nov	37.99 ± 0.27 (37)	18.20 ± 0.99 (36)	2230 ± 13 (37)	2555 ± 12 (37)	8.11 ± 0.01 (36)	366 ± 14 (36)	3.48 ± 0.07 (36)
Dec	37.97 ± 0.25 (32)	16.14 ± 1.12 (32)	2241 ± 12 (32)	2555 ± 12 (32)	8.13 ± 0.02 (32)	352 ± 16 (32)	3.35 ± 0.06 (32)
			50 m				
Jan	38.02 ± 0.11 (37)	14.49 ± 0.71 (35)	2253 ± 9 (37)	2554 ± 6 (37)	8.13 ± 0.01 (35)	347 ± 10 (35)	3.18 ± 0.07 (35)
Feb	38.03 ± 0.10 (32)	13.71 ± 0.43 (32)	2259 ± 11(32)	2556 ± 7 (32)	8.13 ± 0.01 (32)	343 ± 9 (32)	3.12 ± 0.06 (32)
Mar	38.01 ± 0.12 (35)	13.59 ± 0.39 (35)	2260 ± 9 (35)	2554 ± 8 (35)	8.13 ± 0.01 (35)	346 ± 9 (35)	3.09 ± 0.05 (35)
Apr	37.98 ± 0.10 (34)	14.06 ± 0.57 (34)	2258 ± 11 (34)	2553 ± 8 (34)	8.12 ± 0.01 (34)	351 ± 11 (34)	3.10 ± 0.08 (34)
May	37.99 ± 0.11 (37)	15.01 ± 0.85 (37)	2253 ± 16 (37)	2551 ± 10 (37)	8.12 ± 0.02 (37)	360 ± 16 (37)	3.15 ± 0.10 (37)
Jun	38.00 ± 0.09 (37)	15.06 ± 0.59 (37)	2249 ± 16 (37)	2548 ± 11 (37)	8.12 ± 0.01 (37)	358 ± 12 (37)	3.16 ± 0.08 (37)
Jul	38.01 ± 0.07 (39)	15.43 ± 1.12 (39)	2246 ± 14 (39)	2546 ± 9 (39)	8.11 ± 0.02 (39)	363 ± 21 (39)	3.16 ± 0.10 (39)
Aug	37.99 ± 0.07 (28)	15.27 ± 0.66 (28)	2240 ± 10 (28)	2543 ± 8 (28)	8.12 ± 0.01 (28)	353 ± 12 (28)	3.20 ± 0.07 (28)
Sep	38.00 ± 0.11 (32)	16.20 ± 1.69 (31)	2237 ± 13 (31)	2547 ± 11 (32)	8.12 ± 0.02 (30)	357 ± 22 (30)	3.29 ± 0.17 (30)
Oct	38.11 ± 0.13 (33)	18.49 ± 1.83 (33)	2233 ± 12 (33)	2554 ± 12 (33)	8.10 ± 0.02 (33)	377 ± 21 (33)	3.43 ± 0.15 (33)
Nov	38.09 ± 0.11 (36)	17.95 ± 1.19 (35)	2234 ± 14 (36)	2557 ± 9 (36)	8.11 ± 0.02 (35)	366 ± 15 (35)	3.43 ± 0.12 (35)
Dec	38.04 ± 0.16 (32)	16.20 ± 1.10 (32)	2241 ± 11 (32)	2556 ± 9 (32)	8.12 ± 0.02 (32)	352 ± 14 (32)	3.33 ± 0.08 (32)

Table S3. Regression analysis on monthly mean A_T and C_T (μmol kg^{-1} yr^{-1}) change for the period 2007-2015, at 1 m. Slope is change yr^{-1}.

Month	*Slope ± SE*	*Intercept ± SE*	$F_{1,7}$	*Slope P*	R^2
		A_T			
Jan	-1.33 ± 0.83	5225 ± 1677	0.2666	0.155	0.267
Feb	1.09 ± 0.93	366 ± 1874	0.1632	0.281	0.163
Mar	1.48 ± 0.81	-418 ± 1628	0.3227	0.111	0.323
Apr	1.77 ± 0.84	-1010 ± 1688	0.3886	0.073	0.389
May	4.00 ± 1.58	-5498 ± 3183	0.4771	0.039	0.477
Jun	4.53 ± 0.90	-6566 ± 1802	0.785	0.001	0.785
Jul	3.36 ± 1.03	-4201 ± 2080	0.6007	0.014	0.601
Aug	2.01 ± 1.07	-1490 ± 2152	0.3355	0.102	0.336
Sep	1.81 ± 0.86	-1075 ± 1723	0.3886	0.073	0.389
Oct	1.39 ± 0.94	-225 ± 1884	0.238	0.183	0.238
Nov	1.89 ± 1.23	-1254 ± 2465	0.2542	0.166	0.254
Dec	2.00 ± 1.29	-1470 ± 2596	0.2556	0.165	0.256
		C_T			
Jan	-0.14 ± 0.46	2536 ± 922	0.0135	0.766	0.014
Feb	2.64 ± 0.90	-3052 ± 1806	0.5526	0.022	0.553
Mar	2.32 ± 0.77	-2411 ± 1550	0.5644	0.02	0.564
Apr	2.93 ± 0.84	-3637 ± 1697	0.6324	0.01	0.632
May	5.06 ± 1.82	-7936 ± 3663	0.5244	0.027	0.524
Jun	5.72 ± 1.26	-9260 ± 2540	0.7452	0.003	0.745
Jul	4.27 ± 0.91	-6369 ± 1838	0.7575	0.002	0.758
Aug	3.37 ± 1.17	-4541 ± 2357	0.5407	0.024	0.541
Sep	1.80 ± 1.05	-1383 ± 2117	0.2935	0.132	0.294
Oct	2.84 ± 0.65	-3480 ± 1312	0.73	0.003	0.73
Nov	2.57 ± 1.34	-2932 ± 2693	0.3442	0.097	0.344
Dec	1.70 ± 1.25	-1175 ± 2506	0.2098	0.215	0.21

Figure S1. Time-series observations (a-g) and anomalies (h-n) of seawater carbonate chemistry at Point B, 50 m. Significant regression slopes are drawn ± SE (in grey) and noted with a star for significance at α=0.05.

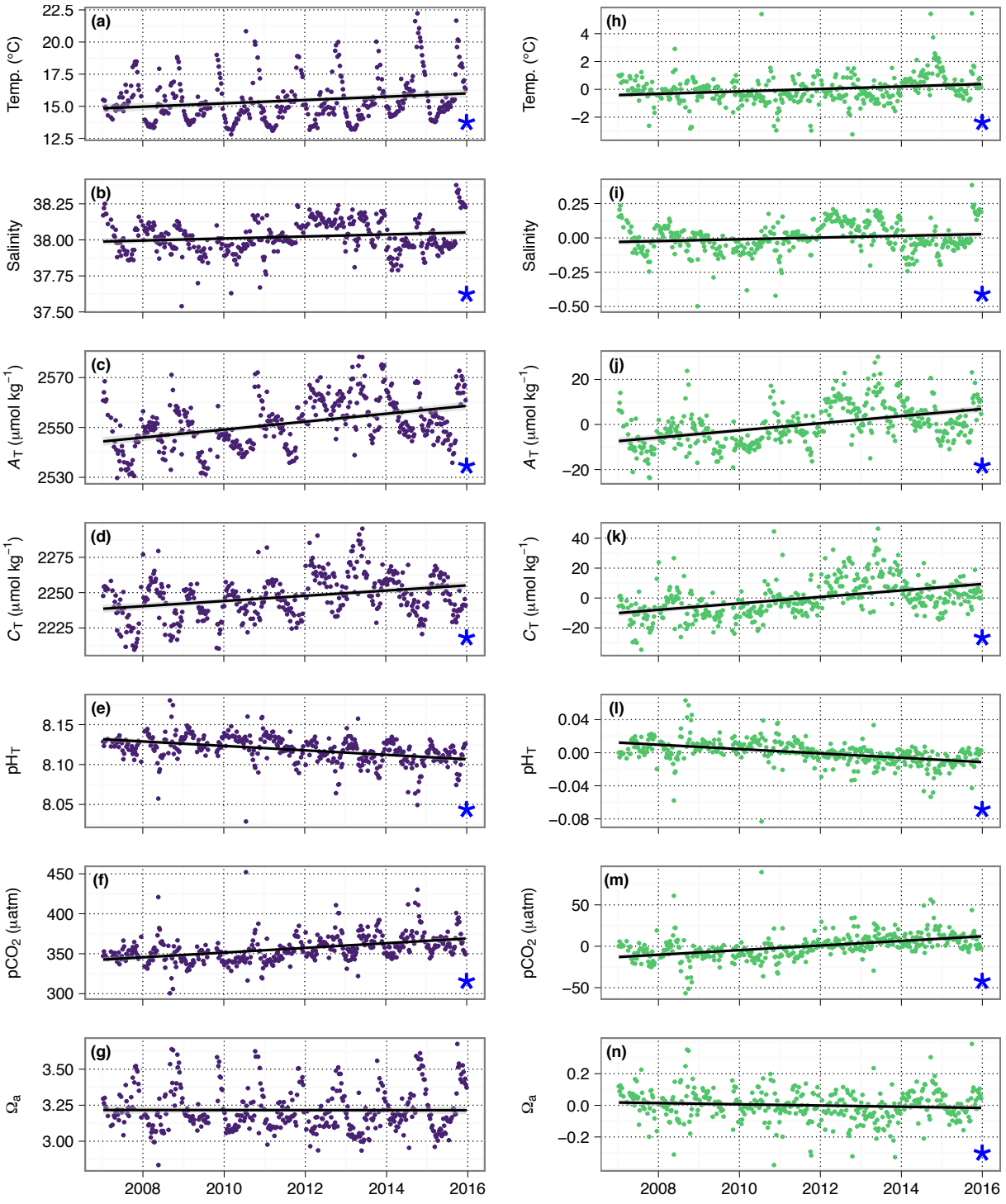

Figure S2. Relationship between monthly mean temperature (a) and Chlorophyll-a (b) and diel pH_T range at EOL, 2 m. Chl-a was measured weekly at Point B using a fluorimetric method (http://rade.obs-vlfr.fr/Protocole_Chlab.htm)

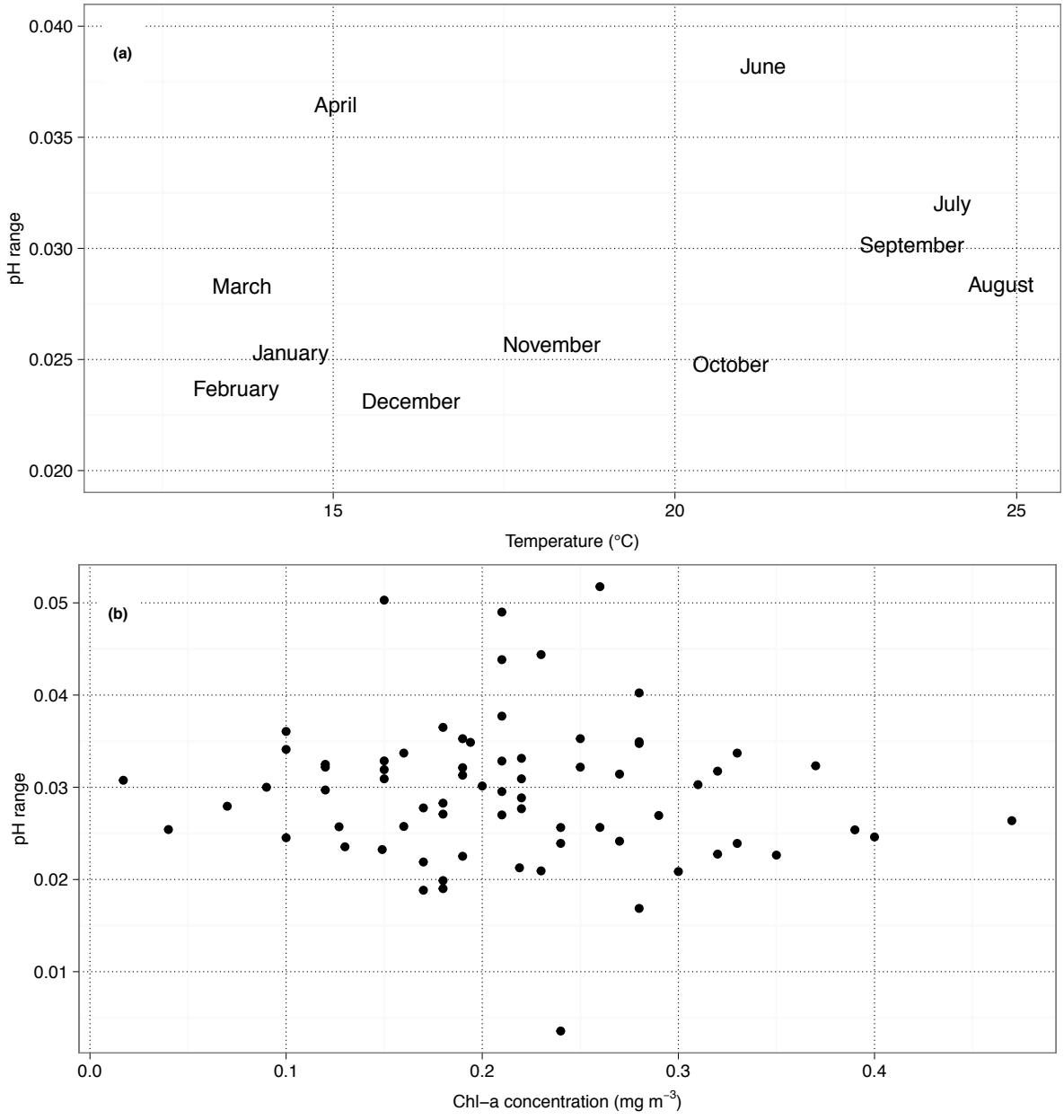

Figure S3. Precipitation at Nice airport (weekly cumulative precipitation from Tuesday to Monday) during the period 2007-2015 (a) and its relationship to A_T (b) and salinity (c), at Point B at 1 m.