

Supplementary Material

Evidence for the non-influence of salinity variability on the coral Sr/Ca paleothermometer

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Fig. S1. Sr/Ca record from Clipperton atoll (blue curve) and the instrumental SST record [Reynold *et al.*, 2002] at this location (red curve).

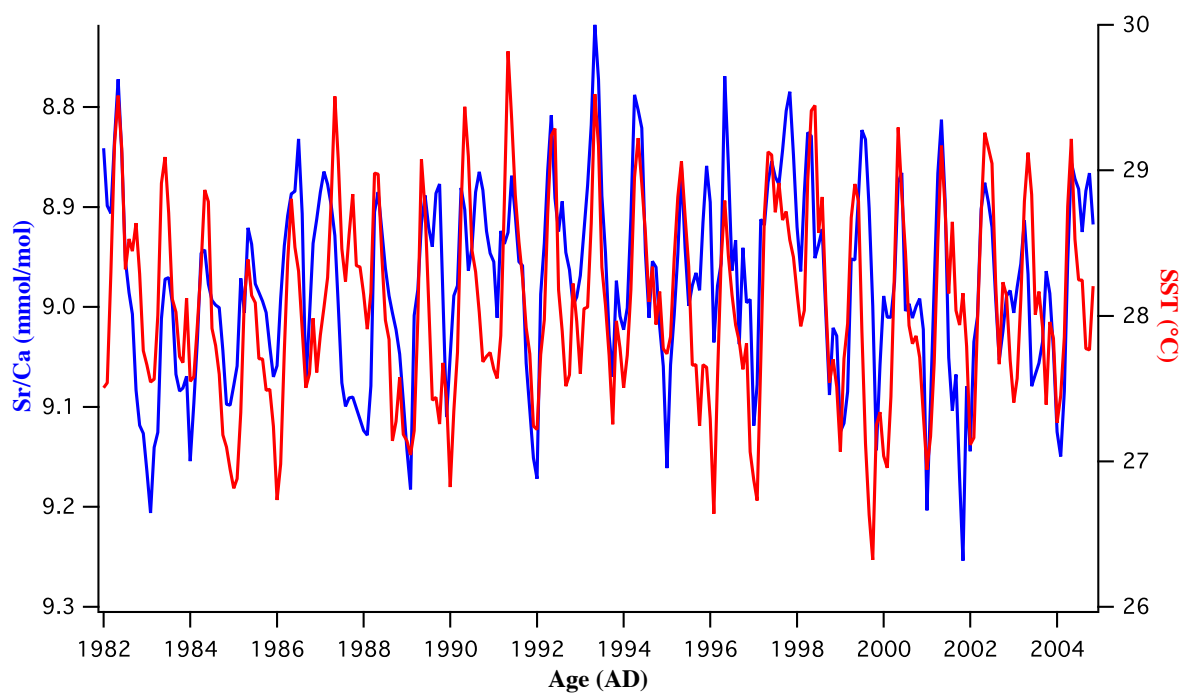


Table S1. Summary of the coefficients of determination (R^2) and the corresponding Student's t-test (p) between residual temperatures and salinity at the different locations used in this study, at monthly and interannual resolution. n is the number of values for each record. R^2 and the corresponding p in bold are the significant correlations discussed in the paper.

Reference	Location	R^2 and p (monthly)	R^2 and p (interannual)	Period and n (monthly and interannual)
Kilbourne et al., 2004	E.Santo, Vanuatu (15°7'S-167°2'E)	0.06 p<0.01	0 p<0.01	(1981-1992) 128 and 104
Alibert et al., 2008	Kavieng, Papua New Guinea (2°5'S-150°5'E)	0 p>0.01	0.02 p>0.01	(1981-1997) 186 and 162
Quinn et al., 2006	Rabaul, Papua New Guinea (4°S-152°E)	0 p>0.01	0.05 p<0.01	(1981-1997) 189 and 165
DeLong et al., 2012	Amédée, New Caledonia (22°28'S-166°28'E)	0.06 p<0.01	0.2 p<0.01	(1981-1999) 216 and 192
Linsley et al., 2000	Rarotonga (21°14'S-159°49'E)	0.01 p>0.01	0.06 p>0.01	(1981-1996) 121 and 96
Nurhati et al., 2010	Christmas Island, Kiribati (1°52'N-157°24'W)	0.05 p>0.01	0.37 p<0.01	(1981-1998) 199 and 175
Nurhati et al., 2010	Fanning, Kiribati (3°51'N-159°21'W)	0 p>0.01	0.06 p<0.01	(1981-2005) 285 and 261
Nurhati et al., 2010	Palmyra, Central Pacific (5°53'N-162°5'W)	0.05 p<0.01	0.07 p<0.01	(1981-1998) 198 and 174
This paper	Clipperton, East Pacific (10°18'N-109°13'W)	0.04 p<0.01	0 p>0.01	(1982-2005) 275 and 251
Sun et al., 2004	Xisha, China Sea (16°51'N-112°20'E)	0.05 p<0.01	0.13 p<0.01	(1981-1994) 151 and 127
Zinke et al., 2004	Madagascar (23°8'S-43°34'E)	0 p>0.01	0.34 p<0.01	(1981-1994) 79 and 66
Zinke et al., 2009	Mayotte (12°39'S-45°06'E)	0.06 p>0.01	0.05 p>0.01	(1981-1994) 75 and 62
DeLong et al., 2011	Gulf of Mexico, Atlantic Siderastrea (24°7'N-82°8'W)	0.02 p>0.01	0.07 p<0.01	(1991-2009) 212 and 188
DeLong et al., 2011	Gulf of Mexico, Atlantic Montastraea (24°7'N-82°8'W)	0.07 p<0.01	0.33 p<0.01	(1991-2008) 212 and 188
Felis et al., 2004	Aqaba, Red Sea (29°27'N-34°58'E)	0.1 p>0.01		(1991-1996) 32

Table S2. Summary of the SST (Reyn_SmithOIv2 monthly SST product) and SSS (Carton-Giese SODA v2p2p4 monthly SSS product) grid point for each location.

Locations	SST grid point	SSS grid point
E.Santo, Vanuatu	15°5'S-167°5'E	15°75'S-167°25'E
Kavieng, Papua New Guinea	2°5'S-150°5'E	2°27'S-150°25'E
Rabaul, Papua New Guinea	4°5'S-151°5'E	4°25'S-151°75'E
Amédée, New Caledonia	22°5'S-166°5'E	22°25'S-166°25'E
Rarotonga	16°5'N-112°5'E	16°75'N-122°25'E
Christmas Island, Kiribati	1°5'N-157°5W	1°75'-157°25'W
Fanning, Kiribati	3°5'N-159°5'W	3°75'N-159°25'W
Palmyra, Central Pacific	5°5'N-162°5'W	5°75'N-162°75'W
Clipperton, East Pacific	10°5'N-109°5'W	9°75'N-109°25'W
Xisha, China Sea	16°5'N-112°5'E	16°75'N-112°25'E
Madagascar	23°5'S-43°5'E	23°25'S-42°75'E
Mayotte	12°5'S-44°5'E	12°25'S-45°25'E
Gulf of Mexico, Atlantic	24°5'N-82°5'W	24°75'N-82°75'W
Aqaba, Red Sea	29°5'N-34°5'E	28°25'N-34°75'E

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