GSA DATA REPOSITORY 2010237

Supplementary Table DR1

Sample Code	Lab Code	Latitude D.Degrees	Longtitude D.Degrees	Description	Depth (cm) Below MSL	Corr. ^{14}C Age	cal_BP_(68%) (lower)	cal_BP_(68%) (upper)	Median probab.age
A24-Mid	WK24487	-19.77222	63.38056	Acropora	272	4662±60	4673	4824	4734
A24-Base	WK24488	-19.77222	63.38056	Acropora	332	5415±63	5584	5713	5658
A26-Base	WK24489	-19.78333	63.38056	Porites	268	3879±53	3614	3773	3692
AA28_Mid	WK24490	-19.79172	63.38060	Coral	210	2503±60	1933	2093	2011
AA28-Base	WK24491	-19.79172	63.38060	Coral	265	2813±50	2320	2454	2396
A30-C1	WK24492	-19.80556	63.38056	Faviid	300	1571±49	936	1046	997
A35-C2-Bas	WK24493	-19.83333	63.38056	Faviid	118	1223±53	620	711	661
A42	WK24494	-19.79722	63.38333	Faviid	237	2275±51	1682	1816	1745
A45-Mid	WK24495	-19.78056	63.38333	Porites	279	3885±52	3625	3780	3700
A45-Base	WK24496	-19.78056	63.38333	Faviid	324	4135±54	3946	4111	4026
A50_Base	WK24497	-19.77000	63.38611	Acropora	300	5021±51	5131	5297	5215
A51	WK24498	-19.77778	63.38611	Porites	191	3860±59	3578	3751	3667
AA53	WK2449	-19.77508	63.38604	Acropora	295	4712±53	4764	4865	4807
A39c	B240541	-19.81389	63.38333	Coral	265	2080±85	1399	1607	1513
A40_C1	B240542	-19.80833	63.38333	Coral	319	1590±66	933	1084	1020
A49	B240543	-19.76667	63.38611	Shell	498	1710±49	1089	1216	1149
A61_C1	B240544	-19.83333	63.38611	Coral	152	550±49	Modern		0
C_17	ANUA2229	-19.76277	63.46674	Coral	340	3056±184	2439	2911	2688
C_10	ANUA2226	-19.70178	63.50157	Coral	460	3371±184	2857	3298	3077
C_14	ANUA2227	-19.67461	63.41817	Coral	200	2856±184	2266	2710	2454
C_15	ANUA2228	-19.67171	63.43046	Coral	510	2642±186	1929	2399	2187
C_18	ANUA2221	-19.70950	63.29541	Coral	310	1758±181	980	1351	1184
C_8	ANUA2225	-19.67712	63.42268	Coral	230	2565±186	1868	2314	2093

Appendix DR1

Samples selected for radiocarbon dating were sectioned and microsampled to remove surficial calcareous encrustation, washed in distilled water, subjected to ultrasonic agitation in distilled water to remove detrital particles, oven dried (40˚C) and then sealed in plastic bags. All samples were tested for secondary calcite cements. All analyses utilized radiometric-standard delivery except sample A49, which utilized AMS-standard delivery. Samples with “WK” prefix were dated at the Waikato Radiocarbon Dating Laboratory in New Zealand, samples with “B” prefix were dated at the Beta Analytic Radiocarbon Dating Laboratory, and samples “ANUA” are from Rees et al. (2005).

Dates were calibrated using Calib 6.0 and calibration curve Marine09 (http://calib.qub.ac.uk/marine). Marine reservoir corrections are reported from nearby Mauritius in Southon et al. (2002) and range from 430 to 471 ^{14}C yr B.P., giving a combined weighted mean ΔR value (N=2) of 122 ± 29. The mean ΔR value for the entire Tropical SW Indian Ocean (N=11) is 140 ± 25.