

Table 1 - Radiocarbon dates from pieces of scleractinian corals (*Acropora* cf. *robusta*-*A.* cf. *danai*), cored on the outerbarrier reef-flat off Papeete, Tahiti, French Polynesia).

¹⁴ C. Lab. ⁽¹⁾ code and number	Depth (metres) below the reef flat surface (accuracy: $\pm 0.30\text{m}$)	Mineralogy (A= Aragonite)	Conventional age (years B.P.)
Orsay - 3315	0.30	A	modern
Orsay - 3324	3.0	A	$4,390 \pm 100$
Orsay - 3422	7.10	A	$5,115 \pm 120$
Orsay - 3412	12.0	A	$5,544 \pm 105$
Orsay - 3418	15.2	A	$5,870 \pm 100$

(1) Analyses performed at the "Laboratoire d'Hydrologie et de Géochimie Isotopique, Université de Paris-Sud, France.

Table 2 (A) - Oxygene and carbon isotope data from modern *Acropora robusta* colonies collected between 3 and 6 m below mean sea level, in the upper part of the outer slope, barrier reef off Papeete, Tahiti, French Polynesia.

Sample number	$\delta^{18}\text{O}$ (‰ PDB)	$\delta^{13}\text{C}$ (‰ PDB)
1	- 4.75	- 3.19
2	- 4.76	- 2.67
3	- 4.49	- 2.52
4	- 4.79	- 2.37
5	- 4.86	- 2.36
6	- 4.51	- 2.35
7	- 4.78	- 2.14
8	- 4.56	- 2.08
9	- 4.38	- 2.10
10	- 4.50	- 1.96
11	- 4.80	- 1.97
12	- 4.05	- 2.13
13	- 3.59	- 1.78
14	- 3.67	- 0.73
15	- 3.16	+ 0.41
16	- 4.69	- 2.21

Table 2 (B) - Oxygene and carbonate isotope data (accuracy : $\pm 0.05 \text{ ‰}$) from Holocene *Acropora* cf. *robusta* - *Acropora* cf. *danai* colonies, collected from a 15.2-m-long core through the outer barrier reef flat off Papeete, Tahiti, French Polynesia).

Depth (metres) below reef flat surface	$\delta^{18}\text{O}$	$\delta^{13}\text{C}$
1.0	- 2.59	1.07
2.0	- 3.39	0.41
3.0	- 2.96	0.53
3.1	- 1.78	1.54
4.0	- 3.63	0.24
4.9	- 3.65	0.18
6.2	- 2.74	1.45
7.1	- 3.34	1.27
7.2	- 2.72	1.25
8.0	- 2.39	1.74
9.0	- 2.49	1.38
10.1	- 3.49	0.64
11.4	- 3.85	- 1.78
12.0	- 2.57	0.85
12.1	- 0.79	2.66
13.2	- 2.95	0.90
14.5	- 2.40	0.84
15.1	- 2.54	- 0.76
15.2	- 2.60	1.90

Table 2 (C) - Oxygene and carbone isotope data (accuracy : $\pm 0.05\text{\textperthousand}$) from some Holocene stromatolitic crusts associated with coralgal communities, collected from a core through the outer barrier reef flat off Papeete, Tahiti, French Polynesia).

Depth (metres) below reef flat surface	$\delta^{18}\text{O} (\text{\textperthousand} \text{ PDB})$	$\delta^{13}\text{C} (\text{\textperthousand} \text{ PDB})$
3.5	- 0.32	+ 3.74
7.6	- 0.21	+ 4.01
9.9	- 0.39	+ 3.73
12.0	- 0.52	+ 4.11
14.5	- 0.49	+ 4.07

All the analyses were performed at the "Centre de Datations et d'Analyses Isotopiques", Université Claude Bernard, Lyon, France.