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ACCELERATOR MASS SPECTROMETRY RADIOCARBON MEASUREMENTS ON MARINE CARBONATE SAMPLES FROM DEEP SEA CORES AND SEDIMENT TRAPS

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CONTENTS

INTRODUCTION

This report was prepared to permit those interested in our accelerator ^{14}C results to get a complete listing of the abundance and radiocarbon age results that we have obtained during the first four years of our study. For these ^{14}C dates that have been published or are in press, reference numbers are given corresponding to those in the references cited at the end of this report. Results without reference numbers have not yet been incorporated into one of our papers.

The foram samples were prepared at Lamont as follows: the dried core sample is weighed and disaggregated in deionized water. The wet sediment is then rinsed through a 63μ mesh sieve. This wash-rinse procedure is repeated four times. The material (coarse fraction) retained in the sieve is dried and weighed. From the weight of the coarse fraction and the original sample weight, the per cent coarse fraction is calculated.

The $>63\mu$ coarse fraction is then split to yield a manageable size sample for picking. The split portion is then put through a 150μ sieve and the species of interest is counted to yield the total whole shells in the split.

The number needed for ^{14}C measurement (200 to 1000 specimens) is picked. This known number of shells is then weighed yielding the weight of the average shell. The number of specimens per gram of sediment and the milligrams of specimens per gram of sediment are calculated as follows:

$$\frac{\text{No. specimens}}{\text{Gm sediment}} = \frac{\text{No. of specimens in split}}{\text{Split fraction} \cdot \text{weight of original sample}}$$

$$\frac{\text{Mg forams}}{\text{Gm sediment}} = \frac{\text{Mass of picked sample (mg)}}{\text{No. specimens in picked sample}} \times \frac{\text{No. of specimens in split}}{\text{Weight of split (gm)}}$$

The samples listed in this report were converted to CO_2 gas at Lamont. This CO_2 was then converted in Bern to carbon targets by the zinc reduction method (Andrée *et al,* 1984). The carbon targets were then analyzed for $^{14}C/^{12}C$ ratio by AMS at the ETH facility in Zurich (Suter *et al,* 1984).

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Andrée, M, Beer, J, Oeschger, H, Bonani, G, Hofmann, H J, Morenzoni, E, Nessi, M, Suter, M and Wolfli, W, 1984, Target preparation for milligram sized ^{14}C samples and data evaluation for AMS measurements: Nuclear Instruments & Methods, v B5, p 274–279.

Suter, M, Balzer, R, Bonani, G, Hofmann, H J, Morenzoni, E, Nessi, M, Wolfli, W, Andrée, M, Beer, J and Oeschger, H, 1984, Precision measurements of ^{14}C in AMS—some results and prospects: Nuclear Instruments & Methods, v B5, p 117–122.

I. CORES FROM THE OPEN ATLANTIC

CEARA RISE

KNORR 110 82GGC

Giant gravity core raised from RV KNORR by Bill Curry of WHOI.
Holocene 0–19cm 65–75% $CaCO_3$
Glacial below 19cm 25–30% $CaCO_3$

The study of this core was carried out cooperatively with Bill Curry of Woods Hole Oceanographic. Our goal was to obtain benthic-planktonic age difference for the glacial section of the core (see Figs 1, 2, Table 1).

References

Broecker, W S, Andrée, M, Bonani, G, Mix, A, Klas, M, Wolfli, W and Oeschger, H, ms in preparation, Differences between the radiocarbon age of coexisting planktonic foraminifera.

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Curry, W, Duplessy, J C, Labeyrie, L and Shackleton, N, in press, Changes in the distribution of deep water ΣCO_2 between the last glacial and the Holocene: Paleoceanography.

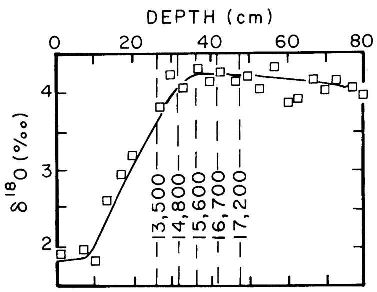

Fig 1. Oxygen isotope record on benthic foraminifera, for KNORR 110-82GGC obtained by Bill Curry of WHOI

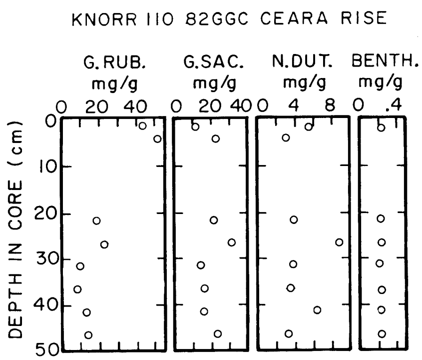

Fig 2. Abundance *vs* depth for the three planktonic and the mixed benthics on which ^{14}C measurements were made

TABLE 1

KNORR 110 82GGC Equatorial Atlantic Ceara Rise
Location (4°20.2'N, 43°29.2'W) Depth 2816m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
0-3**	32.3	G sacc	265	11.2	216	12.3	-	-	
"	"	G ruber	2840	43.6	463	7.1	-	-	
"	"	P obliq	57.7	2.3	201	9.7	-	-	
"	"	N duter	93.2	5.4	161	9.4	-	-	
"	"	M benth	5.7	0.23	247	9.8	-	-	
3-5†	31.8	G sacc	356	22.1	181	11.2	-	-	
"	"	G ruber	2810	52.1	522	9.7	-	-	
"	"	P obliq	49.8	3.0	161	9.7	-	-	
"	"	N duter	76.2	4.8	24	1.5	-	-	
"	"	M benth	-	-	-	-	-	-	
6-8	32.8	G sacc	333	29.1	70	6.1	-	-	
"	"	G ruber	1720	33.1	349	6.7	-	-	
"	"	N duter	29.4	1.75	-	-	-	-	
"	"	M benth	3.8	-	-	-	-	-	
9-11	30.1	G sacc	464	20.6	153	6.8	-	-	
"	"	G ruber	1720	12.8	566	4.2	-	-	
"	"	N duter	41.0	2.31	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
15-17	26.1	G sacc	454	28.4	152	9.5	-	-	
"	"	G ruber	1630	20.7	401	5.1	-	-	
"	"	N duter	103	5.37	-	-	-	-	
"	"	M benth	9.4	0.35	225	8.2	-	-	
20-23	15.4	G sacc	358	20.4	255	14.5	April 86	12,360 ± 190	15
"	"	G ruber	804	17.8	521	11.5	"	12,040 ± 190	15
"	"	P obliq	110	6.25	274	15.6	"	11,950 ± 180	
"	"	N duter	58.2	3.9	221	14.8	"	13,350 ± 230	15
"	"	M benth	7.1	0.22	328	10.4	"	13,160 ± 210	
23-25	15.2	G sacc	-	-	-	-	-	-	
"	"	G ruber	-	-	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
25-28	14.5	G sacc	557	30.8	222	12.3	June 86	14,150 ± 160	15,16
"	"	G ruber	1010	22.8	500	11.3	Jan 87	13,870 ± 260	15,16
"	"	P obliq	38.2	2.0	254	13.2	June 86	12,610 ± 140	
"	"	N duter	143	8.8	213	13.0	July 86	13,860 ± 190	15,16
"	"	M benth	5.8	0.24	233	9.5	June 86	14,930 ± 200	16

TABLE 1 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. Tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
28–30	12.3	G sacc	–	–	–	–	–	–	
"	"	G ruber	–	–	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
30–33	6.8	G sacc	215	14.9	194	13.5	April 86	15,100 ± 250	15,16
"	"	G ruber	526	10.1	453	8.7	"	15,450 ± 260	15,16
"	"	P obliq	5.7	0.36	–	–	–	–	
"	"	N duter	61.7	3.7	186	11.1	April 86	15,170 ± 260	15,16
"	"	M benth	6.7	0.21	298	9.3	"	16,350 ± 280	16
33–35	9.2	G sacc	–	–	–	–	–	–	
"	"	G ruber	–	–	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
35–38	7.4	G sacc	216	16.3	163	12.3	Jan 87	16,090 ± 320	15,16
"	"	G ruber	496	8.7	400	7.0	"	15,870 ± 290	15,16
"	"	P obliq	1.6	0.08	–	–	–	–	
"	"	N duter	58.2	3.5	229	13.7	July 86	16,060 ± 200	15,16
"	"	M benth	4.7	0.11	187	4.4	July 86	16,130 ± 240	16
36–38	7.9	G sacc	96.2	9.4	157	15.3	March 87	–	
"	"	G ruber	–	–	–	–	–	–	
"	"	M benth	3.4	0.24	58	4.1	March 87	–	
38–40	9.1	G sacc	–	–	–	–	–	–	
"	"	G ruber	–	–	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
40–43	8.9	G sacc	220	15.5	183	13.0	June 86	16,710 ± 250	15,16
"	"	G ruber	458	13.2	548	15.8	"	17,040 ± 250	15,16
"	"	P obliq	1.4	0.07	–	–	–	–	
"	"	N duter	86.7	6.3	181	13.2	June 86	17,610 ± 280	15,16
"	"	M benth	4.5	0.23	193	10.2	"	17,870 ± 370	16
43–45	10.1	G sacc	–	–	–	–	–	–	
"	"	G ruber	–	–	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
45–48	8.6	G sacc	186	22.8	86	9.5	Jan 87	17,780 ± 360	15,16
"	"	G ruber	766	14.0	500	12.7	"	17,430 ± 340	15,16
"	"	P obliq	4.2	0.22	–	–	–	–	
"	"	N duter	52.5	3.4	199	12.9	July 86	17,660 ± 260	15,16
"	"	M benth	4.5	0.23	155	5.8	"	17,900 ± 640	16

*Publication no. in which radiocarbon date has been published (see references cited)
**Archive core
†Working core

SIERRA LEONE RISE

EN 066 39GGC
EN 066 21GGC
EN 066 32GGC

Study of the dependence of core top ages for *G menardi* and *G sacculifer* on water depth in cores of low sedimentation rate (~2cm/10^3 yr). The study was initiated by Lisa Dubois of Brown University on cores originally studied by Curry and Lohmann of Woods Hole Oceanographic (see Table 2).

REFERENCES

Curry, W B and Lohmann, G P, 1983, Reduced advection into Atlantic Ocean deep eastern basins during last glaciation maximum: Nature, v 306, no. 5943, p 577–580.

———— 1986, Late Quaternary carbonate sedimentation at the Sierra Leone Rise (Eastern Equatorial Atlantic Ocean): Marine Geology, v 70, p 223–250.

TABLE 2

EN 066 39GGC Equatorial Atlantic Sierra Leone Rise
Location (5°04'N, 20°52'W) Depth 2818m

Depth (cm)	Coarse fraction (%)	Foram Sp	Abund (no./gm)	Abund (mgm/gm)	No. tests Anal.	Weight Anal. (mgm)	Date of AMS Analysis	Age (yr)
2-3	-	G menardi	-	-	-	1.2	Sept 85	1860 ± 120
"	-	G sacc	-	-	-	12.1	"	4510 ± 170
"	-	M benth	-	-	-	9.0	"	5180 ± 180
10-11	-	G menardi	-	-	100	10.3	July 86	3920 ± 90
11-12	-	G menardi	-	-	-	10.1	Sept 85	4100 ± 160
"	-	G sacc	-	-	-	8.0	"	7720 ± 260
"	-	M benth	-	-	-	10.9	"	10,430 ± 350
13-14	-	G menardi	-	-	66	3.0	Aug 86	7510 ± 200
16-17	-	G sacc	-	-	208	10.5	Jan 87	15,130 ± 280
23-24	-	G sacc	-	-	-	11.6	Sept 85	19,290 ±1080
"	-	G infla	-	-	-	5.5	Feb 86	16,900 ± 250
"	-	M benth	-	-	-	5.7	"	20,430 ± 360
EN 066 21GGC Equatorial Atlantic Sierra Leone Rise Location (4°14'N, 20°38'W) Depth 3995m								
2-3	-	G menardi	-	-	-	11.8	Sept 85	2280 ± 130
"	-	G sacc	-	-	-	8.0	"	3800 ± 160
EN 066 32GGC Equatorial Atlantic Sierra Leone Rise Location (2°28'N, 19°44'W) Depth 5003m								
2-3	-	G menardi	-	-	-	10.9	Sept 85	2840 ± 130
"	-	G sacc	-	-	-	8.1	"	4070 ± 160

WESTERN EQUATORIAL ATLANTIC

V14-05TW
V25-59TW
V16-200TW
V14-06TW
V15-17TW

The study of these whole shell, shell fragment pairs from trigger weight cores from the western equatorial Atlantic was initiated by Alan Mix (see Table 3).

References

Damuth, J, (ms) 1973, The western equatorial Atlantic: Morphology, Quaternary sediments, and climatic cycles: PhD dissert, Columbia Univ, 602 p.

Mix, A, (ms) 1986, Late Quaternary paleoceanography of the Atlantic Ocean: Foraminiferal faunal and stable isotopic evidence: PhD dissert, Columbia Univ, 738 p.

Mix, A and Ruddiman, W, 1985, Structure and timing of the last deglaciation: Oxygen-isotope evidence: Quaternary Sci Rev, v 4, p 59–108.

TABLE 3

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)
V14-05TW Equatorial Atlantic Location (00°15'N, 32°51'W) Depth 3255m								
5-10	–	G menardi	–	–	–	9.9	Sept 85	4050 ± 210
"	–	G men frag	–	–	–	5.5	"	3360 ± 220
V25-59TW Equatorial Atlantic Location (01°22'N, 33°29'W) Depth 3824m								
5-10	–	G menardi	–	–	–	7.5	Sept 85	4740 ± 230
"	–	G men frag	–	–	–	7.9	"	5010 ± 210
V16-200TW Equatorial Atlantic Location (01°58'N 37°04'W) Depth 4093m								
0-10	–	G menardi	–	–	–	10.3	Sept 85	2950 ± 180
V14-06TW Equatorial Atlantic Location (00°50'N, 34°20'W) Depth 4429m								
0-10	–	G menardi	–	–	–	9.8	Sept 85	7760 ± 330
"	–	G men frag	–	–	–	8.6	"	7610 ± 330
V15-17TW Equatorial Atlantic Location (06°59'N, 41°04'W) Depth 4768m								
0-10	–	G menardi	–	–	–	5.0	Sept 85	6420 ± 280
"	–	G men frag	–	–	–	9.9	"	5800 ± 230

NORTHERN ATLANTIC

V23-81

The study of this northern Atlantic core was undertaken to establish the chronology of surface water temperature changes in the northern Atlantic from 40,000 years ago to present (see Figs 3, 4; Table 4).

References

Broecker, W S, Andrée, M, Bonani, G, Wolfli, W, Oeschger, H and Klas, M, 1988, in press, Can the Greenland climatic jumps be identified in records from ocean and land?: Quaternary Research.

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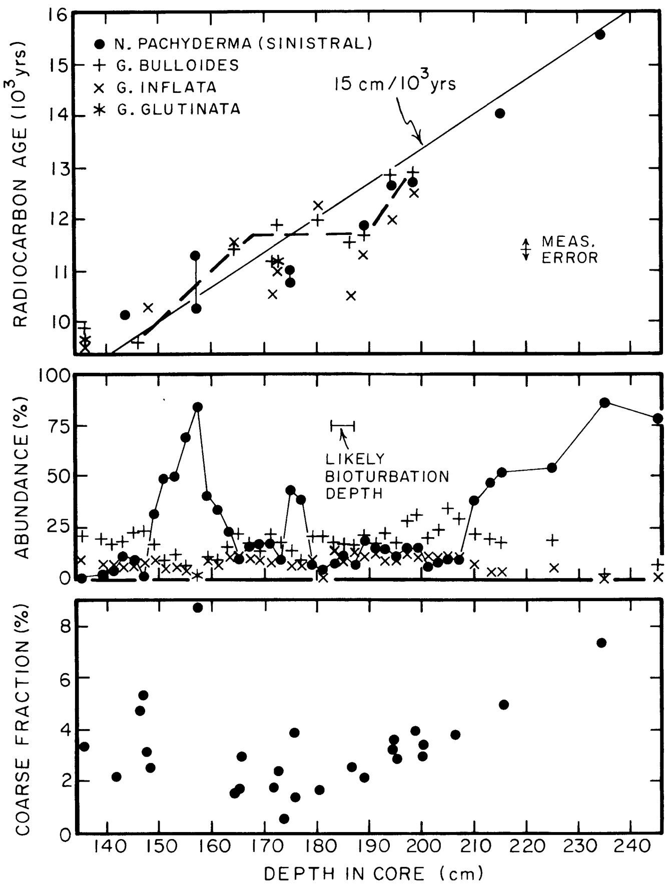

Fig 3. Plot of ^{14}C ages, relative abundances, and coarse fractions *vs* depth for the deglacial interval in core V23-81. As the coarse fraction is made up almost entirely of planktonic shells, the product of the coarse fraction percentage and the relative abundance percentage provides a measure of the absolute abundance of a given shell type (*ie,* gm shell/gm sediment). We do not graph this product for two reasons: 1) the abundances and coarse fractions were not done on the same samples, 2) the abundances are for shell number rather than shell weight. The ^{14}C ages are uncorrected for the $^{14}C/C$ ratio difference between atmospheric CO_2 and surface ocean ΣCO_2. The reference line shows the expected trend in age if the sedimentation rate and the $^{14}C/C$ ratio in surface ocean water remained constant with time.

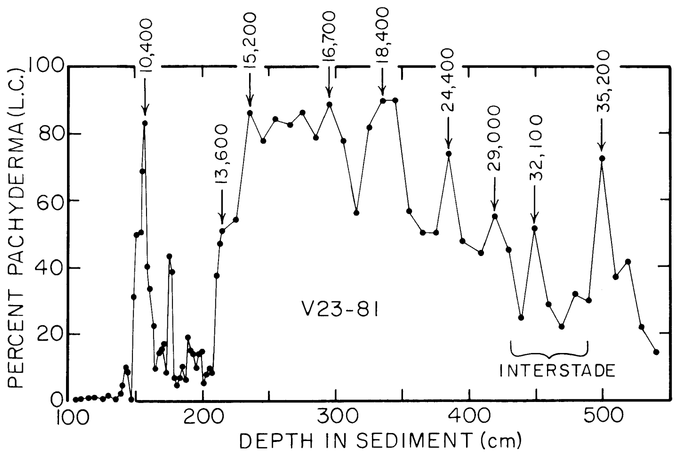

Fig 4. ¹⁴C ages on the shells of *N pachyderma(s)* in northern Atlantic core V23-81

TABLE 4

V23-81 North Atlantic
Location (54°18'N, 16°48'W) Depth 2393m

Depth (cm)	Coarse fraction (%)	Foram Sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
0-3TW	5.0	G infla	309	6.31	270	5.5	Aug 86	2070 ± 90	12
7-8	10.0	G glut	72.8	-	-	-	-	-	
"	"	G quin	65.5	-	-	-	-	-	
"	"	G bull	328	3.34	542	5.5	Aug 86	2410 ± 100	12,15
"	"	G infla	386	9.04	410	9.6	"	1820 ± 90	12,15
"	"	M benth	14.1	-	-	-	-	-	
61-63	11.7	G bull	312	4.76	531	8.1	Nov 87	6930 ± 170	12
"	"	G infla	277	9.41	376	12.8	Mar 87	6260 ± 150	12
"	"	M benth	35.0	1.01	276	8.0	"	6990 ± 170	12
112.5-113.5	4.2	-	-	-	-	-	-	-	
122.5-123.5	7.0	-	-	-	-	-	-	-	
131-132	3.6	-	-	-	-	-	-	-	
135-136	3.4	G glut	107	0.55	1000	5.2	Aug 86	9610 ± 150	12
"	"	G quin	70.5	0.13	1570	3.0	-	-	
"	"	G bull	212	3.94	530	9.9	Aug 86	9890 ± 160	12,15
"	"	G infla	112	2.86	339	8.7	"	9490 ± 200	12,15
"	"	M benth	8.05	-	-	-	-	-	
143-144	2.2	N pach(s)	92.9	0.82	817	7.2	Jan 87	10,120 ± 180	12
"	"	G infla	71.2	1.76	304	7.5	Nov 87	10,450 ± 200	12
146.0-146.5	4.8	N pach(s)	138	-	-	-	-	-	
"	"	G bull	436	8.30	462	8.8	Mar 87	9600 ± 210	12
"	"	G infla	142	-	-	-	-	-	

TABLE 4 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
147.5-148.0	2.6	N pach(s)	209	-	-	-	-	-	
"	"	G bull	232	-	-	-	-	-	
"	"	G infla	105	3.18	296	9.0	Mar 87	10,260 ± 190	12
157-158	8.7	N pach(s)	4130	25.0	1370	8.3	July 85	11,300 ± 140	12,13
"	"	"	4130	32.7	1400	11.1	Jan 87	10,230 ± 200	12,13
164-165	1.8	N pach(s)	167	-	-	-	-	-	
"	"	G bull	155	2.76	548	9.8	Mar 87	11,500 ± 210	12,15
"	"	G infla	97.3	2.16	316	7.0	"	11,500 ± 200	12,15
171-172	1.8	G bull	113	1.61	500	7.1	Aug 86	11,170 ± 180	12,15
"	"	G infla	64.0	1.39	350	7.6	"	10,530 ± 160	12,15
"	"	N pach(d)	-	-	-	-	-	-	
172-173	2.4	G glut	103.4	0.57	777	4.3	Aug 86	11,140 ± 190	12
"	"	G quin	207	0.47	1100	2.5	-	-	
"	"	G bull	219	3.64	479	8.0	Aug 86	11,860 ± 170	12,15
"	"	G infla	52.7	1.02	429	8.3	"	10,960 ± 200	12,15
"	"	N pach(d)	71.1	0.49	583	4.0	-	-	
173-174	0.6	G bull	31.2	-	100	-	-	-	
"	"	G infla	41.8	-	183	-	-	-	
175-176	3.9	N pach(s)	647	6.31	862	8.4	Aug 86	10,990 ± 190	12,13
"	"	"	647	7.34	837	9.5	Jan 87	10,780 ± 190	12
175-176	1.4	N pach(s)	43.2	-	133	-	-	-	
180-181	1.7	N pach(s)	38.5	-	-	-	-	-	
"	"	G bull	191	3.42	250	4.7	Mar 87	11,990 ± 280	12,15
"	"	G infla	78.6	1.90	300	7.2	"	12,240 ± 220	12,15
186-187	2.8	G bull	169	-	-	-	-	-	
"	"	G infla	109	2.96	294	8.0	Mar 87	10,500 ± 230	12,15
186-187	2.5	G bull	254	5.64	450	10.0	Mar 87	11,540 ± 210	12,15
"	"	G infla	109	-	-	-	-	-	
188-190	2.4	N pach(s)	185	1.69	900	8.2	Jan 87	11,850 ± 200	12,13
188-190	2.1	G bull	114	1.35	715	8.5	Mar 87	11,650 ± 210	12,15
"	"	G infla	75.3	1.13	535	8.0	"	11,330 ± 230	12,15
194.0-195.5	3.2	N pach(s)	289	3.41	687	8.1	Jan 87	12,660 ± 240	12
"	"	G bull	282	3.20	724	8.2	Mar 87	12,840 ± 230	12,15
194.0-195.5	3.5	G infla	145	3.17	474	10.4	Mar 87	11,940 ± 210	12,15
194.5-195.0	3.5	N pach(s)	353	-	-	-	-	-	
"	"	G bull	283	-	-	-	-	-	
"	"	G infla	180	-	-	-	-	-	

TABLE 4 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
195.0–195.5	3.6	N pach(s)	499	–	568	–	–	–	
"	"	G bull	251	–	269	–	–	–	
"	"	G infla	145	–	160	–	–	–	
195.5–196.0	2.9	N pach(s)	193	–	438	–	–	–	
"	"	G bull	304	–	294	–	–	–	
"	"	G infla	87.0	–	184	–	–	–	
198–199	3.6	–	–	–	–	–	–	–	
198–199	4.1	N pach(s)	366	3.84	905	9.5	Jan 87	12,270 ± 220	12,13
"	"	G bull	423	7.49	593	10.5	Mar 87	12,910 ± 240	12,15
"	"	G infla	168	4.06	327	7.9	"	12,530 ± 220	12,15
200.0–200.5	3.0	G bull	255	–	–	–	–	–	
"	"	G infla	131	–	–	–	–	–	
201–202	2.9	G bull	272	5.24	451	8.7	Nov 87	12,860 ± 240	12
"	"	G infla	118	4.31	335	12.2	Nov 87	12,390 ± 240	12
206–207	3.8	G bull	277	5.34	550	10.6	Nov 87	13,180 ± 240	12
"	"	G infla	97.7	2.60	432	11.5	Nov 87	13,240 ± 310	12
"	"	N pach(s)	–	–	–	–	–	–	
215–216	5.0	N pach(s)	789	8.66	930	10.2	Aug 86	14,060 ± 210	12,13
234–235	4.5	N pach(s)	1860	20.7	771	8.6	July 85	15,600 ± 190	12,13
293–294	6.7	N pach(s)	2610	32.9	706	8.9	July 85	17,140 ± 240	12,13
313–315	1.9	N pach(s)	105	–	–	–	–	–	
"	"	G bull	39.6	–	400	–	–	–	
"	"	G infla	8.40	–	113	–	–	–	
335–336	7.7	N pach(s)	2130	23.7	845	9.4	July 85	18,790 ± 280	13
384–385	5.6	N pach(s)	1230	15.0	813	9.9	Sept 85	24,820 ± 870	13
385–386	6.8	N pach(s)	898	11.2	900	11.2	Aug 86	24,400 ± 540	13
418–419	9.2	N pach(s)	1780	21.3	916	10.9	Aug 86	29,400 ± 960	13
449–450	5.4	N pach(s)	328	3.56	810	8.8	Aug 86	32,540 ±1240	13
499–500	9.8	N pach(s)	1480	18.0	861	10.5	Aug 86	35,640 ±1810	13

*Publication no. in which radiocarbon date has been published.

II. CORES FROM BASINS ADJACENT TO THE ATLANTIC OCEAN

V28-122

The study of this core was undertaken to measure the benthic-planktonic age difference for the "Boyle water" of glacial time in the Caribbean Sea (see Figs 5, 6; Table 5).

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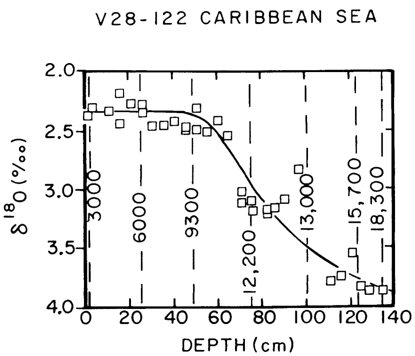

Fig 5. Oxygen isotope record for benthic foraminifera (Oppo & Fairbanks, in press)

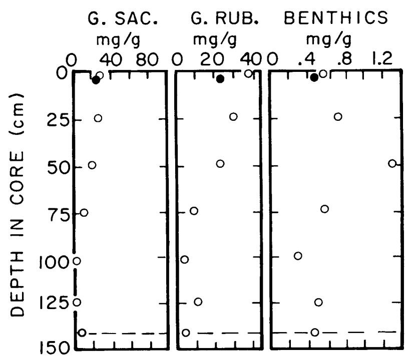

Fig 6. Abundance *vs* depth planktonic and mixed benthic foraminifera shells for V28-122

TABLE 5

V28-122 Caribbean Sea Columbia Basin
Location (11°56'N, 78°41'W) Depth 3623m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
2- 5TW	23.1	G sacc	437	25.7	241	14.2	Mar 87	3180 ± 160	
"	"	G ruber	1210	23.6	554	10.8	-	-	
"	"	M benth	19.6	0.47	172	4.2	-	-	
1- 3	30.3	G sacc	612	29.0	194	9.2	Mar 86	2930 ± 120	15,16
"	"	G ruber	2300	38.7	493	8.3	"	3040 ± 130	15,16
"	"	M benth	27.2	0.57	530	11.1	"	3280 ± 140	16
24- 25	24.9	G sacc	595	27.0	205	9.3	-	5940 ± 130	15
"	"	G ruber	1780	30.7	610	10.5	-	6170 ± 190	15
"	"	M benth	22.5	0.73	130	4.2	-	-	
48- 49	21.4	G sacc	368	20.4	222	12.3	-	9230 ± 150	15,16
"	"	G ruber	1600	23.4	607	8.9	-	9390 ± 160	15,16
"	"	M benth	32.2	1.32	207	8.5	-	10,120 ± 200	16
74- 75	13.8	G sacc	177	9.9	193	10.8	-	12,040 ± 220	15,16
"	"	G ruber	628	9.4	500	7.5	-	12,410 ± 230	15,16
"	"	M benth	31.2	0.69	367	8.1	-	12,620 ± 210	16
98-104	4.1	G sacc	16.6	1.1	205	13.9	Mar 87	12,650 ± 250	15,16
"	"	G ruber	183	3.3	545	9.8	-	13,240 ± 240	15,16
"	"	M benth	6.50	0.29	227	10.3	Mar 87	15,200 ± 300	16
123-124	6.0	G sacc	38.3	2.2	174	10.1	-	15,860 ± 260	15,16
"	"	G ruber	549	10.6	525	10.1	-	15,540 ± 270	15,16
123-128**	"	M benth	17.0	0.51	302	8.2	-	16,550 ± 270	16
129-139	8.0	G sacc	59.2	4.0	121	8.2	Mar 87	17,910 ± 400	16
"	"	G ruber	374	7.1	582	11.1	-	18,730 ± 480	16
"	"	M benth	16.3	0.46	505	15.3	Mar 87	18,530 ± 420	16
145-146	-	G sacc	28.4	1.5	-	-	-	-	
"	-	G ruber	274	4.2	-	-	-	-	
157-158	-	G sacc	20.3	1.1	-	-	-	-	
"	-	G ruber	268	4.7	-	-	-	-	

*Publication no. in which radiocarbon date has been published (see references cited)
**55.3% from 123-124cm
26.2% from 125cm
18.5% from 128cm

GULF OF MEXICO ORCA BASIN

EN32-PC6

The study of this core was undertaken in cooperation with James Kennett. The purpose was to establish the chronology of the Mississippi River melt water record (see Figs 7, 8; Table 6).

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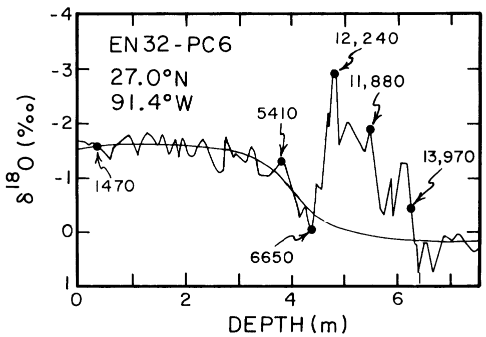

Fig 7. The $^{18}O/^{16}O$ record obtained on the shells of the planktonic species *G ruber* from a Gulf of Mexico deep-sea core raised in the Orca Basin (Leventer, Williams & Kennett, 1982). The smooth curve shows the record expected was the core from the open ocean. The large anomaly to more negative $\delta^{18}O$ values is attributed to the discharge of glacial melt water from the Mississippi River. The ^{14}C analyses were carried out on hand-picked planktonic shells.

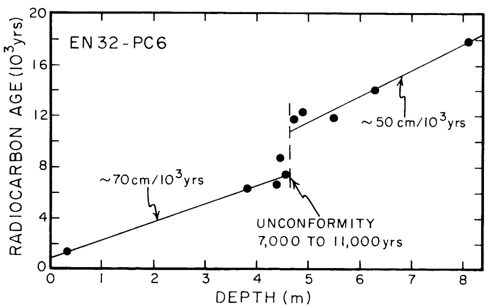

Fig 8. ^{14}C age *vs* depth in Gulf of Mexico core EN32-PC6. The results suggest that a section of the record from ca 7000 BP to ca 11,000 BP is missing. The ^{14}C ages have not been corrected for the air-surface-sea age difference.

TABLE 6

EN32-PC6 Gulf of Mexico Orca Basin
Location (26°57'N, 91°21'W) Depth 2280m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
23- 29	–	M plank**	–	–	–	10.2	Mar 87	1470 ± 120	12
380–382	–	M plank	–	–	–	14.5	Mar 87	5410 ± 130	12
437–438	–	M plank	–	–	–	–	Sept 85	6650 ± 110	12
442–443	0.41	M plank	–	–	–	–	Oct 86	8780 ± 180	12
456–458	–	M plank	–	–	–	7.2	Mar 87	7360 ± 160	12
470–472	–	M plank	–	–	–	13.4	Mar 87	11,690 ± 210	12
485–487	–	G ruber	–	–	–	–	May 85	12,240 ± 150	12
547–548	–	G ruber	–	–	–	8.0	Jan 87	11,880 ± 210	12
627–629	–	M plank	–	–	–	–	Aug 86	13,970 ± 410	12
808–810	–	M plank	–	–	–	7.7	Mar 87	17,860 ± 370	12

*Publication no. in which radiocarbon date has been published (see Refereces cited)
**M plank = mixed planktonic species

ARCTIC OCEAN

FL-124

This study was undertaken in cooperation with David Clark of the University of Wisconsin in order to confirm the previous estimates of low sedimentation rates in the Arctic Basin (see Table 7).

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TABLE 7

FL-124 Arctic Ocean
Location (78°14'N, 174°42'W) Depth 1517m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (years)	Ref*
0–1	–	N pach(s)	–	–	–	–	May 85	9130 ± 120	8
2–3	–	"	–	–	–	–	"	15310 ± 210	8
4–5	–	"	–	–	–	–	"	31720 ± 1280	8
8–9	–	"	–	–	–	–	"	>41100	8

*Publication no. in which radiocarbon date has been published (see References cited)

III. CORES FROM THE OPEN PACIFIC

EAST PACIFIC RISE

TT154-10

This study was carried out in cooperation with Steve Emerson of the University of Washington. The purpose was to obtain benthic-planktonic and planktonic-planktonic age differences on hand-picked foraminifera shells. Material was taken from two separate subcores from the primary $50cm^2$ box core (see Tables 8, 9).

TABLE 8

TT154-10 (Core 5) East Pacific Rise
Location (10°17.5'N, 111°20'W) Depth 3225m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
0- 1	35.7	BULK $CaCO_3$	-	-	-	-	-	5100 ± 200**	15
"	"	G sacc	885	-	-	7.2	July 84	5920 ± 100	15
"	"	P obliq	612	-	-	10.2	"	5770 ± 120	15
"	"	M benth	32.0	0.56	537	9.4	-	-	
1- 2	41.0	G sacc	-	-	-	9.9	July 84	5930 ± 100	15
"	"	P obliq	-	-	-	7.7	"	5580 140	15
2- 3	40.4	G sacc	767	-	187	7.4	July 84	6110 ± 100	15
"	"	P obliq	787	-	192	7.2	"	5020 ± 130	15
"	"	M benth	26.0	0.35	607	8.1	-	-	15
3- 4	34.9	BULK $CaCO_3$	-	-	-	-	-	5100 ± 200**	15
"	"	G sacc	657	-	-	12.4	Mar 84	5160 ± 140	15
"	"	P obliq	743	-	-	9.1	July 84	4750 ± 110	15
"	"	M benth	36.0	0.38	920	9.7	-	-	
4- 6	37.5	BULK $CaCO_3$	-	-	-	-	-	5600 ± 200**	15
"	"	G sacc	786	-	-	8.7	July 84	6770 ± 150	15
"	"	P obliq	643	-	-	12.6	"	5500 ± 90	15
"	"	M benth	27.0	0.37	496	6.8	-	-	
6- 8	37.8	G sacc	-	-	-	12.2	July 84	5880 ± 100	15
"	"	P obliq	-	-	-	10.9	"	5530 ± 100	15
"	"	M benth	28.0	0.31	570	6.4	-	-	
7- 8	-	BULK $CaCO_3$	-	-	-	-	-	6100 ± 250**	15
8-10	34.5	G sacc	675	-	-	8.7	July 84	6500 ± 110	15
"	"	P obliq	532	-	-	11.5	"	6180 ± 100	15
"	"	M benth	30.0	0.42	591	8.3	-	-	
9-10	45.2	BULK $CaCO_3$	-	-	-	-	-	5700 ± 150**	15
11-12	-	BULK $CaCO_3$	-	-	-	-	-	6700 ± 250**	15
10-14	-	M benth	25.0	0.34	537	7.4	-	-	
13-14	-	BULK $CaCO_3$	-	-	-	-	-	8100 ± 300**	
14-16	48.8	BULK $CaCO_3$	-	-	-	-	-	8800 ± 100**	
"	"	G sacc	648	-	-	-	-	-	
"	"	P obliq	800	-	-	-	-	-	
"	"	M benth	31.0	-	-	-	-	-	

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TABLE 8 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
16–18	49.6	BULK $CaCO_3$	–	–	–	–	–	9400 ± 100**	
"	"	M benth	31.0	–	–	–	–	–	
18–20	46.5	M benth	36.0	–	–	–	–	–	
20–22	50.1	M benth	31.0	–	–	–	–	–	
22–24	43.5	G sacc	511	–	–	13.0	July 84	11,640 ± 130	
"	"	P obliq	481	–	–	–	–	–	
"	"	M benth	35.0	0.48	530	7.3	–	–	
24–26	52.3	M benth	39.0	–	587	–	–	–	
26–28	51.2	G sacc	–	–	–	–	Jan 87	12,200 ± 230	15
"	"	P obliq	–	–	–	11.6	"	13,350 ± 250	15
"	"	M benth	37.0	0.44	562	6.7	"	16,220 ± 300	
28–30	53.8	M benth	55.0	–	–	–	–	–	
30–32	47.3	–	–	–	–	–	–	–	
"	"	P obliq	–	–	–	12.8	Jan 87	16,320 ± 310	15,16
"	"	M benth	83.0	1.14	656	9.0	"	17,500 ± 380	16
30–32	46.9	G sacc	120	9.4	150	11.8	Mar 87	15,770 ± 330	15,16
"	"	P obliq	–	–	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
32–34	46.6	M benth	34.0	–	–	–	–	–	
34–36	47.5	G sacc	–	–	161	10.7	Jan 87	16,600 ± 340	15,16
"	"	P obliq	–	–	200	14.2	"	16,530 ± 340	15,16
"	"	M benth	57.0	0.62	809	8.8	"	19,170 ± 420	16
36–38	46.6	M benth	72.0	–	–	–	–	–	
36–38	46.1	G sacc	–	–	150	10.6	Mar 87	16,320 ± 370	15,16
"	"	P obliq	–	–	113	8.1	"	17,390 ± 370	15,16
"	"	M benth	–	–	137	6.8	"	20,180 ± 610	16
40–42	46.9	G sacc	362	–	–	10.5	July 84	20,110 ± 220	16
"	"	M benth	44.0	0.73	484	8.0	"	21,980 ± 640	16

*Publication no. in which radiocarbon date has been published (see References cited)
**Ages obtained at LDGO by conventional decay counting

TABLE 9

TT154-10 (Emerson Frozen Subcore) East Pacific Rise
Location (10°17.5'N, 111°20'W) Depth 3225m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)
0-1.2	49.9	G sacc	487	-	-	-	-	-
"	"	P obliq	683	-	-	-	-	-
"	"	M benth	38.0	0.48	657	8.3	May 85	6700 ± 100
1.2-2.4	49.9	G sacc	411	-	-	-	-	-
"	"	P obliq	679	-	-	-	-	-
"	"	M benth	36.0	0.41	653	7.5	Jun 85	6780 ± 110
2.4-3.6	48.6	G sacc	531	-	-	-	-	-
"	"	G ruber	-	-	754	8.2	-	-
"	"	P obliq	742	-	-	-	-	-
"	"	N duter	-	-	300	12.1	-	-
"	"	M benth	35.0	0.39	704	7.9	Dec 84	6930 ± 110
3.6-4.8	42.0	G sacc	403	33.7	140	11.7	-	-
"	"	P obliq	597	43.5	147	10.7	-	-
"	"	M benth	37.0	0.51	705	9.8	Jun 85	6960 ± 100
4.8-6.0	44.8	G sacc	485	33.3	150	10.3	-	-
"	"	P obliq	624	48.5	148	11.5	-	-
5.0-6.0	44.8	M benth	34.0	0.47	641	8.8	Jun 85	6610 ± 110
6.0-7.2	47.5	G sacc	462	32.8	163	11.2	-	-
"	"	P obliq	657	55.6	124	10.5	-	-
"	"	M benth	41.0	0.51	784	9.7	Jun 85	6550 ± 90
7.2-8.4	45.0	G sacc	434	40.7	130	12.2	-	-
"	"	P obliq	590	52.2	113	10.0	-	-
"	"	M benth	32.0	0.39	747	9.0	Jun 85	7410 ± 110
8.4-9.6	44.0	G sacc	335	23.9	168	12.0	-	-
"	"	P obliq	573	43.8	157	12.0	-	-
"	"	M benth	35.0	0.38	707	7.6	-	-

Table 9 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)
9.6–10.8	37.1	G sacc	527	40.9	152	11.8	–	–
"	"	P obliq	598	48.6	144	11.7	–	–
10.8–12.0	37.4	G sacc	490	32.2	166	10.9	–	–
"	"	P obliq	562	48.8	137	11.9	–	–
12.0–13.2	39.0	G sacc	447	31.7	162	11.5	May 85	6950 ± 110
"	"	G ruber	–	–	552	7.5	–	–
"	"	P obliq	625	47.0	145	10.9	May 85	6480 ± 100
"	"	N duter	–	–	326	12.2	–	–
"	"	M benth	28.0	0.38	644	8.6	May 85	9400 ± 120
13.2–14.4	39.6	G sacc	470	36.8	152	11.9	–	–
"	"	P obliq	582	44.0	152	11.5	–	–
20.4–21.6	44.2	G sacc	569	44.0	163	12.6	–	–
"	"	P obliq	382	30.8	150	12.1	–	–
"	"	G ruber	973	22.6	543	12.6	–	–
"	"	N duter	181	7.6	300	12.6	–	–
25.2–26.4	50.3	G sacc	405	21.6	205	10.9	–	–
"	"	P obliq	560	34.0	283	17.2	–	–
31.2–32.4	49.0	G sacc	188	9.9	61	3.2	–	–
"	"	P obliq	448	28.7	145	9.3	–	–
34.8–36.0	47.9	G sacc	231	15.6	120	8.1	–	–
"	"	P obliq	448	35.0	233	18.2	–	–
39.6–40.8	50.1	G sacc	148	13.0	67	5.9	–	–
"	"	P obliq	532	38.4	241	17.4	–	–
44.4–45.6	43.7	G sacc	110	7.8	45	3.2	–	–
"	"	P obliq	509	34.1	209	14.0	–	–
49.2–50.4	45.9	G sacc	242	14.8	100	6.1	–	–
"	"	P obliq	363	35.8	150	14.8	–	–

OONTONG-JAVA PLATEAU

V28-238
RC17-176

These cores were chosen for our initial effort because they typified normal open ocean conditions (see Fig 9; Tables 10, 11).

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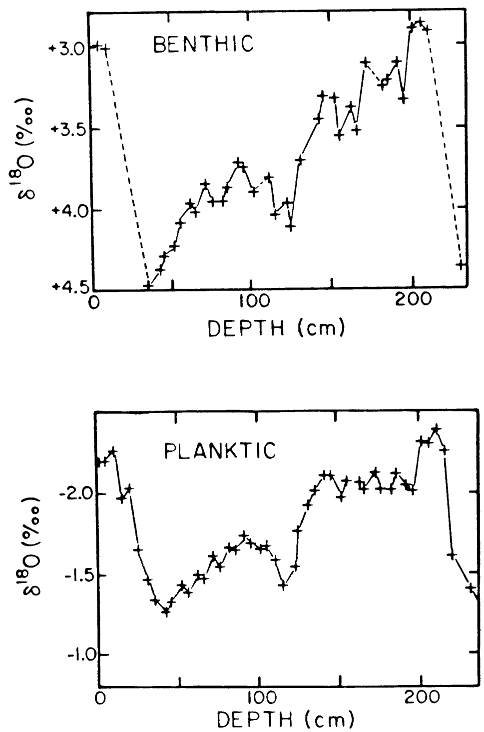

Fig 9. Oxygen isotope records for core V28-238 (Shackleton & Opdyke, 1973)

TABLE 10

V28-238 Equatorial Pacific Oontong-Java Plateau
Location (01°01'N, 160°29'E) DEPTH 3120m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
3. 8TW	30.8	G sacc	632	–	–	–	Dec 83	4640 ± 160	4,6
"	"	sacc frag	–	–	–	–	Mar 84	4650 ± 100	4,6
"	"	G ruber	2067	19.1	–	–	"	5680 ± 90	4,6
"	"	P obliq	685	–	–	–	Dec 83	4760 ± 160	4,6
"	"	N duter	385	17.8	–	–	Mar 84	5410 ± 80	4,6
"	"	M benth	–	–	–	–	Dec 83	6150 ± 180	4,6
2.5–4.5	–	G sacc	–	–	–	–	July 84	5500 ± 230	6
"	"	P obliq	–	–	–	–	"	4330 ± 100	6
10–12	39.0	G sacc	535	–	–	–	Feb 83	5880 ± 100	4,6
"	"	G ruber	1433	1.9	–	–	Mar 84	7670 ± 100	4,6
"	"	P obliq	1604	–	–	–	Dec 83	6390 ± 160	4,6
"	"	N duter	92.0	0.3	–	–	Mar 84	9070 ± 120	4,6
"	"	M benth	–	–	–	–	Feb 83	9530 ± 80	4,6
"	"	<25 microns	–	–	–	–	"	6320 ± 60	4,6
"	"	25–63 microns	–	–	–	–	"	6620 ± 70	4,6
"	"	>63 microns	–	–	–	–	Mar 84	6870 ± 140	4,6
12–15	–	BULK $CaCO_3$	–	–	–	–	–	8010 ± 150	
13–14	40.3	G sacc	249	12.3	–	9.4	Mar 84	8350 ± 100	4,6
"	"	G ruber	1907	–	–	–	–	–	
"	"	P obliq	613	27.4	–	10.5	Mar 84	8620 ± 100	4,6
"	"	N duter	–	–	–	–	–	–	
"	"	M benth	25.0	1.0	152	6.2	Mar 84	12,080 ± 120	4,6
15–16	38.6	G sacc	716	–	–	–	Feb 85	8190 ± 120	
"	"	G ruber	2339	–	–	–	–	–	
"	"	P obliq	1200	–	–	–	Feb 85	8450 ± 110	
"	"	N duter	143	–	–	–	–	–	
"	"	M benth	40.0	–	189	3.2	–	–	
18–20	45.3	G sacc	662	–	–	–	Dec 83	9730 ± 220	4,6
"	"	G sacc	955	–	662	17.8	Mar 84	8490 ± 150	4,6
"	"	G ruber	1079	11.8	–	–	"	9580 ± 110	4,6
"	"	P obliq	1486	–	515	41.2	Dec 83	9300 ± 220	4,6
"	"	P obliq	–	–	–	–	Mar 84	9680 ± 170	4,6
"	"	N duter	107	4.4	–	–	"	11,230 ± 130	4,6
"	"	M benth	49.0	–	540	8.1	Dec 83	11,660 ± 260	4,6
21–22	37.0	G sacc	270	–	208	–	Feb 85	10,230 ± 120	
"	"	G ruber	1862	–	–	–	–	–	
"	"	P obliq	719	–	60	–	Feb 85	10,470 ± 160	
"	"	N duter	195	–	–	–	–	–	
"	"	M benth	60.0	–	–	–	–	–	
25–26	33.1	G sacc	529	–	233	–	–	–	
"	"	G ruber	1114	–	–	–	–	–	
"	"	P obliq	935	–	75	–	–	–	
"	"	N duter	166	–	–	–	–	–	
"	"	M benth	61.0	–	–	–	–	–	
29–30	30.0	G sacc	138	–	208	–	Feb 85	11,880 ± 140	
"	"	G ruber	634	–	–	–	–	–	
"	"	P obliq	795	–	85	–	Feb 85	12,950 ± 140	
"	"	N duter	108	–	–	–	–	–	
"	"	M benth	69.0	–	–	–	–	–	

TABLE 10 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
30-31	25.7	G sacc	392	-	464	16.4	Dec 83	11,650 ± 260	4,6
"	"	P obliq	1069	-	315	21.7	"	12,680 ± 460	4,6
"	"	M benth	76.0	-	715	8.7	"	16,140 ± 390	4,6
34-35	21.6	G sacc	96	3.40	241	8.54	Mar 84	13,560 ± 220	4,6
"	"	G ruber	768	-	-	-	-	-	
"	"	P obliq	340	23.5	80	8.0	Feb 85	14,340 ± 130	
"	"	N duter	225	-	-	-	-	-	
"	"	M benth	87.0	1.00	-	-	-	-	
41-43	24.8	G sacc	93	-	-	11.0	Apr 83	17,780 ± 390	4,6
"	"	P obliq	648	-	-	11.0	July 83	19,620 ± 190	4,6
"	"	N duter	169	-	-	-	-	-	
"	"	M benth	81.0	-	781	6.0	Apr 83	20,650 ± 220	4,6
"	"	<25 microns	-	-	-	-	"	17,800 ± 160	4,6
"	"	25-63 microns	-	-	-	-	"	19,440 ± 260	4,6
44-45	21.2	G ruber	288	-	-	-	-	-	
"	"	P obliq	310	-	-	-	-	-	
"	"	N duter	149	-	-	-	-	-	
"	"	M benth	9.00	-	-	-	-	-	
45-47	28.8	G sacc	-	-	-	-	Mar, 84	19,620 ± 240	4,6
"	"	G ruber	436	0.09	-	-	"	19,380 ± 260	4,6
"	"	N duter	180	6.4	-	-	"	21,000 ± 250	4,6
"	"	M benth	-	-	-	-	"	22,110 ± 350	4,6
50-51	25.9	G sacc	678	21.2	458	14.5	Dec, 83	19,610 ± 620	4
"	"	G sacc	678	-	-	-	Mar, 84	22,400 ± 1180	4
"	"	G ruber	504	5.20	-	-	"	21,030 ± 280	4
"	"	P obliq	1282	75.9	433	26.9	Dec, 83	22,630 ± 1290	4
"	"	P obliq	-	-	-	-	Mar, 84	22,180 ± 1090	4
"	"	N duter	182	0.50	-	-	"	22,890 ± 280	4
"	"	M benth	124	1.40	678	8.1	Dec, 83	22,440 ± 690	4
1200	21.5	G sacc	124	-	-	-	Mar, 84	>40140	4
"	"	P obliq	-	-	-	-	"	>41900	
"	"	P obliq	-	-	-	-	Nov, 85	>42840	4
"	"	G sacc	-	-	-	-	"	>36400	

*Publication no. in which radiocarbon date has been published (see References cited

TABLE 11

RC17-176 Equatorial Pacific Oontong-Java Plateau
Location (03°45'N, 158°46'E) Depth 3156m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)
4-6	49.0	G sacc	351	-	-	-	Dec 83	6080 ± 190
"	"	P obliq	814	-	-	-	"	6710 ± 190
"	"	N duter	-	-	-	-	"	-
"	"	M benth	25.6	-	-	-	"	9400 ± 220

IV. CORES FROM BASINS ADJACENT TO THE PACIFIC

SOUTH CHINA SEA

V35-5
V35-6

This study was undertaken to determine the time history of the surface to deep $^{14}C/C$ ratio difference for the Pacific Ocean (see Fig 10; Tables 12, 13).

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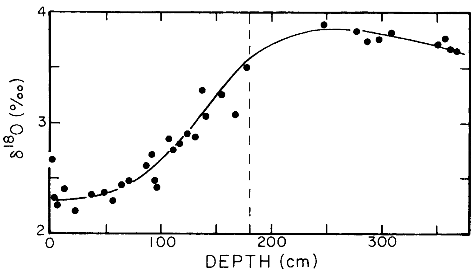

Fig 10. Oxygen isotope record for benthic foraminifera in core V35-05 (Oppo & Fairbanks, 1987)

TABLE 12

V35-05 South China Sea
Location (07°11.7'N, 112°4.6'E) Depth 1953m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
1- 4TW	1.77	G sacc	32.5	0.52	255	4.1	July 85	690 ± 150	9
0-20TW	1.91	G sacc	31.8	1.19	404	15.1	Sept 85	1930 ± 90	9,15
"	"	G sacc	31.8	1.43	348	15.7	Apr 86	1810 ± 100	9,15
"	"	P obliq	10.5	0.29	376	10.4	Sept 85	2090 ± 90	9,15
"	"	P obliq	10.5	0.34	250	8.1	July 86	2160 ± 120	15
"	"	M benth	9.8	0.21	690	15	Sept 85	3560 ± 100	9
0- 1	2.51	G sacc	9.0	0.24	74	2	-	-	
3- 6	3.86	G sacc	26.7	0.66	303	7.5	Sept 85	1940 ± 120	
"	"	P obliq	8.1	0.17	87	1.8	-	-	
6- 7	3.65	G sacc	27.1	0.60	-	-	-	-	
7- 8	3.44	G sacc	4.9	0.18	-	-	-	-	
0-10	3.36	G sacc	23.2	0.86	387	14.3	Sept 85	2010 ± 90	9,15
"	"	G sacc	23.2	0.74	320	10.2	Apr 86	2100 ± 100	9,15
"	"	P obliq	30.9	0.92	294	8.8	Sept 85	2620 ± 90	9,15
"	"	P obliq	30.9	0.87	269	7.6	July 86	2250 ± 80	15
"	"	M benth	8.8	0.25	472	13.4	Sept 85	3610 ± 100	9
10-15	3.54	G sacc	11.3	0.44	-	-	-	-	
"	"	P obliq	9.6	0.38	-	-	-	-	
25-30	2.72	G sacc w/s	29.8	1.05	165	6.4	Nov 87	3380 ± 120	
"	"	G sacc O/s	35.1	0.88	196	6.2	Nov 87	1740 ± 110	
"	"	P obliq	14.9	0.48	151	-	-	-	
"	"	M benth	-	-	-	-	-	-	
40-45	2.52	G sacc	23.5	0.87	-	-	-	-	
"	"	P obliq	10.8	0.27	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
59-70	2.19	G sacc	39.5	1.46	373	13.8	Apr 86	5750 ± 120	9,15
"	"	P obliq	17.2	0.53	253	7.7	"	6500 ± 130	9,15
"	"	M benth	5.7	0.17	232	7.4	"	7240 ± 120	9
60-70	2.41	G sacc	51.2	1.60	433	13.5	Sept 85	5830 ± 110	9,15
"	"	P obliq	12.7	0.37	312	9.1	"	6190 ± 110	9,15
"	"	M benth	7.4	0.12	241	4	"	7110 ± 120	9
65- 70	1.80	G sacc w/s	9.6	0.45	202	9	Nov 87	5750 ± 130	
"	"	G sacc O/s	10.3	0.46	227	10.2	Nov 87	5400 ± 150	
"	"	P obliq	6.2	-	-	-	-	-	

TABLE 12 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
70– 75	1.75	G sacc	49.7	1.57	308	9.8	Oct 86	5990 ± 150	15
"	"	P obliq	22.9	0.82	256	9.2	"	6870 ± 150	15
"	"	M benth	4.1	0.09	260	6	–	–	
75– 80	1.81	G sacc	44.9	1.64	309	11.3	Jan 87	6830 ± 190	
"	"	P obliq	28.5	1.11	273	10.6	"	LOST	
"	"	M benth	4.4	0.12	294	7.9	–	–	
80– 85	1.58	G sacc	34.5	1.20	414	14.4	Apr 86	7670 ± 140	9,15
"	"	P.obliq	21.0	0.67	366	11.6	"	8350 ± 150	9,15
"	"	M benth	5.4	0.09	280	4.8	–	–	
85– 90	1.95	G sacc	37.5	0.99	586	14.5	Apr 86	7500 ± 150	9,15
"	"	P obliq	29.5	0.46	481	14.8	"	7910 ± 150	9,15
"	"	M benth	6.0	0.14	475	11.1	"	8870 ± 160	9
90–100	2.20	G sacc	27.7	0.90	407	13.2	Apr 86	8250 ± 140	9,15
"	"	P obliq	19.7	0.79	284	11.4	July 86	9000 ± 130	9
90–100	1.28	G sacc	26.8	0.94	396	14	Apr 86	8130 ± 140	9,15
"	"	P obliq	19.5	0.63	449	14.7	"	8820 ± 150	9,15
90–100	1.61	M benth	4.6	0.09	461	8.8	July 86	10,930 ± 190	
96–104	1.21	G sacc w/s	13.0	0.58	224	8.6	Nov 87	8700 ± 180	
"	"	G sacc O/s	17.3	0.55	240	7.5	Nov 87	8680 ± 200	
"	"	P obliq	14.0	0.61	155	6.8	–	–	
100–105	1.61	G sacc	35.2	1.22	382	13.3	July 86	9050 ± 130	15
"	"	P obliq	17.6	0.66	320	12.1	"	9520 ± 130	15
105–110	1.33	G sacc	26.3	0.94	424	15.2	July 86	8930 ± 150	15
"	"	P obliq	20.2	0.65	367	11.7	"	9980 ± 140	15
100–110	1.42	M benth	5.1	0.15	304	8.7	July 86	11,430 ± 180	
110–115	1.34	G sacc	27.7	1.05	406	15.4	Apr 86	9050 ± 160	9,15
"	"	P obliq	26.3	0.89	364	12.3	"	9800 ± 180	9,15
"	"	M benth	5.9	0.16	332	9.2	"	10,910 ± 180	9
115–120	1.51	G sacc	29.5	1.11	402	15.1	Oct 86	9610 ± 200	15
"	"	P obliq	22.7	0.87	350	13.4	"	10,400 ± 220	15
"	"	M benth	6.2	0.11	300	5.7	–	–	
120–130	2.11	G sacc	46.8	1.64	405	14.2	July 86	9520 ± 150	15
"	"	P obliq	32.0	1.00	359	11.2	–	–	

TABLE 12 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
120–126	1.60	G sacc	32.0	1.12	380	13.3	July 86	9550 ± 130	
125–130	1.47	G sacc	35.4	1.34	372	14.1	Jun 86	9910 ± 240	9
120–130	1.74	P obliq	37.3	1.17	319	10	Jun 86	10,350 ± 120	9,15
"	"	M benth	5.4	0.11	446	9.1	"	11,690 ± 130	9
130–135	1.20	G sacc	20.7	0.68	248	8.1	Jun 86	9670 ± 110	9
135–140	1.28	G sacc	25.9	0.84	361	11.7	Jun 86	10,890 ± 130	9
140–145	2.05	G sacc	36.3	1.54	356	15.1	Jun 86	11,300 ± 120	9
130–145	1.61	P obliq	35.8	1.24	331	11.5	Jun 86	11,410 ± 190	9,15
"	"	M benth	4.5	0.10	490	10.8	"	11,960 ± 180	9
150–160	3.11	G sacc	29.7	1.19	388	15.5	Jun 86	11,580 ± 200	9,15
"	"	P obliq	38.3	1.43	399	14.9	"	12,210 ± 190	9,15
"	"	M benth	8.7	0.25	308	8.7	"	12,620 ± 190	9
160–165	1.81	G sacc	20.5	0.72	242	8.5	Nov 87	9820 ± 160	
"	"	P obliq	37.2	1.35	217	7.9	Nov 87	12,920 ± 210	
160–165	1.54	G sacc	14.9	0.61	–	–	–	–	
"	"	P obliq	40.0	1.20	–	–	–	–	
165–170	1.06	G sacc	14.1	0.54	–	–	–	–	
"	"	P obliq	23.3	0.84	–	–	–	–	
170–175	.83	G sacc	13.6	0.45	213	7	Nov 87	11,860 ± 190	
"	"	P obliq	25.8	0.77	331	9.9	Nov 87	13,170 ± 210	
170–175	.98	G sacc	20.1	0.48	–	–	–	–	
"	"	P obliq	30.7	0.86	–	–	–	–	
175–180	.70	G sacc	7.2	0.22	221	7.4	May 88	12,980 ± 210	
"	"	P obliq	16.6	0.43	259	7.6	May 88	13,600 ± 170	
180–195	1.43	G sacc	9.5	0.32	285	9.7	Sept 85	13,240 ± 190	15,16
"	"	P obliq	5.5	0.17	270	8.5	"	15,160 ± 220	15,16
"	"	M benth	1.9	0.11	119	6.7	"	13,710 ± 190	16
180–195	1.35	G sacc	9.6	0.27	337	9.5	Apr 86	13,220 ± 190	15,16
"	"	P obliq	5.8	0.16	232	6.6	"	14,780 ± 210	15,16
205–220	.50	G sacc	6.2	0.15	–	–	–	–	
"	"	P obliq	1.4	0.07	–	–	–	–	

TABLE 12 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
210–220	.89	G sacc	10.9	0.23	434	9	Sept 85	1,3740 ± 190	15,16
"	"	P obliq	1.9	0.05	214	5.6	"	1,4340 ± 200	15,16
"	"	M benth	2.5	0.11	114	4.8	"	1,6330 ± 250	16
240–255	1.09	G sacc	2.8	0.08	218	6.1	Sept 85	1,4570 ± 600	15
"	"	P obliq	12.4	0.34	444	12	"	1,6010 ± 440	15,16
"	"	M benth	1.3	0.04	–	–	–	–	
240–255	.22	G sacc	3.0	0.07	–	–	–	–	
"	"	P obliq	5.6	0.22	300	11.4	July 86	1,6130 ± 330	16
240–255	.62	M benth	1.6	0.04	287	7.9	July 86	1,7010 ± 230	16
270–285	.45	G sacc	1.9	0.04	–	–	–	–	
"	"	P obliq	7.9	0.22	–	–	–	–	
270–285	.38	sac&30%rub	2.5	0.06	387*	8.8	Aug 86	1,6170 ± 290	15,16
"	"	P obliq	10.4	0.28	498	13.5	"	1,7530 ± 330	15,16
"	"	M benth	2.5	0.05	435	10	"	1,7810 ± 350	16
300–318	1.12	G sacc	2.7	0.09	135	4.6	Sept 85	1,6380 ± 590	15
"	"	P obliq	8.1	0.22	339	9.1	"	1,7300 ± 500	15
"	"	M benth	1.0	0.03	–	–	–	–	
300–319	.24	G sacc	4.2	0.11	293	7.6	Jun 86	1,7540 ± 260	15,16
"	"	P obliq	10.2	0.32	264	8.1	"	1,8440 ± 270	15,16
300–319	.55	M benth	1.8	0.05	367	9.6	Jun 86	1,9280 ± 290	16
318–330	.41	G sacc	5.6	0.12	475	9.8	Oct 86	1,7020 ± 390	15
"	"	P obliq	10.4	0.32	499	15.5	"	1,7840 ± 430	15
"	"	M benth	2.3	0.05	349	7	"	1,9040 ± 460	
330–350	.27	G sacc	4.4	0.11	312	8	Jun 86	2,1110 ± 340	16
"	"	P obliq	10.6	0.32	300	9.1	"	1,8890 ± 280	16
"	"	P obliq	10.6	0.32	472	15.1	Oct 86	1,8770 ± 480	16
"	"	M benth	2.9	0.06	507	10.8	Jun 86	1,6200 ± 220	16

*Publication no. in which radiocarbon date has been published (see References cited).
**30% G ruber added to reach desired size

TABLE 13

V35-06 South China Sea
Location (07°13'N, 112°09'E) Depth 2030m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
1- 7TW	.80	G sacc	9.2	0.17	125	2.3	July 85	1170 ± 170	7,9
"	"	P obliq	3.2	0.06	35	0.7	–	–	
7- 8TW	.83	G sacc	9.3	0.15	–	–	–	–	
"	"	P obliq	1.2	–	–	–	–	–	
8- 9TW	.68	G sacc	7.6	0.14	–	–	–	–	
"	"	P obliq	1.3	0.07	–	–	–	–	
9-10TW	.91	G sacc	5.8	0.13	–	–	–	–	
"	"	P obliq	1.2	0.12	–	–	–	–	
7-18TW	1.80	G sacc	2.0	0.07	–	–	–	–	
"	"	P obliq	3.2	0.08	–	–	–	–	
18-22TW	2.45	G sacc	18.4	0.55	–	–	–	–	
"	"	P obliq	4.8	–	–	–	–	–	
37-41TW	2.95	G sacc	23.6	0.91	–	–	–	–	
"	"	P obliq	7.0	0.15	–	–	–	–	
0- 1	2.35	G sacc	2.0	0.29	–	–	–	–	
"	"	P obliq	3.2	–	–	–	–	–	
"	"	M benth	4.4	–	–	–	–	–	
1- 2	3.26	G sacc	16.2	0.51	–	–	–	–	
"	"	P obliq	2.5	–	–	–	–	–	
2- 3	2.28	G sacc	10.1	–	–	–	–	–	
"	"	P obliq	2.2	–	–	–	–	–	
1- 2	2.14	G sacc	33.8	0.24	–	–	–	–	
2- 4	2.22	G sacc	43.1	1.13	347	9.1	July 85	3580 ± 80	7,9
"	"	P obliq	2.7	0.15	32	1.8	–	–	
"	"	M benth	4.9	0.14	58	1.6	–	–	
4- 5	2.04	G sacc	18.2	0.32	52	0.9	–	–	
5- 6	4.30	G sacc	69.2	1.99	251	7.2	–	–	
6- 7	2.37	G sacc	26.4	0.50	64	1.2	–	–	

TABLE 13 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
8–13	3.07	G.sacc	41.9	–	100	9.4	May 85	4860 ± 90	7,9,15
"	"	G.ruber	–	–	–	–	–	–	
"	"	P.obliq	24.6	–	155	13.4	May 85	5140 ± 90	7,9,15
"	"	N.duter	–	–	–	–	–	–	
"	"	M.benth	7.8	–	271	4.9	May 85	6420 ± 100	7,9
Unknown*	2.16	G.sacc w/s	24.9	1.02	192	7.9	Nov 87	5210 ± 170	
"	"	G.sacc O/s	19.7	0.60	269	8.1	Nov 87	5470 ± 170	
"	"	P.obliq	15.7	0.53	–	–	–	–	
13–16	1.19	G.sacc	15.2	0.47	–	–	–	–	
"	"	P.obliq	19.7	0.51	–	–	–	–	
"	"	M.benth	–	–	–	–	–	–	
16–22	1.84	G.sacc w/s	19.5	0.76	130	5.1	Nov 87	6350 ± 160	
"	"	G.sacc O/s	15.9	0.51	185	5.9	Nov 87	6370 ± 170	
"	"	P.obliq	16.2	0.50	–	–	–	–	
"	"	M.benth	–	–	–	–	–	–	
17–24	2.38	G.sacc	28.9	–	128	10.0	May 85	6040 ± 100	7,9,15
"	"	G.ruber	–	–	–	–	–	–	
"	"	P.obliq	13.7	–	161	12.3	May 85	6060 ± 100	7,9,15
"	"	N.duter	–	–	–	–	–	–	
18–20	–	M.benth	–	–	273	4.0	Jun 85	7200 ± 110	7,9
22–28	–	M.benth	7.6	–	237	4.8	May 85	7660 ± 130	7,9
27–30	2.75	G.sacc	44.0	–	–	10.0	May 85	6420 ± 100	7,9,15
"	"	G.ruber	–	–	–	–	–	–	
"	"	P.obliq	15.0	–	–	12.4	May 85	6810 ± 100	7,9,15
"	"	N.duter	–	–	–	–	–	–	
"	"	M.benth	8.8	–	–	–	–	–	
37–45	2.46	G.sacc	51.0	–	–	10.0	May 85	7890 ± 110	7,9,15
"	"	G.ruber	–	–	–	–	–	–	
"	"	P.obliq	24.0	–	–	13.5	May 85	8030 ± 110	7,9,15
"	"	N.duter	–	–	–	–	–	–	
"	"	M.benth	8.6	–	480	8.4	Jun 85	9210 ± 130	7,9
42–47	1.52	G.sacc	20.9	0.70	–	–	–	–	
"	"	P.obliq	17.7	0.59	–	–	–	–	
"	"	M.benth	–	–	–	–	–	–	
45–53	1.61	G.sacc	29.0	–	–	9.5	May 85	8780 ± 120	7,9,15
"	"	G.ruber	–	–	–	–	–	–	
"	"	P.obliq	23.0	–	–	11.7	May, 85	9020 ± 120	7,9,15
"	"	N.duter	–	–	–	–	–	–	
"	"	M.benth	7.9	–	476	7.0	Jun, 85	9760 ± 130	7,9

TABLE 13 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
52-60	1.41	G sacc	16.5	0.47	-	-	-	-	
"	"	P obliq	22.6	0.80	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
54-61	1.79	G sacc w/s	17.7	0.56	267	8.4	Nov 87	9600 ± 210	
"	"	G sacc O/s	18.5	0.65	216	7.7	Nov 87	9500 ± 90	
"	"	P obliq	28.5	0.95	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
57-64	0.96	G sacc	24.0	-	-	9.4	May 85	9550 ± 120	7,9,15
"	"	G ruber	-	-	-	-	-	-	
"	"	P obliq	20.0	-	-	11.0	May 85	9630 ± 120	7,9,15
"	"	N duter	-	-	-	-	-	-	
"	"	M benth	6.6	-	362	6.5	Jun 85	1,0810 ± 150	7,9
68-72	1.48	G sacc	20.0	-	-	-	Jun 85	1,0130 ± 120	7,9,15
"	"	G ruber	-	-	-	-	-	-	
"	"	P obliq	51.0	-	-	-	Jun 85	1,0070 ± 120	7,9,15
"	"	N duter	-	-	-	-	-	-	
"	"	M benth	7.5	-	408	7.3	Jun 85	1,1290 ± 150	7,9
78-82	1.72	G sacc	24.0	-	-	-	May 85	9740 ± 130	7,9,15
"	"	G ruber	-	-	-	-	-	-	
"	"	P obliq	30.0	-	-	-	May 85	1,0370 ± 130	7,9,15
"	"	N duter	-	-	-	-	-	-	
"	"	M benth	9.2	-	-	-	May 85	1,1180 ± 140	7,9
89-92	2.17	G sacc	23.0	-	-	-	July 85	1,1590 ± 140	7,9,15
"	"	G ruber	-	-	-	-	-	-	
"	"	P obliq	21.0	-	-	-	July 85	1,1820 ± 140	7,9,15
"	"	N duter	-	-	-	-	-	-	
"	"	M benth	9.2	-	386	5.8	July 85	1,2950 ± 160	7,9
98-102	1.81	G sacc	23.0	-	-	-	July 85	1,2540 ± 160	7,9,15
"	"	G ruber	-	-	-	-	-	-	
"	"	P obliq	50.0	-	-	-	July 85	1,2700 ± 160	7,9,15
"	"	N duter	-	-	-	-	-	-	
"	"	M benth	12.8	-	-	-	July 85	1,3550 ± 170	7,9
103-108	1.03	G sacc	11.0	0.38	-	-	-	-	
"	"	P obliq	30.9	0.95	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
145-155	1.03	G sacc	4.5	0.18	-	-	-	-	
"	"	P obliq	1.5	-	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
196-200	0.21	G sacc	0.2	-	-	-	-	-	
"	"	P obliq	0.1	-	-	-	-	-	
"	"	M.benth	-	-	-	-	-	-	

*Publication no. in which radiocarbon date has been published (see References cited).

V. SEDIMENT TRAP SAMPLES

MANOP SITE C

This project was initiated by Alan Mix working in cooperation with Jack Dymond. It involves measurements of one size fractions and hand-picked foraminifera shells from material caught in sediment traps deployed in the equatorial Pacific Ocean (see Tables 14, 15).

TABLE 14
MPC-2 SOUTAR
Location (01°2.4'N, 138°56.4'W) Depth 2695m

OSU #	Coll date From	To	Material analyzed	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	$\Delta^{14}C$ (°/oo)
1	12/16/82	02/29/84	P obliq	192	7.6	Feb 86	112 ± 12
2	"	"	N duter	210	8.4	"	90 ± 12
3	"	"	Pteropods	-	9.6	"	70 ± 12
4	"	"	63-150μm	-	>8.6	"	79 ± 12
5	"	"	<63μm	-	>9.6	"	50 ± 11
6	"	"	G sacc w/s	407	11.7	"	131 ± 12
7	"	"	G sacc O/s	572	10.4	"	133 ± 13
8	"	"	G congl	235	11.2	"	110 ± 11
9	"	"	G ruber wh	1490	9.0	"	98 ± 11
14(Rep5)	12/16/82	02/29/84	-	-	53.5	-	-
MPC-2 Lower Trap, Location (01°2.4'N, 138°56.4'W) Depth 3495m							
15	12/23/82	04/03/83	<63μ $CaCO_3$	-	31.9	-	-
16	04/03/83	07/12/83	"	-	21.2	Mar 87	204 ± 17
17	07/12/83	10/20/83	"	-	50.7	-	-
18	10/20/83	02/29/84	"	-	46.3	-	-
56(Rep16)	-	-	"	-	25.0	-	243 ± 13
MPC-1 Middle Trap, Location (01°3.6'N, 138°57.6'W) Depth 4295m							
19	12/18/82	03/29/83	"	-	37.0	-	-
20	03/29/83	07/07/83	"	-	38.5	Mar 87	-142 ± 14
21	07/07/83	10/15/83	"	-	46.0	-	-
22	10/15/83	02/08/84	"	-	34.5	-	-

TABLE 15
MPC-2 MIDDLE TRAP
Location (01°2.4'N, 138°56.4'W) Depth 1895m

OSU #	Coll date From	To	Material analyzed	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	$\Delta^{14}C$ (‰)
10	12/23/82	04/03/83	<63µ $CaCO_3$	–	33.4	–	–
11	04/03/83	07/12/83	"	–	44.8	Mar 87	119±15
12	07/12/83	10/20/83	"	–	32.4	–	–
13	10/20/83	02/29/83	"	–	52.5	–	–
27	12/23/82	04/03/83	*G ruber*	1290	7.9	–	–
28	"	"	*P obliq*	185	6.2	Sept 87	109 ± 12
29	"	"	*G sacc* w/s	206	7.1	Sept 87	153 ± 12
30	"	"	*G sacc* O/s	279	6.0	–	–
31	04/03/83	07/12/83	*G ruber*	1112	7.6	–	–
32	"	"	*P obliq*	272	6.3	Sept 87	106 ± 12
33	"	"	*G sacc* w/s	344	9.6	Sept 87	151 ± 12
34	"	"	*G sacc* O/s	309	5.6	–	–
35	"	"	*N duter*	161	5.4	Sept 87	96 ± 12
36	07/12/83	10/20/83	*P obliq*	184	5.0	Sept 87	80 ± 12
37	"	"	*N duter*	171	6.5	Sept 87	102 ± 12
38	10/20/83	02/29/84	*P obliq*	220	8.2	Sept 87	90 ± 13
(39+40)	"	"	*G sacc* w/+O/s	326	6.8	Sept 87	93 ± 13
41	"	"	*N duter*	219	8.5	Sept 87	48 ± 14

MPC-3
Location (01°3.6'N, 138°56.8'W) Depth 2895m

OSU #	Coll date From	To	Material analyzed	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	$\Delta^{14}C$ (‰)
23	02/25/84	04/01/84	<63µ $CaCO_3$	–	12.8	–	–
24	04/01/84	07/10/84	"	–	22.4	–	–
25	07/10/84	10/18/84	"	–	47.0	–	–
26	10/18/84	02/22/84	"	–	33.2	–	–
42	04/01/84	07/10/84	*G ruber*	912	6.6	–	–
43	"	"	*P obliq*	371	9.7	Sept 87	116 ± 12
44	"	"	*G sacc*	365	7.2	Sept 87	121 ± 12
45	"	"	*N duter*	257	8.0	Sept 87	77 ± 12
46	07/10/84	10/18/84	*G ruber*	≈1400	9.1	–	–
47	"	"	*P obliq*	231	8.3	Sept 87	102 ± 12
48	"	"	*G sacc* w/s	347	9.6	Sept 87	80 ± 13
49	"	"	*G sacc* O/s	511	9.8	–	–
50	"	"	*N duter*	278	9.4	Sept 87	62 ± 12
51	10/18/84	02/22/85	*G ruber*	≈1300	8.4	–	–
52	"	"	*P obliq*	285	8.2	Sept 87	70 ± 13
53	"	"	*G sacc* w/s	237	8.3	Sept 87	118 ± 12
54	"	"	*G sacc* O/s	303	6.0	–	–
55	"	"	*N duter*	264	8.0	Sept 87	78 ± 12

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