

# UNIVERSITY OF MIAMI RADIOCARBON DATES IX

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The following radiocarbon measurements are a partial list of geologic samples dated since September 1975. The technique used is described in R, v 18, p 210-220. Dates are calculated using a  $^{14}\text{C}$  half-life of 5568 yr and errors are reported as one standard deviation. This includes only the counting errors on the sample, background and modern standard.

## ACKNOWLEDGMENTS

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## SAMPLE DESCRIPTIONS

### *A. Bahamas*

#### **Joulters Cays I series**

A piston core of oolites from Joulters Cays, Bahamas (25° 20' N, 78° 12' W). Samples coll to determine stratigraphy and date sedimentation rates. Coll 1975 and subm 1976 by P M Harris, RSMAS, Miami, Florida.

*General Comment (DP):* 1st of 3 projects from Joulters Cays area.

<b>UM-801.</b>	<b>75-2-40A: 128 to 133cm</b>	<b>625 ± 155</b>
Outer layer.		
<b>UM-802.</b>	<b>75-2-40A: 128 to 133cm</b>	<b>760 ± 75</b>
Duplicate run of UM-801.		
<b>UM-803.</b>	<b>75-2-40A: 128 to 133cm</b>	<b>1245 ± 70</b>
Middle layer.		
<b>UM-804.</b>	<b>75-2-40A: 128 to 133cm</b>	<b>2195 ± 75</b>
Inner layer.		
<b>UM-805.</b>	<b>75-2-40B: 217 to 222cm</b>	<b>2000 ± 80</b>
Outer layer.		
<b>UM-806.</b>	<b>75-2-40B: 217 to 222cm</b>	<b>2665 ± 90</b>
Inner layer.		
<b>UM-807.</b>	<b>75-2-40C: 308 to 312cm</b>	<b>2740 ± 85</b>
Outer layer.		
<b>UM-808.</b>	<b>75-2-40C: 308 to 312cm</b>	<b>2675 ± 75</b>
Inner layer.		

<b>UM-809.</b>	<b>75-2-40D: 397 to 402cm</b>	<b>3660 ± 75</b>
Outer layer.		
<b>UM-810.</b>	<b>75-2-40D: 397 to 402cm</b>	<b>3970 ± 95</b>
Inner layer.		
<b>UM-811.</b>	<b>75-2-40E: 430cm</b>	<b>4560 ± 105</b>
Whole oolite.		

**Joulters Cays II series**

A piston core of oolites from Joulters Cays, Bahamas (25° 18' N, 78° 13' W). Samples coll to determine stratigraphy and date sedimentation rates. Coll 1976 by P M Harris, RSMAS, Miami, Florida; subm 1976 by T Dlugos, Univ Miami.

*General Comment* (DP): 2nd of 3 projects from Joulters Cays area; this correlates to Joulters Cays I series. Only outer 40-50% of oolites were dated.

<b>UM-794.</b>	<b>76-2-67: 0 to 2cm</b>	<b>910 ± 80</b>
<b>UM-795.</b>	<b>76-2-67: 70 to 72cm</b>	<b>1235 ± 75</b>
<b>UM-796.</b>	<b>76-2-67: 140 to 143cm</b>	<b>1580 ± 80</b>
<b>UM-797.</b>	<b>76-2-67: 210 to 212cm</b>	<b>2640 ± 100</b>
<b>UM-798.</b>	<b>76-2-67: 350 to 352cm</b>	<b>4005 ± 90</b>
<b>UM-799.</b>	<b>76-2-67: 420 to 422cm</b>	<b>4090 ± 100</b>
<b>UM-800.</b>	<b>76-2-67: 468 to 470cm</b>	<b>4935 ± 85</b>
Calclitic mud.		

**Joulters Cays III series**

Hand-picked oolites from S end of Joulters Cay, Bahamas (25° 17' N, 78° 07' W). Samples coll along a transect at right angles to NW-SE trending island. Where possible, loose ooids were coll under the hardened crust of island. Only the outer 10-15% of ooids in the 250m to 420m range were dated. Study for correlation of island age and formation with active shoal. Coll and subm 1976 by P M Harris and B D Clarke, RSMAS, Miami, Florida.

*General Comment* (DP): last of 3 projects from Joulters Cays area. Dates are reported in sequential order from E to W.

<b>UM-783.</b>	<b>SAM 1 SHO</b>	<b>300 ± 70</b>
Subtidal shoal in lm water.		
<b>UM-784.</b>	<b>SAM 2 BEA</b>	<b>1915 ± 75</b>
Marine beach, intertidal zone.		
<b>UM-785.</b>	<b>SAM 2 BEA</b>	<b>&lt; 180</b>
Duplicate run of UM-784.		

<b>UM-786. SAM 2 BEA</b>	<b>103.7 ± 1.1% modern</b>
Triplicate run of UM-784.	
<b>UM-787. SAM 3 SWW</b>	<b>&lt; 195</b>
Marine beach ridge crest, supratidal zone.	
<b>UM-788. SAM 4 STA 2</b>	<b>580 ± 75</b>
Marine beach ridge crest, supratidal zone.	
<b>UM-789. SAM 5 STA 2-C</b>	<b>910 ± 85</b>
Marine beach ridge crest, supratidal zone.	
<b>UM-790. SAM 6 STA 3</b>	<b>390 ± 120</b>
Marine beach trough, supratidal zone.	
<b>UM-791. SAM 7 STA 3-E</b>	<b>500 ± 75</b>
Marine beach ridge crest, supratidal zone.	
<b>UM-792. SAM 8 STA 4</b>	<b>&lt; 230</b>
Marine beach ridge crest, supratidal zone.	
<b>UM-793. SAM 9 STA 6</b>	<b>430 ± 75</b>
Marine beach ridge crest, supratidal zone.	

#### **Eleuthera Bank series**

Several samples of oolites and *Strombus* coll in lithified fragments from submerged shoals on Eleuthera Bank, Bahamas (24° 50' N, 76° 25' W). Crust samples found *in situ* on shoal and clast samples found unattached on shoal. Only outer 15% of oolites were dated. Dates to find correlation between crust and clast lithification. Coll 1975 by J Dravis, RSMAS, Miami, Florida; subm 1976 by J Donnellan, Univ Miami.

<b>UM-769. SC-182</b>	<b>102 ± 1.4% modern</b>
Sample consists of cementing material around oolites from crust of oolitic shoal. Coll in 1m water, exposed at low tide.	
<b>UM-770. SC-202</b>	<b>495 ± 75</b>
Oolite crust from similar shoal as UM-769 coll in 0.5m water, not exposed at low tide.	
<b>UM-771. E-29-3</b>	<b>845 ± 80</b>
Oolite crust coll from shoal flank in water 4m deep.	
<b>UM-772. E-29-2</b>	<b>1545 ± 85</b>
Oolite clast found near shoal flank in water 5m deep.	
<b>UM-773. E-29-1A</b>	<b>550 ± 215</b>
<i>Strombus</i> embedded in oolites coll as crust in water 4m deep.	
<b>UM-776. E-29-1A</b>	<b>895 ± 65</b>
Duplicate run of UM-773.	

**UM-774. SC-89B** **< 175**

Shell material embedded in oolitic clast from water 5m deep.

**UM-775. SC-36** **590 ± 80**

Shell material from oolitic crust in water 30cm deep, exposed at low tide.

### *B. Mid-Atlantic*

#### **Mid-Atlantic Abyssal Plain series**

Two cores of pelagic ooze coll on opposite sides of the Mid-Atlantic ridge. Date sedimentation rates for regions adjacent to continents and for comparison to Mid-Atlantic Ridge sedimentation rates. Core P6903-56 (16° 36' N, 58° 03.5' W) and Core P7008-25 (08° 01.7' N, 21° 04.3' W) are both gravity cores from abyssal plain near base of Mid-Atlantic Ridge. Coll 1969 and 1970 by K Boström, RSMAS, Miami, Florida; subm 1976 by T Damon, Univ Miami.

*General Comment* (TD): samples presumably influenced by continental sediments and may be affected by slumping.

<b>UM-812.</b>	<b>P7008-25: 10 to 20cm</b>	<b>9400 ± 80</b>
<b>UM-813.</b>	<b>P7008-25: 50 to 60cm</b>	<b>30,860<sup>+ 945</sup><sub>-1085</sub></b>
<b>UM-822.</b>	<b>P7008-25: 80 to 90cm</b>	<b>32,945<sup>+1165</sup><sub>-1365</sub></b>
<b>UM-814.</b>	<b>P7008-25: 90 to 100cm</b>	<b>32,495<sup>+1385</sup><sub>-1470</sub></b>
<b>UM-823.</b>	<b>P7008-25: 100 to 110cm</b>	<b>&gt; 37,645</b>
<b>UM-815.</b>	<b>P7008-25: 130 to 140cm</b>	<b>26,945 ± 445</b>
<b>UM-816.</b>	<b>P7008-25: 160 to 170cm</b>	<b>33,390<sup>+1210</sup><sub>-1430</sub></b>
<b>UM-817.</b>	<b>P6903-56: 0 to 10cm</b>	<b>7615 ± 130</b>
<b>UM-818.</b>	<b>P6903-56: 35 to 45cm</b>	<b>23,335 ± 320</b>
<b>UM-821.</b>	<b>P6903-56: 53 to 63cm</b>	<b>&gt; 34,945</b>
<b>UM-819.</b>	<b>P6903-56: 70 to 80cm</b>	<b>25,100 ± 460</b>
<b>UM-820.</b>	<b>P6903-56: 105 to 115cm</b>	<b>25,280<sup>+625</sup><sub>-675</sub></b>

#### **Mid-Atlantic Ridge series**

Nine gravity cores of pelagic ooze from various locations on the Mid-Atlantic Ridge. Continuation of a study on sedimentation rates along ridge (R, v 18, p 407-412). Coll 1965 and 1970 by K Boström, RSMAS, Miami, Florida; subm 1975 and 1976 by D Grigoriev.

*General Comment* (DG): elemental analyses indicate terrigenous influence on sediments from ridge flanks.

Core P6511-29. Eastern flank, Mid-Atlantic Ridge (27° 42' 5" N, 37° 13' 0" W).

<b>UM-888.</b>	<b>P6511-29: 0 to 15cm</b>	<b>11,145 ± 115</b>
<b>UM-889.</b>	<b>P6511-29: 25 to 40cm</b>	<b>27,820<sup>+480</sup><sub>-510</sub></b>
<b>UM-890.</b>	<b>P6511-29: 25 to 40cm</b>	<b>29,700<sup>+635</sup><sub>-690</sub></b>
Duplicate run of UM-889.		
<b>UM-892.</b>	<b>P6511-29: 50 to 65cm</b>	<b>23,245<sup>+655</sup><sub>-710</sub></b>
<b>UM-893.</b>	<b>P6511-29: 80 to 95cm</b>	<b>33,460<sup>+1435</sup><sub>-1745</sub></b>

Core P6511-31. Eastern flank Mid-Atlantic Ridge (26° 15' N, 43° 30' W).

<b>UM-894.</b>	<b>P6511-31: 5 to 15cm</b>	<b>13,100<sup>+740</sup><sub>-810</sub></b>
<b>UM-895.</b>	<b>P6511-31: 30 to 40cm</b>	<b>21,530 ± 275</b>
<b>UM-896.</b>	<b>P6511-31: 60 to 70cm</b>	<b>30,720<sup>+740</sup><sub>-815</sub></b>
<b>UM-897.</b>	<b>P6511-31: 90 to 100cm</b>	<b>&gt; 37,330</b>

Core P7008-17. Western flank Mid-Atlantic Ridge (0° 48.8' N, 31° 27' W).

<b>UM-714.</b>	<b>P7008-17: 0 to 15cm</b>	<b>4145 ± 85</b>
<b>UM-900.</b>	<b>P7008-17: 23 to 35cm</b>	<b>13,500 ± 145</b>
<b>UM-715.</b>	<b>P7008-17: 40 to 55cm</b>	<b>16,720 ± 265</b>
<b>UM-716.</b>	<b>P7008-17: 80 to 95cm</b>	<b>29,990<sup>+1600</sup><sub>-2000</sub></b>
<b>UM-717.</b>	<b>P7008-17: 115 to 130cm</b>	<b>31,130<sup>+625</sup><sub>-680</sub></b>

Core P7008-18. Western flank Mid-Atlantic Ridge (1° 27.2' N, 30° 40.1' W).

<b>UM-898.</b>	<b>P7008-18: 20 to 35cm</b>	<b>13,210 ± 165</b>
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Core P7008-21. Eastern flank Mid-Atlantic Ridge (4° 27.3' N, 25° 09.3' W).

<b>UM-899.</b>	<b>P7008-21: 25 to 35cm</b>	<b>18,750 ± 195</b>
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Core P7008-41. Eastern flank Mid-Atlantic Ridge (12° 52.9' N, 38° 01.5' W).

<b>UM-718.</b>	<b>P7008-41: 0 to 15cm</b>	<b>9190 ± 150</b>
<b>UM-901.</b>	<b>P7008-41: 25 to 35cm</b>	<b>27,350 ± 550</b>
<b>UM-719.</b>	<b>P7008-41: 40 to 55cm</b>	<b>22,430<sup>+1220</sup><sub>-1440</sub></b>
<b>UM-720.</b>	<b>P7008-41: 80 to 95cm</b>	<b>15,170 ± 540</b>
<b>UM-721.</b>	<b>P7008-41: 120 to 135cm</b>	<b>23,195 ± 420</b>

Core P7008-44. Western flank Mid-Atlantic Ridge (12° 56.9' N, 42° 27.6' W).

<b>UM-738.</b>	<b>P7008-44: 0 to 20cm</b>	<b>22,600 ± 255</b>
<b>UM-886.</b>	<b>P7008-44: 0 to 20cm</b>	<b>32,975<sup>+680</sup><sub>-740</sub></b>
Duplicate run of UM-738.		
<b>UM-739.</b>	<b>P7008-44: 45 to 60cm</b>	<b>15,410 ± 160</b>
<b>UM-740.</b>	<b>P7008-44: 95 to 110cm</b>	<b>27,980 ± 450</b>
<b>UM-741.</b>	<b>P7008-44: 145 to 160cm</b>	<b>30,065 ± 455</b>

#### REFERENCES

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