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UNIVERSITY OF MIAMI RADIOCARBON DATES XII

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The following radiocarbon dates are a partial list of samples measured since March 1977. The techniques used are the same as reported in R, v 16, p 402-408, and modified in R, v 18, p 210-220, with the following exception. A third liquid scintillation counter (Beckman LS-100) has been added and the shortened, low-K glass-counting vials have been replaced with teflon vials of Noakes (1975) design. Backgrounds on the counters were thus reduced from 9.1 cpm, 8.8 cpm and 4.9 cpm to 3.8 cpm, 3.5 cpm and 2.8 cpm, respectively, with an attendant small increase in efficiency.

Dates are calculated using the Libby half-life of 5568 years, with no correction factors included, although it is now the policy of this laboratory to routinely measure $^{13}C/^{12}C$ ratios. Errors are reported as one standard deviation which includes only the combined uncertainties on the modern, background and sample measurements.

ACKNOWLEDGMENTS

A computer program was developed by Peter Canter for ^{14}C calculations.

SAMPLE DESCRIPTIONS

I. GEOLOGIC SAMPLES

A. Bahamas

Exuma Sound series

Carbonate ooze cored from 1723m below sea level on basin floor of Exuma Sound (24° 25.6′ N, 76° 18.6′ W), adjacent to the Bahama platform, coll to establish sedimentation rates for comparison with results from Tongue of the Ocean (Lynts *et al,* 1973). Coll and subm 1977 by P D Crevello, RSMAS, Miami, Florida.

UM-1171.	**GS7103-001: 0 to 5cm**	**1675 ± 110**
UM-1172.	**GS7103-001: 2 to 6cm**	**4670 ± 90**
UM-1173.	**GS7103-001: 25 to 29cm**	**8995 ± 145**
UM-1174.	**GS7103-001: 46 to 50cm**	**15,420 ± 250**
UM-1175.	**GS7103-001: 115 to 119cm**	**33,055 $^{+850}_{-955}$**
UM-1176.	**GS7103-001: 172 to 176cm**	**>36,820**
UM-1177.	**GS7103-001: 252 to 256cm**	**>36,815**
UM-1178.	**GS7103-001: 322 to 326cm**	**>34,090**

B. Martinique, West Indies

Mt Pelée series

Charcoal from pyroclastic surge sediments near Mt Pelée, Martinique, West Indies. Dates used to determine frequency of cyclic eruptions on Mt Pelée. Coll and subm by A L Smith and M J Roobol, Univ Puerto Rico, Mayaguez, Puerto Rico.

PM-1027. Pelée 513 **<170**

Sample from small quarry coast rd immediately N of R Claire (14° 46′ 24″ N, 61° 12′ 12″ W).

UM-1028. Pelée 338 **1845 ± 70**

Sample from small gully infill 45.5m from Falaise Bridge (14° 49′ 46″ N, 61° 6′ 04″ W).

UM-1029. Pelée 438 **765 ± 95**

Sample from quarry at mouth of R Seche (14° 45′ 36″ N, 16° 11′ 40″ W).

UM-1030. Pelée 537A **4500 ± 75**

Sample from rd cut between Point la Mare and Qtr de la Charmouse (14° 47′ 18″ N, 61° 13′ 46″ W).

UM-1031. Pelée 553 **7745 ± 135**

Sample from S W edge of Morne Rouge (14° 46′ 04″ N, 61° 08′ 30″ W).

UM-1032. Pelée 378 **7365 ± 105**

Sample from upper part of R des Pares, W Mt Pelée (14° 46′ 15″ N, 61° 10′ W).

UM-1033. Pelée 547 **1900 ± 60**

Sample from rd cut S of Carbet (14° 41′ 30″ N, 61° 10′ 00″ W).

UM-1034. Pelée 180 **3150 ± 65**

Sample from lowest part of R Claire (14° 46′ 12″ N, 61° 12′ 00″ W).

UM-1035. Pelée 44 **535 ± 80**

Sample from lower R Claire (14° 46′ 36″ N, 61° 11′ 36″ W).

UM-1036. Pelée 508.1 **4375 ± 90**

Sample from S bank of R des Pares (14° 45′ 16″ N, 61° 10′ 44″ W).

UM-1037. Pelée 402 **545 ± 60**

Sample from S bank of R des Pares (14° 45′ 16″ N, 61° 10′ 44″ W).

UM-1038. Pelée 405 **5250 ± 90**

Sample from S bank of R des Pares (14° 45′ 16″ N, 61° 10′ 44″ W).

UM-1039. Pelée 537 **1625 ± 75**

Sample from crystal-pumice groundsurge deposit at Morne Callabase (14° 47′ 50″ N, 61° 8′ 42″ W).

UM-1040. Pelée 562 **1625 ± 75**

Sample dates ash hurricane deposits at quarry S of r at La Falaise bridge (14° 49′ 46″ N, 61° 06′ 04″ W).

UM-1085. Pelée Arch **1280 ± 290**

Sample from Fond Brule Le Lorrain.

UM-1086. Pelée 8 **2550 ± 75**

Sample from La Falaise Quarry (14° 49′ 42″ N, 61° 6′ 12″ W).

UM-1087. Palée 96 **1800 ± 95**

Sample from pumic flow at La Falaise Quarry (14° 49′ 42″ N, 61° 6′ 12″ W).

UM-1088. Pelée 216 **4990 ± 100**

Sample from Qobeide Quarry (14° 45′ 24″ N, 61° 8′ 46″ W).

UM-1089. Pelée 515 **2470 ± 125**

Sample from pumice flow at quarry at mouth of R Capot (14° 50′ 20″ N, 61° 05′ 40″ W).

UM-1090. Pelée 574 **2260 ± 110**

Sample from lithic groundsurge deposit at rd cut 2km inland from Vivé (14° 29′ 44″ N, 61° 05′ 32″ W).

C. United States

Sandy Bank series

Samples from cores on Sandy Bank, W Florida, between (25° 04′ 39″ N, 81° 02′ 03″ W) and (25° 01′ 39″ N, 81° 00′ 06″ W). Coll 1976 and subm 1977 by K Mukherji, Concordia Univ, Montreal, Quebec.

General Comment (KM): dates stratigraphic sequence and local buried geomorphic features for West Florida Bay.

UM-1121. M5-1 **5000 ± 110**

Peat from 227 to 233cm depth.

UM-1122. M2-4 **5490 ± 120**

Peat from 222 to 225cm depth.

UM-1123. M21-7 **5150 ± 100**

Peat from 195 to 205cm depth.

UM-1124. M6-12 **3425 ± 75**

Mixed *Transenella*-rich ekeletal material from 193 to 233cm depth. *Comment* (KM): correlated with lowermost Packstone unit (*Anomalocardia*).

UM-1125. M4-13 **4290 ± 85**

Coarse *Pseudocyrena-* and *Anomalocardia*-rich skeletal material from 230 to 233cm depth. *Comment* (KM): correlated with lowermost transgressive sequence.

UM-1126. M23-8 **2385 ± 80**

Transenella-rich skeletal material from 144 to 168cm depth. *Comment* (KM): correlated with lowermost *Anomalocardia* Packstone unit.

UM-1127. M5-2 **2615 ± 70**

Mixed *Transenella*-rich skeletal material from 167 to 186cm depth. *Comment* (KM): correlated with lowermost Packstone unit.

UM-1128. M10-10 **2600 ± 65**

Transenella-rich skeletal material from 111 to 116cm depth. *Comment* (KM): correlated with upper part of lowermost Packstone unit.

UM-1129. M16-9 **2645 ± 70**

Mixed *Transenella*-rich skeletal material from 83 to 111cm depth. *Comment* (KM): correlated with basal Packstone unit.

UM-1130. M20-6 **1790 ± 60**

Mixed *Tellina-, Cardita-,* and *Chione*-rich skeletal material from 83 to 93cm depth. *Comment* (KM): correlated with basal Packstone unit.

UM-1131. M19-5 **1130 ± 70**

Transenella-, Bulla-, and *Cerithium*-rich coarse, skeletal material from 34 to 47cm depth. *Comment* (KM): correlated with uppermost Packstone unit.

UM-1132. M10-11 **1250 ± 70**

Tellina- and *Chione*-rich skeletal material from 62 to 80cm depth. *Comment* (KM): correlated with uppermost Packstone unit.

UM-1133. M5-3 **2150 ± 55**

Mixed *Transenella*-rich coarse, skeletal material from 143 to 153cm depth. *Comment* (KM): correlated with uppermost Packstone unit.

Lower Alsea River Valley, Lincoln Co, Oregon

UM-1119. CLEV(A)/D-228(QL)/421-433 **4180 ± 70**

Woody peat from open-sided, spiral drill bit auger on flood basin of coastal flood plain on Lower Alsea R Valley, Lincoln Co, Oregon (44° 24′ 30″ N, 123° 57′ 18″ W). Coll April 1977 and subm May 1977 by J J Feiereisen, Univ Oregon, Eugene, Oregon.

Lower Siuslaw River Valley, Lane Co, Oregon

UM-1120. CLEV(S)/D-25(QL)/538-553 **3250 ± 70**

Woody peat from open-sided, spiral drill bit auger on flood basin of coastal flood plain on Lower Siuslaw R Valley, Lane Co, Oregon (44° 00′

50″ N, 123° 56′ 03″ W). Coll April 1977 and subm May 1977 by J J Feiereisen.

Ft Lauderdale reef series

Samples cored from 2 of 3 parallel reefs on continental shelf near Ft Lauderdale (26° 06′ 41″ N, 80° 04′ 55″ W). Outermost reef designated 3R (15.2m below sea level) and 2nd reef 2R (10.5m below sea level). Studies were made to determine if reefs are being destroyed by nearby dredging and to evaluate past reef accumulation rates. Coll July 1977 by Bill Raymond and subm Aug 1977 by D E Britt Assoc, Ft Lauderdale, Florida.

UM-1162. 3R-1 **3815 ± 95**
Coral from surface.

UM-1163. 3R-2 **7855 ± 120**
Coral from 76.2cm depth.

UM-1164. 3R-3 **8025 ± 95**
Coral at maximum core depth, 162.5cm.

UM-1165. 2R-4 **3615 ± 95**
Coral from 50.8cm depth.

UM-1166. 2R-5 **4460 ± 100**
Coral (*A Palmata*).

UM-1167. 2R-6 **7520 ± 110**
Coral from 345.5cm depth.

Florida Savannahs series

Peat samples cored on Florida Savannahs area in S Florida (27° 30′ N, 80° 20′ W). Coll and subm 1977 by P Gleason, Flood Control Division, Florida, and P Canter, Univ Miami, Coral Gables, Florida.

General Comment (PC): dates indicate initiation of peat deposition in Florida Savannahs.

UM-960. S-3 **2650 ± 75**
Basal peat from 83.1 to 99.6cm depth.

UM-961. S-5 **5000 ± 135**
Basal peat from 170.9 to 191.8cm depth.

UM-962A. S-1 **3025 ± 90**
Basal peat from 150.9 to 165.9cm depth.

UM-962B. S-1 **2595 ± 105**
Basal peat from 150.9 to 165.9cm depth.

UM-963. S-4 **1445 ± 85**

Basal peat from 78.7 to 97.3 cm depth.

UM-964. S-2 **1565 ± 95**

Basal peat from 68.6 to 85.3cm depth.

Woodside series

Coral and shell samples from sites on coastal plain in North and South Carolina. Coll March 1977 and subm May 1977 by V A Zullo, Univ North Carolina. *Comment* (VZ): dates used for correlation of Pleistocene marine deposits in SE North Carolina.

UM-1137. 6-Mercenaria **>34,265**

Shell material from Waccamau Formation at sea level (34° 25′ N, 77° 38′ 15″ W).

UM-1138. 6-coral **>32,280**

Coral from Waccamau Formation at sea level (34° 25′ N, 77° 38′ 15″ W).

UM-1139. 42-coral **38,410 $^{+3155}_{-5270}$**

Coral *(Septastrea crassa)* from Waccamau Formation at sea level (33° 52′ 30″ N, 78° 35′ W).

UM-1140. 42-Mercenaria **>32,550**

Shell material from Waccamau Formation at sea level (33° 52′ 30″ N, 78° 35′ W).

UM-1141. 39-Mercenaria **31,810 $^{+745}_{-825}$**

Shell material from Canepatch Formation 60cm above sea level (33° 40′ 30″ N, 78° 55′ 05″ W).

UM-1142. 46-Mercenaria **39,040 $^{+1645}_{-2070}$**

Shell material from beach rock 2.5m above sea level (34° 05′ N, 77° 55′ W).

II. ARCHAEOLOGIC SAMPLES

A. Mexico

Cacaxtla series

Cacaxtla (19° 24′ N, 90° 57′ W) in state of Tlaxcala, Mexico is site where wood and stucco structures with murals were uncovered. Murals indicate influence of several cultures including Theoihuacanos and Mayas. Sample coll 1976 by Diana Lopez de Monna, Inst Natl Antropol e Hist, de Pueblo, Tlaxcala and subm by Joaquin Ruiz, Univ Miami, Coral Gables. Comments by Ruiz.

UM-1020. B-6 Level II **1205 ± 75**

Wood from door frame of room where most significant murals were found. *Comment*: since wood appears to have been painted at same time as murals, this dates painting of murals.

UM-1041. 0'2 Level II **1180 ± 65**

Charcoal from a ritual fire. *Comment*: fire is believed to have been burned when Cacaxtla was abandoned.

UM-1042. Ditch 12 Level X **1350 ± 90**

Charcoal from a ritual fire. *Comment*: representative of occupation in Classic period. Consistent with pottery of sampling site.

UM-1043. Ditch 8 Level XVIII **1220 ± 70**

Charcoal from ditch which indicates occupational level of Classic period.

UM-1044. A4 Level II **1450 ± 110**

Charcoal from ritual fires in front of murals. *Comment*: sample was misinterpreted since fire was thought to be from time of Cacaxtla's abandonment and yet predates murals.

UM-1045. Ditch 14 Level IV **1755 ± 100**

Charcoal coll from deep level. *Comment*: dates time of Classical occupation of Cacalaxtla.

UM-1046. Ditch 3 Level VII **1745 ± 120**

Charcoal from early Classic period.

UM-1047. Ditch 9 Level II **1640 ± 120**

Charcoal from Level II. *Comment*: from occupational level of murals but predates them, indicating another probable misassociation.

B. Florida

Little Salt Spring series, Florida

Samples from slough leading to Little Salt Spring, extreme S of Sarasota Co (27° 04′ 29″ N, 82° 13′ 59″ W). Coll 1977 and subm by C J Clausen, Little Salt Spring Research Facility, North Port, Florida, unless otherwise indicated. Comments by Clausen.

UM-1099. GDF-043 **7465 ± 100**

Apparent myrtle branch, compressed by ground pressure, was removed from position in direct assoc with Burial 1, Test 2. *Comment*: should date several Late Archaic horizon primary interments with well-preserved wood, bone, shell, and stone artifacts. Ceremonial burials suggested by use of aromatic flora such as bay and myrtle. Coll 1977 by L N Wood, Jr, General Development Foundation, Inc, North Port, Florida.

UM-1100. GDF-047 **8145 ± 115**

Wood and peat-like material from within portion of Burial 2 next to femur along back of thigh.

UM-1101. GDF-048 **9100 ± 95**

Peat from underlying extensive zone of freshwater marl below similar heavily organic zone containing Archaic burials (same stratigraphic column).

UM-1156. GDF-048 **8820 ± 120**

Duplicate run of UM-1101.

UM-1102. GDF-046 **6180 ± 95**

Carbonate fraction of fragmentary human skeletal material including both radii, both ulnas, one humerus, skull fragments and femur.

UC-1103. GDF-046 **5850 ± 70**

Organic fraction of UM-1102.

UM-1157. GDF-064 **6830 ± 155**

Portion of oak tool found with Archaic period extended burials.

UM-1158. GDF-077 **13,360 ± 205**

Calcitic marl from middle portion of marl layer beneath Burials 1 and 2. *Comment*: age for this position in stratigraphic column would indicate shallow water site of marl formation was fed by water flowing through Miocene carbonates.

Alderman Site series

Charcoal from twigs and small branches from shell midden in Volusia Co, Florida (28° 44′ N, 81° 02′ W). Coll 1977 and subm by M C Stewart, Behavioral Sci Dept, Rollins Coll, Winter Park, Florida. Comments by Stewart.

UM-1152. Ald-TP3-CS10 **2425 ± 210**

Comment: should correlate culture within St John's II in absence of mortuary pottery or significant amounts of trade sherds.

UM-1153. Ald-TP2-CS5 **1090 ± 100**

Comment: use for correlation of culture as UM-1152.

UM-1154. Ald-TP1-CS3 **1190 ± 125**

Comment: dates postmolds as contemporary with UM-1153.

UM-1155. Palmer-Taylor site SE18 **6060 ± 105**

Conch shell from shell midden Seminole Co, Florida (28° 41′ N, 81° 02′ W) used for verification of projectile point, possibly Culbreath found 43cm below surface. Coll 1976 and subm by M C Stewart.

Captiva Island series

Oyster shells from shell mounds on property of South Seas Plantation on Captiva I., Florida (26° 30′ N, 82° 13′ W) for comparison with dates from Wightman site, Sanibel, Florida (UM-729-736, UM-860-872, UM-919-924, R, 1977, v 19, pp 453-455). Mound is ca 3m above bay water. Coll 1977 by Lee High, Dept Geol, Oberlin College. Subm by C J Wilson, Sanibel, Florida.

UM-1169. Surface **1060 ± 110**

UM-1170. 46cm **1065 ± 65**

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