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UNIVERSITY OF MIAMI RADIOCARBON DATES XX

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The following radiocarbon dates are a partial list of samples measured for a variety of projects and materials since May 1980. Chemical and counting procedures remain the same as indicated in R, v 20, p 274-282.

Calculations are based on the 5568-year Libby ^{14}C half-life. Precision is reported as one standard deviation based only on statistical counting uncertainties in the measurement of the background, NBS modern standard, and sample activities. $\delta^{13}C$ values are measured relative to PDB and reported ages are corrected for isotopic fractionation by normalizing to $-25‰$.

SAMPLE DESCRIPTIONS

GEOLOGIC SAMPLES

Florida

Lake Okeechobee series

Peat, organic muck, and freshwater gastropods taken from core from Lake Okeechobee, Florida. Dated to study depositional change from peat to organic muck along with formation of Torrey I. Coll June 1979 and subm Feb 1980 by P Gleason, S Florida Water Management.

UM-2028. VIAL 1 (56-61cm) **3070 ± 80**
$\delta^{13}C = -27.6‰$
Organic muck from Torrey I. (26° 42′ 50″ N, 80° 43′ 4″ W).

UM-2029A. VIAL 2 (62-64cm) **2830 ± 120**
Organic muck from Torrey I. (26° 42′ 50″ N, 80° 43′ 4″ W).

UM-2029B. VIAL 2 (62-64cm) **1370 ± 80**
Freshwater gastropod shells from same context as UM-2029A.

UM-2030. VIAL 3 (64-71cm) **2560 ± 80**
$\delta^{13}C = -27.7‰$
Peat sample from Torrey I. (26° 42′ 50″ N, 80° 43′ 4″ W).

UM-2031. VIAL 6 (38-43cm) **2350 ± 90**
Organic muck from Torrey I. (26° 42′ 50″ N, 80° 43′ 4″ W).

UM-2032. VIAL 5 (160-170cm) **4790 ± 150**
$\delta^{13}C = -23.0‰$
Basal peat from Torrey I. (26° 42′ 50″ N, 80° 43′ 4″ W).

Sanibel Island series

Samples of beach rock coll from Sanibel I., Florida (26° 22′ N, 82° 5′ W). Samples dated to substantiate present interpretation of beach

ridge development. Samples coll and subm 1980 by T Messimer, Sanibel I.

UM-2021. MC1 **1230 ± 90**
Carbonate cement.

UM-2022. CS1 **1840 ± 110**
$\delta^{13}C = -3.0‰$
Chione cancellata removed from beach rock.

UM-2023. MV1 **109.0% modern**
$\delta^{13}C = -6.9‰$
Vermicularia sp.

UM-2024. MC2 **1360 ± 100**
Carbonate cement.

UM-2025. FS1 **2400 ± 130**
Chione cancellata shells removed from beach rock.

UM-2026. CC1 **1590 ± 90**
Carbonate cement.

UM-2027. FC1 **960 ± 110**
Carbonate cement.

Corkscrew Swamp series

Peat and marl samples coll via vibra-core from Corkscrew Swamp Sanctuary, Florida. Samples dated to determine extent of lateral expansion in Corkscrew Swamp. Samples coll and subm 1979 by J Taylor, Univ Miami, and P Stone, Univ South Carolina, Columbia.

UM-2005. CSS 5 Willow **5210 ± 120**
$\delta^{13}C = -21.3‰$
Basal peat from depth 143 to 158cm (26° 21′ 57″ N, 81° 37′ 0″ W).

UM-2006. CSS 9 (53-66cm) **1510 ± 80**
$\delta^{13}C = -26.5‰$
Brown fibrous peat (26° 21′ 22″ N, 81° 37′ 33″ W).

UM-2007. CSS 9 (116-122cm) **3860 ± 130**
Basal peat sample (26° 21′ 22″ N, 81° 37′ 33″ W).

UM-2008. CSS 9 (122-127cm) **8030 ± 160**
Sample from marl layer immediately below UM-2007 (26° 21′ 22″ N, 81° 37′ 33″ W).

UM-2009. CSS 10 (38-50cm) **540 ± 80**
$\delta^{13}C = -26.7‰$
Basal peat sample (26° 21′ 57″ N, 81° 36′ 51″ W).

UM-2072. CSS 5 Willow **6210 ± 120**
Sample taken from top of marl layer (26° 21′ 57″ N, 81° 37′ 0″ W).

UM-2074. LT 1 **8290 ± 150**
Calcitic marl (26° 25′ 20″ N, 81° 29′ 25″ W).

UM-2075. CSS 7 **9770 ± 160**
Basal calcitic marl (26° 21′ 22″ N, 81° 37′ 26″ W).

Ten Thousand Island series

Marine shells removed from flood delta in small bay at Ten Thousand I., SW Florida. Shells were in well-defined sandy layers of probable hurricane origin. Samples were dated for determinations of sedimentation rates caused by hurricane deposition. Coll and subm 1980 by M Perlmutter, Rosenstiel School Marine & Atmos Sci, Miami.

UM-2135. 3-19-3; 18-23 **900 ± 130**
Marine shells mostly fragmented or bored, some whole and bored *Macoma constricta.* Also abundant *Crassotrea virginica, Parastarte triquetra,* and *Nassarius vibex* (22° 55′ N, 81° 40′ W).

UM-2136. 11-17-6; 62-69 **1320 ± 90**
Primarily worn and fragmented *Crassostrea virginica* with common corbula *Swiftiana, Cyclinella tenuis, Nassarius vibex, Parastarte triquetra,* and *cyclinchnella bidentata.*

UM-2223. 3-19-2; 50-53 **990 ± 80**
Marine shells from flood delta.

UM-2224. 3-19-4; 12-24 **920 ± 110**
Marine shell from coarse layer in flood delta.

Elliot Key series

Caliche and limestone bedrock sample from Elliot Key, Miami, Florida (25° 26′ 40″ N, 80° 12′ 6″ W). Coll 1979 by S M Crabtree and D Robbin, USGS, Fisher I., Miami, Florida. Subm 1980 by S M Crabtree and D Robbin. Samples dated for use as stratigraphic markers.

UM-2071. Top laminae **390 ± 190**
Top laminae of caliche crust.

UM-2011. Middle laminae **2540 ± 90**
Middle laminae of caliche crust.

UM-2010. Bottom laminae **2160 ± 130**
Bottom laminae of caliche crust.

UM-2012. Top bedrock **18,700 ± 400**
Top cm of limestone bedrock.

UM-2014. Middle bedrock **18,600 ± 310**
Middle cm of limestone bedrock.

UM-2013. Bottom bedrock **24,000 ± 450**
Bottom cm of limestone bedrock.

North Carolina

Cape Lookout Bight series

Organic-rich muds dated to geochemically trace source of organic matter into interior of Cape Lookout Bight, North Carolina (34° 37′ N, 76° 33′ W). Coll 1979 by F J Samsone and subm 1980 by C S Martins.

UM-2053. FJS-1, 10-25cm **360 ± 90**
$\delta^{13}C = -20.3‰$

UM-2054. U-5-E **2580 ± 90**
$\delta^{13}C = -21.9‰$

UM-2055. U-5-C **1630 ± 90**
$\delta^{13}C = -20.1‰$

UM-2056. U-5-A **2840 ± 170**
$\delta^{13}C = -20.8‰$

UM-2057. U-5-B **2700 ± 130**

UM-2058. U-5-D **2270 ± 80**

Roanoke River series

Wood samples dated as stratigraphic markers showing Holocene development of meander belt of Roanoke R near Albemarle Sound, North Carolina. Samples are from subsurface cores, and were taken laterally from NE to SW banks of river flood plain. Coll and subm 1980 by R N Erlich, Univ North Carolina, Chapel Hill.

UM-2093. H18-S7-12-13 **1860 ± 130**
Wood (35° 56′ N, 76° 41′ W).

UM-2095. H18-S5-16-17 **3780 ± 100**
Wood (35° 56′ N, 76° 41′ W).

UM-2097. H19-S4-8-8.5 **2560 ± 110**
Wood (35° 56′ N, 76° 39′ W).

UM-2098. H20-S2-16-17 **4100 ± 90**
Wood (35° 54′ N, 76° 44′ W).

UM-2099. H20-S3-17.5-18.5 **4670 ± 90**
Wood (35° 54′ N, 76° 44′ W).

UM-2100. H21-S3-9-10 **1550 ± 100**
Wood (35° 55′ N, 76° 43′ W).

UM-2103. H21-S16-24.5-25 **5410 ± 170**
Wood (35° 55′ N, 76° 43′ W).

UM-2104. H22-S5-23.5 **4780 ± 90**
Wood (35° 56′ N, 76° 42′ W).

UM-2105. H23-S2-9-10 **5000 ± 560**
Wood (35° 54′ N, 76° 44′ W).

UM-2106. H23-S4-13-14.5 **4360 ± 100**
Wood (35° 54′ N, 76° 44′ W).

UM-2107. H25-S2-12-13 **3760 ± 80**
Wood (35° 56′ N, 76° 43′ W).

UM-2108. H26-S5-10.5-11 **2930 ± 90**
Wood (35° 57′ N, 76° 43′ W).

California

Brown's Island series

Peaty mud and plant fragments from Brown's I. in E Contra Costa Co, California. Dates aid in determining botanical history of Suisun Bay tidal marshes. Coll and subm 1980 by B F Atwater, USGS, Menlo Park.

UM-2078. BW-10, z=20-25cm **540 ± 120**
Rhizomes *(Distichlis spicata)* coll 20 to 25cm from tidal marsh surface (38° 02′ 35″ N, 121° 51′ 49″ W).

UM-2079. BW-10, z=20-25cm **890 ± 80**
Bulk peaty mud or peat coll 20 to 25cm below ground surface of pristine tidal marsh (38° 02′ 38″ N, 121° 51′ 49″ W).

Roe Island series

Peaty mud and bark from Roe I., Solano Co, California. Samples were coll as part of study of shoreline changes and sedimentation in tidal marshes of central Suisun Bay. Coll and subm by B F Atwater.

UM-2080. ROE-0 **690 ± 70**
Bark exposed in wave-cut bank taken at low tide shoreline (38° 04′ 14″ N, 122° 02′ 30″ W).

UM-2081. ROE-2, z=6.0-6.2m **4150 ± 100**
Peaty mud containing rhizomes (*Distichlis spicate* and *Scirpus* sp) coll 4.62m N of low-tide shoreline (38° 04′ 14″ N, 122° 02′ 30″ W).

UM-2082. ROE-2, z=3.3-3.6m, bulk **2090 ± 120**
Peaty mud containing rhizomes (*Distichlis spicata* and *Scirpus* sp) coll 4.62m N of low-tide shoreline (38° 04′ 14″ N, 122° 02′ 30″ W).

Morro Bay series

Plant material coll 1979 and subm 1980 by R L Phillips, USGS, Menlo Park, California. Samples from Morrow Bay, San Luis Obispo Co, California dated to determine stratigraphic history and depositional environments in modern and ancient sediments within Morro Bay.

UM-2118. M78 PMB-33 **27,300 ± 570**

Large wood branch (35° 20′ 7″ N, 120° 50′ 45″ W) from vertical exposures of resistant sand beds cut into basal mudstone. Coll at 10m below mean low water depth.

UM-2119. M78 PMB-40 **>31,200**

Twigs and small plant fragments (35° 20′ 7″ N, 120° 50′ 45″ W) from peaty bed exposed at 12.1m depth below mean low water in main tidal channel of Morro Bay.

Siuslaw series

Wood samples from Siuslaw Natl Forest State Park, Coos Co, Oregon (43° 35′ 30″ N, 124° 11′ 30″ W). Dated to determine depositional history and age of latest onset of dune migration, and to confirm existing dune migration rates. Coll 1980 by M L Swisher; subm 1980 by R E Hunter, USGS, Menlo Park.

UM-2120. ODO380 **350 ± 60**

Solid tree branch.

UM-2121. ODO380-5 **360 ± 100**

Wood fragments.

Redwood Canyon series

Charcoal and wood samples obtained from cave at Redwood Canyon, Kings Canyon Natl Park, California (36° 40′ N, 118° 54′ W). Dated to establish age, rate of accumulation, and stratigraphic controls on debris cone from which speleothems are growing. Coll 1977 and subm 1980 by J C Tinsley, USGS, Menlo Park.

UM-2124. C-Lil-1 **1350 ± 90**
$\delta^{13}C = -24.3‰$

Tree root, conifer.

UM-2125. C-Lil-2 **1670 ± 90**
$\delta^{13}C = -22.0‰$

Charcoal, partly burned wood.

UM-2126. C-Lil-3 **1020 ± 90**
$\delta^{13}C = -24.2‰$

Charcoal and carbonized wood. Unknown sp.

UM-2127. C-Lil-4 **1350 ± 90**
$\delta^{13}C = -24.3‰$

UM-2128. LA-10 **11,400 ± 240**
$\delta^{13}C = +29.2‰$

Organic-rich soil and debris retrieved 60m E of SE corner of San Gabriel Blvd and Huntington Dr, Pasadena, California. Property of Sunnyslope Water Co (34° 7′ 48″ N, 118° 5′ 6″ W). Coll 1978 by R Hill, California Division Mines & Geol, California Inst Technol. Subm 1980 by J C Tinsley.

San Bernardino series

Peaty, organic-rich sediments from water well in San Bernardino Valley, San Bernardino Co, California (34° 5′ 19″ N, 117° 17′ 47″ W). Coll 1978, subm 1980 by D M Morton, USGS, Menlo Park. Samples dated to determine rate of alluvial accumulation.

UM-2129. LA-20 **>29,400**
$\delta^{13}C = -30.3‰$

UM-2132. LA-23 **>34,600**
$\delta^{13}C = -26.4‰$

UM-2133. LA-24 **2930 ± 100**
$\delta^{13}C = -26.6‰$

Peat samples from alluvium, Lytle Creek, San Bernardino Co, California (34° 10′ 23″ N, 118° 26′ 51″ W). Coll 1976 and subm 1980 by D M Morton.

UM-2134. LA-25 **26,300 ± 560**
$\delta^{13}C = -23.0‰$

Wood deposit from well in San Jacinto Valley, Riverside Co, California (33° 50′ 10″ N, 117° 0′ 30″ W). Coll and subm 1980 by D M Morton.

UM-2141. EF-2 **1490 ± 170**

Charcoal from Pasadena, Los Angeles Co, California (34° 9′ 18″ N, 118° 4′ 36″ W). Dated for max age of soil from area. Sample date to be used in studying latest faulting event. Coll 1980 by R Crook, Jr, California Inst Technol. Subm 1980 by J Tinsley.

UM-2143. 80RC2 **22,200 + 1630 − 1360**

Carbon from Pacific Palisades area, Los Angeles Co, California (34° 3′ 4″ N, 118° 59′ 0″ W). Sample coll 1979 from alluvial environment by R Hill. Subm 1980 by USGS, Menlo Park.

Benicia series

Three peat samples from Benicia State Recreation Area, Colano Co, California (38° 4′ 0″ N, 122° 11′ 30″ W). Dated to determine relative sea level changes at Coraquinez Strait. Coll 1980 by B Atwater and T Yocum, Natl Marine Fisheries Service, California. Subm 1980 by B Atwater.

UM-2144. BEN-1 z 25-30cm **840 ± 70**

Peaty mud with *Distichilis* rhizomes.

UM-2145. BEN-2 z 155-160cm **2160 ± 90**

Peaty mud with *Distichilis* rhizomes. Coll 30.8m NE of UM-2144.

UM-2146. BEN-3 z 75-80cm **1510 ± 90**

Peaty mud with *Distichilis* rhizomes. Coll 15.4m NE of UM-2144.

Dry Creek series

Wood and carbonized wood from N Bank of Dry Creek, Sacramento Co, California (38° 15′ 0″ N, 122° 13′ 45″ W). Dated for min ages on alluvium derived from Sierra Nevada foothills. Coll 1980 by D Marchand and B Atwater. Subm 1980 by B Atwater.

UM-2147. Dry Creek 3 M2f **2220 ± 110**

Wood with most of interior missing. Age is almost certainly younger than deposit.

UM-2148. Dry Creek 2 pM2f **400 ± 100**

Carbonized wood (possibly twigs and branches) with growth rings. Age may be younger than deposit.

UM-2149. RC 125 **610 ± 80**

Carbonized wood from S Bank of Hancat Creek, Sacramento Valley, California (39° 18′ 0″ N, 121° 35′ 0″ W). Coll 1980 by A Busacca, M J Singer, and D Marchand, USGS, Menlo Park. Subm 1980 by D Marchand. Date to be used as age control on late Holocene depositional units.

Bahamas

Joulters Cay series

Carbonate reef samples coll from Joulters cay on NE margin of Grand Bahama Bank, Bahamas (25° 10′ N, 78° 10′ W). Samples dated to study development of Bryozoan patch reefs in tidal channel. Samples coll Nov 1979 and subm Dec 1979 by R Cuffey, Pennsylvania State Univ, University Park.

UM-2051. S-4 **3720 ± 150**

Coral-lithothamnioid reef rock.

UM-2052. E-10 **21,000 ± 640**
$\delta^{13}C = +0.4‰$

Consolidated oolitic sediments.

UM-2061. I-2 **20,200 ± 550**
$\delta^{13}C = -0.3‰$

Consolidated oolitic sediments.

UM-2069. F-0 **1610 ± 160**

Coral reef rock.

UM-2076. F-24 **24,800 ± 910**

Tidal channel limestone bedrock.

UM-2077. F-21 **20,300 ± 490**

Tidal channel limestone bedrock.

San Salvador series

Marine shell dated for sedimentologic history of San Salvador I., Bahamas. Coll and subm by D Gerace, CCFL Bahamian Field Sta, San Salvador.

UM-2114. **23,700 ± 650**

Shell removed from eroded wall of tidal cave (75° 26′ 64.75″ N, 24° 31′ 06″ W).

Antractic Ocean

Antarctic Foraminifera series

Foraminifera samples taken from two cores coll in Antarctic Ocean by *SS Eltanin*. Samples dated to check validity of matching deep-sea *Eltanin* cores with master cores. Samples subm 1980 by M G Dinkelman, Florida State Univ, Tallahassee. Ages appear to be consistently too young with respect to paleontologic information.

5950 ± 210

UM-2015. E49-3 (4-7cm) $\delta^{13}C = -0.7‰$

Eucampia balaustium and *Cyclodophora davisiana* (45° S, 110° W).

UM-2016. E49-3 (24-27cm) **>16,900**

Identical species and location as UM-2015.

UM-2017. E49-3 (54-57cm) **24,400 ± 870**

Identical species and location as UM-2015.

3200 ± 140

UM-2018. E49-24 (5-8cm) $\delta^{13}C = -0.5‰$

Eucampia balaustium and *Cyclodophora davisiana* (48° S, 96° W).

UM-2019. E49-24 (25-27cm) **7530 ± 130**

Identical species and location as UM-2019.

UM-2020. E49-24 (54-57cm) **10,300 ± 310**

Identical species and location as UM-2019.

REFERENCE

Calvert, M, Rudolph, Kim, and Stipp, J J, 1978, University of Miami radiocarbon dates XII: Radiocarbon, v 20, p 274-282.