

UNIVERSITY OF MIAMI RADIOCARBON DATES XVII

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The following radiocarbon dates are a partial list of samples measured for a variety of projects and materials since April 1979. 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. $\delta^{13}\text{C}$ values are measured relative to PDB and reported ages are corrected for isotopic fractionation by normalizing to -25‰ . An additional 400 year reservoir age correction has been applied to marine carbonates.

SAMPLE DESCRIPTIONS

I. GEOLOGIC SAMPLES

Virgin Island Series

Core samples of carbonate sand and coral rock taken from S shelf of US Virgin Islands were dated to determine sedimentation rates. Coll 1978 and subm 1979 by R Miller, USGS, Corpus Christi, Texas.

UM-1728. 305020 **1750 ± 90**

Carbonate sand (18° 19' N, 65° 1.25' W) coll by R Miller.

UM-1729. 380095 **2020 ± 80**

Carbonate sand (18° 19' N, 65° 1.25' W) coll by R Miller.

UM-1730. 3155170 **2890 ± 90**

Carbonate sand (18° 19' N, 65° 1.25' W) coll by R Miller.

UM-1731. 3230245 **3660 ± 80**

Carbonate sand (18° 19' N, 65° 1.25' W) coll by R Miller.

UM-1732. 3320335 **5940 ± 85**

Carbonate sand (18° 19' N, 65° 1.25' W) coll by R Miller.

UM-1733. H-861-I **22,370 ± 280**

Carbonate sand (18° 20.5' N, 64° 58' W) coll by Woodward and Clyde.

UM-1734. Rotary Core #4 **7600 ± 100**

Coral rock (18° 12' N, 64° 44' W) coll by R Miller.

Carteret County series

Core samples of organic clay and shell taken from a lagoonal and back barrier environment in Carteret Co, North Carolina. Samples coll

from Back Sound and Harkers I. (34° 40' N, 76° 40' W) for stratigraphic correlation. Coll July 1978 by W Berelson; subm by D Heron, Duke Univ, Durham, North Carolina.

UM-1647. H I #11 188 to 191cm **4300 ± 90**

Oyster shell within lagoonal mud facies (Back Sound).

UM-1648. H I #26 213cm **3080 ± 90**

Gastropod shells from marsh mud below tidal delta deposit (Back Sound).

UM-1649. H I #37 208 to 218cm **1520 ± 70**

Clam shells near top of marsh mud below tidal delta deposit in back barrier environment (Back Sound).

UM-1650. H I #18 257 to 262cm **15,440 ± 280**

Organic clay unit with lagoonal mud facies, back barrier environment.

UM-1651. H I 25b, 475 to 483cm **>32,000**

Organic stained sandy clay near top of lagoonal mud, back barrier environment.

UM-1652. H I A 457 to 483cm **25,050**

+ 480

- 450

Humate from soil zone below modern barrier island sands (Harkers I.).

Back Sound series

Shell and organic sediment coll via cores from marsh, marine, and back barrier island environments in Back Sound, North Carolina (36° 40' N, 76° 30' W). Samples dated to determine stratigraphic correlation. Coll 1978 by W Berelson and subm 1979 by D Heron, Duke Univ, Durham, North Carolina. UM-1719 coll and subm 1979 by W Berelson.

UM-1707. F (335 to 427cm) **32,540**

+ 680

- 630

Mercenaria sp fragments from marsh mud.

UM-1708. 12 (112 to 142cm) **1050 ± 140**

Oyster and slipper shells from marsh mud.

UM-1709. 24 (287 to 295cm) **3190 ± 150**

Oyster and slipper shells from silty mud in marsh environment.

UM-1710. 5 (76cm) **2940 ± 150**

Gastropod shells from coarse lag in mixed marine environment.

UM-1711. 16 (10 to 20cm) **2720 ± 135**

Ribbed clam shell from coarse lag inlet fill in mixed marine environment.

UM-1712. 29 (Bottom 91cm)	3580 ± 110
Ribbed clam shells from coarse lag inlet fill in mixed marine-back-barrier environment.	
UM-1713. 23 (183 to 188cm)	2710 ± 150
Peaty clay from buried peaty marsh mud unit.	
UM-1714. 19 (76cm)	3780 ± 140
Mix of shell fragments in buried marsh mud.	
UM-1715. 13 (0 to 10cm)	12,550 ± 300
Organic clay from buried marsh mud.	
	+ 380
UM-1716. 13 (241 to 246cm)	9090
	- 360
Organic sand from humic zone in barrier island sand.	
UM-1919. 39 (56 to 64cm)	4800 ± 100
Oyster, razor and <i>Mercenaria</i> sp clam shells buried in muddy marsh unit below fine sandy horizon.	

Harkers Island series

Shell samples coll from mud-marsh unit on Harkers I., North Carolina (34° 40' N, 76° 30' W). Samples dated to determine stratigraphic correlation in area. Coll 1978 and subm 1979 by W Berelson, Duke Univ, Durham, North Carolina.

	+ 500
UM-1717. I (457 to 518cm)	28,940
	- 470
Oyster shell from marsh unit below barrier island sands.	
	+ 625
UM-1718. J (1524 to 1585cm)	23,060
	- 580
<i>Gemma gemma</i> from marsh unit below barrier island sands.	

Lake Erie series

Wood samples taken from cores in Lake Erie NW of Erie, Pennsylvania. Samples dated to determine age of ridge offshore Presque Isle. Coll and subm 1979 by S Williams, Coastal Engineering Research Center, Fort Belvoir, Virginia.

UM-1703. Core 4 -104cm	8240 ± 210
	$\delta^{13}C = -25.06\text{‰}$
Sample from silty sand matrix at water depth, 20.4m (42° 15' N, 80° 18' W).	
UM-1704. Core 18 -357cm	6870 ± 150
	$\delta^{13}C = -29.45\text{‰}$
Sample from fine to medium sand matrix at water depth, 18.5m (42° 12' N, 80° 17' W).	

UM-1705. Core 23 –219cm **8540 ± 100**
 $\delta^{13}C = -27.03\text{‰}$

Sample from matrix at water depth, 19.2m (42° 12' N, 80° 18' W).

UM-1706. Core 28 –351cm **10,800 ± 190**
 $\delta^{13}C = -26.20\text{‰}$

Sample from silt-clay matrix at water depth, 18.4m (42° 12' N, 80° 09' W).

Point Delgada series

Wood and charcoal samples from fluvial siltstones above marine platform out on cretaceous bedrock at Point Delgada, California (40° 1' N, 124° 4' W). Dates uplift and sedimentation rates for fluvial sediments above the platform and may record rise in sea level, ante-dating elev of terrace. Coll and subm 1979 by R McLaughlin, USGS, Menlo Park, California.

UM-1631. SK 79-1 **34,380** **+ 730**
– 670
 $\delta^{13}C = -26.83\text{‰}$

Wood.

UM-1632. SK 79-2 **29,040** **+ 610**
– 570
 $\delta^{13}C = -24.48\text{‰}$

Charcoal from same location as UM-1631.

Alaska Foodweb series

Samples of various living organisms were dated to establish a modern marine standard for pelagic arctic fish and marine plants and an estimation of carbon input resulting from detritus based foodweb utilizing eroded peat. Subm 1979 by D Schell, Univ Alaska, Fairbanks, Alaska.

UM-1738. 79-7 **105.0‰ modern**
 $\delta^{13}C = -17.47\text{‰}$

Laminaria stipes and holdfast coll by D Schell in Stefannsson Sound (70° 23" N, 147° 40" W).

UM-1739. 79-8 **107.1‰ modern**
 $^{13}C = -15.04\text{‰}$

Laminaria blades coll by D Schell in Stefannsson Sound (70° 23" N, 147° 40" W).

UM-1740. 79-9 **104.4‰ modern**
 $\delta^{13}C = -20.82\text{‰}$

Myoxocephalus quadricornus muscle tissue coll by J Helmericks in Harrison Bay (70° 30" N, 150° 10" W).

UM-1741. 79-10 **103.7‰ modern**
 $\delta^{13}C = -21.60‰$

Arctic cod muscle tissue coll by LGL Ltd in Steffannsson Sound
 (70° 23" N, 147° 40" W).

Puget Sound series

Peat and wood fragments hand picked from unconsolidated sediments exposed in marine coastal bluffs on Whidbey I., Washington. Dated to provide temporal framework for stratigraphy of area. Coll and subm 1979 by K L Stoffel, Dept Nat Resources, Olympia, Washington.

UM-1745. 29N03E 29.8g UBE#1 **28,910**
 + 690
 - 630
 $\delta^{13}C = -27.38‰$

UM-1746. 29N03E 29.8g UBE#2 **29,330**
 + 550
 - 520
 $\delta^{13}C = -26.72‰$

UM-1747. 29N03E 29.8g UBE#5 **39,210**
 + 1730
 - 1420
 $\delta^{13}C = -28.66‰$

Peat samples UM-1745-1747 from Useless Bay East (47° 58' 12" N, 122° 27' 36" S) dated to determine age of Whidbey formation.

UM-1748. 28N03E 16.4f SH#1 **29,130**
 + 570
 - 530
 $\delta^{13}C = -27.28‰$

Peat from Scatchet Head (47° 55' 03" N, 122° 25' 47" S).

UM-1749. 28N03E 16.5h SH#2 **>41,500**

Peat from Scatchet Head (47° 55' 14" N, 122° 25' 50" N).

UM-1750. 28N03E 16.4h SH#3 **>39,600**

Wood fragments from Scatchet Head (47° 55' 11" N, 122° 25' 42" N).

UM-1751. 28N03E 23.3h PP#1 **30,470**
 + 1650
 - 1370
 $\delta^{13}C = -28.68‰$

Peat taken from base of Possession Drift (47° 53' 34" N, 122° 22' 56" S).

UM-1752. 29N02E 26.5f DBE#1 **23,600 ± 280**
 $\delta^{13}C = -26.97‰$

Wood fragments from Whidbey Esperance contact (47° 58' 29" N, 122° 31' 08" W).

UM-1753. 29N02E 27.3c DBW #1 **43,200** **+ 3200**
- 2280
 $\delta^{13}C = -28.44\text{‰}$

Peat from S Whidbey I. (47° 58' 12" N, 122° 32' 07" W).

UM-1754. 32N01E 07.6d WI#1 **36,990** **+ 1200**
- 1040
 $\delta^{13}C = -26.96\text{‰}$

Wood fragment coll by G W Thorsen from NW Whidbey I. (48° 16' 29" N, 122° 44' 15" W). Dated to determine min age of Vashon continental ice at this lot.

UM-1692. GN-1 **180 ± 80**
 $\delta^{13}C = -26.30\text{‰}$

Wood sample from 3m below surface in Williston Quad, Florida (29° 27' 0" N, 82° 23' 0" W) was dated to study preservation of organic material in peat. Coll 1977 by G Neal; subm 1979 by B Purdy, Florida State Mus, Univ Florida, Gainesville.

UM-1693. V26-176, 550-570cm **24,750** **+ 1560**
- 1300

Calcareous lutite cored from lower Continental Rise (36° 03' N, 72° 23' W) was dated to study frequency spectrum analysis of faunal fluctuation. Coll by Lamont-Doherty Geol Observatory; subm 1979 by D Schnitker, Dept Oceanog, Univ Maine, Walpole.

II. ARCHAEOLOGIC SAMPLES

Columbia County series

Charred wood samples coll from Indian mound in Columbia Co, Florida. Samples date construction and charnel activities assoc with Mound A at 8-Co-17 (McKeithen) a Weeden Island site. Sample coll Feb 1979 and subm April 1979 by J Milanich, Florida State Mus, Gainesville.

UM-1642. 8-Co-17 FS 1147 **1770 ± 70**

Charred sample (*Prunus* sp) from post in burial preparation area, top of primary mound.

UM-1643. 8-Co-17 FS 1191 **1450 ± 90**

Charred sample (*Pinus* sp) coll from post lying horizontally beside primary mound.

UM-1644. 8-Co-17 FS 1267 **1690 ± 90**

Sample from small oval hearth used during construction of primary mound.

UM-1645. 8-Co-17 FS **1530 ± 80**

Sample from fire pit that was intrusive to primary mound.

UM-1646. 8-Co-17 FS 1312 1520 ± 70

Sample (*Pinus* sp) from post erected in sloppng trench intrusive to primary mound.

Lumpkin County Pottery series

Charred wood coll from exposed surface during excavation in Lumpkin Co, Georgia (34° 28' 07" N, 83° 58' 14" W). Samples dated to obtain absolute ages for different pottery phases. Coll and subm 1979 by M Crook, West Georgia Coll, Carrollton.

UM-1675. FEATURE 14; #267/1 980 ± 100
 $\delta^{13}C = -27.00\%$

Wood sample from hearth assoc with Woodstock Complicated Stamped pottery. Indicates Early Mississippian period.

UM-1676. FEATURE 10; #102/1 2430 ± 70
 $\delta^{13}C = -27.22\%$

Charred wood assoc with stone-lined earth oven and Cartersville Check-Stamped pottery. Earth oven is considered to date to Woodland period.

UM-1677. FEATURE 15; #372/1 1420 ± 80
 $\delta^{13}C = -26.24\%$

Wood assoc with Mossey-Oak Simple Stamped, Cartersville Check-Stamped, and Swift Creek Complicated Stamp types. Sample from refuse pit which appears to date to Woodland period.

Granada series

Charcoal samples from Granada site (8 Da 11) Dade Co, Miami, Florida (80° 11' 25" W, 25° 46' 21" N). Dated to revise ceramic chronology of SE Florida and to date assoc artifacts. Coll and subm 1979 by S Bonath, Bur Hist Sites & Properties, Tallahassee, Florida.

UM-1660. C-79-1 1080 ± 50

+2.08 to 1.69m in 6S-12W.

UM-1661. C-79-2 530 ± 60

+2.10 to 1.95m in 2S-16W.

UM-1662. C-79-3 1020 ± 70

+1.70 to 1.55m in 10S-16W.

UM-1663. C-79-4 1160 ± 50

+1.55 to 1.40m in 10S-16W.

UM-1664. C-79-S 1030 ± 50

+1.40 to 1.18m in 10S-16W.

UM-1665. C-79-6 1350 ± 80

+1.30 to 1.15m in 10S-16W.

UM-1666. C-79-7	1090 ± 70
+1.80 to 1.47m in 0N-72W.	
UM-1667. C-79-8	490 ± 110
+1.70 to 1.27m in 0N-72W.	
UM-1668. C-79-9	890 ± 60
+1.86 to 1.51m in 0N-70W.	
UM-1669. C-79-10	1230 ± 80
+1.93 to 1.56m in 0N-70W.	
UM-1670. C-79-11	1020 ± 50
+1.75 to 1.60m in 2S-64W.	
UM-1671. C-79-12	1220 ± 50
+1.58 to 1.15m in 0N-74W.	
UM-1672. C-79-13	1930 ± 75
+1.55 to 1.40m in 2S-64W.	
UM-1674. C-79-15	1440 ± 140
+2.06 to 1.85m in 2S-10W.	

UM-1742. AE 35 **940 ± 60**

Busycon contrarium shell artifact recovered from Aqui Esta burial mound on north fork of Alligator Creek, 2km S of Punta Gorda, Florida (26° 53' 52" N, 82° 02' 40" W). Dated to determine time of use and correlation with Safety Harbor culture. Coll 1962 by R Jones; subm 1979 by G Luer, Sarasota, Florida.

Dade County series

Charcoal, shell, and peat from various archaeol sites in Dade Co, Florida were dated to determine sequence of Indian habitation. Coll by R Carr, I Eyster, W Carson and J Beriault; subm 1979 by Dade Co Hist Survey.

UM-1720. Trail site—marine shell **2440 ± 70**

$$\delta^{13}C = +1.21\text{‰}$$

Strombus gigas coll from Trail Site, 8Da34 (25° 45' N, 80° 23' 27" W) to date occupation on lowest level of Everglades midden.

UM-1721. FS #218 **2000 ± 70**

$$\delta^{13}C = -27.25\text{‰}$$

Charcoal from Pig site, 8Da1057, Test Pit #1, LVL8 (25° 49' 14" N, 80° 23' 03" W) to date Indian habitation of Everglades tree island.

UM-1722. Pig site—fresh water shell**2210****+ 80****- 70**

$$\delta^{13}C = -1.17\text{‰}$$

Shell coll at Pig site, 8Da1057, Test Pit #1, 90 to 93cm (25° 49' 14" N, 80° 23' 27" W) to understand formation of tree island.

UM-1723. Pig site—peat**3770 ± 80**

$$\delta^{13}C = -24.92\text{‰}$$

Peat taken from Pig site, 8Da1057, Test Pit #1, 90 to 100cm (25° 49' 14" N, 80° 23' 27" W) to date pre-occupation period of Everglades tree island.

UM-1724. FS #234**1460****+ 190****- 180**

$$\delta^{13}C = -26.49\text{‰}$$

Charcoal recovered from Beal Smith site, 8Da1043, Test Pit #1, Level 3.

UM-1725. FS #235**1890****+ 120****- 110**

$$\delta^{13}C = -25.87\text{‰}$$

Charcoal coll from Beal Smith site, 8Da1043, Test Pit #1, level 4, 30 to 40cm, (25° 55' 25" N, 80° 28' 38" W) to date occupational chronology on Everglades tree island.

UM-1726. FS #242**3950 ± 90**

$$\delta^{13}C = +1.43\text{‰}$$

Busycon shell taken from Beal Smith site, 8Da1043, Test Pit #1, Level 11, 100 to 110cm, (25° 55' 25" N, 80° 28' 38" W) was dated to establish occupational sequence on Everglades tree island.

UM-1727. FS #313**1960 ± 70**

$$\delta^{13}C = -24.38\text{‰}$$

Charcoal recovered from Hog site, 8Da1045, Test Pit #1, Level 8, 70 to 80cm, (25° 53' 47" N, 80° 32' 37" W) was dated for chronology of occupation.

REFERENCE

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

VIENNA RADIUM INSTITUTE RADIOCARBON DATES X

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Measurements have continued with the same proportional counter system, pretreatment procedure, methane preparation and measurement, and calculation, as described previously (R, 1970, v 12, p 298-318). Uncertainties quoted are single standard deviations originating from standard, sample, background counting rates and half-life. No $^{13}\text{C}/^{12}\text{C}$ ratios were measured.

Sample descriptions have been prepared in cooperation with submitters.

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SAMPLE DESCRIPTIONS

I. GEOLOGIC, GLAZIOLOGIC, LIMNOLOGIC, AND FOREST SAMPLES

A. Austria

VRI-618. Podlanig, Kärnten **28,300 ± 700**

Wood in talus under Late Glacial Age ice-margin terrace, Podlanig (12° 54' 50" N, 46° 41' 10" E) near St Jacob im Lesachtal, Carinthia. Coll 1977 and subm by D van Husen, Geol Inst, TU Vienna. *Comment* (DvH): dates talus and stagnant water sediments of damming-up phase in Gail Valley.

VRI-619. Nieselach, Kärnten **26,300 ± 600**

Lignite from lignite horizon (Fritz, 1971) overlain by coarse gravel and by ground moraine at the top, Nieselach (46° 36' 30" N, 13° 30' 30" E), Gail Valley, Carinthia. Coll 1977 and subm by D Van Husen. *Comment* (DvH): chronologic fixation of lignite horizon in Würm Ice age.

Helfenberg series, OÖ

Samples from surroundings of Helfenberg, Mühlviertel, Upper Austria. Coll 1976 and subm by F Kral, Univ Bodenkultur, Vienna. *General Comment* (FK): question of forest history.

VRI-587. Afiesl **750 ± 70**

Wood (spruce) ca 1.5m below corn-field, Afiesl (48° 35' 15" N, 14° 08' 30" E), alt 750m. *Comment* (FK): date is max for end of former woodland.

VRI-588. Hinterau **590 ± 70**

Brown carr-peat at depth 14 to 24cm above which *Larix* is continuously found, Hinterau (48° 35' 50" N, 14° 08' 40" E), 720m NN. *Com-*

ment (FK): date indicates autochthonous *Larix* palynologically detected and gives max age for later clearing.

VRI-630. Flachau, Salzburg **<250**

Wood from stem below 10 ton-stone in landslide material at -4.5m in Griesgraben (47° 20' N, 13° 23' E), Flachau, Salzburg. Coll 1978 and subm by Forsttechnischer Dienst f Wildbach- u Lawinenverbauung, Salzburg. *Comment*: dates landslide.

VRI-631. Bockstein, Salzburg **4420 ± 100**

Wood 13.2m below ground from excavation of water power Sta Bockstein (47° 05' 13" N, 13° 06' 57" E) near Badgastein, Salzburg. Coll 1978 and subm by SAFE. *Comment* (SAFE): dates Holocene valley filling.

St Martin a Tg, series, Salzburg

Wood, St Martin am Tennengebirge, Salzburg. Coll 1978 and subm by W Weinmeister, Forsttechnischer Dienst f Wildbach- u Lawinenverbauung, Salzburg.

VRI-633. Sample 1 **2280 ± 100**

Branch or root ca 60cm below surface in uppermost bog layer overlain by sand (47° 29' 57" N, 13° 22' 44.5 E). *Comment* (WW): max age of sand deposition on alluvial cone of rivulet Schöberlbach and min age for cone.

VRI-634. Sample 2 **6130 ± 120**

Stem at base of rivulet Schöberlbach earlier covered by 6m dolomite detritus (47° 29' 57.5" N, 13° 20' 24" E). *Comment* (WW): dates flood causing fall of trees into rivulet bed.

VRI-464. Pass Thurn, Salzburg **11,560 ± 170**

Cyperaceae peat at base -3.2m of bog Wasenmoos, Pass Thurn (47° 18' 21" N, 12° 25' 03" E), 1205m alt, near Mittersill, Salzburg. Coll and subm by S Bortenschlager, Bot Inst, Univ Innsbruck. *Comment* (SB): age is min of ice retreat and fixes beginning of peat growth. Expected ca 13,000 BP.

VRI-594. Spital am Pyhrn, Steiermark **9680 ± 210**

Wood in rubble of E slope of Mt Mitterberg near Spital am Pyhrn (47° 40' N, 14° 20' E), Styria. Coll 1977 when tunneling Hwy A9 Pyhrn-autobahn and subm by H Auferbauer, Steiermärkische Landesregierung, Graz. *Comment* (HA): dates postglacial slope overburden.

Trieben series, Steiermark

Sphagnum peat from lowland moor Aubruckermoos near Trieben (47° 29' 20" N, 14° 30' 30" E), alt 690m, Styria. Coll 1974 and subm by F Kral.

General Comment (FK): dates palynologically detected events.