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UNIVERSITY OF MIAMI RADIOCARBON DATES V

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The following list of dates are selected from geologic and archaeologic samples measured in early 1975. The technique employed is liquid scintillation counting of wholly synthesized benzene as described by Noakes *et al* (1965) and discussed in R, v 16, p 402-408. Errors are reported as one standard deviation.

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SAMPLE DESCRIPTIONS

I. ARCHAEOLOGIC SAMPLES

A. El Salvador

Santa Leticia series

Three charcoal samples from artificial fill under 'Pot Belly' statue, 2nd terrace, Finca Santa Leticia, Apaneca area, El Salvador (13° 51′ 18″ N, 89° 47′ 32″ W). Coll 1969 and subm 1974 by S H Boggs.

General Comment (SHB): results indicate emplacement of statuary during Pre-Classic era. Culture presently unknown. Santa Leticia statuary emplacement corresponds chronologically with 'Pot Belly' emplacements at Finca Monte Alto, Guatemala (Berger, 1973; Cadwell *et al*, 1975).

2400 ± 60
UM-390. Santa Leticia 1 **450 BC**

2460 ± 130
UM-391. Santa Leticia 3 **510 BC**

2780 ± 210
UM-392. Santa Leticia 19-21 **830 BC**

B. Puerto Rico

Villa Taina series

Charcoal and shell from shell midden, Boquerón, Puerto Rico (18° 02′ 27″ N, 67° 11′ 33″ W). Charcoal pretreated with 5% NaOH for removal of humic acid. Dated to establish Arawak Indian habitation (Goodwin, 1973). Coll and subm 1974 by C Goodwin.

1300 ± 90
UM-398. Villa Taina 1Aa **AD 650**

Charcoal from 27cm beneath surface.

UM-399. Villa Taina 1Ab **1090 ± 100**
AD 860

Duplicate run of UM-398.

UM-400. Villa Taina 1B **1050 ± 80**
AD 900

Shell from 30cm beneath surface.

II. GEOLOGIC SAMPLES

A. United States

Caesars Creek Bank series

Shell and coral samples from 8 piston cores from .2 to 1.7m water, Caesars Creek Bank, Biscayne Bay, Florida. Carbonate mudbank—storm, tidal delta assoc with major tidal pass between Biscayne Bay and inner reef tract, SE coast of Florida. Dates depositional sequence of bank. Samples found *in situ* except UM-336 and -344. Coll and subm 1974 by E R Warzeski, RSMAS, Univ Miami.

Core 1 from .2m water. Core penetration 4.8m to bedrock (25° 23′ 00″ N, 80° 13′ 12″ W).

UM-297. Core 1 **1760 ± 100**
AD 190

Codakia orbicularis and *Porites divaricata* from 135 to 145 cm within core.

UM-326. Core 1 **3300 ± 80**
1350 BC

Codakia orbicularis from 290 to 300cm within core.

UM-327. Core 1 **3870 ± 80**
1920 BC

Codakia orbicularis from 335 to 345cm within core.

Core 2 from .5m water. Core penetration 5.3m to bedrock (25° 22′ 53″ N, 80° 13′ 01″ W).

UM-335. Core 2 **2040 ± 90**
90 BC

Codakia orbicularis, Astrea tecta americana, and *Porites divaricata* from 150 to 160cm within core.

UM-336. Core 2 **4200 ± 100**
2250 BC

Anodontia alba from 420 to 430cm within core. *Comment* (ERW): shell directly underlying storm mud layer. Shell was deposited after burial of UM-337.

UM-337. Core 2 **3600 ± 140**
1650 BC

Anodontia alba and *Laevicardium laevigatum* from 480 to 500cm within core.

Core 3 from 1.7m water. Core penetration 2.5m (25° 22′ 42″ N, 80° 12′ 50″ W).

UM-322. Core 3 **2300 ± 90**
350 BC

Codakia orbicularis from 235 to 245cm within core.

Core 4 from 1.7m water. Core penetration 4.6m to bedrock (25° 22′ 41″ N, 80° 12′ 48″ W). *Comment* (ERW): core penetrated buried tidal channel. UM-332 antedates cutting of channel and is below erosional surface of channel floor. UM-331, -344, and -330 record lateral migration of channel margin across core site.

UM-330. Core 4 **1540 ± 80**
AD 410

Porites divaricata from 80 to 90cm within core.

UM-344. Core 4 **3530 ± 130**
1580 BC

Porites divaricata, Astrea tecta americana, and *Tellina similis* from 255 to 265cm within core. *Comment* (ERW): UM-344 appears to be transported material.

UM-331. Core 4 **1880 ± 80**
AD 70

Anodontia alba from 310cm within core.

UM-322. Core 4 **3650 ± 100**
1700 BC

Laevicardium laevigatum from 360 to 370cm within core.

Core 5 from .7m water. Core penetration 5.4m (25° 22′ 32″ N, 80° 12′ 12″ W).

UM-321. Core 5 **2820 ± 480**
870 BC

Laevicardium laevigatum from 370 to 410cm within core.

UM-320. Core 5 **3480 ± 90**
1520 BC

Laevicardium laevigatum from 480 to 510cm within core.

Core 6 from .4m water. Core penetration 5.4m (25° 22′ 58″ N, 80° 12′ 15″ W).

UM-318. Core 6 **2020 ± 90**
70 BC

Laevicardium laevigatum and *Porites divaricata* from 360 to 380cm within core.

UM-319. Core 6 **2640 ± 100**
690 BC

Laevicardium laevigatum from 460 to 480cm within core.

Core 7 from .4m water. Core penetration 5.4m to bedrock (25° 22′ 21″ N, 80° 12′ 48″ W).

990 ± 80
UM-323. Core 7 **AD 960**

Manicina areolata from 280 to 290cm within core.

3530 ± 130
UM-324. Core 7 **1580 BC**

Laevicardium laevigatum, Tellina mera, and *Cumingia tellinoides* from 485 to 495cm within core.

Core 8 from .9m water. Core penetration 3.9m (25° 22′ 16″ N, 80° 13′ 00″ W).

240 ± 80
UM-333. Core 8 **AD 1710**

Astrea tecta americana, Natica canrena, and *Porites divaricata* from 200 to 210cm within core.

1920 ± 120
UM-334. Core 8 **AD 30**

Manicina areolata from 310 to 330cm within core.

Safety Valve series

Eight cores from Safety Valve tidal bar, Biscayne Bay, Florida. Dates establish pattern of tidal-bar formation relative to sea level rise (Plescia *et al,* 1975). Cores from .5 to 1m water. Core A (25° 39′ 03″ N, 80° 10′ 25″ W). Core B (25° 39′ 06″ N, 80° 10′ 05″ W). Core C (25° 37′ 44″ N, 80° 10′ 13″ W). Core D (25° 37′ 48″ N, 80° 10′ 00″ W). Core E (25° 37′ 12″ N, 80° 10′ 05″ W). Core F (25° 36′ 25″ N, 80° 10′ 30″ W). Core G (25° 36′ 00″ N, 80° 10′ 00″ W). Core H (25° 36′ 16″ N, 80° 09′ 45″ W). Coll and subm 1973, 1974 by J Plescia, Univ Miami.

900 ± 60
UM-309. Core A **AD 1050**

Shell from 12 to 18cm within core.

1700 ± 80
UM-505. Core A **AD 250**

Shell from 48 to 56cm within core.

1500 ± 80
UM-306. Core A **AD 450**

Porites coral from 61 to 69cm within core.

1520 ± 120
UM-495. Core A **AD 430**

Porites coral from 152 to 158cm within core.

3020 ± 110
UM-308. Core A **1070 BC**

Shell from 335 to 363cm within core.

UM-307. Core B — **3620 ± 90**; **1670 BC**

Shell from 399 to 424cm within core.

UM-310. Core B — $\mathbf{27{,}540^{+520}_{-560}}$; **25,590 BC**

Recrystallized limestone from 424 to 427cm within core.

UM-516. Core C — **960 ± 70**; **AD 990**

Shell from 175 to 182cm within core.

UM-514. Core C — **2360 ± 90**; **410 BC**

Shell from 250 to 262cm within core.

UM-515. Core D — **1380 ± 70**; **AD 570**

Shell from 71 to 79cm within core.

UM-517. Core D — **1230 ± 80**; **AD 720**

Porites coral from 71 to 79cm within core.

UM-513. Core D — **2500 ± 120**; **550 BC**

Shell from 320 to 343cm within core.

UM-502. Core E — **840 ± 80**; **AD 1110**

Porites coral from 0 to 10cm within core.

UM-499. Core E — **520 ± 60**; **AD 1430**

Porites coral from 24 to 32cm within core.

UM-496. Core E — **960 ± 70**; **AD 990**

Shell from 52 to 55cm within core.

UM-498. Core E — **4030 ± 110**; **2080 BC**

Shell from 175 to 183cm within core.

UM-503. Core E — **3130 ± 110**; **1180 BC**

Shell from 183 to 193cm within core.

UM-511. Core F — **320 ± 70**; **AD 1630**

Porites coral from 14 to 22cm within core.

UM-510. Core F — **660 ± 70**; **AD 1290**

Porites coral from 57 to 67cm within core.

1470 ± 80
UM-509. Core F **AD 480**

Porites coral from 159 to 168cm within core.

2230 ± 80
UM-507. Core F **280 BC**

Porites coral from 210 to 216cm within core.

4270 ± 100
UM-508. Core F **2320 BC**

Shell from 259 to 269cm within core.

19,840 ± 420
UM-512. Core F **17,890 BC**

Recrystallized limestone from 259 to 269cm within core.

1900 ± 140
UM-506. Core G **AD 50**

Porites coral from 261 to 270cm within core.

4200 ± 90
UM-500. Core H **2250 BC**

Porites coral from 25 to 33cm within core.

520 ± 80
UM-497. Core H **AD 1430**

Porites coral from 46 to 53cm within core.

900 ± 80
UM-504. Core H **AD 1050**

Porites coral from 86 to 94cm within core.

900 ± 80
UM-501. Core H **AD 1050**

Porites coral from 195 to 203cm within core.

B. Bahamas

Frazers Hog Cay series

Carbonate sediment from 3 cores, Frazers Hog Cay, Bahamas. Continuation of study on Frazers Hog Cay (R, v 17, p 410), to determine date of Holocene bank flooding and transgression (Crevello *et al*, 1975). Coll 1962 by J Imbrie; subm 1975 by P Crevello, Univ Miami, and H Buchanan.

2240 ± 60
UM-488. Core 855(cc)R **290 BC**

Oolitic sand from 242 to 262cm within core. From .75m water (25° 26′ 56″ N, 77° 56′ 45″ W).

2120 ± 70
UM-489. Core 858N **170 BC**

Shells from 120cm within core. From 2.2m water (25° 27′ 25″ N, 77° 53′ 14″ W).

960 ± 60
UM-490. Core 784-2 BN **AD 990**

Organic aggregate and grapestone sand from 20 to 30cm within core. From 1.5m water (25° 27′ 25″ N, 77° 53′ 14″ W).

1400 ± 100
UM-491. Core 784-2 BN **AD 550**

Organic aggregate and grapestone sand from 150cm within core. Same core as UM-490.

Haines Cay series

Marine-derived carbonates from beach and eolian dune ridge sediments. Dates provide temporal framework for interpretation of island fomation and Holocene sea level. Continuation of study on Haines Cay, Bahamas (R, v 17, p 118; Pasley *et al*, 1975). Dune A forms rocky shoreline on NE side of I. Lithified material is well-sorted, oolitic calcarenite. Dune B is W of Dune A. Semi-lithified material is oolitic, pelletoidal calcarenite. Dune C forms shoreline on NW side of I. Lithified material is well-sorted, oolitic calcarenite. Dune D is a massive back beach dune S of Dune A. Poorly lithified material is oolitic, pelletoidal calcarenite. Dune E extends S of Dunes A and B, W of Dune D. Semi-lithified material is oolitic, pelletoidal calcarenite. Coll and subm 1974 by D Pasley, RSMAS, Univ Miami, and S Locker.

5580 ± 100
UM-407. Dune A **3630 BC**

Fine grained oolites, alt 2m above MSL (25° 44′ 10″ N, 77° 49′ 08″ W).

6280 ± 100
UM-494. Dune A **4330 BC**

Fine grained oolites, alt 2m above MSL (25° 34′ 58″ N, 77° 49′ 07″ W).

5840 ± 100
UM-404. Dune A **3890 BC**

Fine grained oolites, alt 1.5m above MSL (25° 43′ 58″ N, 77° 49′ 07″ W). *Comment* (SL): UM-494 and -404 show reverse age trend relative to superposition.

4110 ± 111
UM-409. Dune B **2160 BC**

Medium grained oolites, alt 7m above MSL (25° 44′ 10″ N, 77° 49′ 08″ W).

3670 ± 90
UM-408. Dune B **1720 BC**

Medium grained oolites, alt 5m above MSL (25° 44′ 10″ N, 77° 49′ 08″ W). *Comment* (SL): UM-409 and -408 show reverse age trend relative to superposition.

UM-492. Dune C **6460 ± 90**
4510 BC

Fine grained oolites, alt 1m above MSL (25° 44′ 09″ N, 77° 49′ 12″ W).

UM-405. Dune D **1920 ± 80**
AD 30

Medium grained oolites, alt 2m above MSL (25° 43′ 58″ N, 77° 49′ 07″ W).

UM-493. Dune E **2020 ± 80**
70 BC

Medium grained oolites, alt 2m above MSL (25° 43′ 54″ N, 77° 49′ 09″ W).

UM-406. Beach sand **1860 ± 70**
AD 90

Mixed carbonate sand from intertidal zone, E of Dunes D and E (25° 43′ 57″ N, 77° 49′ 07″ W).

C. Martinique

Martinique series

Charcoal from pyroclastic surge sediments, near Mt Pelée, Martinique. Dated to determine age of surge sediments eminating from Mt Pelée. Coll and subm 1974 by G P L Walker, Imperial Coll Sci and Technol, London.

UM-394. Martinique 56 **1230 ± 80**
AD 720

Sample from non-pumiceous sediment, 2.6km S of Mt Pelée summit (14° 47′ N, 61° 10′ W).

UM-395. Martinique 75 **3110 ± 100**
1160 BC

Sample from non-pumiceous sediment, .5km NW of Quartière Démare, NE slope of Mt Pelée (14° 50′ N, 61° 07′ W). *Comment* (GPLW): precedes UM-396 surge sediment.

UM-396. Martinique 95 **2020 ± 80**
70 BC

Sample from pumice sediment, road cut at Morne Calebasse, 2.6km SE of Mt Pelée summit (14° 48′ N, 61° 09′ W).

UM-397. Martinique 131 **4940 ± 100**
2990 BC

Sample from non-pumiceous sediment, road cut .4km SW of Morne Rouge (14° 46′ N, 61° 08′ W).

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