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UNIVERSITY OF MIAMI RADIOCARBON DATES VII

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The following radiocarbon measurements are a partial list of geologic samples from S Florida dated during the summer of 1975. The technique used is liquid scintillation counting of wholly synthesized benzene as indicated in R, v 16, p 402-408 and R, v 18, p 210-220. Dates are calculated using a ^{14}C half-life of 5568 yr and errors are reported as one standard deviation. Before conversion, shell material was etched with HCl to remove all soft or powdery material. All wood and peat samples were treated with NaOH.

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SAMPLE DESCRIPTIONS

Lake Okeechobee series

Shell, peat, and gyttja from Lake Okeechobee, Florida. Continuation of study on sedimentary environment of lake (R, v 17, p 240-241; Gleason & Stone, 1975). Dates fresh water and marine influence on lake area. Coll and subm 1975 by P Gleason, Central and S Florida Flood Control Dist.

1860 ± 120

UM-554. Core LO 26 **AD 90**

Hydrobeids from 19 to 22cm within core (26° 58′ 30″ N, 80° 47′ 05″ W). Present as lenses and distinct strata. *Comment* (PG): dated to determine if Hydrobeids are reworked material in underlying Pleistocene Ft Thompson Fm.

+1150
29,320
−1350

UM-562. Cores 12 and 13 combined **27,370 BC**

Chione cancellata shells from base of mud in 30cm cores (27° 01′ 50″ N, 80° 47′ 20″ W). *Comment* (PG): brackish to marine shells used to determine age of most recent marine influence in lake.

+1940
38,660
−2570

UM-559. Grab 12 A **36,710 BC**

Rangia cuneata shells loose on lake bottom over a marl containing abundant *Rangia* (26° 54′ 20″ N, 80° 49′ 30″ W). *Comment* (PG): shells appear to represent a non-depositional surface during last 30,000 yr. Dated to establish age of brackish water shells.

+2180
39,710
−3010

UM-560. Grab 12 A **37,760 BC**

Duplicate run of UM-559.

31,130 ± 950

UM-636. Core LO 29 **29,180 BC**

Rangia cuneata shells from 82 to 93cm within core (26° 58′ 30″ N, 80° 47′ 05″ W). *Comment* (PG): *Rangia* bed overlain by fresh water gyttja and *Viviparus* zone. Dates last brackish water influence in lake.

32,740 ± 1120

UM-637. Sample Y **30,790 BC**

Rangia cuneata shells from within 15cm of surface under, and mixed with, several cm gyttja (26° 52′ N, 80° 49′ W). *Comment* (PG): dates last marine influence in lake.

32,560 ± 1040

UM-638. Sample X **30,610 BC**

Rangia cuneata shells near and similar to UM-637.

UM-646. Modern *Viviparus* **31% > modern**

Viviparus atop and in surface gyttja material covering bottom of lake. Shells contained living animal at time of colln. *Comment* (PG): hard water lake expected to show this effect by giving slightly older than modern 'age'.

3720 ± 130

UM-647. Core LO 27 **1770 BC**

Viviparus shells from 75 to 86cm within core (26° 58′ 30″ N, 80° 47′ 05″ W). *Comment* (PG): *Viviparus* zone underlies gyttja and overlies brackish water *Rangia cuneata* marl. Dates initiation of gyttja deposition.

4150 ± 90

UM-648. Core LO 31: 1 to 6cm **2200 BC**

Peat from within top 6cm of layer (26° 44′ 30″ N, 80° 47′ 30″ W), adjacent to Ritta I. *Comment* (PG): dates end of peat deposition in lake as fresh water level rose.

5490 ± 90

UM-649. Core LO 31: 30 to 38cm **3540 BC**

Peat from base of layer (26° 44′ 30″ N, 80° 47′ 30″ W) adjacent to Ritta I. *Comment* (PG): dates initiation of peat deposition in lake.

2670 ± 80

UM-650. Core LO 32: 1 to 6cm **720 BC**

Peat from within top 6cm of layer (26° 44′ 10″ N, 80° 48′ 20″ W) adjacent to Ritta I. *Comment* (PG): dates end of peat deposition in lake as fresh water level rose. See UM-648.

UM-555. Core LO 26 **3020 ± 70**
1070 BC

Gyttja and organic mud from 75 to 83cm within core of lake sediment (26° 58′ 30″ N, 80° 47′ 05″ W). *Comment* (PG): dates sediment and rate of deposition.

UM-558. Core LO 22 **5270 ± 140**
3320 BC

Helisoma shells (fresh water) from 49 to 57cm within core (26° 56′ 58″ N, 80° 41′ 10″ W). *Comment* (PG): dates marl-forming environment and maximum age of gyttja.

UM-561. Core LO 14 **13,160 ± 190**
11,210 BC

Carbonate marl from 43 to 46cm within core near base of gyttja (26° 57′ 50″ N, 80° 47′ 13″ W). *Comment* (PG): marl appears to be fresh water because of presence of *Helisoma* and absence of *Rangia* and *Chione*. Dates fresh-water environment in lake and maximum age for gyttja.

UM-563. Core 8, 15, 16, 22, 24 composite **3780 ± 100**
1830 BC

Viviparus shells combined from distinct strata of several 20cm cores in gyttja material W of Port Mayaca. *Comment* (PG): dates beginning of gyttja deposition in lake.

UM-564. Core LO 25 **4780 ± 180**
2830 BC

Viviparus shells from 75.5 to 82.5cm at base of gyttja (26° 58′ 30″ N, 80° 47′ 05″ W). *Comment* (PG): dates initiation of gyttja deposition in lake.

UM-565. Core LO 24: 0 to 12cm **2360 ± 100**
410 BC

Gyttja and organic mud from 0 to 12cm in core of lake bottom sediment (26° 58′ 30″ N, 80° 47′ 05″ W).

UM-566. Core LO 24: 14 to 23cm **2750 ± 80**
800 BC

Gyttja and organic mud.

UM-567. Core LO 24: 28 to 42cm **4450 ± 270**
2500 BC

Shell fraction of gyttja.

UM-568. Core LO 24: 52 to 60cm **3030 ± 80**
1080 BC

Gyttja and organic mud.

UM-569. Core LO 24: 75 to 83cm **3730 ± 110**
1780 BC

Gyttja and organic mud.

Sand Cut series

Shell and coral samples from rockpit in high bedrock ridge ca 5km E of Sand Cut on E side of Lake Okeechobee, Florida (26° 55′ N, 80° 35′ W). Coll and subm by P Gleason, July 1975, Central and S Florida Flood Control Dist.

+1750
35,250
−2230

UM-639. Ridge 1 **33,300 BC**

Marine shell hash from top of ridge. *Comment* (PG): represents most recent marine deposition on ridge.

31,270 ± 1230

UM-640. Ridge 2 **29,320 BC**

Marine shell hash from top of ridge. *Comment* (PG): marine shells could have either been deposited around same time as *Rangia cuneata* in lake center, or they could represent much older reworked material. Thought to date most recent deposition of marine carbonates.

24,360 ± 580

UM-641. Ridge 3 **22,410 BC**

Fresh-water gastropod shell hash from top of ridge. *Comment* (PG): dates most recent deposition on beach ridge.

+2520
37,630
−3690

UM-642. Ridge 4 **35,680 BC**

Corals from coarse shell hash from top of ridge. *Comment* (PG): dates most recent age of marine influence in Lake Okeechobee area.

3830 ± 110

UM-643. Pomaceae—A&B contact **1880 BC**

Pomaceae from 0.5m below surface at contact between base of peat and sandy marl. *Comment* (PG): dates most recent peat deposition on ridge.

4650 ± 140

UM-644. Lymnaea & Polygyra—A&B contact **2700 BC**

Lymnaea and *Polygyra* shells from 0.5m below surface at contact between base of peat and sandy marl. *Comment* (PG): dates most recent peat deposition on ridge.

3030 ± 100

UM-645. Heliosoma—A&B contact **1080 BC**

Heliosoma shells from 0.5m below surface at contact between base of peat and sandy marl. *Comment* (PG): dates most recent peat deposition on ridge.

Everglades Tree-island series

Peat samples from 3 cores in Everglades tree-island, small *Persea* type, in Conservation Area 1, The Everglades, Florida (26° 31′ 10″ N, 80° 19′ 40″ W).

General Comment (PG): stratigraphic age reversal suggests concurrence with theory that tree-islands formed in one place, later broke loose during flooding, came to rest over a younger area, and resumed growth.

UM-595.	**Core 16 (2): 59 to 64cm**	**210 ± 60** **AD 1740**
UM-596.	**Core 16 (3): 101 to 106cm**	**540 ± 70** **AD 1410**
UM-597.	**Core 16 (3): 131 to 137cm**	**780 ± 80** **AD 1170**
UM-598.	**Core 16 (3): 186 to 191cm**	**1880 ± 90** **AD 70**
UM-599.	**Core 16 (3): 201 to 207cm**	**2580 ± 100** **630 BC**
UM-600.	**Core 16 (3): 207 to 212cm**	**1890 ± 70** **AD 60**
UM-601.	**Core 16 (4): 228 to 233cm**	**2920 ± 90** **970 BC**
UM-602.	**Core 16 (4): 264 to 269cm**	**2500 ± 80** **550 BC**
UM-603.	**Core 16 (4): 295 to 300cm**	**3590 ± 80** **1640 BC**
UM-604.	**Core 16 (4): 308 to 314cm**	**4800 ± 100** **2850 BC**

References

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