

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.

UM-554. Core LO 26

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.

1860 ± 120

AD 90

+1150
29,320

-1350

UM-562. Cores 12 and 13 combined

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.

27,370 BC

+1940
38,660

-2570

UM-559. Grab 12 A

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.

36,710 BC

- +2180**
39,710
-3010
37,760 BC
- UM-560. Grab 12 A**
Duplicate run of UM-559.
- 31,130 ± 950**
29,180 BC
- UM-636. Core LO 29**
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**
30,790 BC
- UM-637. Sample Y**
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**
30,610 BC
- UM-638. Sample X**
Rangia cuneata shells near and similar to UM-637.
- 31% > modern**
- UM-646. Modern *Viviparus***
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**
1770 BC
- UM-647. Core LO 27**
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**
2200 BC
- UM-648. Core LO 31: 1 to 6cm**
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**
3540 BC
- UM-649. Core LO 31: 30 to 38cm**
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**
720 BC
- UM-650. Core LO 32: 1 to 6cm**
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

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

31,270 ± 1230
29,320 BC

UM-640. Ridge 2

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
22,410 BC

UM-641. Ridge 3

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

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

3830 ± 110
1880 BC

UM-643. Pomaceae—A&B contact

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
2700 BC

UM-644. Lymnaea & Polygyra—A&B contact

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
1080 BC

UM-645. Heliosoma—A&B contact

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

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