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MARINE RESOURCES RESEARCH INSTITUTE RADIOCARBON DATES III*

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Samples in this paper are a continuation of the Florida geologic samples, reported earlier (R, 1978, v 20, p 436-440). Each specimen analyzed in this list was a carbonate shell. All dates are from single shells as opposed to means of multiple shell samples.

As previously discussed (R, 1978, v 20, p 436-440), wide age ranges were found for the various Holocene beach deposits. Very old samples (>20,000 yr BP) were found in conjunction with comparatively young samples (2000 to 4000 yr BP), presumably due to reworking and incorporation of older deposits with younger ones.

Analytic procedures and age calculations were performed as previously reported (R, 1976, v 18, p 202-204). All ages were based on a ^{14}C half-life of 5570 years, using 0.95 NBS oxalic acid as the modern standard. Each sample was counted a minimum of 2000 minutes. Calculations were based on sample, standard, and background statistics to $\pm 1\sigma$.

After experimenting with laboratory procedures, the best overall results were obtained by utilizing a V_2O_5-alumina catalyst, prepared basically as described by Coleman *et al* (1972). Rather than heating the catalyst in a muffle furnace for 48 hr at 550°C, it is heated in a tube-furnace at 550°C for 1 to 2 hr in a stream of oxygen. Acetylene is allowed to sublime directly onto this catalyst after the catalyst has been heated *in vacuo* to remove adsorbed oxygen. Samples of benzene in the 2.5 to 3g range can be formed from the acetylene in 30 to 45 minutes. Overall yields are generally 70 to 80%, but occasionally may be >80%. This yield is somewhat low, possibly because of incomplete reaction in the CO_2-lithium step, rather than because of the catalyst.

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SAMPLE DESCRIPTIONS

Siesta Key, Sarasota Co

Samples coll from lithified calcarenite at Point-of-Rocks on Siesta Key (27° 14′ 42″ N, 82° 32′ 14″ W) at MSL.

MRRI-102.	**Shell (*Mercenaria* sp)**	**2520 ± 80**
MRRI-104.	**Shell (*Mercenaria* sp)**	**2500 ± 110**
MRRI-106.	**Shell (*Mercenaria* sp)**	**3140 ± 110**

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MRRI-119.	**Shell (*Mercenaria* sp)**	**4590 ± 210**
MRRI-120.	**Shell (*Mercenaria* sp)**	**4590 ± 90**

Gasparilla I., Lee Co

Samples coll from lithified calcarenite at Boca Grande on Gasparilla I. (26° 45′ 48″ N, 82° 15′ 55″ W) at MSL.

MRRI-122.	**Shell (*Mercenaria* sp)**	**5550 ± 140**
MRRI-123.	**Shell (*Mercenaria* sp)**	**4240 ± 320**
MRRI-124.	**Shell (*Mercenaria* sp)**	**6910 ± 290**
MRRI-125.	**Shell (*Mercenaria* sp)**	**2110 ± 110**

Cape Canaveral Launch Complex No. 19

Samples coll from beach ridge with poorly lithified calcarenite 0 to 1m above MLW (28° 30′ 26″ N, 80° 33′ 00″ W).

MRRI-130.	**Shell (*Anadara brasiliana*)**	**19,300 ± 970**
MRRI-131.	**Shell (*Busycon carica*)**	**4210 ± 80**
MRRI-132.	**Shell (*B carica*)**	**20,100 ± 640**
MRRI-134.	**Shell (*A ovalis*)**	**5030 ± 290**
MRRI-136.	**Shell (*A brasiliana*)**	**5550 ± 240**
MRRI-138.	**Shell (*Dinocardium robustum*)**	**6990 ± 370**
MRRI-143.	**Shell (*Anadara* sp)**	**4580 ± 170**
MRRI-144.	**Shell (*Anadara* sp)**	**7370 ± 220**
MRRI-145.	**Shell (*B carica*)**	**21,100 ± 900**

Launch Complex No. 11

Samples coll from unconsolidated sand 1 to 2m above MSL (28° 28′ 55″ N, 80° 31′ 45″ W).

MRRI-161.	**Shell (*B carica*)**	**20,600 ± 480**
MRRI-162.	**Shell (*Anadara* sp)**	**3920 ± 130**
MRRI-163.	**Shell (*Mercenaria* sp)**	**4900 ± 120**
MRRI-164.	**Shell (*B carica*)**	**19,700 ± 400**
MRRI-165.	**Shell (*B carica*)**	**2030 ± 80**
MRRI-166.	**Shell (*B carica*)**	**6110 ± 180**
MRRI-167.	**Shell (*Anadara* sp)**	**20,000 ± 710**
MRRI-168.	**Shell (*B carica*)**	**17,200 ± 600**
MRRI-169.	**Shell (*B carica*)**	**5090 ± 130**
MRRI-170.	**Shell (*B carica*)**	**18,300 ± 380**

Sanibel I., Lee Co Location No. 1

Samples coll from beach ridge sand ~70cm above MLW (26° 28′ 15″ N, 82° 09′ 30″ W).

MRRI-139.	**Shell (*Mercenaria* sp)**	**4420 ± 160**
MRRI-146.	**Shell (*D robustum*)**	**5280 ± 160**
MRRI-149.	**Shell (*Anadara* sp)**	**2410 ± 100**
MRRI-150.	**Shell (*B carica*)**	**2520 ± 120**
MRRI-153.	**Shell (*Mercenaria* sp)**	**2090 ± 80**
MRRI-157.	**Shell (*D robustum*)**	**2860 ± 90**
MRRI-159.	**Shell (*Mercenaria* sp)**	**3990 ± 290**

Location No. 3

Samples coll from beach ridge sand ~70cm above MLW (26° 27′ 26″ N, 82° 09′ 12″ W).

MRRI-141.	**Shell (*Mercenaria* sp)**	**4730 ± 110**
MRRI-147.	**Shell (*Mercenaria* sp)**	**6410 ± 100**
MRRI-148.	**Shell (*Mercenaria* sp)**	**5250 ± 100**
MRRI-151.	**Shell (*Mercenaria* sp)**	**3720 ± 140**
MRRI-152.	**Shell (*D robustum*)**	**3690 ± 80**
MRRI-154.	**Shell (*Mercenaria* sp)**	**3440 ± 120**
MRRI-156.	**Shell (*Mercenaria* sp)**	**3070 ± 120**
MRRI-201.	**Shell (*Mercenaria* sp)**	**4890 ± 150**
MRRI-204.	**Shell (*Anadara* sp)**	**3690 ± 90**

La Costa I., Lee Co Location No. 2

Samples coll from beach ridge sand ~1m above MSL (26° 41′ 06″ N, 82° 14′ 53″ W).

MRRI-175.	**Shell (*Mercenaria* sp)**	**2650 ± 80**
MRRI-176.	**Shell (*Spisula* sp)**	**1340 ± 110**
MRRI-180.	**Shell (*Anadara* sp)**	**2260 ± 310**
MRRI-182.	**Shell (*Strombus* sp)**	**1980 ± 120**
MRRI-183.	**Shell (*Anadara* sp)**	**1830 ± 130**
MRRI-184.	**Shell (*Anadara* sp)**	**1830 ± 110**
MRRI-188.	**Shell (*Spisula* sp)**	**2550 ± 170**
MRRI-189.	**Shell (*Spisula* sp)**	**2120 ± 150**

Location No. 3

Samples coll from beach ridge sand ~1m above MSL (26° 41′ 06″ N, 82° 15′ 00″ W).

MRRI-177.	**Shell (*Mercenaria* sp)**	**2600 ± 120**
MRRI-178.	**Shell (*B carica*)**	**2270 ± 90**
MRRI-179.	**Shell (*Anadara* sp)**	**2410 ± 80**
MRRI-185.	**Shell (*B carica*)**	**2200 ± 80**
MRRI-186.	**Shell (*D robustum*)**	**2160 ± 70**
MRRI-187.	**Shell (*Mercenaria* sp)**	**1980 ± 70**

Orange Cove

Samples coll from beach ridge with poorly lithified calcarenite 0 to 50cm above MLW (26° 39′ 55″ N, 82° 14′ 30″ W).

MRRI-190.	**Shell (*Mercenaria* sp)**	**2920 ± 90**
MRRI-191.	**Shell (*B carica*)**	**3810 ± 200**
MRRI-192.	**Shell (*Mercenaria* sp)**	**3120 ± 90**
MRRI-193.	**Shell (*Mercenaria* sp)**	**3750 ± 230**
MRRI-195.	**Shell (*Mercenaria* sp)**	**3680 ± 100**
MRRI-196.	**Shell (*Mercenaria* sp)**	**3770 ± 90**
MRRI-199.	**Shell (*Mercenaria* sp)**	**4510 ± 110**
MRRI-202.	**Shell (*Mercenaria* sp)**	**3050 ± 100**
MRRI-203.	**Shell (*D robustum*)**	**3640 ± 130**

North Captiva I., Lee Co

Samples coll from beach ridge sand and poorly lithified calcarenite 0 to 1m above MSL (26° 35′ 50″ N, 82° 13′ 10″ W).

MRRI-205.	**Shell (*Mercenaria* sp)**	**4100 ± 80**
MRRI-206.	**Shell (*Mercenaria* sp)**	**1880 ± 80**
MRRI-207.	**Shell (*Mercenaria* sp)**	**3130 ± 80**
MRRI-208.	**Shell (*Mercenaria* sp)**	**2230 ± 70**
MRRI-209.	**Shell (*Mercenaria* sp)**	**4620 ± 80**
MRRI-210.	**Shell (*Mercenaria* sp)**	**3450 ± 100**
MRRI-211.	**Shell (*Mercenaria* sp)**	**4800 ± 110**
MRRI-212.	**Shell (*Mercenaria* sp)**	**4060 ± 110**

References

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