

**MARINE RESOURCES RESEARCH INSTITUTE  
RADIOCARBON DATES IV\***

THOMAS D MATHEWS and FONDA L KEARNS

Marine Resources Research Institute, PO Box 12559,  
Charleston, South Carolina 29412

The results presented in this date list are from the same sampling program previously reported (R, 1978, v 20, p 436-440). Each sample reported herein was geologic in origin and, in most instances, represents a single shell date.

As discussed earlier (R, 1978, v 20, p 436-440), wide age ranges were found at some sites due to reworking and the incorporation of other deposits into younger ones. Not all sites had such extreme ranges, since the age range at one location was approx 800 yr as opposed to 18,000 yr.

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

ACKNOWLEDGMENTS

Samples were submitted and field work was directed by F W Stapor, Jr, Marine Resources Research Institute, Charleston, South Carolina. Thanks are extended to C DuPree for typing the manuscript.

*A. South Carolina coastal samples*

**Charleston 1**

Samples coll from tidal flat sand ca 1m above MLW (32° 39' 00" N, 79° 59' 35" W).

<b>MRRI-216.</b>	Shell ( <i>Mercenaria</i> sp)	<b>4420 ± 100</b>
<b>MRRI-217.</b>	Shell ( <i>Dinocardium robustum</i> )	<b>5600 ± 110</b>
<b>MRRI-219.</b>	Shell ( <i>D robustum</i> )	<b>6130 ± 100</b>
<b>MRRI-220.</b>	Shell ( <i>D robustum</i> )	<b>8250 ± 120</b>
<b>MRRI-221.</b>	Shell ( <i>Mercenaria</i> sp)	<b>4230 ± 90</b>
<b>MRRI-222.</b>	Shell ( <i>D robustum</i> )	<b>18,500 ± 390</b>
<b>MRRI-223.</b>	Shell ( <i>Anadara brasiliana</i> )	<b>1240 ± 100</b>
<b>MRRI-224.</b>	Shell ( <i>Mercenaria</i> sp)	<b>8390 ± 160</b>
<b>MRRI-226.</b>	Shell ( <i>Mercenaria</i> sp)	<b>4560 ± 140</b>
<b>MRRI-227.</b>	Shell ( <i>D robustum</i> )	<b>4150 ± 130</b>
<b>MRRI-258.</b>	Shell ( <i>D robustum</i> )	<b>5870 ± 130</b>

\* Contribution No. 125 from the South Carolina Marine Resources Center

**MRRI-261.** Shell (*A brasiliana* with periostracum ligament on hinge) 4170 ± 140

**MRRI-262.** Shell (*A brasiliana* with periostracum ligament on hinge) 4370 ± 170

Samples coll from clay bed ca 70cm above MLW.

**MRRI-254.** Shell (right valve of articulated *Mercenaria* sp) 4270 ± 90

**MRRI-256.** Shell (left valve of MRRI-254) 4450 ± 120

### Charleston 2

Samples coll from tidal flat sand ca 10 to 40cm above MLW (32° 39' 52" N, 79° 59' 35" W).

**MRRI-228.** Shell (left valve of articulated *Mercenaria* sp) 4310 ± 100

**MRRI-229.** Shell (right valve of MRRI-228) 4490 ± 100

**MRRI-230.** Shell (*Mercenaria* sp) 4380 ± 100

**MRRI-231.** Shell (*A ovalis*) 5390 ± 120

**MRRI-232.** Shell (*Busycon carica*) 4810 ± 110

**MRRI-233.** Shell (*B carica*) 17,400 ± 470

**MRRI-234.** Shell (*D robustum*) 6180 ± 100

**MRRI-235.** Shell (*B carica*) 5600 ± 110

**MRRI-236.** Shell (*D robustum*) 23,300 ± 560

**MRRI-237.** Shell (*Trachycardium egmontianum*) 4450 ± 150

### Charleston 3

Samples coll from shell bed 1 to 1.5m above MLW (32° 37' 14" N, 80° 01' 53" W).

**MRRI-249.** Shell (*D robustum*) 2850 ± 80

**MRRI-250.** Shell (*D robustum*) 3730 ± 120

Samples coll from tidal flat sand 0 to 70cm above MLW.

**MRRI-238.** Shell (articulated *Dosinia discus*) 3660 ± 140

**MRRI-239.** Shell (articulated *A brasiliana*) 2920 ± 220

**MRRI-240.** Shell (*Mercenaria* sp) 3770 ± 80

**MRRI-241.** Shell (*D robustum*) 18,500 ± 440

**MRRI-242.** Shell (*A brasiliana*) 4240 ± 170

<b>MRRI-243.</b>	<b>Shell (<i>A brasiliana</i>)</b>	<b>3400 ± 160</b>
<b>MRRI-244.</b>	<b>Shell (<i>B carica</i>)</b>	<b>3980 ± 170</b>
<b>MRRI-246.</b>	<b>Shell (<i>B carica</i>)</b>	<b>3630 ± 200</b>

**Folly Island, Charleston Co**

Samples coll from sand bed 1 to 2m above MLW (72° 39' 38" N, 79° 57' 16" W).

<b>MRRI-263.</b>	<b>Shell (left valve of articulated <i>Mercenaria</i> sp)</b>	<b>1230 ± 80</b>
<b>MRRI-274.</b>	<b>Shell (right valve of MRRI-263)</b>	<b>1670 ± 80</b>
<b>MRRI-275.</b>	<b>Shell (articulated <i>Mercenaria</i> sp)</b>	<b>1230 ± 70</b>
<b>MRRI-276.</b>	<b>Shell (right valve of articulated <i>Mercenaria</i> sp)</b>	<b>2010 ± 110</b>
<b>MRRI-277.</b>	<b>Shell (left valve of MRRI-276)</b>	<b>2020 ± 90</b>

*B. Georgia coastal samples***Ossabaw Island, Bryan Co**

Samples coll from clay layer ca 1.2m above MLW (31° 46' 50" N, 81° 05' 41" W).

<b>MRRI-264.</b>	<b>Shell (articulated <i>Mercenaria</i> sp in life position at top of clay bed)</b>	<b>2960 ± 100</b>
<b>MRRI-266.</b>	<b>Shell (left valve of articulated <i>Mercenaria</i> sp)</b>	<b>3030 ± 70</b>
<b>MRRI-267.</b>	<b>Shell (right valve of MRRI-266)</b>	<b>2890 ± 90</b>

Sample coll from sand unit above clay layer ca 2 to 2.5m above MLW. *Comment* (FWS, Jr): sample may be reworked from lower clay layer.

<b>MRRI-265.</b>	<b>Shell (articulated <i>A brasiliana</i>)</b>	<b>3330 ± 90</b>
------------------	--	------------------

*C. Florida coastal samples***North Captiva Island, 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).

<b>MRRI-213.</b>	<b>Shell (<i>Busycon</i> sp)</b>	<b>5620 ± 160</b>
<b>MRRI-214.</b>	<b>Reef (<i>Vermetus nigricans</i> Dall)</b>	<b>6890 ± 140</b>
<b>MRRI-215.</b>	<b>Shell (<i>Mercenaria</i> sp)</b>	<b>6410 ± 120</b>
<b>MRRI-245.</b>	<b>Reef (<i>V nigricans</i> Dall)</b>	<b>5650 ± 120</b>
<b>MRRI-248.</b>	<b>Reef (<i>V nigricans</i> Dall)</b>	<b>6310 ± 130</b>

<b>MRRI-251.</b>	<b>Reef (<i>V nigricans</i> Dall)</b>	<b>6140 ± 110</b>
<b>MRRI-252.</b>	<b>Reef (<i>V nigricans</i> Dall)</b>	<b>5490 ± 120</b>
<b>MRRI-253.</b>	<b>Reef (<i>V nigricans</i> Dall)</b>	<b>6330 ± 110</b>
<b>MRRI-255.</b>	<b>Reef (<i>V nigricans</i> Dall)</b>	<b>6160 ± 100</b>
<b>MRRI-291.</b>	<b>Shell (<i>Mercenaria mercenaria</i>)</b>	<b>6540 ± 100</b>
<b>MRRI-295.</b>	<b>Shell (<i>Noetia ponderosa</i>)</b>	<b>5740 ± 200</b>
<b>MRRI-296.</b>	<b>Shell (<i>Busycon</i> sp)</b>	<b>4670 ± 110</b>
<b>MRRI-297.</b>	<b>Shell (<i>D robustum</i>)</b>	<b>5150 ± 240</b>
<b>MRRI-298.</b>	<b>Shell (<i>Mercenaria</i> sp)</b>	<b>4540 ± 110</b>
<b>MRRI-299.</b>	<b>Shell (<i>D robustum</i>)</b>	<b>7430 ± 160</b>
<b>MRRI-300.</b>	<b>Shell (<i>D robustum</i>)</b>	<b>5440 ± 150</b>
<b>MRRI-301.</b>	<b>Shell (<i>M mercenaria</i>)</b>	<b>4280 ± 90</b>
<b>MRRI-302.</b>	<b>Shell (<i>Mercenaria</i> sp)</b>	<b>7250 ± 290</b>
<b>MRRI-303.</b>	<b>Shell (<i>M mercenaria</i>)</b>	<b>6940 ± 120</b>

**La Costa Island, Lee Co, Pejuan Point**

Samples coll from beach ridge with poorly lithified calcarenite 0 to 80cm above MLW (26° 37' 11" N, 82° 13' 36" W).

<b>MRRI-257.</b>	<b>Shell (8 to 10 <i>Spisula raveneli</i> Conrad, some articulated, possibly in growth position)</b>	<b>4360 ± 120</b>
<b>MRRI-259.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>4440 ± 120</b>
<b>MRRI-260.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>4900 ± 120</b>
<b>MRRI-268.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>5100 ± 90</b>
<b>MRRI-269.</b>	<b>Shell (<i>Mercenaria</i> sp)</b>	<b>2130 ± 130</b>
<b>MRRI-270.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>3040 ± 80</b>
<b>MRRI-271.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>3370 ± 90</b>
<b>MRRI-272.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>3570 ± 130</b>
<b>MRRI-273.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>4000 ± 110</b>
<b>MRRI-280.</b>	<b>Shell (articulated <i>S raveneli</i> Conrad)</b>	<b>5140 ± 170</b>
<b>MRRI-281.</b>	<b>Shell (articulated <i>S raveneli</i> Conrad)</b>	<b>4910 ± 90</b>
<b>MRRI-282.</b>	<b>Shell (<i>S raveneli</i> Conrad)</b>	<b>5650 ± 120</b>

**MRRI-294. Shell (*D robustum*) 5130 ± 90**

#### North Tip of Island

Samples coll from layer of quartz sand and shell fragments 0.5m above MSL (26° 42' 30" N, 82° 15' 00" W). *Comment* (FLK): MRRI-283, -285, and -286 were not acid etched in pretreatment.

**MRRI-283. Shell (articulated *S raveneli* Conrad) 5170 ± 100**

**MRRI-285. Shell (articulated *S raveneli* Conrad) 5790 ± 140**

**MRRI-286. Shell (articulated *S raveneli* Conrad) 4850 ± 110**

**MRRI-287. Shell (articulated *S raveneli* Conrad) 5600 ± 170**

**MRRI-288. Shell (articulated *S raveneli* Conrad) 5560 ± 190**

**MRRI-292. Shell (articulated *S raveneli* Conrad) 4990 ± 90**

**MRRI-293. Shell (*D robustum*) 5400 ± 90**

#### Gasparilla Island, Lee Co

Samples coll from drainage ditch ca 1m below ground level in spoil from ditch composed of quartz sand and shell fragments (26° 47' N, 82° 16' N).

**MRRI-289. Shell (articulated *S raveneli* Conrad) 4550 ± 160**

**MRRI-290. Shell (articulated *S raveneli* Conrad) 4700 ± 370**

#### REFERENCES

- Mathews, T D, 1976, Marine Resources Research Institute radiocarbon dates I: Radiocarbon, v 18, p 202-204.  
 \_\_\_\_\_ 1978, Marine Resources Research Institute radiocarbon dates II: Radiocarbon, v 20, p 436-440.