

PROGRESS REPORT
FOR THE THIRTY-SIXTH QUARTER

On

STUDY OF WOODBORER POPULATIONS
IN RELATION TO THE
OYSTER CREEK NUCLEAR
GENERATING STATION

To

GPU NUCLEAR CORPORATION

May 31, 1984

by

R.E. Hillman and C.I. Belmore

REPORT NO. 15235

February 1, 1984 to April 30, 1984

BATTELLE
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Duxbury, Massachusetts 02332

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EXECUTIVE SUMMARY

This progress report presents data from field and laboratory work during the period February 1 to April 30, 1984. Also included are the results of observations on gonad development in samples collected in January, February and March, 1984.

All field work during this quarter was carried out by GPU Nuclear personnel. Temperature, salinity, dissolved oxygen and pH were measured and recorded at each of the 20 stations during the three periods of exposure panel exchange.

The exposure panel exchange in March, 1984, was a week later than scheduled due to weather conditions. Panels installed in March were pre-soaked for three weeks instead of the standard two weeks.

A few Limnoria tunnels were found in the long-term exposure panels removed from the station at the mouth of Oyster Creek in February, 1984. Two of the tunnels were occupied and five of the seven tunnels were made by juveniles.

No unusual aspects in the biology of the teredinids collected during the present reporting period were observed. Gonadal tissues from the January collections showed mostly spent or early active stages. Those studied from the February and March collections showed mostly early active stages, as gonad development proceeds toward the spring and early summer spawning periods.

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INTRODUCTION

Battelle's New England Marine Research Laboratory is conducting an investigation to determine whether the Oyster Creek Nuclear Generating Station is affecting the resident marine borer population in Oyster Creek to the extent that that population is contributing significantly to marine borer-caused damage in Barnegat Bay.

A description of the program and procedures used may be found in the eighth annual report titled, "Study of Woodborer Populations in Relation to the Oyster Creek Generating Station", dated February 15, 1984.

This report presents data for the thirty-sixth quarterly period from February 1 to April 30, 1984.

PROCEDURES AND INTERIM DATA

Exposure panels

The long-term and short-term exposure panels were retrieved and replaced with new untreated pre-soaked (for two weeks) panels at the 20 exposure sites in Barnegat Bay and adjacent waters (Figure 1) during the periods of February 13-14, March 19-20, and April 16-17, 1984. Long-term and short-term panels at all stations were retrieved and replaced by personnel from GPU's Oyster Creek Nuclear Generating Station.

Exposure panels installed in March, 1984 were pre-soaked for three (3) weeks due to postponement of the panel exchange for one week because of weather conditions.

Table 1 describes the geographical locations of the exposure sites. Data from the laboratory examination of the panels are presented in Tables 2 through 5.

Water Quality

Salinity, water temperature, dissolved oxygen and pH were taken at each site by the GPU Nuclear field team. Results for February, March, and April, 1984 are presented in Tables 6 through 8.

Teredinid Gonadal Development Studies

Table 9 shows the gonad condition of teredinid borers collected in January, February, and March, 1984. Included are results from panels exposed for periods ranging from 6 to 12 months.

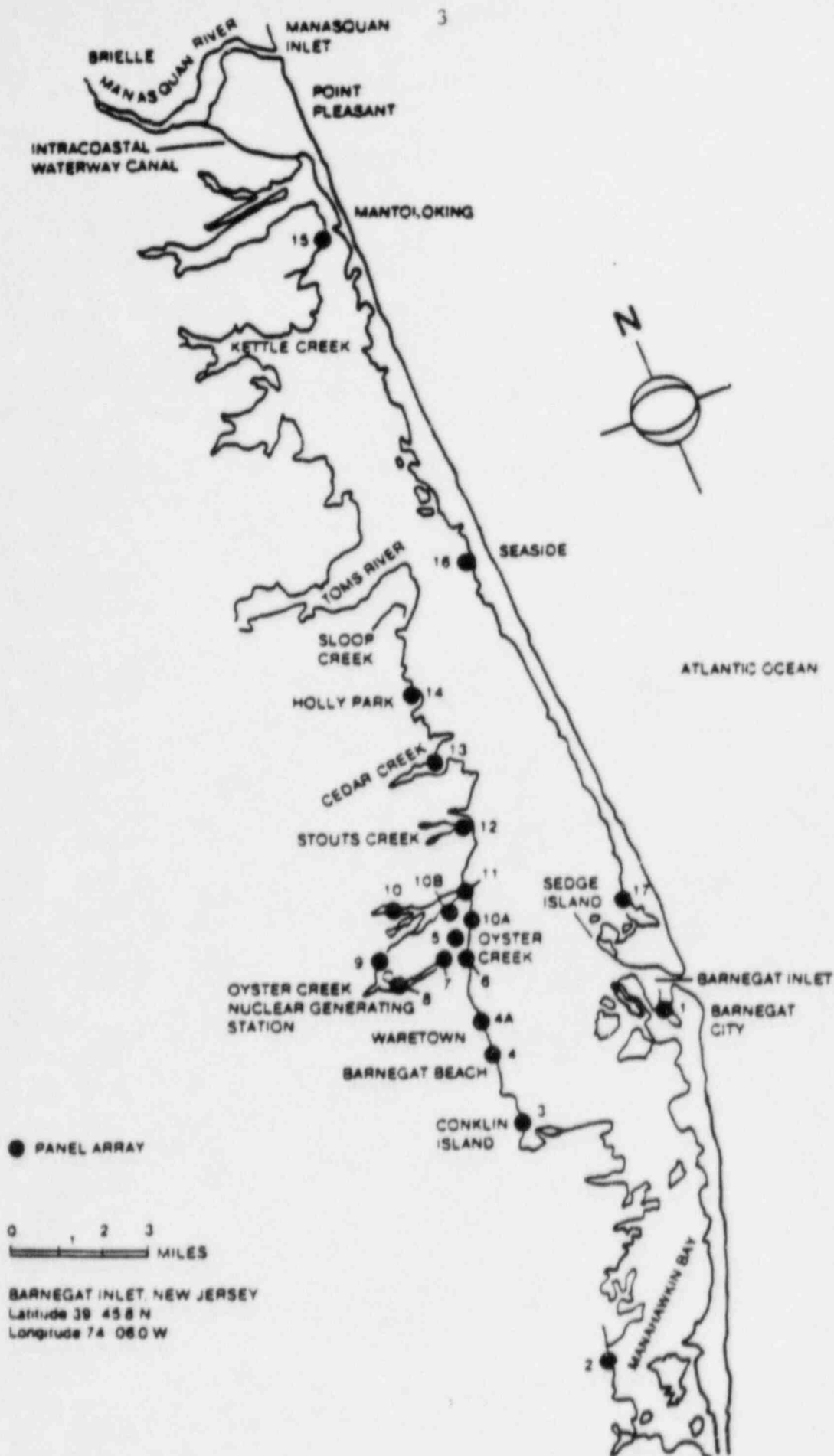


FIGURE 1. OUTLINE OF BARNEGAT BAY SHOWING GEOGRAPHIC LOCATIONS OF EXPOSURE PANELS

TABLE 1. GEOGRAPHICAL LOCATIONS OF BATTELLE NEW ENGLAND MARINE RESEARCH LABORATORY'S EXPOSURE PANEL ARRAYS IN BARNEGAT BAY, NEW JERSEY

Site No.	Site	Structure to be used for Suspension of Rack	Nearest Previous Data Stations	Approximate Latitude and Longitude
1.	Barnegat Coast Guard Station, Barnegat Inlet	Finger Pier Bulkhead	WC 1 WFCL 1948-1967	Lat. 39° 45.8'N Long. 74° 06.5'W
2.	Ashton Marina 1450 Bay Ave. Manahawkin	Bulkhead	WC 13, 14	Lat. 39° 40'N Long. 74° 13'W
3.	Iggie's Marina East Bay Ave. Barnegat (Conklin Island)	Bulkhead	WC 16, 17, 18, 19	Lat. 39° 45'N Long. 74° 12.5'W
4.	Liberty Harbor Marina Washington Ave. Waretown	Bulkhead	WC 21 R. Turner Rutgers U.	Lat. 39° 47'N Long. 74° 11'W
4-A*.	Holiday Harbor Marina Lighthouse Drive Waretown	Bulkhead R. Turner Rutgers U.	WC 21	Lat. 39° 48'N Long. 74° 11'N
5.	Mouth of Oyster Creek, Lot 4, Compass Road Offshore End	Dock	WC 29, 30 Rutgers U.	Lat. 39° 48.5'N Long. 74° 10.3'W
6.	Oyster Creek I Lagoon, Inshore End 37 Capstan Drive	Dock		Lat. 39° 48.5'N Long. 74° 10.35'W

TABLE 1. (Continued)

Site No.	Site	Structure to be used for Suspension of Rack	Nearest Previous Data Stations	Approximate Latitude and Longitude
7.	Private Dock Dock Ave. Oyster Creek Sands Pt. Harbor Waretown	End of Dock	WC 27,28 R. Turner Rutgers U.	Lat. 39° 48.5'N Long. 74° 11.1'W
8*.	Oyster Creek Discharge Canal	Bulkhead 1500 ft. east of the R.R. bridge	WC 26	Lat. 39° 48.7'N Long. 74° 12'W
9*.	Forked River South Branch Intake Canal	Metal pier	WC 31	Lat. 39° 49.2'N Long. 74° 12.2'W
10.	Teds Marina Bay Ave. Forked River	Pier	WC 33, 34	Lat. 39° 50.1'N Long. 74° 11.6'W
10A*.	Private Dock 1217 Aquarius Ct. Forked River	Under Dock		Lat. 39° 49'N Long. 74° 10'W
10B*.	Private Dock 1307 Beach Blvd. Forked River	Under Dock		Lat. 39° 49.4'N Long. 74° 10.1'W
11.	Forked River (near mouth) 1413 River View Drive	Bulkhead	WC 35 Rutgers U.	Lat. 39° 49.7'N Long. 74° 10'W

TABLE 1. (Continued)

Site No.	Site	Structure to be used for Suspension of Rack	Nearest Previous Data Stations	Approximate Latitude and Longitude
12.	Stouts Creek 1273 Capstan Drive	Bulkhead	WC 38, 40, 41 R. Turner Wurtz Rutgers U.	Lat. 39° 50.5'N Long. 74° 08.8'W
13.	Rocknak's Yacht Basin Seaview Ave. Lanoka Harbor Cedar Creek	End of Pier	WC 46	Lat. 39° 52'N Long. 74° 09'W
14.	Dicks Landing Island Drive Bayville (Holly Park)	Pier	WC 49 R. Turner Nelson	Lat. 39° 54'W Long. 74° 08.1'W
15.	Winter Yacht Basin Inc. Rt. 528 Mantoloking Bridge	Pier	WC 57	Lat. 40° 02.5'N Long. 74° 04.9'W
16*.	Berkely Yacht Basin J. Street Seaside	Pier	WC 60, 61	Lat. 39° 55.9'N Long. 74° 04.9'W
16A*.	Municipal Dock Seaside Heights	Pier	WC 60, 61	Lat. 39° 56.6'N Long. 74° 04.9'W
16B*.	Bayside Boats State Highway 35 and Bay Boulevard Seaside Heights, NJ	Pier	WC 60, 61	Lat. 39° 56.6'N Long. 74° 04.9'W

TABLE 1. (Continued)

Site No.	Site	Structure to be used for Suspension of Rack	Nearest Previous Data Stations	Approximate Latitude and Longitude
17.	Island Beach State Park (Sedge Island)	Pier	WC 68	Lat. 39° 47.1'N Long. 74° 05.9'W

All exposure panel racks suspended in a minimum water depth at mean low water of at least three feet. Racks hung with nylon line from existing structures so the bottom panels are close to, but not touching the bottom.

WC = Woodward-Clyde

WFCL = William F. Clapp Laboratories

- * Site 4-A installed April, 1977.
- Sites 10A, 10B installed April, 1978.
- Site 16 discontinued November, 1981.
- Site 16A installed December, 1981 - discontinued June, 1982.
- Site 16B installed June, 1982.
- Sites 8 and 9 moved from original locations November, 1983.

TABLE 2. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED FEBRUARY 13-14, 1984

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P*	600+	99		600+ Teredinidae**	Only 15% of panel received. None live.
	C	0				
2	P	1	<2	113	1 <u>T. navalis</u>	
	C	0				
4	P	3	<1	<1	3 Teredinidae**	
	C	0				
5	P	1	<1	32	1 <u>B. gouldi</u>	
	C	0				
10A	P	1	2	145	1 <u>T. navalis</u>	
	C	0				
10B	P	1	2	135	1 <u>B. gouldi</u> ,	
	C	0				
11	P	9	5	2-165	5 <u>B. gouldi</u> , 2 <u>T. navalis</u> 2 Teredinidae**	
	C	0				
12	P	1	1	85	1 <u>T. navalis</u>	
	C	0				
13	P	2	<1	<1-6	2 Teredinidae**	
	C	0				
14	P	3	1	<1-100	2 <u>B. gouldi</u> , 1 Teredinidae**	
	C	0				
15	P	1	<1	<1	1 Teredinidae**	
	C	0				
17	P	20	2	<1-85	12 <u>T. navalis</u> , 1 <u>Teredo</u> spp., 7 Teredinidae**	
	C	0				

Stations 3, 4A, 6-10, 16B - No Teredinidae present.

P = Long-term panel submerged August 1-2, 1983.

C = Short-term panel submerged January 9-10, 1984.

* = Long-term panel removed November 7, 1983 due to severity of attack.

** = Not speciated due to size or condition.

TABLE 3. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED MARCH 19-20, 1984

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification
1	P	500 \pm	10	<1-44	130 <i>T. navalis</i> , 370 <i>Teredinidae</i> *
	C	0			
11	P	22	<1	<1-12	5 <i>Teredo</i> spp., 17 <i>Teredinidae</i> *
	C	0			
14	P	4	<1	1-5	1 <i>Bankia</i> spp., 3 <i>Teredinidae</i> *
	C	0			
17	P	16	<1	<1-6	2 <i>Teredo</i> spp., 14 <i>Teredinidae</i> *
	C	0			

Stations 2-10B, 12, 13, 15, 16B - No *Teredinidae* present.

P = Long-term panel submerged September 6-7, 1983.

C = Short-term panel submerged February 13-14, 1984.

* = Not speciated due to size or condition.

TABLE 4. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED APRIL 16-17, 1984

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification
1	P	680	1	<1-2	680 Teredinidae*
	C	0			
17	P	2	<1	1	2 Teredinidae*
	C	0			

Stations 2-16B, - No Teredinidae present.

P = Long-term panel submerged October 4-5, 1983.

C = Short-term panel submerged March 19-20, 1984.

* = Not speciated due to size.

TABLE 5. INCIDENCE OF LIMNORIA IN PANELS REMOVED FEBRUARY, MARCH, AND APRIL, 1984

Station	Panel	February		March		April	
		No. of Tunnels	No. of Specimens	No. of Tunnels	No. of Specimens	No. of Tunnels	No. of Specimens
1	P	0*		5	0	5	3
	C	0		0		0	
2	P	50	10	5	2	2	1
	C	0		0		0	
3	P	2	2	1	0	0	
	C	0		0		0	
4A	P	380	300	30	10	0	
	C	0		0		0	
5	P	7	2	0		0	
	C	0	0	0		0	

Stations 4, 6-17, no Limnoria present.

P = Long-term panel, submerged 6 months.

C = Short-term panel, submerged 1 month.

* = Panel removed November 7, 1983 due to severe teredinid attack.

TABLE 6. WATER QUALITY AT EXPOSURE PANEL STATIONS
FEBRUARY, 1984

Station	Date	Time	Depth in Feet	Salinity o/oo	Temperature (°C)	O ₂ (mg/l)	pH
1	2/13/84	0920	2.5	28.2	4.8	11.6	8.2
2	2/13/84	1000	2.0	19.8	5.3	11.6	8.2
3	2/13/84	1030	1.0	21.8	5.0	13.2	8.3
4	2/13/84	1050	3.0	21.8	5.0	12.2	8.1
4A	2/13/84	1100	1.5	17.5	5.0	12.6	8.3
5	2/13/84	1142	1.0	7.0	6.4	13.2	7.2
6	2/13/84	1200	1.5	11.8	3.6	13.8	8.1
7	2/13/84	1215	2.0	17.0	6.0	12.6	8.1
8	2/13/84	1234	1.5	3.3	7.2	13.3	6.7
9	2/13/84	1350	5.0	16.5	5.3	12.0	7.7
10	2/13/84	1523	3.0	17.1	5.3	12.6	7.9
10A	2/13/84	1420	0.8	14.6	5.3	12.8	8.0
10B	2/13/84	1440	2.0	16.9	5.3	13.2	8.2
11	2/13/84	1456	0.8	17.1	5.4	12.6	8.3
12	2/13/84	1550	1.5	15.5	5.0	12.4	7.9
13	2/14/84	1242	2.0	2.8	8.6	13.0	6.7
14	2/14/84	1225	3.0	14.2	6.8	13.1	8.3
15	2/14/84	0900	2.0	18.2	6.3	12.4	7.9
16B	2/14/84	0938	3.5	14.3	5.4	13.6	8.2
17	2/14/84	1040	1.0	24.8	8.8	12.1	8.3

TABLE 7. WATER QUALITY AT EXPOSURE PANEL STATIONS
MARCH, 1984

Station	Date	Time	Depth in Feet	Salinity o/oo	Temperature (°C)	O ₂ (mg/l)	pH
1	3/19/84	0910	7.0	25.2	5.2	10.4	7.8
2	3/19/84	0945	5.5	19.2	6.0	9.5	7.7
3	3/19/84	1012	2.0	18.2	6.0	9.6	7.7
4	3/19/84	1033	4.0	18.5	6.0	9.4	7.6
4A	3/19/84	1050	2.5	18.0	6.2	9.8	7.6
5	3/19/84	1110	2.0	4.8	7.0	10.8	6.8
6	3/19/84	1123	3.0	11.5	6.2	11.2	7.1
7	3/19/84	1140	4.0	16.5	6.2	10.6	7.5
8	3/19/84	1200	3.0	16.2	6.8	10.5	7.5
9	3/19/84	1320	5.5	15.8	6.1	10.4	6.8
10	3/19/84	1438	4.9	15.0	7.0	10.4	7.1
10A	3/19/84	1345	2.0	13.5	8.5	10.2	7.3
10B	3/19/84	1400	3.8	17.1	7.1	9.8	7.7
11	3/19/84	1415	2.0	6.6	8.8	11.6	7.0
12	3/19/84	1500	3.0	16.2	6.5	11.2	7.7
13	3/19/84	1526	3.0	15.5	6.2	11.1	7.7
14	3/19/84	1545	3.5	16.5	6.2	11.0	7.8
15	3/20/84	0840	3.0	16.6	6.5	11.3	7.8
16B	3/20/84	0917	4.0	14.0	6.2	10.8	7.5
17	3/20/84	1055	1.5	21.5	7.5	9.8	7.8

TABLE 8. WATER QUALITY AT EXPOSURE PANEL STATIONS
APRIL, 1984

Station	Date	Time	Depth in Feet	Salinity o/oo	Temperature (°C)	O ₂ (mg/l)	pH
1	4/16/84	0940	7.5	23.9	8.0	9.6	7.8
2	4/16/84	1034	6.5	17.2	10.2	9.8	7.6
3	4/16/84	1105	3.0	15.2	10.8	9.6	7.5
4	4/16/84	1130	4.8	15.2	11.0	8.8	7.2
4A	4/16/84	1155	3.0	14.1	11.4	9.0	7.5
5	4/16/84	1214	2.5	2.0	11.4	10.7	6.4
6	4/16/84	1244	3.5	2.1	11.4	10.8	6.4
7	4/16/84	1258	2.5	0.5	11.6	10.8	4.5
8	4/16/84	1324	3.5	1.1	11.9	10.6	5.1
9	4/16/84	1613	5.0	11.2	11.5	7.6	6.6
10	4/16/84	1506	5.0	7.5	13.0	8.7	6.4
10A	4/16/84	1525	2.5	12.1	12.8	9.8	7.4
10B	4/16/84	1536	4.0	11.0	12.1	9.6	7.2
11	4/16/84	1552	2.5	7.1	12.6	10.2	7.1
12	4/17/84	1217	3.5	14.5	13.3	9.4	7.5
13	4/17/84	1152	4.0	14.2	12.6	9.1	7.5
14	4/17/84	1125	3.0	12.0	13.3	9.6	7.5
15	4/17/84	0848	4.0	14.8	11.2	10.0	7.5
16B	4/17/84	0925	5.0	9.6	12.0	9.8	7.4
17	4/17/84	1010	2.0	20.0	13.3	8.4	7.8

TABLE 9. CONDITION OF GONADS OF TEREDINID BORERS
REMOVED FROM EXPOSURE PANELS IN BARNEGAT
BAY FROM JANUARY THROUGH MARCH, 1984

EA=Early active; LA=Late active; R=Ripe; PS=Partially
spawned; S=Spent; M=Male; F=Female; H=Hermaphrodite

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1339 a	8	Jan 84	6	<u>Bankia gouldi</u>	M	S	No discernable gonad
b				<u>Bankia gouldi</u>	M	S	
c				<u>Bankia gouldi</u>	M	S	
d				<u>Bankia gouldi</u>			
e				<u>Bankia gouldi</u>	F	S	
1340	7	Jan 84	6	<u>Bankia gouldi</u>	M	EA	
1341 a	13	Jan 84	6	<u>Bankia gouldi</u>	M	EA	No discernable gonad No discernable gonad No discernable gonad
b				<u>Bankia gouldi</u>			
c				<u>Bankia gouldi</u>			
d				<u>Bankia gouldi</u>			
e				<u>Bankia gouldi</u>	F	S	
1342 a	14	Jan 84	6	<u>Bankia gouldi</u>	F	EA	
b				<u>Bankia gouldi</u>	F	EA	
c				<u>Bankia gouldi</u>	F	EA	
d				<u>Bankia gouldi</u>	F	EA	
e				<u>Bankia gouldi</u>	F	EA	
f				<u>Bankia gouldi</u>	F	EA	
g				<u>Bankia gouldi</u>	F	EA	
h				<u>Bankia gouldi</u>	F	EA	
i				<u>Bankia gouldi</u>	F	EA	
j				<u>Bankia gouldi</u>	F	S	
k				<u>Bankia gouldi</u>	F	EA	
l				<u>Bankia gouldi</u>	F	EA	
1343 a	12	Jan 84	6	<u>Bankia gouldi</u>	M	EA	
1344 a	15	Jan 84	6	<u>Teredo navalis</u>	F	LA	No discernable gonad
b				<u>Teredo navalis</u>	F	LA	
c				<u>Teredo navalis</u>			
1345 a	11	Jan 84	6	<u>Teredo navalis</u>	F	LA	
b				<u>Teredo navalis</u>	M	EA	
c				<u>Teredo navalis</u>	F	LA	
1346 a	11	Jan 84	6	<u>Bankia gouldi</u>			No discernable gonad
b				<u>Bankia gouldi</u>			No discernable gonad
c				<u>Bankia gouldi</u>			No discernable gonad
d				<u>Bankia gouldi</u>	F	EA	
e				<u>Bankia gouldi</u>	F	EA	
f				<u>Bankia gouldi</u>			No discernable gonad
g				<u>Bankia gouldi</u>			No discernable gonad
h				<u>Bankia gouldi</u>	F	S	
i				<u>Bankia gouldi</u>	M	S	

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1347	2	Jan 84	6	<u>Teredo</u> <u>navalis</u>	F	LA	
1348 a	17	Jan 84	6	<u>Teredo</u> <u>navalis</u>	F	EA	
b				<u>Teredo</u> <u>navalis</u>	M	S	
c				<u>Teredo</u> <u>navalis</u>	F	LA	
d				<u>Teredo</u> <u>navalis</u>	M	EA	
e				<u>Teredo</u> <u>navalis</u>	M	EA	
f				<u>Teredo</u> <u>navalis</u>	H	EA	
g				<u>Teredo</u> <u>navalis</u>	H	EA	
h				<u>Teredo</u> <u>navalis</u>	M	S	
i				<u>Teredo</u> <u>navalis</u>	H	EA	
j				<u>Teredo</u> <u>navalis</u>	H	EA	
k				<u>Teredo</u> <u>navalis</u>	H	EA	
l				<u>Teredo</u> <u>navalis</u>	H	EA	
1349 a	17	Jan 84	12	<u>Teredo</u> <u>navalis</u>	H	EA	Special panel
b				<u>Teredo</u> <u>navalis</u>	H	EA	
c				<u>Teredo</u> <u>navalis</u>	M	EA	
1350 a	12	Jan 84	12	<u>Bankia</u> <u>gouldi</u>			Special panel; No discernable gonad
b				<u>Bankia</u> <u>gouldi</u>	F	S	
c				<u>Bankia</u> <u>gouldi</u>	M	S	
d				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
1351 a	11	Jan 84	12	<u>Bankia</u> <u>gouldi</u>	M	S	Special panel
b				<u>Bankia</u> <u>gouldi</u>	M	S	
c				<u>Bankia</u> <u>gouldi</u>	M	S	
d				<u>Bankia</u> <u>gouldi</u>	F	S	
e				<u>Bankia</u> <u>gouldi</u>	M	EA	
f				<u>Bankia</u> <u>gouldi</u>	M	S	
g				<u>Bankia</u> <u>gouldi</u>	M	EA	
h				<u>Bankia</u> <u>gouldi</u>	F	EA	
i				<u>Bankia</u> <u>gouldi</u>	M	S	
j				<u>Bankia</u> <u>gouldi</u>	F	S	
k				<u>Bankia</u> <u>gouldi</u>	F	S	
l				<u>Bankia</u> <u>gouldi</u>	F	EA	
m				<u>Bankia</u> <u>gouldi</u>	M	EA	
n				<u>Bankia</u> <u>gouldi</u>	F	EA	
o				<u>Bankia</u> <u>gouldi</u>	M	EA	
1352 a	7	Jan 84	12	<u>Bankia</u> <u>gouldi</u>			Special panel; No discernable gonad
b				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
c				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
1353	2	Feb 84	6	<u>Teredo</u> <u>navalis</u>	F	LA	
1354	12	Feb 84	6	<u>Teredo</u> <u>navalis</u>	F	LA	
1355	10A	Feb 84	6	<u>Teredo</u> <u>navalis</u>	F	LA	

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1356 a	17	Feb 84	6	<u>Teredo navalis</u>	M	EA	
b				<u>Teredo navalis</u>	M	EA	
c				<u>Teredo navalis</u>	M	EA	
d				<u>Teredo navalis</u>	M	EA	
e				<u>Teredo navalis</u>	M	EA	
f				<u>Teredo navalis</u>	F	LA	
g				<u>Teredo navalis</u>	M	EA	
h				<u>Teredo navalis</u>	M	EA	
i				<u>Teredo navalis</u>	M	EA	
1357	10B	Feb 84	6	<u>Bankia gouldi</u>			No discernable gonad
1358 a	11	Feb 84	6	<u>Bankia gouldi</u>	F	EA	
b				<u>Bankia gouldi</u>			No discernable gonad
c				<u>Bankia gouldi</u>			No discernable gonad
d				<u>Bankia gouldi</u>			No discernable gonad
1359 a	11	Feb 84	6	<u>Teredo navalis</u>	F	LA	
b				<u>Teredo navalis</u>	H	LA	
1360	12	Feb 84	12	<u>Bankia gouldi</u>			Special panel; No discernable gonad
1361	5	Feb 84	6	<u>Bankia gouldi</u>			No discernable gonad
1362 a	14	Feb 84	6	<u>Bankia gouldi</u>			No discernable gonad
b				<u>Bankia gouldi</u>			No discernable gonad
1363 a	17	Feb 84	12	<u>Teredo navalis</u>	M	EA	Special panel
b				<u>Teredo navalis</u>	M	EA	
c				<u>Teredo navalis</u>	M	EA	
d				<u>Teredo navalis</u>	H	EA	
e				<u>Teredo navalis</u>	M	EA	
f				<u>Teredo navalis</u>	M	EA	
g				<u>Teredo navalis</u>	M	EA	
h				<u>Teredo navalis</u>	H	EA	
i				<u>Teredo navalis</u>	M	EA	
1364	12	Feb 84	12	<u>Bankia gouldi</u>	M	S	Special panel
1365 a	7	Feb 84	12	<u>Bankia gouldi</u>			Special panel; No discernable gonad
b				<u>Bankia gouldi</u>	M	S	
1366 a	11	Feb 84	12	<u>Bankia gouldi</u>	M	S	Special panel
b				<u>Bankia gouldi</u>	M	S	
c				<u>Bankia gouldi</u>			No discernable gonad
d				<u>Bankia gouldi</u>	M	S	
e				<u>Bankia gouldi</u>	M	EA	
f				<u>Bankia gouldi</u>	M	S	
g				<u>Bankia gouldi</u>	M	EA	
h				<u>Bankia gouldi</u>	M	EA	
i				<u>Bankia gouldi</u>			No discernable gonad

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
j				<u>Bankia gouldi</u>	M	EA	
k				<u>Bankia gouldi</u>	M	EA	
l				<u>Bankia gouldi</u>	M	EA	
m				<u>Bankia gouldi</u>	M	EA	
n				<u>Bankia gouldi</u>	M	EA	
o				<u>Bankia gouldi</u>	M	EA	
1367 a	1	Mar 84	6	<u>Teredo navalis</u>	M	EA	
b				<u>Teredo navalis</u>	M	EA	
c				<u>Teredo navalis</u>	M	EA	
d				<u>Teredo navalis</u>	F	EA	
e				<u>Teredo navalis</u>	F	EA	
f				<u>Teredo navalis</u>	M	EA	
g				<u>Teredo navalis</u>	F	EA	
h				<u>Teredo navalis</u>	F	EA	
i				<u>Teredo navalis</u>	M	EA	
j				<u>Teredo navalis</u>	F	EA	
k				<u>Teredo navalis</u>	M	EA	
l				<u>Teredo navalis</u>	M	EA	
m				<u>Teredo navalis</u>	M	EA	
n				<u>Teredo navalis</u>	F	EA	
o				<u>Teredo navalis</u>	F	EA	
p				<u>Teredo navalis</u>	M	EA	
q				<u>Teredo navalis</u>	F	EA	
r				<u>Teredo navalis</u>	M	EA	
1368	12	Mar 84	12	<u>Bankia gouldi</u>	M	EA	Special panel
1369 a	7	Mar 84	12	<u>Bankia gouldi</u>	M	EA	Special panel
b				<u>Bankia gouldi</u>	M	EA	
1370 a	17	Mar 84	12	<u>Bankia gouldi</u>	M	EA	Special panel
b					M	EA	
1371 a	17	Mar 84	12	<u>Teredo navalis</u>	F	LA	Special panel
b				<u>Teredo navalis</u>	M	EA	
c				<u>Teredo navalis</u>	M	EA	
d				<u>Teredo navalis</u>	M	EA	
e				<u>Teredo navalis</u>	M	EA	
f				<u>Teredo navalis</u>	M	EA	
g				<u>Teredo navalis</u>	M	EA	
h				<u>Teredo navalis</u>	M	EA	
i				<u>Teredo navalis</u>	M	EA	
j				<u>Teredo navalis</u>	M	EA	
k				<u>Teredo navalis</u>	M	EA	
l				<u>Teredo navalis</u>	M	EA	
m				<u>Teredo navalis</u>	F	LA	
n				<u>Teredo navalis</u>	M	LA	

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1372 a	11	Mar 84	12	<u>Bankia gouldi</u>	M	EA	Special panel
b				<u>Bankia gouldi</u>	M	EA	
c				<u>Bankia gouldi</u>	M	EA	
d				<u>Bankia gouldi</u>	M	EA	
e				<u>Bankia gouldi</u>			No discernable gonad
f				<u>Bankia gouldi</u>	M	EA	
g				<u>Bankia gouldi</u>	M	EA	
h				<u>Bankia gouldi</u>	M	S	Necrotic
i				<u>Bankia gouldi</u>			No discernable gonad
j				<u>Bankia gouldi</u>	M	EA	
k				<u>Bankia gouldi</u>	M	EA	
l				<u>Bankia gouldi</u>	F	EA	
m				<u>Bankia gouldi</u>	F	EA	
n				<u>Bankia gouldi</u>	M	EA	
o				<u>Bankia gouldi</u>	F	EA	