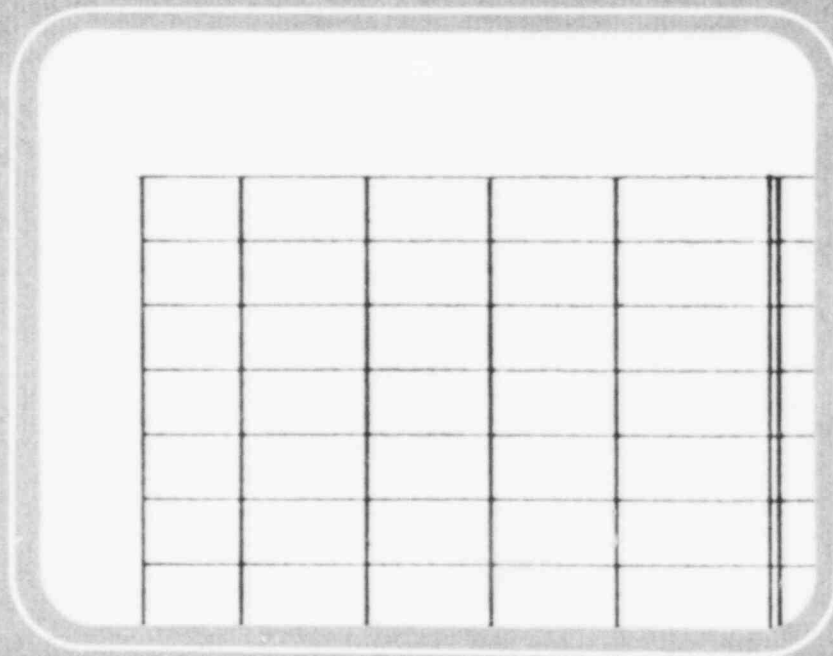




Battelle

# Report



New England  
Marine Research Laboratory

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PROGRESS REPORT  
FOR THE THIRTIETH QUARTER

on

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

to

GPU NUCLEAR CORPORATION

November 30, 1982

by

R.E. Hillman and C.I. Belmore

REPORT NO. 15164

August 21 to November 20, 1982

**BATTELLE**  
New England Marine Research Laboratory  
Duxbury, Massachusetts 02332

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### Executive Summary

This progress report presents data from field and laboratory work during the period August 21 to November 20, 1982.

All field work during this quarter was carried out by GPU 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.

Laboratory analysis of the exposure panels showed a noticeable decrease in shipworm attack in the exposure panels from Station 7 (Frylings). This decrease is attributed to the absence of, Teredo bartschi, which was not recorded from any of the exposure panels examined during the past quarter. Teredo navalis was the only species of Teredinidae recorded from Station 7 during this period.

The location of Station 16 was moved to Bayside Boats in Seaside Heights in June, 1982. A very light attack by Bankia gouldi is present at the new location.

Long-term exposure panel #5 at Station 1 was missing from the rack at the time of the panel exchange in November, 1982. Panels #6 and #1 also show very heavy attack by shipworms at this site.

Limnoria were present at Stations 1 through 4A as in previous years. One Limnoria tunnel was also found in the long-term exposure panel examined in October, 1982 from Station 17.

Examination of gonads from specimens collected in August, September and October showed that spawning was still taking place in August, but by September and October most gonads were in the spent phase.

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INTRODUCTION

Battelle's New England Marine Research Laboratory is conducting an investigation to determine whether the 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 Sixth Annual Report Titled, "Study of Woodborer Populations in Relation to the Oyster Creek Generating Station," dated March 15, 1982.

This report presents data for the thirtieth quarterly period from August 21, 1982 to November 20, 1982.

## 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 September 7-8, October 5-6, and November 1-2, 1982. Long-term and short-term panels at all stations were retrieved and replaced by personnel from GPU's Oyster Creek Nuclear Generating Station.

The long-term exposure panel, labelled #5, was missing from this exposure rack suspended at Station #1, the Barnegat Light Coast Guard Station at the time of the November, 1982 exchange of panels. GPU personnel also reported the #6 and #1 panels were also in a deteriorated condition due to the very heavy marine borer attack.

Table 1 describes the geographical locations of the exposure sites. The data for 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 field team. The results for September, October and November, 1982 are presented in Tables 6 through 8.

### Teredinid Gonadal Development Studies

Table 9 shows the gonad condition of the teredinid borers collected in August, September, and October. Included are results from panels exposed for periods ranging from 6 to 12 months.

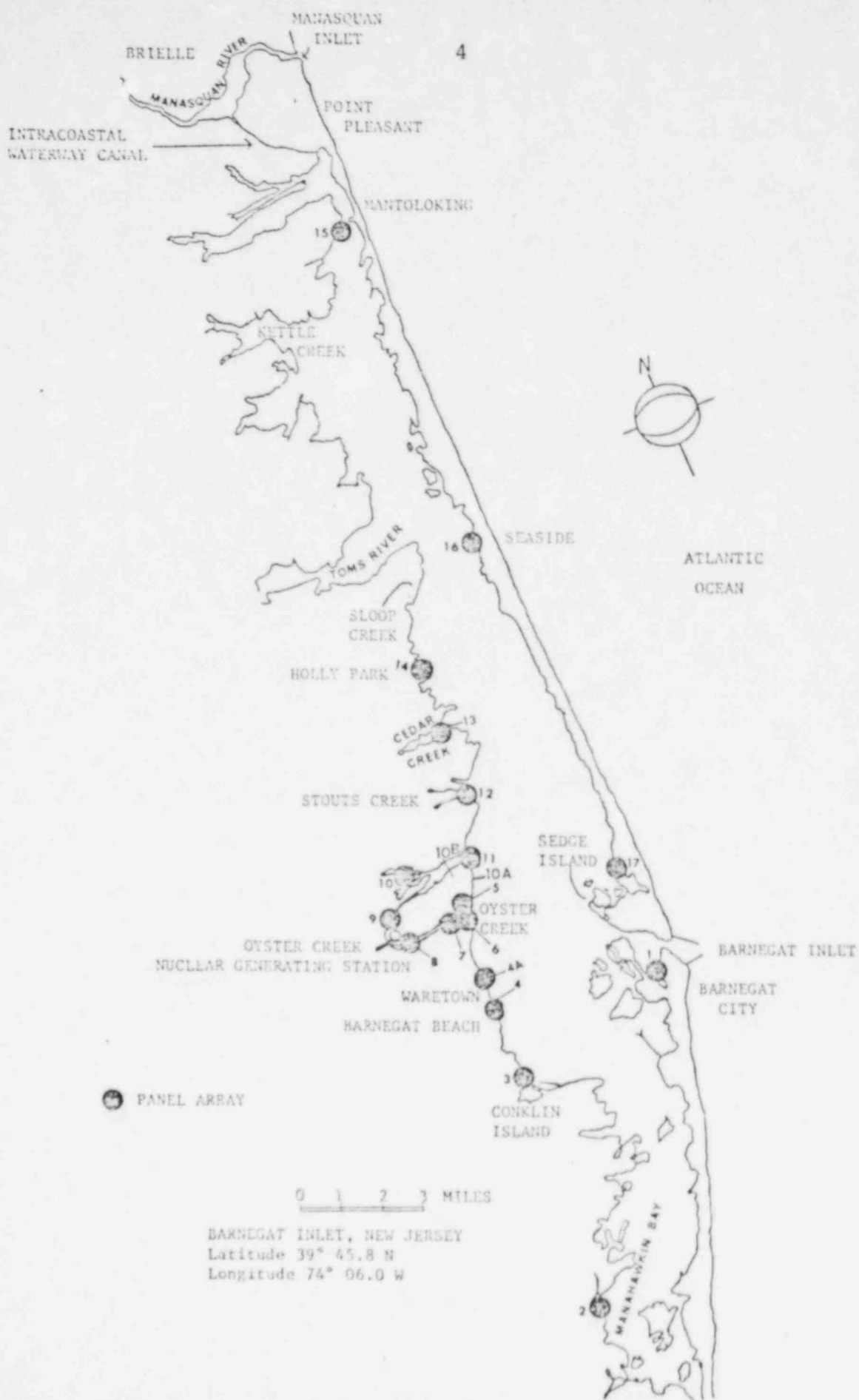


FIGURE 1. OUTLINE OF BARNEGAT BAY SHOWING GEOGRAPHIC LOCATIONS OF EXPOSURE PANELS

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	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	WC 21 R. Turner Rutgers U.	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 #1 Lagoon, Inshore End 37 Capstan Drive	Dock		Lat. 39° 48.5'N Long. 74° 10.35'W
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



TABLE 1. (continued)

Site No.	Site	Structure to be used for Suspension of Rack	Nearest Previous Data Stations	Approximate Latitude and Longitude
8.	Oyster Creek-R.R. Bridge Discharge Canal	Cross Member Bridge	WC 26 Rutgers U.	Lat. 39° 48.7'N Long. 74° 12'W
9.	Forked River South Branch Intake Canal	Cross Member R.R. Bridge	WC 31 Rutgers U.	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
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

TABLE 1. (continued)

Site No.	Site	Structure to be used for Suspension of Rack	Nearest Previous Data Stations	Approximate Latitude and Longitude
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° 03.5'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
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. Racks at Forked River railroad bridge and Oyster Creek railroad bridge suspended with wire rope.

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.

TABLE 2. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED JUNE 1-2, 1982

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P	500	95	<1-80	400 <u>T. navalis</u> , 100 <u>Teredinidae</u> *	Several with ripening gonads-few with larvae
	C	700	15	<1-12	60 <u>T. navalis</u> , 640 <u>Teredinidae</u> *	
5	P	1	2	130	1 <u>B. gouldi</u>	
	C	1	<1	7	1 <u>Teredinidae</u> *	
7	P	4	2	10-140	4 <u>T. navalis</u>	
	C	0				
10A	P	2	<1	1-50	2 <u>Teredinidae</u> *	
	C	0				
11	P	56	60	30-150	1 <u>B. gouldi</u> , 55 <u>T. navalis</u>	1 <u>T. navalis</u> dead
	C	0				
13	P	3	5	70-180	<u>B. gouldi</u>	
	C	0				
14	P	4	5	48-110	3 <u>B. gouldi</u> , 1 <u>T. navalis</u>	
	C	0				
15	P	4	3	5-115	1 <u>T. navalis</u> , 3 <u>B. gouldi</u>	
	C	0				
16B	P	1	2	123	1 <u>B. gouldi</u>	
	C	1	<1	9	1 <u>B. gouldi</u>	
17	P	4	1	<1-44	3 <u>T. navalis</u> , 1 <u>Teredinidae</u> *	
	C	18	<1	1-7	1 <u>T. navalis</u> , 13 <u>Teredo</u> spp., 4 <u>Teredinidae</u> *	

Stations 2-4A, 6, 8-10, 10B, 12 - No Teredinidae present

P = Long-term panel submerged March 2-3, 1982 (Station 16B submerged June 2, 1981).

C = Short-term panel submerged August 3-4, 1982.

\* = Not speciated due to size or condition.

TABLE 3. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED OCTOBER 5-6, 1982

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P	1,000±	99	3-60	150 <i>T. navalis</i> , 850 <i>Teredinidae</i> *	10% of specimens dead
	C	0				
3	P	1	3	150	1 <i>B. gouldi</i>	
	C	0				
7	P	2	2	65-80	2 <i>T. navalis</i>	1 dead, 1 live
	C	0				
8	P	1	2	130	1 <i>T. navalis</i>	
	C	0				
10B	P	3	8	130-170	1 <i>B. gouldi</i> , 1 <i>T. navalis</i>	
	C	0				
11	P	48	80	60-170	48 <i>T. navalis</i>	
	C	0				
13	P	1	3	175	1 <i>B. gouldi</i>	
	C	0				
14	P	3	7	40-205	3 <i>B. gouldi</i>	
	C	0				
15	P	3	2	4-130	1 <i>B. gouldi</i> , 1 <i>T. navalis</i> , 1 <i>Teredinidae</i> *	
	C	0				
16B	P	1	4	205	1 <i>B. gouldi</i>	
	C	0				
17	P	6	3	<1-105	5 <i>T. navalis</i> , 1 <i>Teredinidae</i> *	
	C	0				

Stations 2, 4-6, 9-10A, 12 - No *Teredinidae* present

P = Long-term panel submerged April 7-8, 1982 (Station 16B submerged June 2, 1982).

C = Short-term panel submerged September 7-8, 1982.

\* = Not speciated due to size or condition.

TABLE 4. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED NOVEMBER 1-2, 1982

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P (Panel missing from rack due to heavy attack)					
	C	160	< 1	< 1	160 <i>Teredinidae</i> *	
5	P	1	2	180	1 <i>T. navalis</i>	
	C	1	< 1	< 1	1 <i>Teredinidae</i> *	
7	P	2	1	1-100	2 <i>Teredinidae</i> *	empty tube only of 100 mm specimen
	C	0				
8	P	1	2	150	1 <i>T. navalis</i>	
	C	0				
9	P	1	1	70	1 <i>T. navalis</i>	
	C	0				
10A	P	4	9	60-175	4 <i>T. navalis</i>	
	C	0				
11	P	82	90	40-130	82 <i>T. navalis</i>	
	C	4	< 1	< 1	4 <i>Teredinidae</i> *	
13	P	5	20	180-260	5 <i>B. gouldi</i>	
	C	0				
14	P	2	7	155-190	<i>B. gouldi</i>	
	C	0				
15	P	5	7	24-145	1 <i>B. gouldi</i> 4 <i>T. navalis</i>	
	C	0				
16B	P	2	9	220-240	2 <i>B. gouldi</i>	
	C	0				
17	P	5	5	40-130	5 <i>T. navalis</i>	4 live, 1 dead
	C					

Stations 2-4A, 6, 10, 10B, 12 - No *Teredinidae* present

P = Long-term panel submerged May 4-5, 1982 (Station 16B submerged June 2, 1982).

C = Short-term panel submerged October 5-6, 1982.

\* = Not speciated due to size or condition.

TABLE 5. INCIDENCE OF LIMNORIA IN PANELS REMOVED SEPTEMBER, OCTOBER, AND NOVEMBER, 1982

Station	Panel	September		October		November	
		No. of Tunnels	No. of Specimens	No. of Tunnels	No. of Specimens	No. of Tunnels	No. of Specimens
1	P	48	13**	200	150**	-	
	C	8	11	4	3	3	3
2	P	70	75**	950	1000**	650	400**
	C	0		5	3	2	2
3	P	70	75*	7	2***	3	2
	C	0		0		0	
4	P	1600	1650**	2000	1700***	2700	2400***
	C	16	10*	0		0	
4A	P	5000	6000**	6300	4000**	7000	6000
	C	260	300*	110	100	7	2
17	P	0		1	0	0	
	C	0		0		0	

Sites 5 through 16B, no Limnoria present

- P = Long-term panel, submerged 6 months.  
 C = Short-term panel, submerged 1 month.  
 \* = Gravid females present.  
 \*\* = Gravid females and juveniles present.  
 \*\*\* = Juveniles present.  
 --- = Panel missing from rack.

TABLE 6. WATER QUALITY AT EXPOSURE PANEL STATIONS SEPTEMBER 1982

Station	Date	Time	Depth in Feet	Salinity o/oo	Temperature (oC)	O <sub>2</sub> (mg/l)	pH
1	9/7/82	0945	3.0	26.0	20.0	6.8	8.0
2	9/7/82	1020	0.2	26.8	21.5	6.8	8.0
3	9/7/82	1055	0.5	24.4	22.1	6.6	8.1
4	9/7/82	1110	1.0	24.4	21.9	6.0	7.8
4A	9/7/82	1127	1.0	24.9	22.5	7.1	8.1
5	9/7/82	1145	0.5	22.4	24.7	6.5	8.1
6	9/7/82	1200	0.8	22.4	24.2	6.9	8.1
7	9/7/82	1210	1.0	22.4	24.7	6.2	7.9
8	9/7/82	1330	2.5	23.3	24.8	6.4	8.0
9	9/7/82	1315	2.5	23.3	21.6	6.8	8.1
10	9/7/82	1445	2.5	19.9	22.5	7.8	8.1
10A	9/7/82	1350	0.8	23.7	23.0	7.1	8.1
10B	9/7/82	1405	2.0	23.9	22.3	7.6	8.2
11	9/7/82	1415	0.8	24.0	21.6	6.9	8.1
12	9/7/82	1525	1.5	21.7	21.8	7.2	8.1
13	9/7/82	1548	1.5	18.0	22.1	7.6	8.2
14	9/8/82	1110	2.0	17.3	20.0	6.9	7.6
15	9/8/82	0900	2.0	16.7	19.0	7.1	7.7
16	9/8/82	0920	2.0	15.3	19.9	6.6	7.7
17	9/8/82	1000	0.2	25.0	19.5	6.0	7.5

TABLE 7. WATER QUALITY AT EXPOSURE PANEL STATIONS OCTOBER, 1982

Station	Date	Time	Depth in Feet	Salinity o/oo	Temperature (°C)	O <sub>2</sub> (mg/l)	pH
1	10/5/82	0900	3.0	24.7	19.0	6.8	8.0
2	10/5/82	0930	1.0	24.8	19.2	6.4	7.8
3	10/5/82	1000	1.2	23.9	19.3	6.8	8.0
4	10/5/82	1015	1.5	24.4	19.3	7.3	8.0
4A	10/5/82	1035	1.7	24.4	20.2	7.1	8.0
5	10/5/82	1055	0.7	24.0	22.3	7.0	8.0
6	10/5/82	1105	1.0	23.1	22.5	7.1	8.0
7	10/5/82	1125	0.7	22.0	24.8	6.6	7.9
8	10/5/82	1140	4.5	22.7	23.9	6.5	7.9
9	10/5/82	1200	4.0	23.1	20.3	7.1	8.1
10	10/5/82	1355	2.0	21.5	21.0	6.5	7.8
10A	10/5/82	1305	1.0	23.0	21.9	7.6	8.1
10B	10/5/82	1320	2.0	23.1	21.9	7.6	8.1
11	10/5/82	1330	1.0	22.7	21.0	7.5	8.0
12	10/5/82	1435	1.0	21.9	21.5	7.5	8.0
13	10/5/82	1500	1.5	20.0	21.9	7.8	8.1
14	10/5/82	1525	2.5	17.8	20.9	7.8	8.2
15	10/6/82	0830	2.0	17.8	19.1	7.4	8.2
16	10/6/82	0855	2.5	15.9	19.3	7.0	8.2
17	10/6/82	0935	0.7	22.4	20.8	6.0	7.9



TABLE 8. WATER QUALITY AT EXPOSURE PANEL STATIONS NOVEMBER, 1982

Station	Date	Time	Depth in Feet	Salinity o/oo	Temperature (°C)	O <sub>2</sub> (mg/l)	pH
1	11/1/82	1008	3.0	25.0	16.6	7.9	8.1
2	11/1/82	1104	3.0	23.5	15.4	8.5	8.2
3	11/1/82	1200	1.5	23.0	16.7	9.3	8.2
4	11/1/82	1235	1.0	23.0	16.9	9.6	8.3
4A	11/1/82	1300	1.0	23.2	17.6	9.4	8.3
5	11/1/82	1415	0.5	21.9	19.6	9.0	8.1
6	11/1/82	1435	0.5	22.0	20.0	9.5	8.2
7	11/1/82	1450	0.3	21.7	19.9	9.0	8.1
8	11/1/82	1522	3.0	20.9	20.0	9.1	8.1
9	11/1/82	1603	3.0	21.9	17.7	9.4	8.2
10	11/2/82	1454	2.0	19.7	17.5	8.9	8.2
10A	11/2/82	1538	1.0	21.9	18.1	9.2	8.3
10B	11/2/82	1602	1.5	22.1	18.3	9.0	8.3
11	11/2/82	1620	0.7	22.6	18.0	8.7	8.3
12	11/2/82	1421	1.3	21.5	17.6	9.0	8.2
13	11/2/82	1349	1.5	20.5	16.8	8.8	8.3
14	11/2/82	1314	2.5	19.7	16.3	8.7	8.3
15	11/2/82	1008	2.5	20.5	16.1	9.9	8.3
16	11/2/82	1047	3.0	17.8	16.0	9.0	8.4
17	11/2/82	1135	0.3	24.1	17.8	9.2	8.4

TABLE 9. CONDITION OF GONADS OF TEREDINID BORERS REMOVED FROM EXPOSURE PANELS IN BARNEGAT BAY FROM AUGUST THROUGH OCTOBER, 1982

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
i116	14	Aug 82	6	<u>Teredo navalis</u>			No discernable gonad
1117	8	Aug 82	6	<u>Teredo navalis</u>	F	R	
1118	15	Aug 82	1	<u>Bankia gouldi</u>			No discernable gonad
1119a	11	Aug 82	6	<u>Teredo navalis</u>	F	R	
b				<u>Teredo navalis</u>	F	R	
c				<u>Teredo navalis</u>	H	R	
1120	7	Aug 82	6	<u>Teredo navalis</u>	M	S	
1121a	11	Aug 82	12	<u>Teredo navalis</u>	F	PS	Special panel
b				<u>Teredo navalis</u>	F	PS	
c				<u>Teredo navalis</u>	M	PS	
1122a	17	Aug 82	12	<u>Teredo navalis</u>	F	PS	Special panel
b				<u>Teredo navalis</u>	F	PS	
c				<u>Teredo navalis</u>	F	PS	
d				<u>Teredo navalis</u>	F	S	
1123a	14	Sep 82	6	<u>Bankia gouldi</u>	M	S	
b				<u>Bankia gouldi</u>			No discernable gonad
c				<u>Bankia gouldi</u>	M	S	
1124	10A	Sep 82	6	Teredinidae			No discernable gonad

TABLE 9. (continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1125	14	Sep 82	6	<u>Teredo navalis</u>	M	S	
1126	11	Sep 82	6	<u>Bankia gouldi</u>	M	S	
1127a	7	Sep 82	6	<u>Teredo navalis</u>	F	S	
b					M	S	
c					M	S	
d					M	EA	
1128a	11	Sep 82	6	<u>Teredo navalis</u>	F	S	
b					F	S	
c					F	S	
d					M	PS	
e					F	S	
f					M	PS	
g					F	S	
h					M	EA	
i					F	S	
j					M	S	
k					M	S	
l					F	S	
m					F	S	
1129	5	Sep 82	1	Teredinidae			No discernable gonad
1130a	15	Sep 82	6	<u>Bankia gouldi</u>			No discernable gonad
b				<u>Bankia gouldi</u>	M	S	
1131	15	Sep 82	6	<u>Teredo navalis</u>	F	S	

TABLE 9. (continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1132	5	Sep 82	6	<u>Bankia gouldi</u>			No discernable gonad
1133	16A	Sep 82	1	<u>Bankia gouldi</u>			No discernable gonad
1134	16A	Sep 82	3	<u>Bankia gouldi</u>	M	S	
1135a	13	Sep 82	6	<u>Bankia gouldi</u>	M	PS	
b				<u>Bankia gouldi</u>			No discernable gonad
c				<u>Bankia gouldi</u>	M	S	
1136a	17	Sep 82	6	<u>Teredo navalis</u>			No discernable gonad
b				<u>Teredo navalis</u>	H	EA	
c				<u>Teredo navalis</u>	M	S	
1137a	1	Sep 82	1	<u>Teredo navalis</u>			No discernable gonad
b				<u>Teredo navalis</u>			No discernable gonad
c				<u>Teredo navalis</u>			No discernable gonad
d				<u>Teredo navalis</u>			No discernable gonad
1138a	1	Sep 82	6	<u>Teredo navalis</u>	H	EA	
b				<u>Teredo navalis</u>			No discernable gonad
c				<u>Teredo navalis</u>	H	EA	
d				<u>Teredo navalis</u>	F	S	
e				<u>Teredo navalis</u>	F	LA	
f				<u>Teredo navalis</u>	M	S	
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	R	

TABLE 9. (continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
k				<u>Teredo navalis</u>			No discernable gonad
l				<u>Teredo navalis</u>	F	S	
m				<u>Teredo navalis</u>	F	R	
n				<u>Teredo navalis</u>	F	S	
o				<u>Teredo navalis</u>	F	S	
p				<u>Teredo navalis</u>	F	S	
q				<u>Teredo navalis</u>	F	S	
r				<u>Teredo navalis</u>	F	S	
s				<u>Teredo navalis</u>	F	S	
t				<u>Teredo navalis</u>	F	S	
1139	11	Sep 82	12	<u>Bankia gouldi</u>	M	Ea	Special panel
1140	7	Sep 82	12	<u>Bankia gouldi</u>	M	S	
1141a	11	Sep 82	12	<u>Teredo navalis</u>	M	S	Special panel
b				<u>Teredo navalis</u>	M	EA	
c				<u>Teredo navalis</u>	F	S	
d				<u>Teredo navalis</u>	M	S	
1142	17	Sep 82	12	<u>Teredo navalis</u>			Special panel; no discernable gonad
1143	13	Oct 82	6	<u>Bankia gouldi</u>	M	S	
1144a	14	Oct 82	6	<u>Bankia gouldi</u>	M	S	
b				<u>Bankia gouldi</u>	M	S	
c				<u>Bankia gouldi</u>	M	S	

TABLE 9. (continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1145a	10B	Oct 82	6	<u>Bankia gouldi</u>	M	S	
b				<u>Bankia gouldi</u>	M	S	
1146	10B	Oct 82	6	<u>Teredo navalis</u>	M	S	
1147	16B	Oct 82	4	<u>Bankia gouldi</u>			No discernable gonad
1148	8	Oct 82	6	<u>Teredo navalis</u>	F	S	
1149	15	Oct 82	6	<u>Bankia gouldi</u>			No discernable gonad
1150	7	Oct 82	6	<u>Teredo navalis</u>	M	S	
1151a	11	Oct 82	6	<u>Teredo navalis</u>	F	S	
b				<u>Teredo navalis</u>	F	S	
c				<u>Teredo navalis</u>	F	S	
d				<u>Teredo navalis</u>	F	S	
e				<u>Teredo navalis</u>	M	S	
f				<u>Teredo navalis</u>	F	S	
g				<u>Teredo navalis</u>	M	LA	
h				<u>Teredo navalis</u>	M	S	
i				<u>Teredo navalis</u>	F	S	
j				<u>Teredo navalis</u>	M	S	
k				<u>Teredo navalis</u>	M	S	
l				<u>Teredo navalis</u>	M	S	
m				<u>Teredo navalis</u>	M	S	
n				<u>Teredo navalis</u>	H	S	
o				<u>Teredo navalis</u>	M	S	

TABLE 9. (continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1152a	17	Oct 82	6	<u>Teredo navalis</u>	F	S	
b				<u>Teredo navalis</u>	F	S	
c				<u>Teredo navalis</u>	M	S	
d				<u>Teredo navalis</u>	M	EA	
e				<u>Teredo navalis</u>			No discernable gonad
1153	3	Oct 82	6	<u>Bankia gouldi</u>	M	S	
1154a	17	Oct 82	12	<u>Teredo navalis</u>	F	S	Special panel
b				<u>Teredo navalis</u>			No discernable gonad
1155	12	Oct 82	12	<u>Bankia gouldi</u>			Special panel; no discernable gonad
1156a	11	Oct 82	12	<u>Teredo navalis</u>	H	S	Special panel
b				<u>Teredo navalis</u>	M	S	
c				<u>Teredo navalis</u>			No discernable gonad
d				<u>Teredo navalis</u>	M	S	
e				<u>Teredo navalis</u>	M	~	
1157a	7	Oct 82	12	<u>Teredo navalis</u>	F	R	Special panel
b							no discernable gonad
1158a	11	Oct 82	12	<u>Bankia gouldi</u>	M	S	Special panel
b				<u>Bankia gouldi</u>	M	S	
c				<u>Bankia gouldi</u>	M	S	
d				<u>Bankia gouldi</u>	M	S	
e				<u>Bankia gouldi</u>	M	S	

TABLE 9. (continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
159a	1	Oct 82	6	<u>Teredo</u> <u>navalis</u>	F	R	
b				<u>Teredo</u> <u>navalis</u>	F	R	
c				<u>Teredo</u> <u>navalis</u>	H	PS	
d				<u>Teredo</u> <u>navalis</u>	M	PS	
e				<u>Teredo</u> <u>navalis</u>	F	S	
f				<u>Teredo</u> <u>navalis</u>	F	PS	
g				<u>Teredo</u> <u>navalis</u>	M	PS	
h				<u>Teredo</u> <u>navalis</u>			No discernable gonad
i				<u>Teredo</u> <u>navalis</u>	F	PS	
j				<u>Teredo</u> <u>navalis</u>	M	R	
k				<u>Teredo</u> <u>navalis</u>	H	S	
l				<u>Teredo</u> <u>navalis</u>	F	S	
m				<u>Teredo</u> <u>navalis</u>	F	PS	
n				<u>Teredo</u> <u>navalis</u>	F	S	
o				<u>Teredo</u> <u>navalis</u>	F	S	
p				<u>Teredo</u> <u>navalis</u>	M	PS	
q				<u>Teredo</u> <u>navalis</u>	M	S	