

PROGRESS REPORT  
FOR THE THIRTY-FOURTH QUARTER

On

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

To

GPU NUCLEAR CORPORATION

November 30, 1983

by

R.E. Hillman and C.I. Belmore

REPORT NO. 15207

July 21, 1983 to October 20, 1983

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 July 21, 1983 to October 20, 1983.

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.

Shipworm damage has increased this year as compared with 1982, particularly at Stations 13 and 14. Bankia gouldi is responsible for the increase. One specimen of Bankia gouldi was found in the long-term exposure panel removed from Station 17 in October, 1983. The last time any Bankia were found in long-term exposure panels from this site was 1978. Teredo navalis continues to be active there also.

Two Limnoria tunnels were found in the long-term exposure panel from Station 5 at the mouth of Oyster Creek in September, 1983. There were no tunnels in the panels examined from this site in October, 1983.

No Teredo bartschi have been found in any of the exposure panels in Barnegat Bay as yet this year.

For the most part, the gonads of both B. gouldi and T. navalis were in typical mid- to late-summer condition, with most being in the late active to partially spawned stage. No unusual conditions were noted in the gonad histology.

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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 seventh annual report titled, "Study of Woodborer Populations in Relation to the Oyster Creek Generating Station", dated May 15, 1983.

This report presents data for the thirty-fourth quarterly period from July 21 to October 20, 1983.

## 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 August 1-2, September 6-7, and October 4-5, 1983. Long-term and short-term panels at all stations were retrieved and replaced by personnel from GPU's Oyster Creek Nuclear Generating Station.

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 August, September, and October, 1983 are presented in Tables 6 through 8.

### Teredinid Gonadal Development Studies

Table 9 shows the gonad condition of teredinid borers collected in July, August, and September, 1983. Included are results from panels exposed for periods ranging from 6 to 12 months.

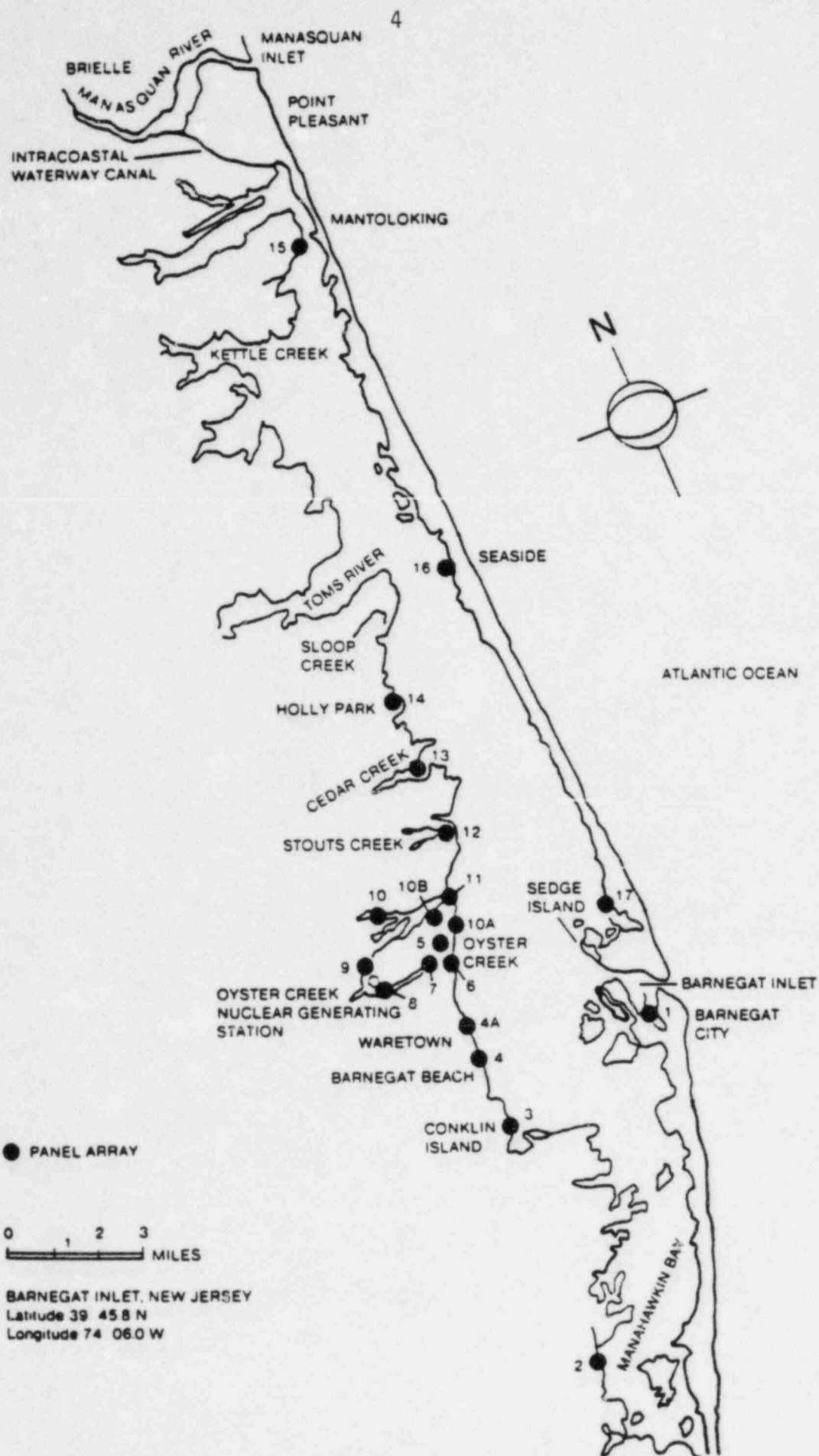


FIGURE 1. OUTLINE OF BARNEGAT BAY SHOWING GEOGRAPHIC LOCATIONS OF EXPOSURE PANELS



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 Long. 74° 11'N	Lat. 39° 48'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

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-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	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. 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 AUGUST 1-2, 1983.

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P	900	5	<1-16	10 <u>T. navalis</u> , 890 Teredinidae*	
	C	1100	4	<1-7	1100 Teredinidae*	
2	P	0				
	C	1	<1	2	1 Teredinidae*	
5	P	1	<1	30	1 <u>B. gouldi</u>	
	C	0				
7	P	1	<1	2	1 Teredinidae*	
	C	0				
8	P	2	<1	13-30	2 <u>B. gouldi</u>	
	C	1	<1	1	1 Teredinidae*	
10A	P	2	<1	14-45	2 <u>B. gouldi</u>	
	C	0				
10B	P	2	<1	<1	2 Teredinidae*	
	C	0				
11	P	46	60	35-110	43 <u>B. gouldi</u> , 3 <u>T. navalis</u>	Ripening gonads
	C	0				
12	P	2	<1	13-20	2 <u>B. gouldi</u>	
	C	1	<1	<1	1 Teredinidae*	
13	P	0				
	C	2	<1	<1-3	2 Teredinidae*	
14	P	59	40	20-110	59 <u>B. gouldi</u>	Ripening gonads
	C	28	<1	<1-4	28 Teredinidae*	

Stations 3-4A, 6, 9, 10, 15-17 - No Teredinidae present.

P = Long-term panel submerged February 8-9, 1983.

C = Short-term panel submerged July 5-6, 1983.

\* = Not speciated due to size.

TABLE 3. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED SEPTEMBER 6-7, 1983.

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P	850	98	<1-50	650 <u>T. navalis</u> , 200 <u>Teredinidae</u> *	Ripening gonads
	C	1040	5	<1-18	40 <u>T. navalis</u> , 1000 <u>Teredinidae</u> *	
3	P	1	3	180	1 <u>B. gouldi</u>	
	C	0				
5	P	2	8	230-240	2 <u>B. gouldi</u>	
	C	0				
7	P	3	5	60-220	3 <u>B. gouldi</u>	
	C	0				
8	P	7	8	25-180	6 <u>B. gouldi</u> , 1 <u>T. navalis</u>	<u>Teredo</u> -ripening gonads
	C	0				
10A	P	1	4	250	1 <u>B. gouldi</u>	
	C	0				
11	P	37	95	50-190	36 <u>B. gouldi</u> , 1 <u>T. navalis</u>	<u>Teredo</u> dead
	C	0				
12	P	1	3	160	1 <u>B. gouldi</u>	
	C	1	<1	28	1 <u>B. gouldi</u>	
13	P	6	17	140-250	6 <u>B. gouldi</u>	
	C	0				
14	P	47	90	20-190	47 <u>B. gouldi</u>	
	C	0				
15	P	1	2	130	1 <u>B. gouldi</u>	
	C	1	<1	4	1 <u>Teredinidae</u> *	
17	P	7	1	<1-27	4 <u>T. navalis</u> , 3 <u>Teredinidae</u> *	
	C	8	<1	<1-3	1 <u>Teredo</u> spp, 7 <u>Teredinidae</u> *	

Stations 2, 4, 4A, 6, 9, 10, 10B, and 16B - No Teredinidae present.

P = Long-term panel submerged March 7-8, 1983.  
 C = Short-term panel submerged August 1-2, 1983.  
 \* = Not speciated due to size.

TABLE 4. INCIDENCE OF TEREDINIDAE IN PANELS REMOVED OCTOBER 4-5, 1983.

Station	Panel	No. of Specimens	Percent Filled	Size Range in mm.	Species Identification	Remarks
1	P	400	99		30 <u>T. navalis</u> , 370 Teredinidae*	None live
	C	85	<1	<1-3	85 Teredinidae*	
6	P	1	2	140	1 <u>B. gouldi</u>	
	C	0				
7	P	4	8	95-200	4 <u>B. gouldi</u>	3 live, 1 dead
	C	0				
8	P	3	7	130-170	3 <u>B. gouldi</u>	
	C	0				
10A	P	1	7	360	1 <u>B. gouldi</u>	
	C	0				
10B	P	2	5	140-180	2 <u>B. gouldi</u>	1 live, 1 dead
	C	0				
11	P	48	98	25-190	11 <u>B. gouldi</u> , 37 Teredinidae*	37 empty tubes
	C	0				
12	P	1	2	165	1 <u>B. gouldi</u>	
	C	0				
13	P	23	95	75-225	23 <u>B. gouldi</u>	
	C	0				
14	P	120	98	<1-120	1 <u>T. navalis</u> , 46 <u>B. gouldi</u> 73 Teredinidae*	65% of specimens dead
	C	0				
15	P	1	5	285	1 <u>B. gouldi</u>	
	C	0				
17	P	24	5	<1-140	1 <u>B. gouldi</u> , 6 <u>T. navalis</u> , 1 <u>Teredo</u> spp*, 8 Teredinidae*	
	C	0				

Stations 2-5, 9-10, 16B - No Teredinidae present

P = Long-term panel submerged April 5-6, 1983.

C = Short-term panel submerged September 6-7, 1983.

\* = Not speciated due to size or condition.

TABLE 5. INCIDENCE OF LIMNORIA IN PANELS REMOVED AUGUST, SEPTEMBER, AND OCTOBER, 1983.

Station	Panel	August		September		October	
		No. of Tunnels	No. of Specimens	No. of Tunnels	No. of Specimens	No. of Tunnels	No. of Specimens
1	P	7	12*	26	12**	19	3
	C	7	8*	10	12**	10	7
2	P	1600	1500**	4000	3800**	2000	1500**
	C	31	23*	38	47*	2	0
3	P	20	16*	155	170**	150	130***
	C	0		0		0	
4	P	14	19**	290	375**	205	205***
	C	0		1	0	0	
4A	P	4500	6000**	7200	6000**	7500	5500**
	C	260	380*	59	73**	10	10
5	P	0		2	2*	0	
	C	0		0		0	

Stations 6-17, 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.



TABLE 6. WATER QUALITY AT EXPOSURE PANEL STATIONS  
AUGUST, 1983

Station	Date	Time	Depth in Feet	Salinity 0/00	Temperature (°C)	O <sub>2</sub> (mg/l)	pH
1	8/1/83	0905	4.0	25.2	21.7	6.1	7.7
2	8/1/83	0950	3.0	23.4	27.0	5.0	7.6
3	8/1/83	1025	1.0	21.1	28.2	4.4	7.5
4	8/1/83	1048	1.5	21.8	29.0	5.2	7.7
4A	8/1/83	1106	1.0	21.8	28.8	5.6	7.8
5	8/1/83	1125	0.8	15.2	28.7	6.2	7.8
6	8/1/83	1140	2.0	16.8	27.5	6.2	7.8
7	8/1/83	1206	1.5	19.0	30.0	6.2	7.9
8	8/1/83	1356	4.0	17.8	28.5	6.5	7.8
9	8/1/83	1325	4.0	17.8	28.8	6.0	7.4
10	8/1/83	1521	3.0	12.5	28.9	5.8	7.5
10A	8/1/83	1425	1.5	19.3	29.6	5.2	7.8
10B	8/1/83	1443	3.0	18.9	29.5	6.0	7.9
11	8/1/83	1500	2.0	17.8	29.2	5.6	7.9
12	8/2/83	1250	2.0	18.3	28.7	6.0	7.6
13	8/2/83	1220	2.5	13.0	28.5	6.3	7.4
14	8/2/83	1152	3.0	17.8	28.2	5.6	7.7
15	8/2/83	0908	3.5	13.0	26.5	5.8	7.2
16B	8/2/83	0942	4.0	12.3	26.8	5.0	7.2
17	8/2/83	1030	1.0	23.3	27.0	7.6	8.0

TABLE 7. WATER QUALITY AT EXPOSURE PANEL STATIONS  
SEPTEMBER, 1983

Station	Date	Time	Depth in Feet	Salinity 0/00	Temperature (°C)	O <sub>2</sub> (mg/l)	pH
1	9/6/83	0910	6.0	24.8	23.7	5.6	7.4
2	9/6/83	0955	1.5	24.5	27.7	5.0	7.5
3	9/6/83	1028	1.5	22.8	27.9	4.4	7.3
4	9/6/83	1102	3.0	22.6	28.0	3.2	7.2
4A	9/6/83	1123	2.0	22.3	29.0	5.6	7.6
5	9/6/83	1142	2.0	18.1	28.7	6.3	7.5
6	9/6/83	1155	2.0	19.1	28.0	5.0	7.3
7	9/6/83	1213	1.2	17.5	29.0	6.0	7.3
8	9/6/83	1340	4.0	20.2	27.9	5.4	7.3
9	9/6/83	1323	4.0	19.0	28.7	6.0	7.2
10	9/6/83	1512	4.0	16.0	28.7	5.7	7.3
10A	9/6/83	1406	2.2	20.2	28.9	5.8	7.6
10B	9/6/83	1425	3.0	20.0	29.0	6.0	7.6
11	9/6/83	1442	1.5	19.0	29.2	6.0	7.6
12	9/7/83	1324	2.5	19.4	28.8	5.2	7.5
13	9/7/83	1256	3.0	16.1	28.8	5.3	7.4
14	9/7/83	1220	4.0	17.9	29.0	4.8	7.4
15	9/7/83	0852	3.0	15.2	26.7	6.3	7.3
16B	9/7/83	0930	4.0	13.8	27.6	5.0	7.2
17	9/7/83	1055	1.5	23.9	28.7	3.9	7.6

TABLE 8. WATER QUALITY AT EXPOSURE PANEL STATIONS  
OCTOBER, 1983

Station	Date	Time	Depth in Feet	Salinity 0/00	Temperature (°C)	O <sub>2</sub> (mg/l)	pH
1	10/4/83	0900	5.5	20.9	19.6	6.6	7.8
2	10/4/83	0938	2.0	20.9	19.8	6.9	7.7
3	10/4/83	1026	2.0	20.5	20.2	6.3	7.6
4	10/4/83	1053	2.2	20.8	19.9	5.8	7.6
4A	10/4/83	1112	2.2	21.1	20.7	6.8	7.8
5	10/4/83	1131	1.2	16.6	20.5	8.8*	7.9
6	10/4/83	1148	2.5	18.0	20.0	7.4	7.8
7	10/4/83	1205	1.6	16.9	21.7	8.4	8.0
8	10/4/83	1401	4.0	20.2	20.6	9.0	8.0
9	10/4/83	1340	4.0	18.8	21.7	7.2	7.4
10	10/4/83	1535	4.0	18.2	21.0	7.3	7.7
10A	10/4/83	1430	1.5	19.0	22.3	7.1	7.7
10B	10/4/83	1450	3.2	19.4	21.6	7.8	7.9
11	10/4/83	1508	2.5	18.5	21.7	7.8	7.9
12	10/5/83	1250	2.5	19.6	21.6	7.6	7.9
13	10/5/83	1225	3.0	19.6	21.6	8.0	8.0
14	10/5/83	1140	4.0	17.9	21.5	7.4	7.8
15	10/5/83	0928	4.0	17.6	20.6	7.3	7.7
16B	10/5/83	1000	5.0	14.0	20.7	7.8	7.9
17	10/5/83	1054	1.5	22.3	21.6	6.2	7.7

\*Value may be too low, DO meter may have needed to be recalibrated.

TABLE 9. CONDITION OF GONADS OF TEREDINID BORERS  
REMOVED FROM EXPOSURE PANELS IN BARNEGAT  
BAY FROM JULY THROUGH SEPTEMBER, 1983.

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
1247 a	7	Jul 83	12	<u>Teredo</u> <u>navalis</u>	M	R	Special panel
b				<u>Teredo</u> <u>navalis</u>	F	R	
c				<u>Teredo</u> <u>navalis</u>	F	R	
d				<u>Teredo</u> <u>navalis</u>	F	R	
e				<u>Teredo</u> <u>navalis</u>	M	R	
1248 a	17	Jul 83	12	<u>Teredo</u> <u>navalis</u>	F	R	Special panel
b				<u>Teredo</u> <u>navalis</u>	M	PS	
c				<u>Teredo</u> <u>navalis</u>	M	PS	
d				<u>Teredo</u> <u>navalis</u>	M	PS	
1249	11	Jul 83	12	<u>Bankia</u> <u>gouldi</u>	F	R	Special panel
1250	11	Jul 83	12	<u>Teredo</u> spp.	F	R	Special panel
1251 a	11	Jul 83	12	<u>Teredo</u> <u>navalis</u>	H	S	Special panel
b				<u>Teredo</u> <u>navalis</u>	F	PS	
1252 a	11	Aug 83	6	<u>Bankia</u> <u>gouldi</u>	M	LA	
b				<u>Bankia</u> <u>gouldi</u>	M	PS	
c				<u>Bankia</u> <u>gouldi</u>	H	R	
d				<u>Bankia</u> <u>gouldi</u>	H	PS	
e				<u>Bankia</u> <u>gouldi</u>	F	PS	
f				<u>Bankia</u> <u>gouldi</u>	F	PS	
g				<u>Bankia</u> <u>gouldi</u>	M	R	
h				<u>Bankia</u> <u>gouldi</u>	H	PS	
i				<u>Bankia</u> <u>gouldi</u>	M	PS	
j				<u>Bankia</u> <u>gouldi</u>	M	PS	

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
k				<u>Bankia gouldi</u>			No discernable gonad
l				<u>Bankia gouldi</u>	M	LA	
m				<u>Bankia gouldi</u>	F	PS	
n				<u>Bankia gouldi</u>	M	PS	
1253 a	12	Aug 83	6	<u>Bankia gouldi</u>			No discernable gonad
b				<u>Bankia gouldi</u>			No discernable gonad
1254 a	14	Aug 83	6	<u>Bankia gouldi</u>	F	R	
b				<u>Bankia gouldi</u>	F	PS	
c				<u>Bankia gouldi</u>	F	PS	
d				<u>Bankia gouldi</u>	F	PS	
e				<u>Bankia gouldi</u>	M	PS	
f				<u>Bankia gouldi</u>	M	PS	
g				<u>Bankia gouldi</u>			No discernable gonad
h				<u>Bankia gouldi</u>	M	LA	
i				<u>Bankia gouldi</u>	M	PS	
j				<u>Bankia gouldi</u>	F	PS	
k				<u>Bankia gouldi</u>	F	PS	
l				<u>Bankia gouldi</u>	F	PS	
m				<u>Bankia gouldi</u>	M	LA	
n				<u>Bankia gouldi</u>	F	PS	
o				<u>Bankia gouldi</u>	F	PS	
1255	8	Aug 83	6	<u>Bankia gouldi</u>			No discernable gonad
1256 a	1	Aug 83	6	<u>Teredo navalis</u>			No discernable gonad
b				<u>Teredo navalis</u>			No discernable gonad
1257 a	10A	Aug 83	6	<u>Bankia gouldi</u>	M	LA	
b				<u>Bankia gouldi</u>	M	R	
1258	5	Aug 83	6	<u>Bankia gouldi</u>	M	R	



TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1259	11	Aug 83	6	<u>Teredo</u> <u>navalis</u>			No discernable gonad
1260 a	11	Aug 83	12	<u>Bankia</u> <u>gouldi</u>	H	LA	Special panel
b				<u>Bankia</u> <u>gouldi</u>	M	PS	
c				<u>Bankia</u> <u>gouldi</u>	M	R	
d				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
e				<u>Bankia</u> <u>gouldi</u>	M	R	
f				<u>Bankia</u> <u>gouldi</u>	F	R	
g				<u>Bankia</u> <u>gouldi</u>	M	PS	
h				<u>Bankia</u> <u>gouldi</u>	M	R	
1261	17	Aug 83	12	<u>Teredo</u> <u>navalis</u>			Special panel, no discernable gonad
1262	15	Sep 83	6	<u>Bankia</u> <u>gouldi</u>			No discernable gonad
1263	12	Sep 83	6	<u>Bankia</u> <u>gouldi</u>			No discernable gonad
1264	12	Sep 83	6	<u>Bankia</u> <u>gouldi</u>	M	EA	
1265 a	8	Sep 83	6	<u>Bankia</u> <u>gouldi</u>			No discernable gonad
b				<u>Bankia</u> <u>gouldi</u>	M	PS	
c				<u>Bankia</u> <u>gouldi</u>	M	R	
d				<u>Bankia</u> <u>gouldi</u>	M	PS	
e				<u>Bankia</u> <u>gouldi</u>	M	S	
f				<u>Bankia</u> <u>gouldi</u>	M	PS	
1266	8	Sep 83	6	<u>Teredo</u> <u>navalis</u>	F	R	
1267	10A	Sep 83	6	<u>Bankia</u> <u>gouldi</u>	M	LA	
1268 a	14	Sep 83	6	<u>Bankia</u> <u>gouldi</u>	M	S	
b				<u>Bankia</u> <u>gouldi</u>	F	R	



TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
c				<u>Bankia gouldi</u>	F	S	
d				<u>Bankia gouldi</u>	F	S	
e				<u>Bankia gouldi</u>	F	PS	
f				<u>Bankia gouldi</u>	F	S	
g				<u>Bankia gouldi</u>	M	PS	
h				<u>Bankia gouldi</u>	M	PS	
i				<u>Bankia gouldi</u>	M	S	
j				<u>Bankia gouldi</u>	M	R	
k				<u>Bankia gouldi</u>	M	S	
l				<u>Bankia gouldi</u>	F	S	
m				<u>Bankia gouldi</u>	M	S	
1269 a	5	Sep 83	6	<u>Bankia gouldi</u>	M	S	
b				<u>Bankia gouldi</u>	M	S	
1270 a	7	Sep 83		<u>Bankia gouldi</u>			No discernable gonad
b				<u>Bankia gouldi</u>	M	R	
c				<u>Bankia gouldi</u>	M	R	
1271	3	Sep 83	6	<u>Bankia gouldi</u>	M	S	
1272 a	1	Sep 83	6	<u>Teredo navalis</u>			No discernable gonad
b				<u>Teredo navalis</u>	F	R	
c				<u>Teredo navalis</u>	F	R	
d				<u>Teredo navalis</u>	F	R	
e				<u>Teredo navalis</u>	F	R	
f				<u>Teredo navalis</u>	F	R	
g				<u>Teredo navalis</u>	F	R	
h				<u>Teredo navalis</u>	M	R	
i				<u>Teredo navalis</u>			No discernable gonad
j				<u>Teredo navalis</u>	F	R	
k				<u>Teredo navalis</u>	F	R	

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
l				<u>Teredo</u> <u>navalis</u>	F	R	
m				<u>Teredo</u> <u>navalis</u>	F	R	
n				<u>Teredo</u> <u>navalis</u>	F	R	
o				<u>Teredo</u> <u>navalis</u>			No discernable gonad
p				<u>Teredo</u> <u>navalis</u>	F	R	
1273 a	17	Sep 83	6	<u>Bankia</u> <u>gouldi</u>			No discernable gonad
b				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
c				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
d				<u>Bankia</u> <u>gouldi</u>	M	EA	
1274 a	11	Sep 83	6	<u>Bankia</u> <u>gouldi</u>	M	PS	
b				<u>Bankia</u> <u>gouldi</u>	F	S	
c				<u>Bankia</u> <u>gouldi</u>	M	PS	
d				<u>Bankia</u> <u>gouldi</u>	M	PS	
e				<u>Bankia</u> <u>gouldi</u>	M	PS	
f				<u>Bankia</u> <u>gouldi</u>	F	S	
g				<u>Bankia</u> <u>gouldi</u>	M	R	
h				<u>Bankia</u> <u>gouldi</u>	M	LA	
i				<u>Bankia</u> <u>gouldi</u>	M	LA	
j				<u>Bankia</u> <u>gouldi</u>	M	PS	
k				<u>Bankia</u> <u>gouldi</u>	M	R	
l				<u>Bankia</u> <u>gouldi</u>	M	S	
m				<u>Bankia</u> <u>gouldi</u>	M	R	
n				<u>Bankia</u> <u>gouldi</u>	F	PS	
1275 a	13	Sep 83	6	<u>Bankia</u> <u>gouldi</u>	M	R	
b				<u>Bankia</u> <u>gouldi</u>	F	S	
c				<u>Bankia</u> <u>gouldi</u>	F	S	
d				<u>Bankia</u> <u>gouldi</u>	M	S	
e				<u>Bankia</u> <u>gouldi</u>	F	R	
f				<u>Bankia</u> <u>gouldi</u>			No discernable gonad
1276	7	Sep 83	12	<u>Bankia</u> <u>gouldi</u>	F	R	Special panel

TABLE 9. (Continued)

Specimen No.	Station	Month Removed	No. Months Exposed	Species	Sex	Gonad Condition	Comments
1277	12	Sep 83	12	<u>Bankia gouldi</u>	M	PS	Special panel
1278 a	11	Sep 83	12	<u>Bankia gouldi</u>	M	S	Special panel
b				<u>Bankia gouldi</u>	M	PS	
c				<u>Bankia gouldi</u>	M	S	
d				<u>Bankia gouldi</u>	M	S	
e				<u>Bankia gouldi</u>	M	S	
f				<u>Bankia gouldi</u>	M	S	
g				<u>Bankia gouldi</u>	M	S	
h				<u>Bankia gouldi</u>			No discernable gonad
1279 a	17	Sep 83	12	<u>Teredo navalis</u>	M	S	Special panel
b				<u>Teredo navalis</u>	M	PS	
c				<u>Teredo navalis</u>	H	S	
d				<u>Teredo navalis</u>	M	S	
e				<u>Teredo navalis</u>	F	R	
f				<u>Teredo navalis</u>			No discernable gonad
g				<u>Teredo navalis</u>	M	S	
h				<u>Teredo navalis</u>			No discernable gonad
i				<u>Teredo navalis</u>	F	EA	
j				<u>Teredo navalis</u>	F	S	
k				<u>Teredo navalis</u>	M	S	
l				<u>Teredo navalis</u>	M	S	
m				<u>Teredo navalis</u>	M	S	
1280	17	Sep 83	12	<u>Teredinidae</u>	M	R	Special panel





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