PHYSICAL OCEANOGRAPHIC, BIOLOGICAL, AND CHEMICAL DATA— SOUTH ATLANTIC COAST OF THE UNITED STATES

Gill Cruise 6

SPECIAL SCIENTIFIC REPORT–FISHERIES No. 265

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EXPLANATORY NOTE

The series embodies results of investigations, usually of restricted scope, intended to aid or direct management or utilization practices and as guides for administrative or legislative action. It is issued in limited quantities for official use of Federal, State or cooperating agencies and in processed form for economy and to avoid delay in publication.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service, Arnie J. Suomela, Commissioner

PHYSICAL OCEANOGRAPHIC, BIOLOGICAL, AND CHEMICAL DATA SOUTH ATLANTIC COAST OF THE UNITED STATES M/V THEODORE N. GILL CRUISE 6

by

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Special Scientific Report--Fisheries No. 265

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SOUTH ATLANTIC COAST OF THE UNITED STATES
M/V THEODORE N. GILL CRUISE 6

This is the sixth in a series of reports presenting basic data from cruises of the Theodore N. Gill in waters off the South Atlantic coast of the United States.

Background of the investigations; objectives; procedures on station; and chemical, biological, and oceanographic methods and procedures were presented in the report for Cruise 1 (Anderson, Gehringer, and Cohen, 1956). Biological methods and procedures were the same as those modified on Cruise 3 (Anderson and Gehringer, 1957). The basic station plan is shown in figure 1.

NARRATIVE ACCOUNT OF CRUISE 6

The Gill departed from Brunswick, Georgia, on April 14, 1954 to commence the southern leg of the cruise. Special stations 5, 6, 7, and 8 were occupied on April 15 and 16 and the vessel proceeded to the standard station, arriving on April 17. The vessel remained on standard station for about 40 hours on April 17 to 19, during which time 13 hydrographic casts were completed--one cast going to 2500 meters. Bathythermograph observations, routine meteorological observations, and special plankton tows for deep scattering layer and other studies were also accomplished.

Damage to the ship's rudder necessitated drydocking the vessel at Nassau, B.W.I,, for repairs, and occupation of the regular stations began on April 25. Good weather prevailed, and from April 25 to 28 the vessel occupied regular stations 1 through 17 and special station 9. Enroute to station 18 one of the main reduction gears on the main engine was abadly damaged, requiring cancellation of the remainder of the cruise. The Gill arrived back in Brunswick on April 29. The cruise track is shown in figure 2.

During this short cruise a total of 35 hydrographic and 48 bathythermograph casts were made. Oblique plankton tows were taken at each station with the Gulf III all-metal planton sampler, the Gulf IA high-speed plankton sampler was towed between stations, and 8 runs of 8 hours each with the continuous plankton sampler. A bottom sample was obtained at most of the stations by means of a modified orange-peel dredge, and Secchi disc readings were taken whenever conditions permitted. A complete set of water samples for shore analysis on salinity, inorganic phosphate, total phosphorus, nitrate-nitrite, carbohydrates, and proteins were obtained from all stations and all levels. Oxygen determinations were run aboard vessel for all stations and all levels. Dip-net fishing was conducted during the day and at night, yielding a considerable amount of material.

Twelve drift bottles were released for the Woods Hole Oceanographic Institution on each of regular stations 3, 4, 5, 10, 11, 12, and 13. The bottles used were 8-ounce, clear glass soda bottles approximately 22 cm. high and 6 cm. in diameter. To reduce wind drift the bottles were ballasted with clean dry sand, so that they floated vertically at or near the surface. Tabulated results are given in table 16.

Scientific personnel participating in the cruise were:

I. Southern Leg

U. S. Fish and Wildlife Service and Cooperators:

William W. Anderson	Chief Scientist
Edward Cohen	Chemist
Vibert L. Strock	Administrative Assistant
Charles P. Goodwin	Chemical Aid

Navy Hydrographic Office:

Melvin Light	Senior Oceanographer
Richard Williams	Oceanographer
Charles W. Backus	Technician

Office of Naval Research:

James Carpenter	Chemist (Chesapeake Bay Institute)

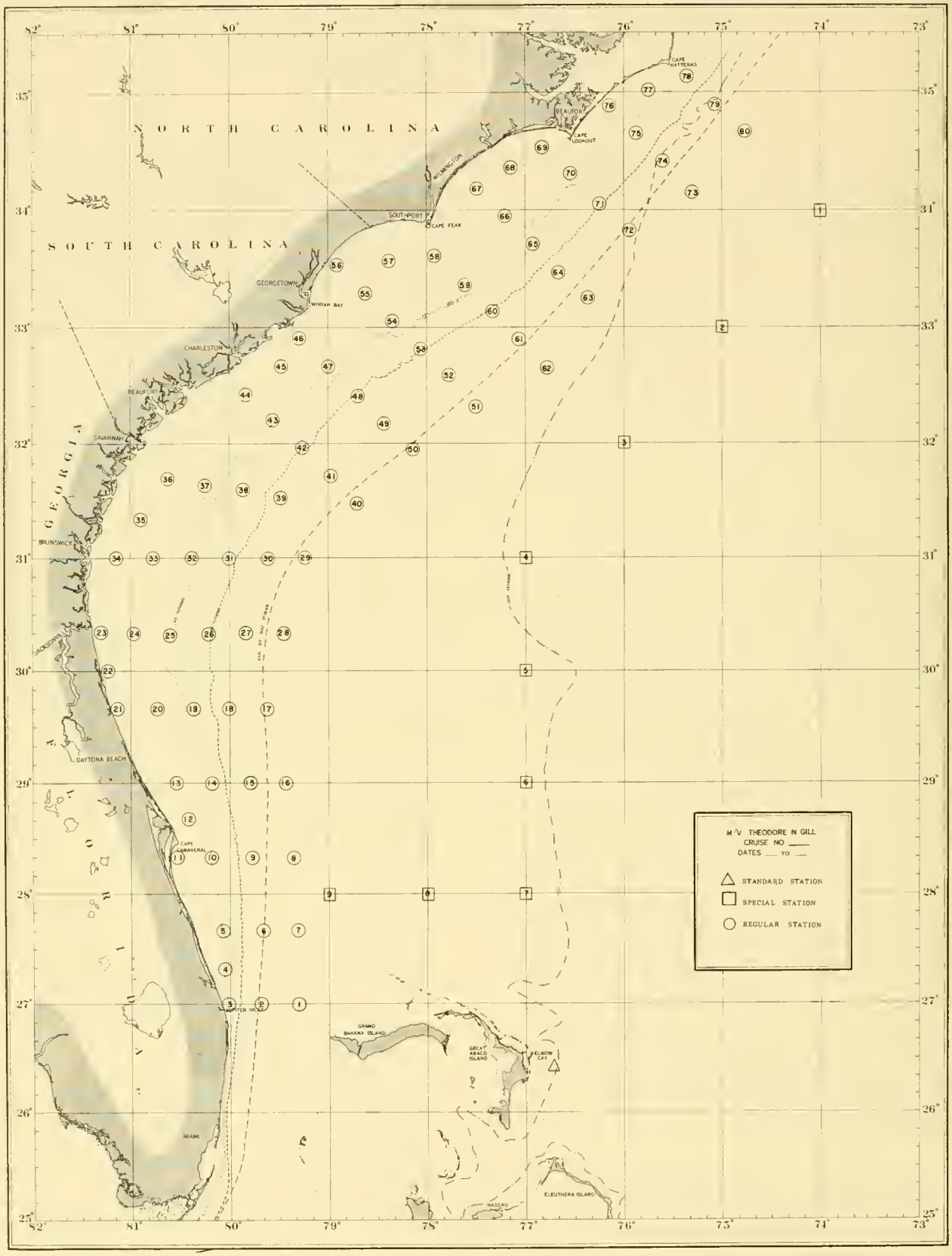

Figure 1.--Basic station plan.

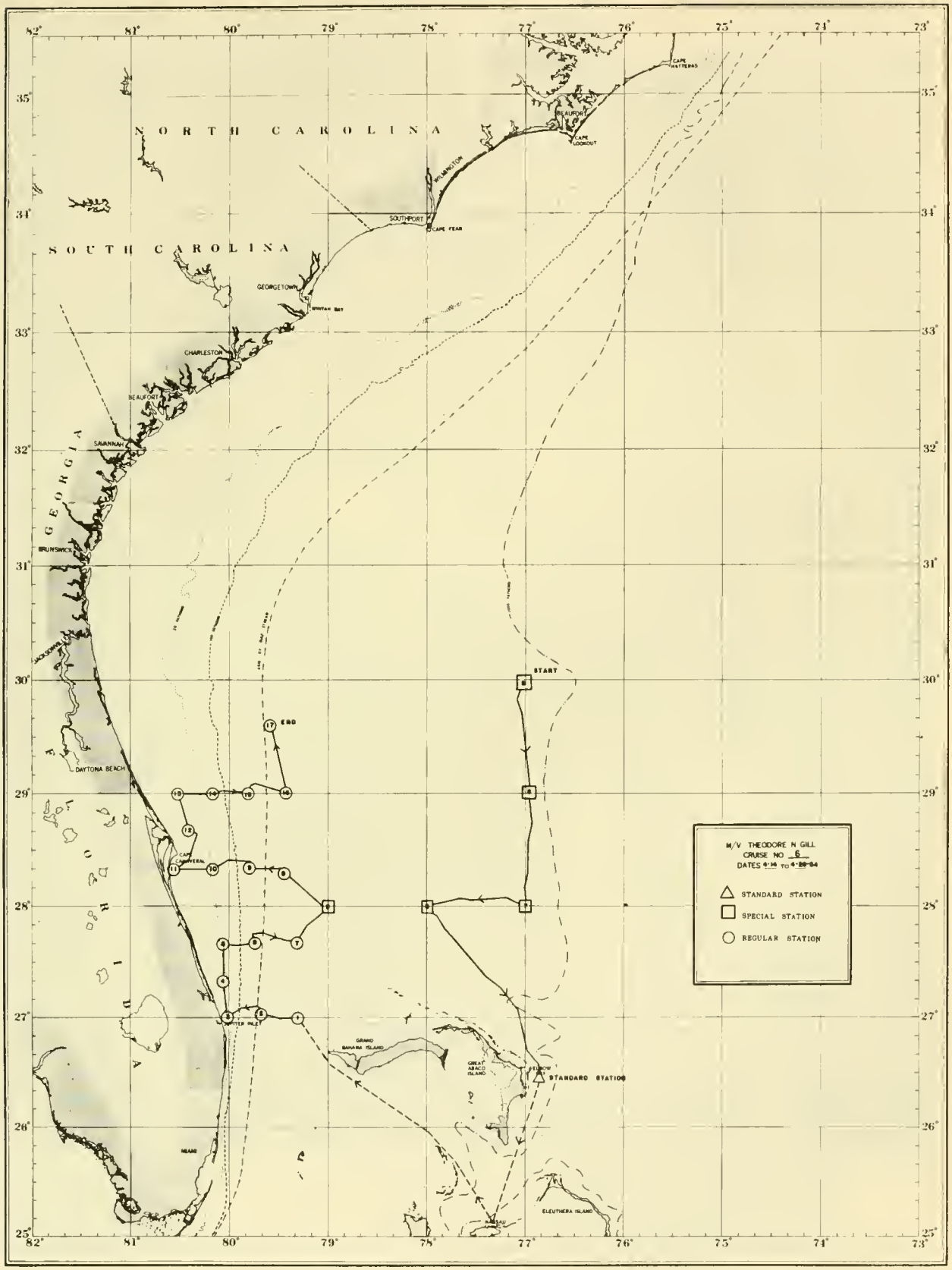

Figure 2.--Track chart.

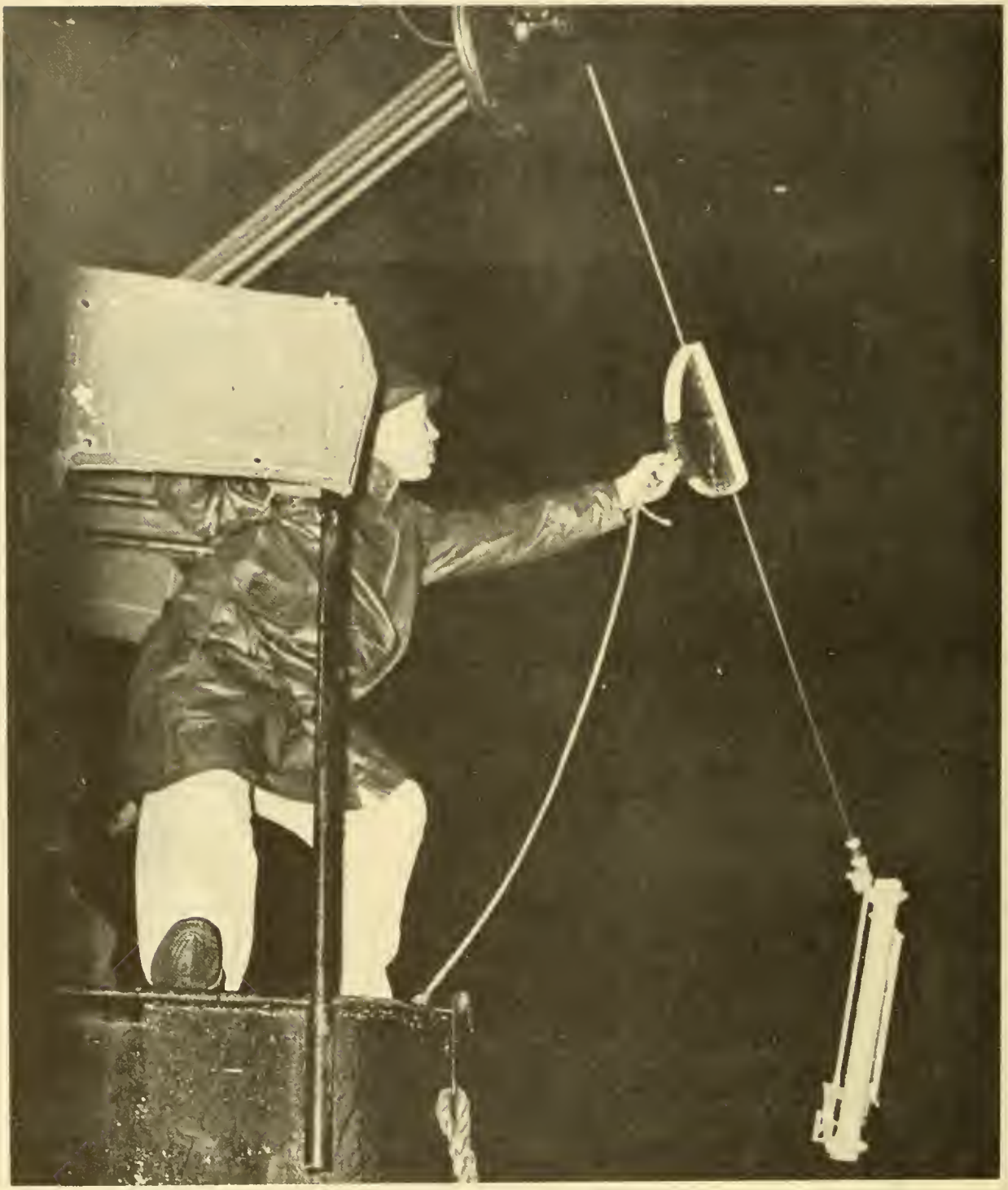

Figure 3.--Measuring angle of hydrographic cable on a windy night station.

Figure 4.--Porcupine fish taken on a night dip-net station.

EXPLANATION OF DATA SHEETS AND TABLES

Oceanographic and Chemical

Each of the items appearing on the station data pages is explained below. All doubtful data are indicated and were not used in the construction of the curves from which the interpolated values (standard depth values) were derived. Observed values which were obviously false were omitted entirely. A dash in a table means that no value was available. Interpolations for standard depth values for temperature, salinity, sigma-t, and oxygen are IBM calculations; those for the chemical constituents were derived from straight lines between observed values.

The profiles of salinity, temperature, and denisty were prepared from these data, and appear as figures 5-8.

1. Cruise Number. The first cruise over the established station pattern (fig. 1) was numbered Gill 1, and subsequent cruises, Gill 2 through Gill 9 (only Gill 6 is covered by the present report).

2. Station Number. Stations are numbered consecutively, starting with one, at the beginning of each cruise. The station pattern and numbers as shown in figure 1 were maintained on each cruise. If a station or series of stations was not occupied, these station numbers are omitted. Regular stations have numbers only; standard and special stations are specifically indicated.

3. Date. Month, day, and year are given.

4. Latitude and Longitude. The position of the station is given in degrees and minutes.

5. Time. Given in Greenwich Mean Time and is that hour nearest to the start of the first cast.

6. Depth. Is the observed uncorrected sonic sounding for the station, recorded in meters.

7. Wind. Wind speed is given in meters per second. Direction from which the wind blows is coded in degrees true to the nearest ten degrees. The last zero is omitted. North is 36 on this scale and calm is 00. See table 1, "Compass Direction Conversion Table for Wind, Sea, and Swell Directions".

8. Barometer. The barometric pressure is coded in millibars, neglecting the 900 or 1000. Thus 996 millibars is coded as 96, and 1008 millibars is coded as 08.

9. Air Temperature. Dry bulb and wet bulb temperatures are entered to the nearest tenth of a degree (centigrade).

10. Humidity. The percent of humidity is coded directly.

11. Weather. Weather is coded as indicated in table 2, "Numerical Weather Codes-Present Weather".

12. Clouds. Cloud type and amount are coded as indicated in table 3, "Cloud Type"; and table 4, "Cloud Amount".

13. Sea. Sea direction and amount are coded as indicated in table 5, "Sea Amount"; and table 1.

14. Swell. Swell directions and amount are coded as indicated in table 6, "Swell Amount"; table 1.

15. Visibility. Visibility is coded as indicated in table 7, "Visibility".

16. Water Transparency. Given as meters to which a Secchi disc is visible.

Subsurface Observations

1. Sample Depth. Observed (actual) depth of each sample is given in meters. Interpolated values at standard depths are also given. The standard depths in meters are: 0, 10, 20, 30, 50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800, 1000, 1200, 1500, 2000, 2500, 3000, and thence every 1000 meters.

2. Temperature. The centigrade temperature is given in degrees and hundredths.

3. Salinity. Salinity is given in parts per thousand to two decimal places.

4. Sigma-t. To convert to density divide by 1000 and add 1. Thus, a sigma-t

value of 22.35 converts to a density of 1.02235.

5. Dissolved Oxygen. These values are given in milliliters per liter to two decimal places.

6. Total Phosphorus. Values are given in microgram atoms per liter to the nearest 0.1 of a unit.

7. Inorganic Phosphate. Values are given in microgram atoms per liter to the nearest 0.1 of a unit.

8. Nitrate-nitrite. These values are given in microgram atoms per liter to the nearest 0.5 of a unit.

9. Carbohydrates (Arabinose). These values are given in terms of milligrams per liter to the nearest 0.1 of a unit. Collier et al (1953) presented a technique for estimating certain elements of the organic materials in sea water which react to the test for carbohydrates. The carbohydrate values are given as arabinose equivalents, and are not necessarily the actual concentrations of carbohydrate substances.

10. Proteins (Tyrosine). These values are given to the nearest 0.1 of a unit as milligrams per liter of protein material in sea water, which reacts to the test for tyrosine.

Biological

1. Plankton volumes (Gulf III sampler), table 8. The position given is that at beginning of the tow. The depth of the haul is given from 0 to the greatest depth reached. The volumes as given are "wet volumes" (procedures for determination were given under methods in report for Cruise 1). Very few samples contained large organisms such as jellyfish (which were removed), so that the volumes represent smaller organisms.

2. Plankton volumes (Gulf IA high-speed sampler), table 9. The position given is that at the center of the tow. All tows were made at the surface. The volumes as given are "wet volumes" (procedures for determination were given under methods in report for Cruise 1). Very few samples contained large organisms such as jellyfish (which were removed), so that the volumes represent smaller organisms.

3. Numbers of plankton organisms per cubic meter of water (Gulf III sampler), table 10. The procedures for plankton tows, methods for sorting and counting, and calculations of numbers of organisms were described under methods in report for Cruise 1. Counts are given for major groups as indicated.

4. Numbers of plankton organisms per cubic meter of water (high-speed sampler), table 11. The procedures for plankton tows, methods for sorting and counting, and calculations of numbers of organisms were described under methods for Cruise 3. Counts are given for major groups as indicated.

5. Numbers of plankton organisms per cubic meter of water (continuous plankton sampler), table 12. Description of this sampler, its use, and methods of calculating numbers of organisms were given under methods in report for Cruise 1. Counts are given by compartment for major groups as indicated.

6. List of the species of fish in dip-net, trolling, and stomach contents collections (D-dip net; T-trolling; S-stomach contents), table 13. The species are listed in alphabetical order, followed by symbols indicating method of capture.

7. Numbers and species of fish taken by trolling, table 14. The stage of gonad development is based on International Council classifications of gonad maturity for the herring (International Councils Rapports et Process-Verbaux des Reunions, Vol. LXXIV, p. 17, March 1931). The scale is only a guide to general classifications and must be treated as such.

This scale follows:

Stage I. Virgin individuals. Very small sexual organs close under vertebral column. Wine-coloured torpedo-shaped ovaries about 2-3 cm. long and 2-3 mm. thick. Eggs

invisible to naked eye. Whitish or grayish brown knife-shaped testes 2-3 cm. long and 2-3 mm. broad.

Stage II. Maturing virgins or recovering spents. Ovaries somewhat longer than half the length of ventral cavity, about 1 cm. diameter. Eggs small but visible to naked eye. Milt whitish, somewhat bloodshot, same size as ovaries, but still thin and knife-shaped.

Stage III. Sexual organs more swollen, occupying about half of ventral cavity.

Stage IV. Ovaries and testes nearly filling 2/3 of ventral cavity. Eggs not transparent, milt whitish, swollen.

Stage V. Sexual organs filling ventral cavity. Ovaries with some large transparent eggs. Milt white, not yet running.

Stage VI. Roe and milt running (spawning).

Stage VII. Spents. Ovaries slack with residual eggs. Testes baggy, bloodshot. Doubtful cases are indicated by quoting two stages, e.g. "St. I-II, St. VII-II", etc.

8. Numbers and species of fish taken by dip net, table 15. There is shown, by family, the genera and species taken. Numbers of specimens from each station are given in parentheses, followed by the approximate size or size range of standard length, in millimeters.

ACKNOWLEDGMENTS

Acknowledgment is made to the following agencies and individuals for contributions in securing and processing the material presented. To the Navy Hydrographic Office for their cooperation in planning and executing the field program and for processing the physical oceanographic data. To the Office of Naval Research, and Dr. Sidney R. Galler in particular, for help in planning and executing the field program. To the Georgia Game and Fish Commission for their cooperation in the biological and chemical studies; through Frank T. Knapp, biologist, and Joseph E. Moore, chemist (now a member of Fish and Wildlife Service staff). To the Florida State Board of Conservation (through the Marine Laboratory of the University of Miami) for their cooperation in the biological studies, through George F. Arata, Jr., biologist. To Dean F. Bumpus of the Woods Hole Oceanographic Institution for preparation of the salinity, temperature, and density profiles which appear as figures 5-8.

From our own staff special recognition is due: Frederick H. Berry for identification of dip-net and stomach content material; Hugh M. Fields, Donald Moore, and Melba C. Wilson for the plankton organism identifications and counts; Edward Cohen (formerly chemist) for chemical determinations; and Joseph E. Moore for assitance in assembling the physical and chemical data. We also appreciate the assistance of other members of the staff who aided in one way or another: Charles P. Goodwin, Clyde C. Bryant, Herbert R. Gordy, Carolyn V. Martin, and Mary E. Cobb. Acknowledgment is made of the excellent cooperation of crew members of the M/V Theodore N. Gill and Captain Mauritz C. Fredricksen in particular.

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Table 1.--Compass direction conversion table for wind, sea, and swell directions

Code	Direction
00	Calm
01	5° to 14°
02	15° to 24° NNE
03	25° to 34°
04	35° to 44°
05	45° to 54° NE
06	55° to 64°
07	65° to 74° ENE
08	75° to 84°
09	85° to 94° E
10	95° to 104°
11	105° to 114° ESE
12	115° to 124°
13	125° to 134°
14	135° to 144° SE
15	145° to 154°
16	155° to 164° SSE
17	165° to 174°
18	175° to 184° S
19	185° to 194°
20	195° to 204° SSW
21	205° to 214°
22	215° to 224°
23	225° to 234° SW
24	235° to 244°
25	245° to 254° WSW
26	255° to 264°
27	265° to 274° W
28	275° to 284°
29	285° to 294° WNW
30	295° to 304°
31	305° to 314°
32	315° to 324° NW
33	325° to 334°
34	335° to 344° NNW
35	345° to 354°
36	355° to 4° N

TABLE II NUMERICAL WEATHER CODES—PRESENT WEATHER

00 Cloud development NOT observed or NOT observable during past hour.	**01** Clouds generally dissolving or becoming less developed during past hour.	**02** State of sky on the whole unchanged during past hour	**03** Clouds generally forming or developing during past hour	**04** Visibility reduced by smoke	**05** Haze	**06** Widespread dust in suspension in the air, NOT raised by wind, at time of observation.	**07** Dust or sand raised by wind, at time of observation.	**08** Well developed dust devil(s) within past hour	**09** Duststorm or sandstorm within sight of or at station during past hour
10 Light fog	**11** Patches of shallow fog at station, NOT deeper than 6 feet on land	**12** More or less continuous shallow fog at station, NOT deeper than 6 feet on land	**13** Lightning visible, no thunder heard.	**14** Precipitation within sight, but NOT reaching the ground	**15** Precipitation within sight, reaching the ground, but distant from station	**16** Precipitation within sight, reaching the ground, near to but NOT at station.	**17** Thunder heard, but no precipitation at the station.	**18** Squall(s) within sight during past hour	**19** Funnel cloud(s) within sight during past hour.
20 Drizzle (NOT freezing and NOT falling as showers) during past hour, but NOT at time of ob	**21** Rain (NOT freezing and NOT falling as showers) during past hour, but NOT at time of ob.	**22** Snow (NOT falling as showers) during past hour, but NOT at time of observation	**23** Rain and snow (NOT falling as showers) during past hour, but NOT at time of observation.	**24** Freezing drizzle or freezing rain (NOT falling as showers) during past hour, but NOT at time of observation	**25** Showers of rain during past hour, but NOT at time of observation.	**26** Showers of snow, or of rain and snow, during past hour, but NOT at time of observation.	**27** Showers of hail, or of hail and rain, during past hour, but NOT at time of observation.	**28** Fog during past hour, but NOT at time of observation.	**29** Thunderstorm (with or without precipitation) during past hour, but NOT at time of observation
30 Slight or moderate duststorm or sanostorm has decreased during past hour	**31** Slight or moderate duststorm or sandstorm no appreciable change during past hour	**32** Slight or moderate duststorm or sandstorm has increased during past hour.	**33** Severe duststorm or sandstorm, has decreased during past hour	**34** Severe duststorm or sandstorm, no appreciable change during past hour.	**35** Severe duststorm or sandstorm, has increased during past hour	**36** Slight or moderate drifting snow, generally low	**37** Heavy drifting snow, generally low	**38** Slight or moderate drifting snow generally high.	**39** Heavy drifting snow, generally high
40 Fog at distance at time of observation, but NOT at station during past hour.	**41** Fog in patches	**42** Fog, sky discernible, has become thinner during past hour	**43** Fog, sky NOT discernible, has become thinner during past hour.	**44** Fog, sky discernible, no appreciable change during past hour.	**45** Fog, sky NOT discernible no appreciable change during past hour	**46** Fog, sky discernible, has begun or become thicker during past hour.	**47** Fog, sky NOT discernible, has begun or become thicker during past hour	**48** Fog, depositing rime, sky discernible	**49** Fog, depositing rime, sky not discernible
50 Intermittent drizzle (NOT freezing) slight at time of observation.	**51** Continuous drizzle (NOT freezing) slight at time of observation.	**52** Intermittent drizzle (NOT freezing) moderate at time of ob.	**53** Continuous drizzle (NOT freezing), moderate at time of ob.	**54** Intermittent drizzle (NOT freezing), thick at time of observation.	**55** Continuous drizzle (NOT freezing), thick at time of observation	**56** Slight freezing drizzle	**57** Moderate or thick freezing drizzle	**58** Drizzle and rain, slight	**59** Drizzle and rain, moderate or heavy
60 Intermittent rain (NOT freezing), slight at time of observation.	**61** Continuous rain (NOT freezing), slight at time of observation.	**62** Intermittent rain (NOT freezing), moderate at time of ob.	**63** Continuous rain (NOT freezing), moderate at time of observation.	**64** Intermittent rain (NOT freezing), heavy at time of observation.	**65** Continuous rain (NOT freezing), heavy at time of observation.	**66** Slight freezing rain.	**67** Moderate or heavy freezing rain	**68** Rain or drizzle and snow, slight	**69** Rain or drizzle and snow, moderate or heavy
70 Intermittent fall of snowflakes, slight at time of observation.	**71** Continuous fall of snowflakes, slight at time of observation.	**72** Intermittent fall of snowflakes, moderate at time of observation.	**73** Continuous fall of snowflakes, moderate at time of observation.	**74** Intermittent fall of snowflakes, heavy at time of observation.	**75** Continuous fall of snowflakes, heavy at time of observation	**76** Ice needles (with or without fog).	**77** Granular snow (with or without fog).	**78** Isolated starlike snow crystals (with or without fog)	**79** Ice pellets (sleet, U S definition).
80 Slight rain shower(s).	**81** Moderate or heavy rain shower(s)	**82** Violent rain shower(s).	**83** Slight shower(s) of rain and snow mixed.	**84** Moderate or heavy shower(s) of rain and snow mixed.	**85** Slight snow shower(s)	**86** Moderate or heavy snow shower(s).	**87** Slight shower(s) of soft or small hail with or without rain or rain and snow mixed	**88** Moderate or heavy shower(s) of soft or small hail with or without rain or rain and snow mixed	**89** Slight shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder
90 Moderate or heavy shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder.	**91** Slight rain at time of ob., thunderstorm during past hour, but NOT at time of observation.	**92** Moderate or heavy rain at time of ob., thunderstorm during past hour, but NOT at time of observation.	**93** Slight snow or rain and snow mixed or hail at time of observation., thunderstorm during past hour, but not at time of observations.	**94** Mod. or heavy snow, or rain and snow mixed or hail at time of ob., thunderstorm during past hour, but NOT at time of observation.	**95** Slight or mod. thunderstorm without hail, but with rain and/or snow at time of observation.	**96** Slight or moderate thunderstorm, with hail at time of observation.	**97** Heavy thunderstorm, without hail, but with rain and/or snow at time of observation	**98** Thunderstorm combined with duststorm or sandstorm at time of observation.	**99** Heavy thunderstorm with hail at time of observation

Table 2.--Numerical weather codes--present weather

Table 3.--Cloud type

Code	
0	Stratus or Fractostratus
1	Cirrus
2	Cirrostratus
3	Cirrocumulus
4	Altocumulus
5	Altostratus
6	Stratuscumulus
7	Nimbostratus
8	Cumulus or Fractocumulus
9	Cumulonumbus

Table 4.--Cloud amount

Code	
0	No clouds
1	Less than 1/10 or 1/10
2	2/10 and 3/10
3	4/10
4	5/10
5	6/10
6	7/10 and 8/10
7	9/10 and 9/10 plus
8	10/10
9	Sky obscured

Table 5.--Sea amount

Code	Approximate Height (feet)	Description
0	------	Calm
1	Less than 1	Smooth
2	1 to 3	Slight
3	3 to 5	Moderate
4	5 to 8	Rough
5	8 to 12	Very rough
6	12 to 20	High
7	20 to 40	Very high
8	40 and over	Mountainous
9	------	Very rough confused sea

Table 6.--Swell amount

Code	Approximate Height (feet)	Description		Approximate Length (feet)
0	----	No swell		----
1	1 to 6	Low swell	Short or Average	0 to 600
2			Long	Above 600
3	6 to 12	Moderate	Short	0 to 300
4			Average	300 to 600
5			Long	Above 600
6	Greater than 12	High	Short	0 to 300
7			Average	300 to 600
8			Long	Above 600
9	----	Confused		----

Table 7. Visibility

Code

0	Dense fog	50 yards
1	Thick fog	200 yards
2	Fog	400 yards
3	Moderate fog	1000 yards
4	Thin fog or mist	1 mile
5	Visibility poor	2 miles
6	Visibility moderate	5 miles
7	Visibility good	10 miles
8	Visibility very good	30 miles
9	Visibility excellent	Over 30 miles

Table 8.--Plankton volumes (Gulf III sampler)

Sta.	Position N. Lat.	Position W. Long.	(1954) Date	Time (EST) Start	Time (EST) End	Vol. water strained (m^3)	Depth of haul in meters	Vol. per m^3 strained (ml)
1	27° 00'	79° 18'	Apr. 25	1220	1254	379.4	0-60	0.040
2	27° 02'	79° 41'	Apr. 25	1545	1615	332.7	0-65	0.015
3	27° 00'	80° 04'	Apr. 25	2004	2026	427.8	0-5	0.058
4	27° 20'	80° 04'	Apr. 25	2311	2332	106.1	0-8	0.188
5	27° 40'	80° 04'	Apr. 26	0157	0219	103.9	0-13	0.048
6	27° 41'	79° 44'	Apr. 26	0535	0608	212.4	0-90	0.094
7	27° 40'	79° 18'	Apr. 26	1037	1108	310.5	0-86	0.032
8	28° 18'	79° 27'	Apr. 26	2041	2113	289.9	0-65	0.069
9	28° 21'	79° 48'	Apr. 26-27	2354	0026	292.6	0-69	0.120
10	28° 20'	80° 10'	Apr. 27	0321	0343	148.2	0-9	0.270
11	28° 20'	80° 32'	Apr. 27	0655	0716	180.9	Surface	0.193
12	28° 41'	80° 25'	Apr. 27	0921	0943	324.0	0-5	0.108
13	29° 00'	80° 31'	Apr. 27	1204	1226	199.2	0-5	0.251
14	29° 00'	80° 10'	Apr. 27	1452	1516	131.5	0-20	0.114
15	29° 00'	79° 48'	Apr. 27	1925	1956	284.5	0-69	0.053
16	29° 00'	79° 26'	Apr. 27-28	2330	0001	339.8	0-69	0.059
17	29° 37'	79° 36'	Apr. 28	0438	0508	331.7	0-65	0.060
Spc. 5	30° 00'	77° 00'	Apr. 15	1945	2016	314.4	0-60	0.016
Spc. 6	29° 00'	77° 00'	Apr. 16	0507	0539	266.9	0-69	0.019
Spc. 7	28° 00'	77° 00'	Apr. 16	1354	1425	269.8	0-77	0.018
Spc. 8	28° 00'	78° 00'	Apr. 16	2119	2153	277.4	0-77	0.036
Spc. 9	28° 00'	79° 00'	Apr. 26	1528	1559	308.6	0-60	0.016

Table 9.--Plankton volumes (Gulf IA High-speed sampler)

Tow No.	Position of ship at center of tow: N. Lat.	W. Long.	(1954) Date	Time (EST) Start	End	Vol. water strained (m^3)	Vol. per m^3 strained (ml)
1	27° 00'	79° 29'	Apr. 25	1255	1418	17.2	0.058
2	27° 07'	79° 50'	Apr. 25	1619	1909	24.0	0.333
3	27° 10'	80° 04'	Apr. 25	2031	2155	14.9	0.268
4	27° 29'	80° 04'	Apr. 25-26	2340	0111	16.2	0.494
5	27° 39'	79° 54'	Apr. 26	0223	0335	-	-
6	27° 44'	79° 34'	Apr. 26	0610	0905	31.2	0.128
7	27° 51'	79° 10'	Apr. 26	1112	1320	23.8	0.042
8	28° 06'	79° 11'	Apr. 26	1601	1854	35.8	0.028
9	28° 21'	79° 36'	Apr. 26	2114	2220	13.7	0.146
10	28° 25'	80° 00'	Apr. 27	0030	0225	22.6	0.088
11	28° 20'	80° 20'	Apr. 27	0347	0507	15.1	0.331
12	28° 28'	80° 23'	Apr. 27	0620	0825	20.7	0.290
13	28° 49'	80° 28'	Apr. 27	0945	1108	14.8	0.203
14	29° 00'	80° 21'	Apr. 27	1227	1405	18.6	0.161
15	29° 01'	80° 00'	Apr. 27	1519	1718	21.0	0.095
16	29° 03'	79° 38'	Apr. 27	1958	2146	21.4	0.140
17	29° 19'	79° 31'	Apr. 28	0005	0245	31.3	0.032
18	29° 40'	79° 43'	Apr. 28	0510	0620	15.2	0.066

Table 10.--Numbers of plankton organisms per cubic meter of water (Gulf III sampler)

Station Number	Reg. 1	Reg. 2	Reg. 3	Reg. 9	Reg. 10	Reg. 11	Reg. 12	Reg. 13
Protozoa	91.6	120.4	49.6	152.9	194.5	291.8	135.4	97.9
Coelenterata	3.0	5.6	1.0	5.3	8.9	15.6	1.1	5.3
Chaetognatha	4.4	5.6	3.5	7.5	7.2	5.7	27.5	88.3
Misc. Worms	1.5	1.0	0.1	1.8	0.5	22.7	18.3	0.8
Copepoda	121.2	77.1	50.5	156.5	231.7	30.8	74.6	501.3
Ostracoda	2.9	2.6	0.6	4.8	10.2	0.3	1.0	2.8
Mysidacea	-	-	0.1	-	1.5	-	0.4	-
Amphipoda	0.5	0.5	1.3	0.8	7.7	0.7	-	0.9
Isopoda	-	-	-	-	-	-	-	0.1
Stomatopoda	-	-	0.2	-	-	0.8	0.6	2.2
Euphausiacea	3.4	3.7	-	9.4	2.3	-	-	-
Shrimp	1.8	1.1	20.8	1.2	21.6	6.2	47.1	5.6
Crabs	<0.1	1.0	3.2	0.2	5.3	58.6	24.2	211.8
Misc. Crustaceans	0.2	0.3	0.2	0.5	-	2.1	0.2	338.4
Pteropoda	0.3	0.2	0.1	2.7	1.1	0.1	0.3	-
Misc. Mollusca	1.3	1.4	0.2	2.8	1.3	17.7	7.0	5.9
Larvacea	44.7	44.0	25.8	39.8	84.4	28.1	20.9	33.0
Misc. Tunicata	1.0	1.0	0.1	1.7	1.2	-	-	0.7
Leptocardia	-	0.05	0.01	0.01	-	0.02	0.01	-
Misc. Organisms	0.9	2.8	1.6	3.4	105.8	829.7	111.9	30.9
Subtotal	278.8	268.4	158.9	391.3	685.2	1310.9	470.5	1325.9
Fish Eggs	0.02	0.01	3.24	0.01	9.09	5.96	5.29	2.80
Fish Larvae	0.46	0.92	0.63	0.84	3.70	0.87	0.27	1.49
Total	279.3	269.3	162.8	392.2	698.0	1317.7	476.1	1330.2

Table 10.--Numbers of plankton organisms per cubic meter of water (Gulf III sampler), cont'd

Station Number	Reg. 14	Reg. 15	Reg. 16	Reg. 17	Spc. 5	Spc. 6	Spc. 7	Spc. 8
Protozoa	233.8	118.5	75.5	99.1	60.0	58.0	76.2	43.6
Coelenterata	10.0	4.9	13.7	12.1	6.2	9.2	6.7	4.2
Chaetognatha	5.9	3.0	3.4	2.8	9.7	19.1	7.8	5.8
Misc. Worms	1.2	1.3	1.4	1.0	1.7	2.0	0.2	0.9
Copepoda	245.0	91.6	96.7	95.2	74.8	78.6	84.9	69.5
Ostracoda	1.2	4.4	4.7	5.1	12.1	7.8	3.6	6.6
Mysidacea	-	-	0.1	-	-	0.1	-	-
Amphipoda	2.6	0.6	0.4	0.4	1.6	1.3	0.2	0.4
Isopoda	-	0.1	0.1	0.1	0.1	0.1	-	-
Stomatopoda	0.2	0.1	0.1	-	-	-	-	-
Euphausiacea	2.3	5.6	6.9	5.2	3.3	3.3	1.0	3.6
Shrimp	8.8	1.3	0.9	1.3	0.6	0.3	0.7	1.2
Crabs	1.4	0.4	0.4	0.2	0.1	-	0.1	0.1
Misc. Crustaceans	1.8	1.0	0.2	0.5	0.4	0.7	1.0	0.4
Pteropoda	2.9	2.0	2.1	1.4	0.4	0.7	0.6	0.6
Misc. Mollusca	2.4	2.4	1.7	1.4	5.2	3.4	2.4	1.2
Larvacea	109.6	27.6	26.8	42.8	14.8	5.8	36.1	22.2
Misc. Tunicata	1.2	0.7	0.3	0.7	0.4	0.6	0.2	0.9
Leptocardia	-	<0.01	0.02	0.04	0.05	0.04	<0.01	0.04
Misc. Organisms	9.6	0.8	1.1	2.2	39.1	27.8	8.7	4.0
Subtotal	639.9	266.3	236.5	271.5	230.6	218.8	230.4	165.2
Fish Eggs	3.54	0.01	-	0.01	0.01	0.03	0.01	0.04
Fish Larvae	1.21	0.69	0.58	0.95	0.58	0.14	0.57	0.68
Total	644.6	267.0	237.1	272.5	231.2	219.0	231.0	166.0

Table 10.--Numbers of plankton organisms per cubic meter of water (Gulf III sampler), cont'd

Station Number	Spc. 9
Protozoa	114.0
Coelenterata	4.1
Chaetognatha	6.7
Misc. Worms	1.5
Copepoda	82.4
Ostracoda	2.8
Mysidacea	-
Amphipoda	0.1
Isopoda	-
Stomatopoda	-
Euphausiacea	4.5
Shrimp	1.4
Crabs	0.3
Misc. Crustaceans	0.7
Pteropoda	0.3-
Misc. Mollusca	0.9
Larvacea	97.6
Misc. Tunicata	0.4
Leptocardia	0.11
Misc. Organisms	4.0
Subtotal	321.8
Fish Eggs	0.02
Fish Larvae	0.61
Total	322.4

Table 11.--Numbers of plankton organisms per cubic meter of water (high-speed sampler)

Tow Number	1	2	3	4	5*	6	7	8
Protozoa	3.5	101.6	124.5	160.3	1325	73.0	80.2	100.7
Coelenterata	-	13.8	4.0	13.0	185	5.9	0.6	2.9
Chaetognatha	0.3	11.4	2.0	8.0	185	2.6	0.2	4.2
Misc. Worms	-	1.0	0.7	0.9	10	0.2	-	0.7
Copepoda	4.9	163.4	177.8	281.4	2862	59.4	11.6	82.9
Ostracoda	-	59.6	11.7	258.4	245	0.3	-	0.6
Mysidacea	-	-	0.3	0.9	-	-	-	-
Amphipoda	-	5.8	1.0	9.0	40	0.5	-	0.4
Isopoda	-	-	-	-	-	-	-	0.1
Stomatopoda	-	0.2	-	0.9	-	-	-	0.1
Euphausiacea	-	3.1	0.3	1.8	50	2.1	0.2	2.9
Shrimp	-	5.2	23.2	18.2	80	0.2	0.2	0.4
Crabs	-	2.1	10.1	15.1	55	1.4	0.8	0.1
Misc. Crustaceans	-	0.4	3.7	4.3	15	-	-	0.1
Pteropoda	-	1.2	1.0	2.8	40	0.5	-	0.4
Misc. Mollusca	-	1.0	0.7	4.6	20	2.4	0.4	0.8
Larvacea	1.7	15.4	82.9	54.9	360	14.4	1.7	6.8
Misc. Tunicata	-	2.9	1.0	3.1	20	0.5	-	0.1
Leptocardia	-	-	-	-	-	-	-	-
Misc. Organisms	-	17.9	7.7	117.3	505	9.4	3.4	3.2
Subtotal	10.4	406.0	452.6	954.9	5997	172.8	99.3	207.4
Fish Eggs	-	1.04	46.98	24.01	456	0.13	0.17	-
Fish Larvae	0.06	0.38	6.84	2.10	17	0.35	0.21	0.17
Total	10.5	407.4	506.4	981.0	6470	173.3	99.7	207.6

*Total number of organisms in sample, water volume not determined

Table 11.--Numbers of plankton organisms per cubic meter of water (high-speed sampler), cont'd

Tow Number	9	10	11	12	13	14	15	16
Protozoa	77.4	103.2	140.4	115.2	193.4	131.1	126.2	86.7
Coelenterata	9.1	4.2	6.6	1.0	0.3	3.2	4.0	6.5
Chaetognatha	8.0	2.9	23.2	11.8	22.3	8.9	7.6	9.6
Misc. Worms	-	0.2	1.0	1.2	0.3	-	0.5	0.7
Copepoda	54.4	208.7	638.8	478.8	118.2	199.5	78.2	71.8
Ostracoda	1.8	33.0	193.0	32.1	2.0	0.8	-	1.9
Mysidacea	-	-	12.6	1.0	-	-	-	-
Amphipoda	0.7	4.0	5.3	-	-	-	1.4	0.7
Isopoda	-	-	-	-	-	-	-	-
Stomatopoda	-	0.2	0.3	1.0	1.0	0.8	0.5	0.5
Euphausiacea	9.5	5.3	4.0	0.7	0.3	-	-	5.6
Shrimp	-	13.5	200.1	12.8	9.4	5.9	1.2	2.6
Crabs	1.1	1.5	61.2	46.4	157.6	88.3	17.6	5.8
Misc. Crustaceans	0.4	0.2	7.9	1.0	1.0	20.4	2.6	-
Pteropoda	2.9	2.2	1.6	1.7	0.3	0.3	0.2	2.8
Misc. Mollusca	2.2	1.1	1.3	4.8	2.4	5.1	3.3	3.5
Larvacea	39.0	6.8	50.0	47.8	19.2	54.1	22.4	20.3
Misc. Tunicata	0.7	1.3	1.6	0.7	-	-	3.1	0.5
Leptocardia	-	0.04	0.07	0.34	0.07	-	-	-
Misc. Organisms	8.0	55.1	126.4	53.8	60.9	57.0	4.5	42.1
Subtotal	215.2	443.4	1475.4	812.1	588.7	575.4	273.3	261.6
Fish Eggs	-	11.15	13.77	9.95	2.70	4.03	0.62	0.14
Fish Larvae	0.73	0.26	13.11	8.50	2.84	1.08	0.76	0.09
Total	215.9	454.8	1502.3	830.6	594.2	580.5	274.7	261.8

Table 11.--Numbers of plankton organisms per cubic meter of water (high-speed sampler), cont'd

Tow Number	17	18
Protozoa	69.4	146.4
Coelenterata	3.0	9.2
Chaetognatha	4.5	8.6
Misc. Worms	0.3	0.3
Copepoda	88.0	146.4
Ostracoda	2.4	1.0
Mysidacea	-	-
Amphipoda	0.5	1.3
Isopoda	-	-
Stomatopoda	0.2	0.3
Euphausiacea	7.5	4.9
Shrimp	1.0	0.6
Crabs	1.6	0.6
Misc. Crustaceans	-	-
Pteropoda	2.2	0.6
Misc. Mollusca	1.8	1.0
Larvacea	6.4	15.1
Misc. Tunicata	-	1.3
Leptocardia	-	-
Misc. Organisms	61.0	5.3
Subtotal	249.8	342.9
Fish Eggs	0.03	-
Fish Larvae	0.29	0.53
Total	250.1	343.4

Table 12.--Numbers of plankton organisms per cubic meter of water (continuous plankton sampler)

Run No. 1 Date April 25, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	1414	1517	1620	1723	1826	1929	2032	2135
Position of Ship: (N. Lat.	27°00'	27°03'	27°06'	27°07'	27°06'	27°03'	27°04'	27°14'
(W. Long.	79°36'	79°42'	79°43'	79°48'	79°56'	80°02'	80°04'	80°04'
Protozoa	-	-	-	-	-	26.0	6.5	39.0
Coelenterata	-	-	-	-	-	-	-	-
Chaetognatha	-	6.5	-	-	-	-	-	-
Misc. Worms	-	-	-	-	-	6.5	-	-
Copepoda	6.5	175.5	19.5	71.5	32.5	175.5	149.5	143.0
Ostracoda	-	-	-	-	-	39.0	-	6.5
Amphipoda	-	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	26.0	6.5	13.0
Crabs	-	-	-	-	-	-	19.5	19.5
Misc. Crustaceans	-	-	-	-	13.0	-	32.5	6.5
Mollusca	-	-	-	-	-	-	-	-
Invertebrate Eggs	-	6.5	-	-	-	19.5	32.5	26.0
Misc. Organisms	-	-	-	-	6.5	26.0	13.0	32.5
Subtotal	6.5	188.5	19.5	71.5	52.0	318.5	260.0	286.0
Fish Eggs	-	-	-	-	-	-	-	-
Fish Larvae	-	-	-	-	-	-	-	-
Total	6.5	188.5	19.5	71.5	52.0	318.5	260.0	286.0

Run No. 2 Date April 25-26, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	2254	2356	0058	0200	0302	0404	0506	0608
Position of Ship: (N. Lat.	27°19'	27°26'	27°33'	27°39'	27°38'	27°41'	27°43'	27°46'
(W. Long.	80°03'	80°04'	80°04'	80°03'	79°53'	79°45'	79°43'	79°43'
Protozoa	17.8	17.8	17.8	5.9	5.9	5.9	5.9	5.9
Coelenterata	-	-	5.9	-	-	-	-	-
Chaetognatha	-	5.9	5.9	-	-	-	-	-
Misc. Worms	-	-	-	-	-	-	-	-
Copepoda	112.5	426.2	142.1	53.3	165.8	17.8	35.5	17.8
Ostracoda	-	100.6	-	-	5.9	17.8	-	-
Amphipoda	-	-	-	-	-	-	5.9	-
Shrimp	11.8	5.9	5.9	-	5.9	-	-	-
Crabs	5.9	23.7	-	-	-	-	5.9	11.8
Misc. Crustaceans	5.9	11.8	-	-	-	5.9	-	5.9
Mollusca	-	-	-	-	-	-	-	-
Invertebrate Eggs	5.9	136.2	11.8	-	77.0	-	-	5.9
Misc. Organisms	53.3	77.0	17.8	11.8	17.8	-	-	11.8
Subtotal	213.1	805.1	207.2	71.0	278.3	47.4	53.2	59.1
Fish Eggs	-	-	-	-	-	-	-	-
Fish Larvae	-	5.9	-	-	-	-	-	-
Total	213.1	811.0	207.2	71.0	278.3	47.4	53.2	59.1

Table 12.--Numbers of plankton organisms per cubic meter of water (continuous plankton sampler), cont'd

Run No. 3 Date April 26, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	0719	0819	0919	1019	1119	1219	1319	1419
Position of (N. Lat.	27°45'	27°42'	27°42'	27°42'	27°46'	27°52'	27°57'	27°58'
Ship: (W. Long.	79°36'	79°28'	79°20'	79°18'	79°16'	79°09'	79°03'	78°59'
Protozoa	4.8	4.8	38.0	9.5	19.0	9.5	-	4.8
Coelenterata	-	-	-	-	-	-	-	-
Chaetognatha	-	-	-	-	-	-	-	-
Misc. Worms	4.8	-	-	-	-	-	-	-
Copepoda	23.8	23.8	14.2	42.8	9.5	14.2	9.5	4.8
Ostracoda	-	14.2	-	-	-	-	-	-
Amphipoda	-	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	-	-	-
Crabs	9.5	-	-	-	-	-	-	-
Misc. Crustaceans	-	-	-	-	-	-	4.8	-
Mollusca	-	-	-	-	-	-	-	-
Invertebrate Eggs	-	-	-	-	-	-	9.5	-
Misc. Organisms	19.0	9.5	9.5	9.5	4.8	-	4.8	-
Subtotal	61.9	52.3	61.7	61.8	33.3	23.7	28.6	9.6
Fish Eggs	-	-	-	4.8	-	-	-	-
Fish Larvae	-	-	-	-	-	-	-	-
Total	61.9	52.3	61.7	66.6	33.3	23.7	28.6	9.6

Run No. 4 Date April 26, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	1534	1636	1738	1840*	1942	2044	2146	2248
Position of (N. Lat.	27°58'	28°02'	28°07'		28°19'	28°21'	28°21'	28°21'
Ship: (W. Long.	79°00'	79°05'	79°12'		79°25'	79°28'	79°36'	79°46'
Protozoa	4.2	4.2	4.2		4.2	-	-	8.5
Coelenterata	-	-	-		-	-	-	-
Chaetognatha	-	-	8.5		-	-	4.2	4.2
Misc. Worms	-	-	-		-	-	-	-
Copepoda	8.5	17.0	-		25.5	12.8	4.2	12.8
Ostracoda	-	-	-		-	-	-	-
Amphipoda	-	-	-		-	-	-	-
Shrimp	-	-	-		-	-	-	-
Crabs	-	-	-		-	-	-	-
Misc. Crustaceans	-	-	-		-	-	-	-
Mollusca	-	-	-		-	-	-	-
Invertebrate Eggs	-	-	-		-	-	-	-
Misc. Organisms	4.2	-	-		4.2	4.2	-	-
Subtotal	16.9	21.2	12.7		33.9	17.0	8.4	25.5
Fish Eggs	-	-	-		-	-	-	-
Fish Larvae	-	-	-		-	-	-	-
Total	16.9	21.2	12.7		33.9	17.0	8.4	25.5

*No sample

Table 12.--Numbers of plankton organisms per cubic meter of water (continuous plankton sampler), cont'd

Run No. 5 Date April 26-27, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	0000	0101	0202	0303	0404	0505	0606	0707
Position of Ship: (N. Lat.	28°23'	28°26'	28°24'	28°20'	28°20'	28°20'	28°22'	28°25'
(W. Long.	79°50'	79°57'	80°04'	80°10'	80°16'	80°26'	80°29'	80°24'
Protozoa	6.0	17.9	77.6	17.9	41.8	6.0	-	17.9
Coelenterata	-	-	-	-	-	6.0	-	-
Chaetognatha	-	-	-	6.0	-	-	-	6.0
Misc. Worms	-	-	-	-	-	-	-	-
Copepoda	17.9	101.5	429.8	232.8	226.9	65.7	29.8	250.7
Ostracoda	-	-	41.8	6.0	11.9	-	-	6.0
Amphipoda	-	-	-	-	-	-	-	6.0
Shrimp	-	-	23.9	17.9	23.9	17.9	17.9	17.9
Crabs	-	-	-	6.0	-	-	-	23.9
Misc. Crustaceans	-	-	17.9	6.0	-	6.0	-	6.0
Mollusca	-	-	6.0	-	-	-	-	-
Invertebrate Eggs	-	-	29.8	41.8	53.7	-	-	11.9
Misc. Organisms	-	6.0	6.0	47.8	-	6.0	-	11.9
Subtotal	23.9	125.4	632.8	382.2	358.2	107.6	47.7	358.2
Fish Eggs	-	-	29.8	6.0	6.0	-	-	-
Fish Larvae	-	6.0	-	-	-	-	-	-
Total	23.9	131.4	662.6	388.2	364.2	107.6	47.7	358.2

Run No. 6 Date April 27, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	0831	0934	1037	1140	1243	1346	1449	1552
Position of Ship: (N. Lat.	28°38'	28°43'	28°50'	28°58'	29°00'	29°00'	29°00'	29°01'
(W. Long.	80°23'	80°26'	80°28'	80°31'	80°26'	80°16'	80°09'	80°03'
Protozoa	18.4	18.4	6.1	-	6.1	-	55.2	12.3
Coelenterata	-	-	-	-	-	-	-	-
Chaetognatha	-	12.3	-	-	-	-	-	-
Misc. Worms	-	-	-	-	-	-	-	6.1
Copepoda	190.0	214.6	67.4	55.2	220.7	110.3	159.4	42.9
Ostracoda	18.4	-	-	-	-	-	-	-
Amphipoda	-	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	6.1	-	-
Crabs	18.4	12.3	6.1	12.3	55.2	30.6	-	-
Misc. Crustaceans	12.3	6.1	12.3	67.4	12.3	12.3	-	-
Mollusca	-	-	-	-	-	-	-	-
Invertebrate Eggs	18.4	18.4	-	6.1	-	-	12.3	6.1
Misc. Organisms	18.4	24.5	18.4	-	12.3	6.1	30.6	12.3
Subtotal	294.3	306.6	110.3	141.0	306.6	165.4	257.5	79.7
Fish Eggs	-	-	-	-	-	-	-	-
Fish Larvae	-	-	-	-	-	-	-	-
Total	294.3	306.6	110.3	141.0	306.6	165.4	257.5	79.7

Table 12.--Numbers of plankton organisms per cubic meter of water (continuous plankton sampler), cont'd

Run No. 7 Date April 27-28, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	1709	1811	1914	2016	2119	2221	2324	0026
Position of Ship: (N. Lat.	29°00'	29°00'	29°03'	29°05'	29°03'	29°01'	29°03'	29°08'
(W. Long.	79°52'	79°47'	79°46'	79°43'	79°33'	79°27'	79°27'	79°28'
Protozoa	20.7	16.6	33.1	-	-	-	4.1	8.3
Coelenterata	-	-	-	-	-	-	-	-
Chaetognatha	-	-	-	-	-	-	-	-
Misc. Worms	4.1	-	-	-	-	-	-	4.1
Copepoda	29.0	29.0	53.8	37.3	8.3	53.8	4.1	45.5
Ostracoda	-	-	-	-	-	4.1	-	-
Amphipoda	-	-	-	-	-	-	-	-
Shrimp	4.1	-	-	-	-	-	-	-
Crabs	4.1	4.1	-	4.1	4.1	-	-	4.1
Misc. Crustaceans	4.1	-	-	8.3	-	-	4.1	-
Mollusca	-	-	-	-	-	-	-	-
Invertebrate Eggs	4.1	-	-	-	-	-	-	-
Misc. Organisms	8.3	-	-	8.3	-	-	-	12.4
Subtotal	78.5	49.7	86.9	58.0	12.4	57.9	12.3	74.4
Fish Eggs	4.1	-	-	-	-	-	-	-
Fish Larvae	-	-	4.1	-	-	-	-	-
Total	82.6	49.7	91.0	58.0	12.4	57.9	12.3	74.4

Run No. 8 Date April 28, 1954

Compartment No.	1	2	3	4	5	6	7	8
Time (EST)	0144	0247	0351	0454	0558	0701	0805	0908
Position of Ship: (N. Lat.	29°23'	29°34'	29°37'	29°39'	29°40'	29°41'	29°47'	29°57'
(W. Long.	79°31'	79°35'	79°35'	79°37'	79°45'	79°49'	79°57'	80°06'
Protozoa	-	10.5	5.2	-	15.7	10.5	10.5	26.2
Coelenterata	-	-	-	-	-	-	-	-
Chaetognatha	-	-	-	-	5.2	-	-	5.2
Misc. Worms	5.2	-	-	-	5.2	-	-	-
Copepoda	41.8	20.9	10.5	31.4	177.8	47.1	41.8	31.4
Ostracoda	-	-	-	-	-	-	-	-
Amphipoda	-	-	-	-	-	-	-	-
Shrimp	5.2	-	-	-	-	-	-	-
Crabs	-	-	-	-	-	-	-	-
Misc. Crustaceans	-	-	-	-	-	5.2	-	-
Mollusca	-	-	-	-	-	-	5.2	-
Invertebrate Eggs	-	-	-	-	-	-	-	-
Misc. Organisms	10.5	-	-	5.2	5.2	5.2	20.9	10.5
Subtotal	62.7	31.4	15.7	36.6	209.1	68.0	78.4	73.3
Fish Eggs	-	-	-	-	-	-	-	-
Fish Larvae	-	-	-	-	-	-	-	-
Total	62.7	31.4	15.7	36.6	209.1	68.0	78.4	73.3

Table 13.--List of the species of fish in dip-net, trolling, and stomach contents collections (D-dip net; T-trolling; S-stomach contents)

Ablennes hians (Valenciennes) D
Acanthocybium solandri (Cuvier) T
Acanthurus sp. S
Acanthurus chirurgus (Bloch) ? S
Amanses pullus (Ranzani) D
Canthidermis sufflamen (Mitchill) S
Caranx bartholomaei Cuvier D
Caranx ruber (Bloch) D S
Carcharhinus floridanus
Bigelow, Schroeder, & Springer T
Centrobranchus nigroocellatus
(Günther) D
Clupeidae, unidentified S
Coryphaena hippurus Linnaeus D T
Cypselurus sp. D S
Cypselurus cyanopterus
(Valenciennes) D
Cypselurus furcatus (Mitchill) D
Cypselurus heterurus (Rafinesque) D
Decapterus punctatus (Agassiz) D
Diodontidae, unidentified S
Euleptorhamphus velox Poey D
Euthynnus alletteratus
(Rafinesque) T
Exocoetus obtusirostris Günther D
Hemiramphus balao LeSueur D
Hemiramphus brasiliensis (Linnaeus) D
Hirundichthys affinis (Günther) D
Histrio histrio (Linnaeus) D
Hygophum reinhardti (Lütken) D
Monacanthus tuckeri Bean S
Mugil curema Valenciennes D
Mullus auratus Jordan & Gilbert D
Myctophum nitidulum (Garman) D
Parexocoetus brachypterus
(Richardson) D
Priacanthus cruentatus (Lacepede) S
Prognichthys gibbifrons
(Valenciennes) D
Psenes cyanophrys Valenciennes D
Pseudupeneus maculatus (Bloch) D
Remora remora (Linnaeus) T
Seriola dumerili (Risso) D
Sphaeroides sp. D
Strongylura sp. S
Strongylura acus (Lacepede) D
Strongylura ardeola (Valenciennes) D
Strongylura raphidoma (Ranzani) D
Syngnathidae, unidentified S
Syngnathus pelagicus Linnaeus D
Tetraodontidae, unidentified S
Thunnus albacares (Bonnaterre) T
Thunnus atlanticus (Lesson) T
Xiphias gladius Linnaeus D

Table 14.--Numbers and species of fish taken by trolling

Species	Date 1954	Time (EST)	Location N.lat.	Location W.long.	Sex	Stage Gonad Devel.	Fork Length (mm.)	Weight (lbs.)	Stomach Contents
Carcharhinus floridanus/1	Apr. 26	1445	27°59'	78°59'	M	--	2515/2	-	unidentified worm (1)
Euthynnus alletteratus	Apr. 27	1410	29°00'	80°12'	F	I	684	13.0	Clupeidae, unidentified (5); fish remains, unidentified (1)
"	Apr. 28	1500	30°37'	80°50'	F	I	520	6.6	none
"	Apr. 28	1500	30°37'	80°50'	M	I	510	5.5	none
"	Apr. 28	1525	30°40'	80°53'	F	I	540	8.3	none
"	Apr. 28	1525	30°40'	80°53'	F	I	558	8.3	none
Thunnus atlanticus	Apr. 17	1101	26°33'	76°52'	F	II	568	8.8	none
"	Apr. 17	1101	26°33'	76°52'	M	I	604	12.1	Canthidermis sufflamen (1); Strongylura sp. (1); fish remains, unidentified (1)
Thunnus albacares	Apr. 16	0945	28°21'	76°59'	M	I	827	26.4	Priacanthus cruentatus (1); Acanthurus chirurgus ? (3); Acanthurus sp. (3); Syngnathidae, unidentified (1); Tetraodontidae, unidentified (1); fish remains, unidentified (3); unidentified worms (2); squid (2); cephalopods (3); gastropod (1); parasitic copepod (1); unidentified crustacean (1)
Acanthocybium solandri	Apr. 27	0800	28°34'	80°22'	F	IV-V	1530	63.9	none

/1 Hook and line
/2 Total length

Table 14.--Numbers and species of fish taken by trolling (cont'd)

Species	Date 1954	Time (EST)	Location N.lat.	Location W.long.	Sex	Stage Gonad Devel.	Fork Length (mm.)	Weight (lbs.)	Stomach Contents
Coryphaena hippurus	Apr. 19	1515	25°20'	77°15'/3	M	IV	371	16.5	Monacanthus tuckeri (2); fish remains, unidentified (7); squid (2); cephalopod remains
"	Apr. 27	1600	29°01'	80°02'	M	III	860	15.4	Caranx ruber (2); Cypselurus sp. (2); fish remains, unidentified (3)
"	Apr. 27	1610	29°01'	80°00'	M	IV-V	880	13.0	none
"	Apr. 27	1610	29°01'	80°00'	M	IV	950	17.6	Diodontidae, unidentified (body spines); fish remains, unidentified (3)
Remora remora/4	Apr. 26	1445	27°59'	78°59'	-	-	155/5	-	-

/3 Estimated position
/4 Taken from Carcharhinus floridanus
/5 Standard length

Table 15.--Numbers and species of fish taken by dip net

Species	Location of capture, number and size range (in standard length) of specimens
MYCTOPHIDAE	
Hygophum reinhardti	-Spc. 8, (2) 20.5-21 mm. Reg. 8, (1) 39.5 mm. Reg. 17, (1) 37.5 mm.
Myctophum nitidulum	-Std., 4-17-54, 1800-2400, (2) 20-33.5 mm. Spc. 5, (6) 55.5-66 mm. Spc. 8, (6) 18-75 mm. Reg. 8, (3) 62-66 mm. Reg. 16, (32) 21.5-70 mm. Reg. 17, (5) 25.5-44 mm.
Centrobranchus nigroocellatus	-Spc. 5, (5) 30-31.5 mm. Spc. 8, (2) 27-28 mm. Reg. 17, (1) 30.5 mm.
BELONIDAE	
Strongylura ardeola	-Std., 4-17-54, 1800-2400, (1) 145 mm. Std., 4-18-54, 0000, (3) 135-258 mm.
Strongylura acus	-Reg. 1, (1) 43.5 mm. Reg. 9, (1) 71 mm.
Strongylura raphidoma	-Spc. 7, (1) 45.5 mm.
Ablennes hians	-Reg. 4, (1) 87 mm.
HEMIRAMPHIDAE	
Hemiramphus brasiliensis	-Spc. 8, (1) 45.5 mm. Reg. 4, (1) 196 mm.
Hemiramphus balao	-Std., 4-17-54, 1800-2400, (1) 71 mm. Std., 4-18-54, 0000-2400, (1) 112 mm. Spc. 7, (2) 22-35 mm. Reg. 16, (1) 154 mm.
Euleptorhamphus velox	-Reg. 4, (1) 279 mm.
EXOCOETIDAE	
Parexocoetus brachypterus	-Reg. 4, (4) 64.5-113 mm. Reg. 10, (1) 110 mm.
Exocoetus obtusirostris	-Std., 4-18-54, 0000-2400, (1) 48 mm. Spc. 5, (2) 29.5-48.5 mm.
Cypselurus cyanopterus	-Spc. 5, (1) 280 mm.
Cypselurus heterurus	-Reg. 4, (3) 197-202 mm.
Cypselurus furcatus	-Std., 4-18-54, 0000-2400, (1) 109 mm.
Cypselurus sp.	-Brunswick, Ga. to Spc. 5, 30°23'N., 78°31'W., 4-15-54, 0900-0945, (1) 11.7 mm.
Prognichthys gibbifrons	-Brunswick, Ga. to Spc. 5, (1) 15.5 mm./1
Hirundichthys affinis	-Std., 4-18-54, 0000-2400, (1) 86.5 mm. Reg. 16, (1) 193 mm.

/1 Location and time as above

Table 15.--Numbers and species of fish taken by dip net (cont'd)

Species	Location of capture, number and size range (in standard length) of specimens
SYNGNATHIDAE	
Syngnathus pelagicus	-Spc. 5, (1) 116 mm. Spc. 8, (1) 72.5 mm.
MUGILIDAE	
Mugil curema	-Reg. 4, (12) 176-250 mm. Reg. 4, (2) 13.3-15.3 mm. Reg. 16, (1) 24.5 mm.
XIPHIIDAE	
Xiphias gladius	-Reg. 10, (1) 48.6 mm.
CORYPHAENIDAE	
Coryphaena hippurus	-Brunswick, Ga. to Spc. 5, 30°23'N., 78°31'W., 4-15-54, 0900-0945, (1) 25.1 mm. Spc. 8, (1) 21.4 mm. Reg. 9, (1) 18.7 mm. Reg. 10, (1) 14.7 mm. Reg. 16, (1) 66.5 mm.
NOMEIDAE	
Psenes cyanophrys	-Reg. 17, (1) 21 mm.
CARANGIDAE	
Seriola dumerili	-Spc. 7, (1) 17.3 mm.
Decapterus punctatus	-Reg. 4, (1) 23 mm.
Caranx ruber	-Reg. 14, (2) 22.9-31.9 mm.
Caranx bartholomaei	-Reg. 9, (1) 21.2 mm. Reg. 10, (1) 38.5 mm.
MULLIDAE	
Mullus auratus	-Reg. 4, (25) 27.5-39.5 mm. Reg. 10, (1) 28 mm.
Pseudupeneus maculatus	-Reg. 4, (3) 42.5-44.5 mm. Reg. 5, (1) 44.5 mm. Reg. 10, (2) 44.5-45 mm.
ALUTERIDAE	
Amanses pullus	-Reg. 1, (1) 66 mm.
TETRAODONTIDAE	
Sphaeroides sp.	-Reg. 15, (1) 10.5 mm.

Table 15.--Numbers and species of fish taken by dip net (cont'd)

Species	Location of capture, number and size range (in standard length) of specimens
ANTENNARIIDAE	
Histrio histrio	-Std., 4-17-54, 1800-2400, (8) 10.5-26 mm. Std., 4-18-54, 0000-2400, (1) 12 mm. Spc. 5, (9) 11.5-23 mm. Spc. 6, (1) 11.5 mm. Spc. 7, (6) 11-24.5 mm. Spc. 8, (12) 12-22.5 mm. Reg. 9, (1) 21.5 mm. Reg. 15, (8) 11.5-16 mm.

Table 16.--Record of drift bottles released and recovered

Released					Recovered			
Sta.	Bottle No.	N. Lat.	W. Long.	(1954) Date	N. Lat.	W. Long.	(1954) Date	No. of Days
3	14101	27° 00'	80° 03.5'	Apr. 25	27° 15'	80° 11.6'	Apr. 27	2
3	14102	27° 00'	80° 03.5'	Apr. 25	27° 28'	80° 18'	May 23	28
3	14103	27° 00'	80° 03.5'	Apr. 25	27° 15'	80° 17.9'	Apr. 28	3
3	14104	27° 00'	80° 03.5'	Apr. 25	27° 29'	80° 17.9'	Apr. 29	4
3	14108	27° 00'	80° 03.5'	Apr. 25	27° 39.1'	80° 21.3'	May 9	14
3	14109	27° 00'	80° 03.5'	Apr. 25	27° 28'	80° 17.5'	Apr. 28	3
3	14110	27° 00'	80° 03.5'	Apr. 25	27° 24.5'	80° 16'	Apr. 30	5
3	14111	27° 00'	80° 03.5'	Apr. 25	27° 28.2'	80° 17.6'	Apr. 29	4
3	14112	27° 00'	80° 03.5'	Apr. 25	27° 28'	80° 17.5'	Apr. 29	4
4	14113	27° 20'	80° 03.5'	Apr. 25	28° 08'	80° 35'	May 26	31
4	14114	27° 20'	80° 03.5'	Apr. 25	28° 38.6'	80° 37.4'	May 11	16
4	14115	27° 20'	80° 03.5'	Apr. 25	29° 14'	81° 01'	June 28	64
4	14117	27° 20'	80° 03.5'	Apr. 25	28° 04.1'	80° 33.5'	May 31	36
4	14118	27° 20'	80° 03.5'	Apr. 25	28° 15'	80° 36.1'	May 28	33
4	14120	27° 20'	80° 03.5'	Apr. 25	28° 15'	80° 36.1'	May 20	25
4	14121	27° 20'	80° 03.5'	Apr. 25	28° 06.8'	80° 34.4'	May 30	35
4	14122	27° 20'	80° 03.5'	Apr. 25	28° 14.5'	80° 36.1'	May 28	33
4	14123	27° 20'	80° 03.5'	Apr. 25	28° 15'	80° 36.2'	May 11	16
5	14125	27° 40'	80° 03.5'	Apr. 26	28° 16.1'	80° 36.3'	May 11	15
5	14126	27° 40'	80° 03.5'	Apr. 26	28° 19'	80° 36.5'	May 11	15
5	14127	27° 40'	80° 03.5'	Apr. 26	28° 15'	80° 36.2'	June 1	36
5	14128	27° 40'	80° 03.5'	Apr. 26	28° 19'	80° 36.5'	May 31	35
5	14130	27° 40'	80° 03.5'	Apr. 26	28° 14.5'	80° 36.1'	May 28	32
5	14132	27° 40'	80° 03.5'	Apr. 26	28° 48'	80° 44'	Sept. 10	137
5	14133	27° 40'	80° 03.5'	Apr. 26	28° 08.8'	80° 34.9'	May 26	30
5	14134	27° 40'	80° 03.5'	Apr. 26	28° 19.7'	80° 36.3'	May 15	19
5	14136	27° 40'	80° 03.5'	Apr. 26	28° 08.8'	80° 34.9'	May 26	30
10	-	28° 19.5'	80° 10'	Apr. 27	-	No Returns	-	-
11	14149	28° 20'	80° 32.5'	Apr. 27	28° 55'	80° 49'	May 9	12
11	14151	28° 20'	80° 32.5'	Apr. 27	29° 04.3'	80° 55.1'	May 8	11
11	14152	28° 20'	80° 32.5'	Apr. 27	29° 00'	80° 52.3'	May 7	10
11	14153	28° 20'	80° 32.5'	Apr. 27	28° 47'	80° 44'	May 2	5
11	14154	28° 20'	80° 32.5'	Apr. 27	28° 35'	80° 35'	Apr. 30	3
11	14156	28° 20'	80° 32.5'	Apr. 27	29° 01.5'	80° 53.3'	May 7	10
11	14157	28° 20'	80° 32.5'	Apr. 27	28° 58.3'	80° 51.2'	May 7	10
11	14159	28° 20'	80° 32.5'	Apr. 27	28° 52'	80° 47'	May 2	5
11	14160	28° 20'	80° 32.5'	Apr. 27	29° 03.9'	80° 55'	May 4	7
12	14162	28° 41'	80° 25'	Apr. 27	28° 32.2'	80° 33.8'	May 26	29
12	14163	28° 41'	80° 25'	Apr. 27	28° 24.5'	80° 35.5'	May 31	34
12	14164	28° 41'	80° 25'	Apr. 27	28° 24.5'	80° 35.4'	June 1	35
12	14165	28° 41'	80° 25'	Apr. 27	28° 32.2'	80° 33.8'	May 26	29
12	14166	28° 41'	80° 25'	Apr. 27	28° 38.5'	80° 37.4'	June 3	37
12	14168	28° 41'	80° 25'	Apr. 27	29° 01.7'	80° 53.3'	May 30	33
12	14171	28° 41'	80° 25'	Apr. 27	28° 46'	80° 43.1'	May 25	28
13	14181	29° 00'	80° 31'	Apr. 27	29° 17.5'	81° 02.3'	June 21	55

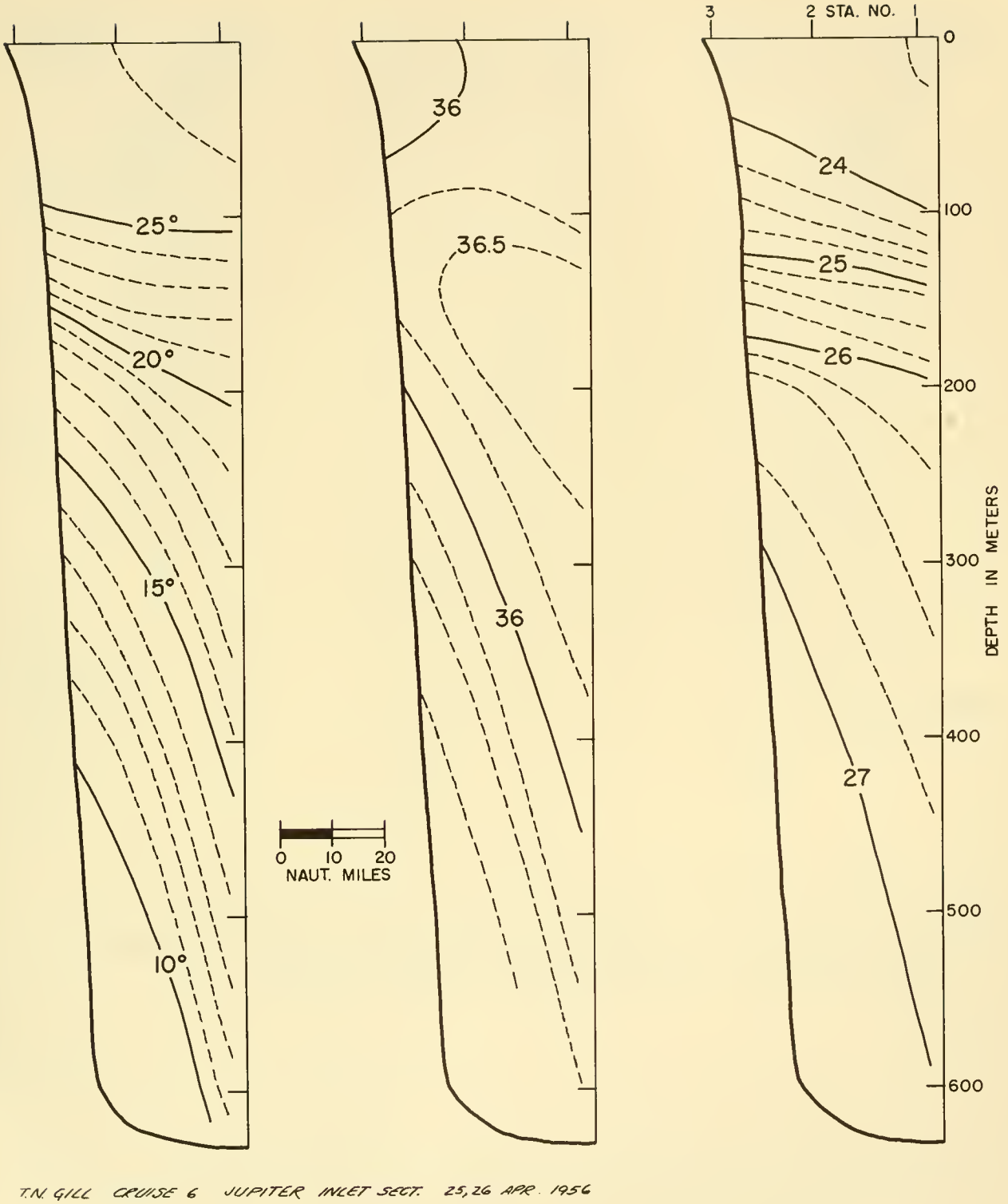

Figure 5.--Distribution of temperature (°C), salinity (‰), and density (σ_t) across section of stations 1, 2, and 3 (Jupiter Section).

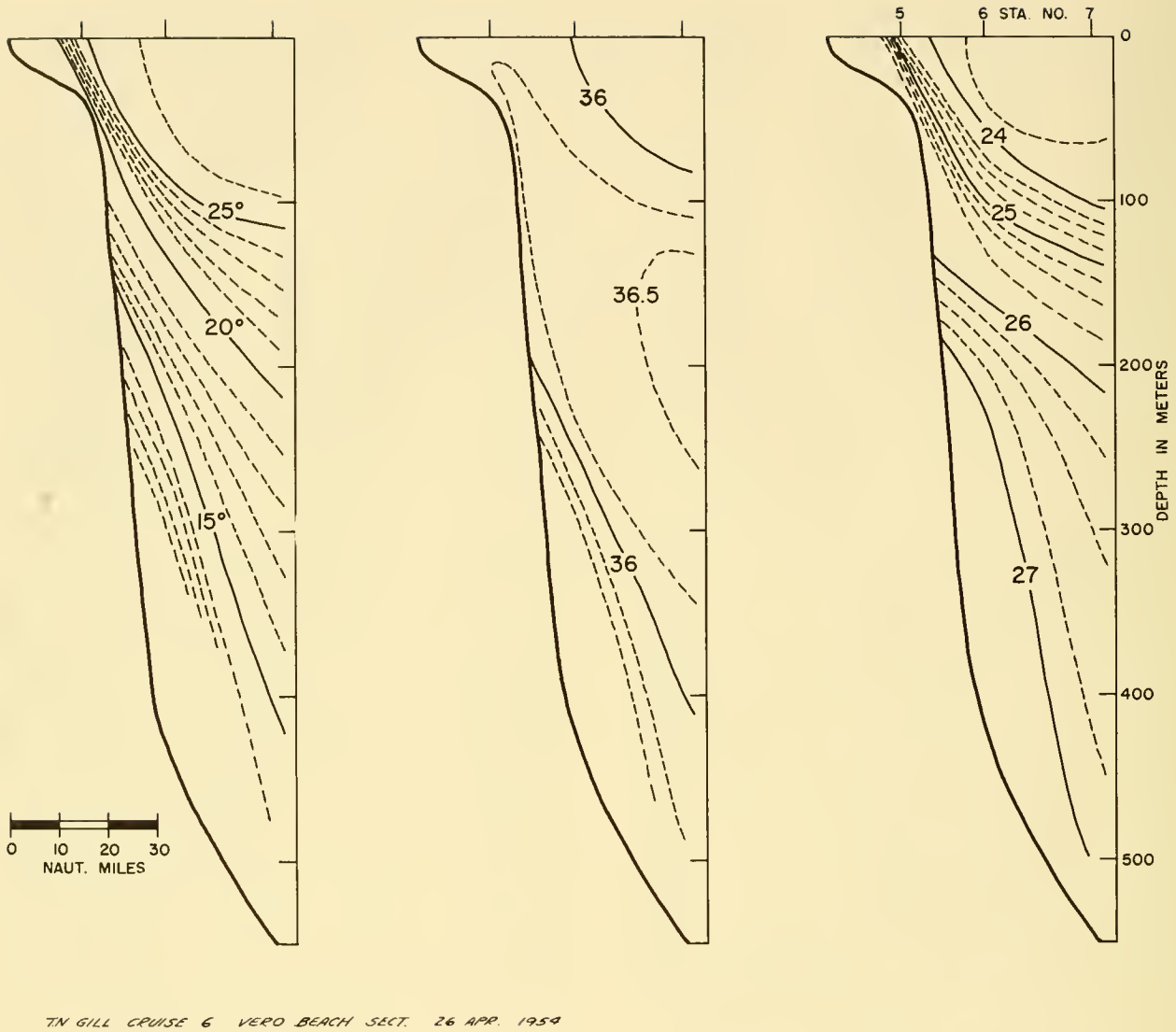

Figure 6.--Distribution of temperature (°C), salinity (‰), and density (σ_t) across section of stations 5, 6, and 7 (Vero Section).

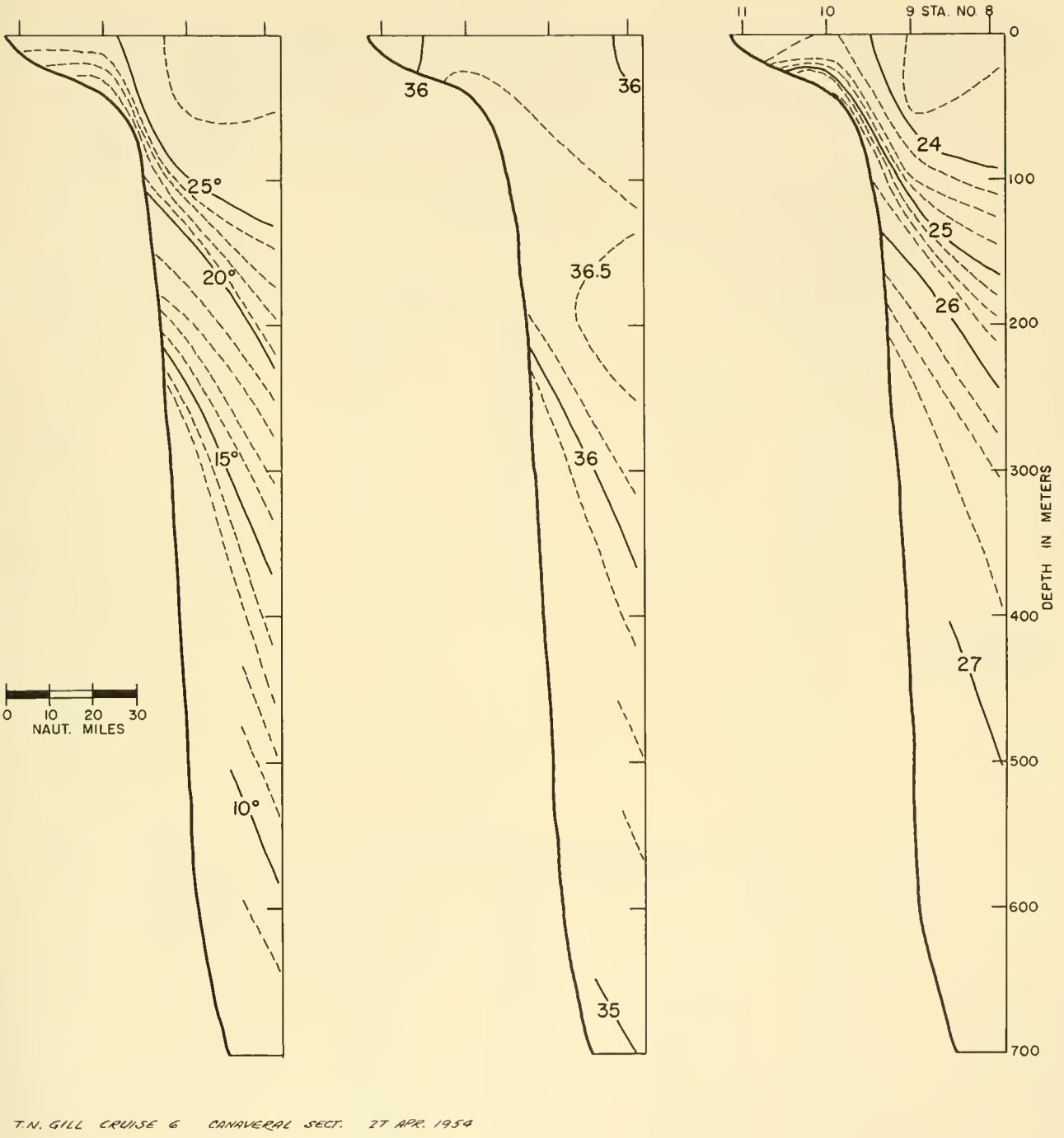

Figure 7.--Distribution of temperature (°C), salinity (‰), and density (σ_t) across section of stations 8, 9, 10, and 11 (Canaveral Section).

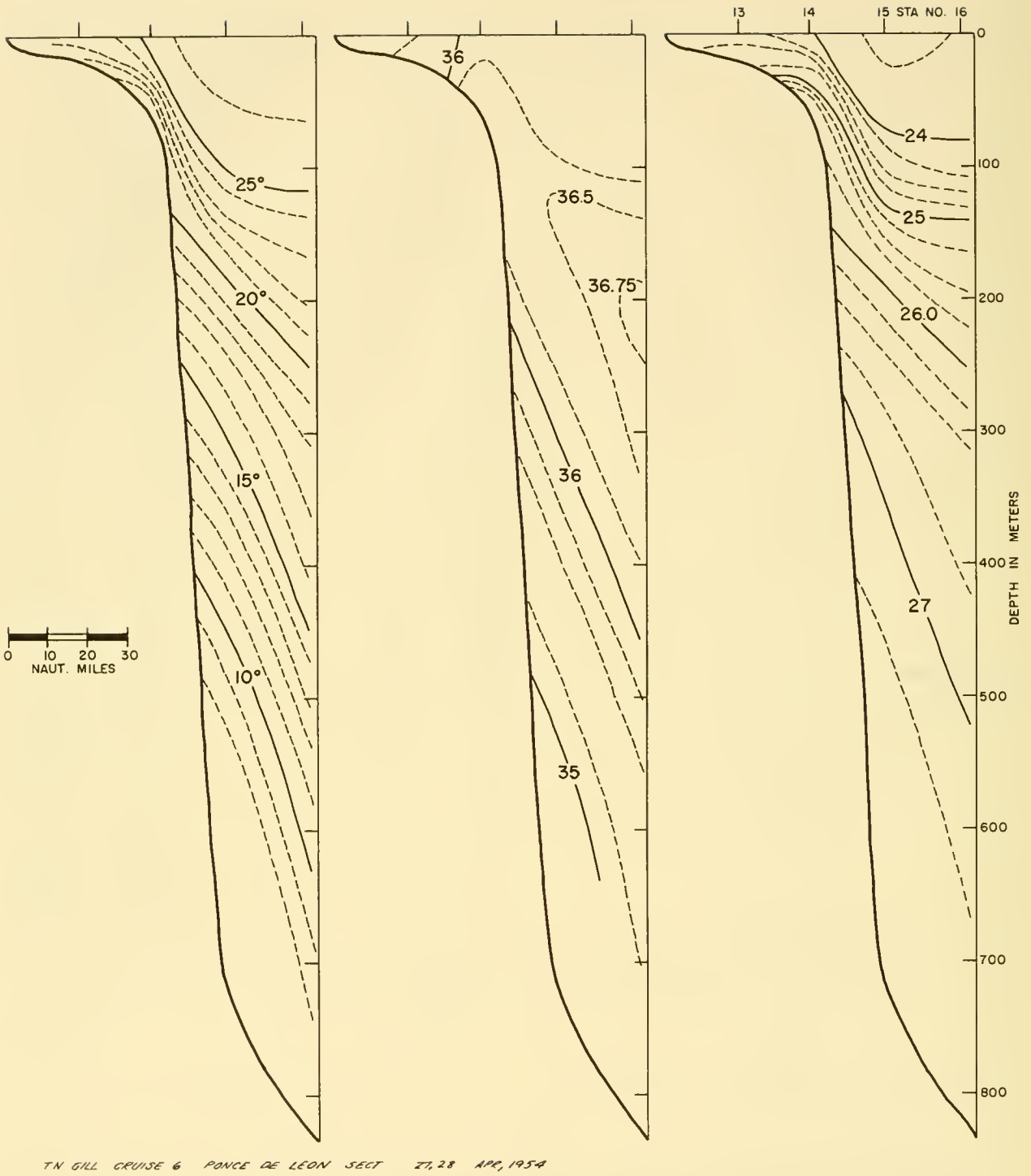

Figure 8.--Distribution of temperature (°C), salinity (‰), and density (σ_t) across section of stations 13, 14, 15, and 16 (Ponce de Leon Section).

STATION 1

DATE April 25, 1954 LAT. 27°00' N. LONG. 79°18' W. TIME 16
DEPTH 631 WIND 7 , 13 BAR. 19 AIR TEMP: dry 25.0°C, wet 22.8°C
HUMIDITY 83% WEATHER 15 CLOUDS: type 9 , amt. 6 SEA: dir. 10 , amt. 2
SWELL: dir. 07 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.24	36.00	23.73	4.73
10	26.25	36.00	23.73	4.71
20	26.21	36.00	23.74	4.71
50	26.21	36.00	23.74	4.74
100	25.68	36.15	24.02	4.55
150	22.42	36.71	25.42	4.10
200	20.06	36.67	26.04	3.64
300	17.75	36.41	26.43	3.72
400	15.79	36.14	26.69	3.94
500	13.92	35.82	26.86	3.44
600	11.46	35.43	27.04	3.03

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.24	36.00	23.73	4.73
10	26.25	36.00	23.73	4.71
20	26.21	36.00	23.74	4.71
30	26.21	36.00	23.74	4.73
50	26.21	36.00	23.74	4.74
75	25.98	36.02	23.83	4.68
100	25.68	36.15	24.02	4.55
150	22.42	36.71	25.42	4.10
200	20.06	36.67	26.04	3.64
250	18.86	36.54	26.25	3.66
300	17.75	36.41	26.43	3.72
400	15.79	36.14	26.69	3.94
500	13.92	35.82	26.86	3.44
600	11.46	35.43	27.04	3.03

STATION 1

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.7	0.2	0.5	-	1.1
10	1.6	0.5	1.5	-	1.6
20	0.9	0.0	0.5	0.0	1.8
50	0.3	0.0	0.0	2.7	0.8
100	0.5	0.0	0.5	-	0.2
150	1.2	-	3.0	-	0.0
200	1.6	-	3.5	-	0.5
300	3.5	-	3.5	-	1.2
400	1.0	0.6	9.5	-	0.5
500	2.5	-	7.0	-	0.4
600	3.4	1.9	7.0	-	0.5

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.7	0.2	0.5	-	1.1
10	1.6	0.5	1.5	-	1.6
20	0.9	0.0	0.5	0.0	1.8
30	0.7	0.0	<0.5	0.9	1.5
50	0.3	0.0	0.0	2.7	0.8
75	0.4	0.0	<0.5	-	0.5
100	0.5	0.0	0.5	-	0.2
150	1.2	0.1	3.0	-	0.0
200	1.6	0.2	3.5	-	0.5
250	2.6	0.3	3.5	-	0.9
300	3.5	0.4	3.5	-	1.2
400	1.0	0.6	9.5	-	0.5
500	2.5	1.3	7.0	-	0.4
600	3.4	1.9	7.0	-	0.5

STATION 2

DATE April 25, 1954 LAT. 27°02' N. LONG. 79°41' W. TIME 20
DEPTH 616 WIND 9 , 06 BAR. 17 AIR TEMP: dry 25.6°C, wet 23.3°C
HUMIDITY 83% WEATHER 01 CLOUDS: type 8 , amt. 4 SEA: dir. 06 , amt. 3
SWELL: dir. 07 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.00	36.06	23.85	4.66
10	26.00	36.06	23.85	4.74
20	25.99	36.00	23.81	4.72
50	25.86	36.03	23.87	4.74
100	25.15	36.30	24.30	4.64
150	22.13	36.72	25.51	3.69
200	17.57	36.32	26.41	3.55
300	14.27	35.81	26.77	3.34
400	11.06	35.39	27.09	3.00
500	9.63	35.14	27.14	2.91

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.00	36.06	23.85	4.66
10	26.00	36.06	23.85	4.74
20	25.99	36.00	23.81	4.72
30	25.97	36.00	23.82	4.73
50	25.86	36.03	23.87	4.74
75	25.79	36.15	23.99	4.69
100	25.15	36.30	24.30	4.64
150	22.13	36.72	25.51	3.69
200	17.57	36.32	26.41	3.55
250	15.91	36.05	26.59	3.46
300	14.27	35.81	26.77	3.34
400	11.06	35.39	27.09	3.00
500	9.63	35.14	27.14	2.91

STATION 2

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.3	-	0.5	-	0.1
10	1.1	-	1.0	-	0.1
20	1.2	-	0.5	0.0	0.6
50	1.8	0.1	1.0	-	0.2
100	1.7	-	1.0	-	0.8
150	1.7	0.6	4.0	0.0	1.3
200	1.4	-	10.0	0.4	0.6
300	2.5	-	10.5	-	1.1
400	2.6	2.1	19.5	-	0.8
500	2.6	2.1	3.0*	-	-

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.3	-	0.5	-	0.1
10	1.1	-	1.0	-	0.1
20	1.2	-	0.5	0.0	0.6
30	1.4	-	1.0	-	0.5
50	1.8	0.1	1.0	-	0.2
75	1.8	0.3	1.0	-	0.5
100	1.7	0.4	1.0	-	0.8
150	1.7	0.6	4.0	0.0	1.3
200	1.4	0.9	10.0	0.4	0.6
250	2.0	1.2	10.5	-	0.9
300	2.5	1.5	10.5	-	1.1
400	2.6	2.1	19.5	-	0.8
500	2.6	2.1	-	-	-

STATION 3

DATE April 26, 1954 LAT. 27°00' N. LONG. 80°04' W. TIME 01
DEPTH 12 WIND 4 , 08 BAR. 18 AIR TEMP: dry 24.4°C, wet 22.8°C
HUMIDITY 87% WEATHER 01 CLOUDS: type 8 , amt. 2 SEA: dir. 08 , amt. 1
SWELL: dir. 07 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	25.19	35.79	23.90	4.77
10	25.21	35.77	23.88	4.77

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	25.19	35.79	23.90	4.77
10	25.21	35.77	23.88	4.77

STATION 3

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.1	0.2	0.5	-	1.0
10	1.5	0.0	0.0	-	0.6

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.1	0.2	0.5	-	1.0
10	1.5	0.0	0.0	-	0.6

STATION 4

DATE April 26, 1954 LAT. 27°20' N. LONG. 80°04' W. TIME 04
DEPTH 24 WIND 7 , 08 BAR. 18 AIR TEMP: dry 25.0°C, wet 22.8°C
HUMIDITY 83% WEATHER 01 CLOUDS: type - , amt. 2 SEA: dir. 08 , amt. 2
SWELL: dir. 07 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.60	36.02	24.25	4.73
10	24.59	36.00	24.24	4.73

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.60	36.02	24.25	4.73
10	24.59	36.00	24.24	4.73

STATION 4

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.1	0.0	0.5	0.0	0.7
10	-	1.3	0.0	-	1.3

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.1	0.0	0.5	0.0	0.7
10	-	1.3	0.0	-	1.3

STATION 5

DATE April 26, 1954 LAT. 27°40' N. LONG. 80°04' W. TIME 07
DEPTH 37 WIND 7 , 08 BAR. 18 AIR TEMP: dry 24.4°C, wet 22.2°C
HUMIDITY 83% WEATHER 02 CLOUDS: type 8 , amt. 3 SEA: dir. 08 , amt. 2
SWELL: dir. 07 , amt. 1 VIS. 8 WATER TRANS. 6

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.99	36.01	24.13	4.76
10	23.98	36.18	24.56	4.74
20	21.02	36.30	25.50	4.45
30	19.24	36.20	25.89	4.20

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.99	36.01	24.13	4.76
10	23.98	36.18	24.56	4.74
20	21.02	36.30	25.50	4.45
30	19.24	36.20	25.89	4.20

STATION 5

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	-	0.4	<0.5	-	<0.1
10	1.5	0.1	0.0	-	0.0
20	1.1	-	2.0	0.0	0.6
30	1.8	0.9	4.0	0.0	0.7

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	-	0.4	<0.5	-	<0.1
10	1.5	0.1	0.0	-	0.0
20	1.1	0.5	2.0	0.0	0.6
30	1.8	0.9	4.0	0.0	0.7

STATION 6

DATE April 26, 1954 LAT. 27°41' N. LONG. 79°44' W. TIME 10
DEPTH 430 WIND 7 , 08 BAR. 17 AIR TEMP: dry 25.0°C, wet 22.2°C
HUMIDITY 79% WEATHER 02 CLOUDS:type 8 ,amt. 3 SEA:dir. 08 ,amt. 2
SWELL:dir. 08 ,amt. 2 VIS. 8 WATER TRANS. 1

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.45	36.01	23.67	4.66
8	26.43	36.00	23.67	4.66
16	26.45	36.00	23.67	4.65
40	26.47	36.00	23.66	4.70
79	25.16	36.26	24.26	4.45
118	20.88	36.29	25.53	5.01
157	19.34	36.33	25.97	4.23
233	14.85	36.28	27.01	3.33
308	10.56	35.30*	27.11	3.01

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.45	36.01	23.67	4.66
10	26.44	36.00	23.67	4.66
20	26.46	36.00	23.66	4.67
30	26.47	36.00	23.66	4.70
50	26.42	36.09	23.74	4.56
75	25.43	36.24	24.17	4.47
100	22.51	36.27	25.06	4.92
150	19.65	36.33	25.89	4.35
200	16.78	36.32	26.60	3.65
250	13.87	-	-	3.21
300	11.01	-	-	3.02

STATION 6

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.3	0.1	0.0	2.2	1.6
8	1.0	0.6	0.0	-	0.4
16	1.0	0.6	0.0	0.0	-
40	0.8	0.5	0.5	-	0.6
79	0.9	0.1	0.5	0.0	0.5
118	1.2	0.5	<0.5	2.6	1.5
157	1.3	0.9	4.5	-	0.3
233	1.5	1.2	-	2.3	0.6
308	2.6	0.2*	23.0	-	0.7

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.3	0.1	0.0	2.2	1.6
10	1.0	0.6	0.0	0.9	0.4
20	1.0	0.6	0.0	0.0	0.5
30	0.9	0.6	0.5	0.0	0.6
50	0.8	0.4	0.5	0.0	0.6
75	0.9	0.2	0.5	0.0	0.5
100	1.1	0.3	<0.5	1.4	1.1
150	1.3	0.9	4.0	2.5	0.5
200	1.4	1.1	9.5	2.4	0.5
250	1.7	1.2	16.0	-	0.6
300	2.6	-	23.0	-	0.7

STATION 7

DATE April 26, 1954 LAT. 27°40' N. LONG. 79°18' W. TIME 15
DEPTH 549 WIND 9 , 09 BAR. 19 AIR TEMP: dry 25.6°C, wet 22.2°C
HUMIDITY 75% WEATHER 02 CLOUDS: type 8 , amt. 3 SEA: dir. 09 , amt. 2
SWELL: dir. 09 , amt. 2 VIS. 9 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.20	35.99	23.74	4.64
9	26.19	35.99	23.74	4.66
18	26.21	35.99	23.73	4.72
46	26.19	35.97	23.73	4.69
92	26.07	36.02	23.80	4.65
139	23.12	36.63	25.15	3.99
185	21.00	36.70	25.81	3.58
280	17.96	36.44	26.40	3.91
376	15.82	36.08	26.64	3.45
473	14.01	35.77	26.80	3.23

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.20	35.99	23.74	4.64
10	26.19	35.99	23.74	4.67
20	26.21	35.99	23.73	4.72
30	26.21	35.98	23.73	4.71
50	26.18	35.97	23.73	4.68
75	26.15	35.98	23.75	4.66
100	25.80	36.10	23.95	4.52
150	22.57	36.66	25.34	3.86
200	20.50	36.69	25.93	3.68
250	18.82	36.53	26.25	3.89
300	17.49	36.36	26.46	3.79
400	15.34	36.00	26.68	3.37

STATION 7

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.8	1.1	<0.5	-	1.1
9	1.1	0.3	1.0	0.0	0.5
18	1.0	0.5	0.0	-	<0.1
46	1.0	0.2	1.0	1.1	0.9
92	1.1	0.5	0.0	-	0.7
139	1.5	0.5	2.5	-	0.6
185	1.2	0.8	0.0	2.3	0.1
280	1.3	0.9	5.5	-	1.4
376	1.6	0.8	9.5	-	2.2
473	2.5	1.4	2.5	-	<0.1

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.8	1.1	<0.5	-	1.1
10	1.1	0.3	1.0	0.0	0.5
20	1.0	0.5	0.0	0.3	0.1
30	1.0	0.4	0.5	0.5	0.4
50	1.0	0.2	1.0	1.1	0.9
75	1.0	0.4	0.5	1.4	0.8
100	1.2	0.5	0.5	1.6	0.7
150	1.4	0.6	1.5	2.0	0.5
200	1.2	0.8	1.5	2.3	0.3
250	1.3	0.9	4.0	-	1.0
300	1.4	0.9	6.5	-	1.6
400	1.8	1.0	7.5	-	1.7

STATION 8

DATE April 27, 1954 LAT. 28°18' N. LONG. 79°27' W. TIME 01
DEPTH 768 WIND 9 , 07 BAR. 17 AIR TEMP: dry 25.0°C, wet 22.2°C
HUMIDITY 79% WEATHER 02 CLOUDS: type 8 , amt. 3 SEA: dir. 07 , amt. 2
SWELL: dir. 07 , amt. 2 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.27	35.99	23.72	4.77
10	26.27	35.99	23.72	4.77
20	26.25	35.99	23.72	4.80
50	26.05	36.03	23.82	4.72
100	25.45	36.13	24.08	4.54
150	23.91	36.57	24.88	3.87
200	21.32	36.73	25.74	3.59
300	17.00	36.27	26.51	3.53
400	14.03	35.79	26.81	3.31
500	11.09	35.34	27.04	3.05
600	9.11	35.07	27.17	2.93
700	8.25	34.99	27.25	2.96

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.27	35.99	23.72	4.77
10	26.27	35.99	23.72	4.77
20	26.25	35.99	23.72	4.80
30	26.20	36.00	23.75	4.78
50	26.05	36.03	23.82	4.72
75	25.87	36.06	23.89	4.69
100	25.45	36.13	24.08	4.54
150	23.91	36.57	24.88	3.87
200	21.32	36.73	25.74	3.59
250	18.99	36.56	26.23	3.58
300	17.00	36.27	26.51	3.53
400	14.03	35.79	26.81	3.31
500	11.09	35.34	27.04	3.05
600	9.11	35.07	27.17	2.93

STATION 8

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.8	0.0	0.0	3.2	1.8
10	1.9	0.4	0.0	-	-
20	1.0	0.0	0.0	-	-
50	0.8	0.3	-	-	0.4
100	0.9	0.9	0.0	0.2	0.2
150	1.0	0.3	0.0	1.1	2.6
200	1.3	0.0	3.0	-	0.9
300	1.6	0.6	10.5	6.6	0.8
400	1.9	1.4	2.5*	2.7	0.5
500	2.6	1.8	16.0	-	0.7
600	2.9	1.9	13.0	-	0.9
700	3.2	1.8	-	-	1.8

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.8	0.0	0.0	3.2	1.8
10	1.9	0.4	0.0	-	-
20	1.0	0.0	0.0	-	-
30	0.9	0.1	0.0	-	-
50	0.8	0.3	0.0	-	0.4
75	0.9	0.6	0.0	-	0.3
100	0.9	0.9	0.0	0.2	0.2
150	1.0	0.3	0.0	1.1	2.6
200	1.3	0.0	3.0	-	0.9
250	1.5	0.3	7.0	-	0.9
300	1.6	0.6	10.5	6.6	0.8
400	1.9	1.4	13.5*	2.7	0.5
500	2.6	1.8	16.0	-	0.7
600	2.9	1.9	13.0	-	0.9
700	3.2	1.8	-	-	1.8

*Value questionable

STATION 9

DATE April 27, 1954 LAT. 28°21' N. LONG. 79°48' W. TIME 04
DEPTH 476 WIND 9 , 07 BAR. 17 AIR TEMP: dry 23.9°C, wet 21.1°C
HUMIDITY 78% WEATHER 00 CLOUDS: type - , amt. 0 SEA: dir. 07 , amt. 2
SWELL: dir. 07 , amt. 2 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.44	36.09	23.74	4.70
10	26.43	36.07	23.73	4.72
19	26.46	36.06	23.71	4.72
48	26.48	36.06	23.70	4.73
95	25.06	36.45	24.44	4.16
141	19.84	36.35*	25.85	4.73
186	18.70	36.45	26.22	3.72
229	15.75	36.14	26.70	3.40
269	12.59	35.64	26.99	3.09

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.44	36.09	23.74	4.70
10	26.43	36.07	23.73	4.72
20	26.47	36.06	23.71	4.72
30	26.48	36.06	23.70	4.72
50	26.47	36.07	23.71	4.68
75	26.15	36.27	23.96	4.26
100	24.44	36.46	24.63	4.30
150	19.53	36.46	26.02	4.47
200	17.82	36.39	26.40	3.62
250	14.14	35.90	26.87	3.24

STATION 9

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.6	0.3	-	-	0.5
10	0.8	6.2*	<0.5	-	1.8
19	1.3	0.5	0.0	-	0.8
48	1.0	1.0	0.5	-	1.2
95	1.3	0.5	0.5	1.3	0.8
141	1.2	-	-	0.2	2.1
186	1.2	0.5	3.5	1.2	0.5
229	2.0	-	13.5	-	0.8
269	3.3	-	13.5	-	-

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.6	0.3	-	-	0.5
10	0.8	0.4	<0.5	-	1.8
20	1.3	0.5	0.0	-	0.8
30	1.2	0.7	<0.5	-	1.0
50	1.0	1.0	0.5	-	1.2
75	1.2	0.7	0.5	-	1.0
100	1.3	0.5	0.5	1.3	1.0
150	1.2	0.5	2.5	0.4	1.8
200	1.5	-	7.0	-	0.6
250	2.7	-	13.5	-	-

STATION 10

DATE April 27, 1954 LAT. 28°20' N. LONG. 80°10' W. TIME 08
DEPTH 38 WIND 5 , 09 BAR. 16 AIR TEMP: dry 23.9°C, wet 21.7°C
HUMIDITY 83% WEATHER 01 CLOUDS: type 3 , amt. 1 SEA: dir. 08 , amt. 1
SWELL: dir. 10 , amt. 2 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.84	36.17	24.29	4.89
10	24.84	36.17	24.29	4.89
20	23.74	36.22	24.66	4.96

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.84	36.17	24.29	4.89
10	24.84	36.17	24.29	4.89
20	23.74	36.22	24.66	4.96
30	21.17	36.34	25.49	4.63

STATION 10

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.8	-	0.0	-	2.8
10	0.6	-	0.0	-	1.3
20	0.8	0.0	-	0.4	2.0
30	1.4	0.3	1.0	-	1.3

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.8	-	0.0	-	2.8
10	0.6	-	0.0	-	1.3
20	0.8	0.0	0.5	0.4	2.0
30	1.4	0.3	1.0	-	1.3

STATION 11

DATE April 27, 1954 LAT. 28°20' N. LONG. 80°32' W. TIME 11
DEPTH 13 WIND 2 , 09 BAR. 16 AIR TEMP: dry 23.3°C, wet 20.6°C
HUMIDITY 78% WEATHER 02 CLOUDS: type 1 , amt. 8 SEA: dir. - , amt. -
SWELL: dir. 12 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.59	35.84	24.12	5.10

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.59	35.84	24.12	5.10

STATION 11

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.0	0.8	-	-	0.7

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.0	0.8	-	-	0.7

STATION 12

DATE April 27, 1954 LAT. 28°41' N. LONG. 80°25' W. TIME 14
DEPTH 18 WIND 1 , 36 BAR. 18 AIR TEMP: dry 23.9°C, wet 21.1°C
HUMIDITY 78% WEATHER 02 CLOUDS: type 8 , amt. 1 SEA: dir. - , amt. -
SWELL: dir. 11 , amt. 1 VIS. 9 WATER TRANS. 5

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	23.97	36.08	24.49	5.13
10	23.71	36.04	24.53	5.09

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	23.97	36.08	24.49	5.13
10	23.71	36.04	24.53	5.09

STATION 12

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.5	0.0	0.5	-	-
10	1.9	0.2	0.0	-	0.5

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.5	0.0	0.5	-	-
10	1.9	0.2	0.0	-	0.5

STATION 13

DATE April 27, 1954 LAT. 29°00' N. LONG. 80°31' W. TIME 17
DEPTH 18 WIND 2 , 04 BAR. 18 AIR TEMP: dry 24.4°C, wet 21.1°C
HUMIDITY 74% WEATHER 02 CLOUDS: type 8 , amt. 1 SEA: dir. - , amt. -
SWELL: dir. 11 , amt. 1 VIS. 9 WATER TRANS. 3

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	23.21	35.68	24.41	5.21
10	22.91	35.76	24.56	5.22

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	23.21	35.68	24.41	5.21
10	22.91	35.76	24.56	5.22

STATION 13

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	-	1.8	<0.5	12.0	0.2
10	-	1.5	<0.5	-	-

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	-	1.8	<0.5	12.0	0.2
10	-	1.5	<0.5	-	-

STATION 14

DATE April 27, 1954 LAT. 29°00' N. LONG. 80°10' W. TIME 20
DEPTH 62 WIND 2 , 04 BAR. 16 AIR TEMP: dry 25.0°C, wet 21.7°C
HUMIDITY 75% WEATHER 02 CLOUDS: type 8 , amt. 4 SEA: dir. - , amt. -
SWELL: dir. 10 , amt. 1 VIS. 9 WATER TRANS. 1

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	25.66	36.16	24.03	4.88
10	25.41	36.15	24.10	4.90
20	24.29	36.25	24.52	5.02
30	23.67	36.33	24.76	5.03
50	20.51	36.33	25.66	4.61

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	25.66	36.16	24.03	4.88
10	25.41	36.15	24.10	4.90
20	24.29	36.25	24.52	5.02
30	23.67	36.33	24.76	5.03
50	20.51	36.33	25.66	4.61

STATION 14

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.0	0.0	0.5	-	1.4
10	0.8	0.0	-	-	<0.1
20	1.1	0.0	1.0	-	1.6
30	0.7	0.0	0.0	0.0	1.5
50	1.4	0.3	2.0	-	-

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.0	0.0	0.5	-	1.4
10	0.8	0.0	1.0	-	<0.1
20	1.1	0.0	1.0	-	1.6
30	0.7	0.0	0.0	0.0	1.5
50	1.4	0.3	2.0	-	-

STATION 15

DATE April 27, 1954 LAT. 29°00' N. LONG. 79°48' W. TIME 24
DEPTH 722 WIND 3 , 06 BAR. 15 AIR TEMP: dry 24.4°C, wet 21.7°C
HUMIDITY 79% WEATHER 01 CLOUDS: type 8 , amt. 3 SEA: dir. - , amt. -
SWELL: dir. 10 , amt. 1 VIS. 9 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.79	36.06	23.60	4.68
9	26.53	36.06	23.69	4.76
18	26.43	36.09	23.74	4.76
44	26.10	36.09	23.84	4.76
87	25.56	36.21	24.10	4.59
130	23.82	36.67	24.98	-
170	20.36	36.45	25.79	4.25
250	16.70	36.29	26.59	3.40
324	14.20	35.93	26.88	3.13
398	11.32	35.47	27.10	2.98
538	7.09	35.01	27.43	3.22

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.79	36.06	23.60	4.68
10	26.52	36.06	23.69	4.76
20	26.40	36.09	23.75	4.76
30	26.28	36.09	23.79	4.76
50	26.05	36.09	23.86	4.74
75	25.83	36.14	23.97	4.64
100	25.25	36.32	24.28	4.55
150	21.95	36.55	25.43	4.33
200	18.87	36.39	26.13	3.86
250	16.70	36.29	26.59	3.40
300	15.05	36.06	26.80	3.20
400	11.25	35.46	27.11	2.98
500	8.08	35.11	27.37	3.15

STATION 15

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	2.9	0.0	0.5	-	0.8
9	3.0	-	<0.5	-	0.5
18	2.5	0.0	1.5	0.0	1.3
44	2.5	0.4	0.0	0.6	0.6
87	4.8	0.1	1.0	-	0.6
130	4.5	0.7	1.5	-	0.4
170	2.2	0.3	0.0	-	-
250	4.0	1.0	5.5	2.6	-
324	1.9	1.0	16.0	-	0.6
398	2.5	1.3	3.5	2.7	1.9
538	3.1	2.0	6.5	-	0.2

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	2.9	0.0	0.5	-	0.8
10	3.0	0.0	<0.5	-	0.5
20	2.5	0.0	1.5	0.0	1.2
30	2.5	0.2	1.0	0.2	1.0
50	2.8	0.4	0.0	0.6	0.6
75	4.1	0.2	1.0	-	0.6
100	4.7	0.3	1.0	-	0.5
150	3.3	0.5	1.0	-	0.4
200	2.9	0.6	2.0	-	0.5
250	4.0	1.0	5.5	2.6	0.5
300	2.6	1.0	12.5	2.6	0.6
400	2.5	1.3	3.5	2.7	1.9
500	2.9	1.8	5.5	-	0.7

STATION 16

DATE April 28, 1954 LAT. 29°00' N. LONG. 79°26' W. TIME 04
DEPTH 832 WIND 5 , 12 BAR. 14 AIR TEMP: dry 24.4°C, wet 22.2°C
HUMIDITY 83% WEATHER 01 CLOUDS: type - , amt. 2 SEA: dir. 13 , amt. 1
SWELL: dir. 10 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.30	36.09	23.78	4.68
10	26.35	36.08	23.76	4.72
20	26.20	36.07	23.80	4.75
49	26.16	36.08	23.82	4.76
99	25.40	36.20	24.15	4.49
148	23.48	36.65	25.06	-
198	22.04	36.76	25.56	-
297	18.18	36.62	26.48	4.42
396	16.11	36.22	26.68	3.66
495	13.07	35.73	26.96	3.15
594	10.45	35.34	27.16	2.92
792	7.58	35.16	27.48	3.74

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.30	36.09	23.78	4.68
10	26.35	36.08	23.76	4.72
20	26.20	36.07	23.80	4.75
30	26.18	36.07	23.80	4.75
50	26.16	36.08	23.82	4.75
75	25.92	36.10	23.91	4.61
100	25.36	36.21	24.17	4.49
150	23.43	36.66	25.09	4.47
200	21.94	36.76	25.59	4.45
250	19.79	36.72	26.15	4.44
300	18.13	36.61	26.49	4.39
400	15.98	36.20	26.69	3.63
500	12.92	35.71	26.98	3.13
600	10.32	35.32	27.17	2.92

STATION 16

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.4	0.3	-	-	0.4
10	1.4	-	0.0	-	1.2
20	2.2	0.2	0.5	-	1.3
49	1.6	1.0	0.0	0.0	0.1
99	3.0	0.1	0.0	0.1	1.9
148	2.8	0.0	0.0	-	1.5
198	3.1	0.6	<0.5	0.1	2.0
297	4.2	0.4	1.0	0.0	-
396	-	2.6	1.0	-	0.6
495	4.8	1.4	16.0	-	1.9
594	2.6	1.8	7.0	-	1.5
792	2.6	1.9	8.0	-	1.6

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.4	0.3	-	-	0.4
10	1.4	0.3	0.0	-	1.2
20	2.2	0.2	0.5	-	1.3
30	2.0	0.5	<0.5	-	0.9
50	1.6	1.0	0.0	0.0	0.1
75	2.3	0.6	0.0	0.1	1.0
100	3.0	0.1	0.0	0.1	1.9
150	2.8	0.0	0.0	0.1	1.5
200	3.1	0.6	<0.5	0.1	2.0
250	3.7	0.5	0.5	<0.1	1.7
300	4.2	0.4	1.0	0.0	1.3
400	4.5	2.6	1.0	-	0.6
500	4.8	1.4	16.0	-	1.9
600	2.6	1.8	7.0	-	1.5
700	2.6	1.9	7.5	-	1.6
800	2.6	1.9	8.0	-	1.6

STATION 17

DATE April 28, 1954 LAT. 29°37' N. LONG. 79°36' W. TIME 09
DEPTH 850 WIND 4 , 22 BAR. 13 AIR TEMP: dry 24.4°C, wet 21.7°C
HUMIDITY 79% WEATHER 01 CLOUDS: type 8 , amt. 1 SEA: dir. - , amt. -
SWELL: dir. 10 , amt. 1 VIS. 8 WATER TRANS. 1

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.10	36.11	23.86	4.80
9	26.18	36.11	23.83	4.78
18	26.05	36.11	23.88	4.80
45	25.80	36.15	23.98	4.85
90	25.38	36.29	24.22	4.83
134	24.27	36.62	24.81	3.95
178	22.18	36.80	25.55	3.70
267	18.67	36.63	26.37	3.85
352	16.75	36.35	26.63	3.64
437	15.19	36.08	26.78	3.49
521	13.49	35.90	27.01	3.84
676	9.21	35.19	27.25	2.91

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.10	36.11	23.86	4.80
10	26.16	36.11	23.84	4.78
20	26.03	36.11	23.88	4.81
30	25.94	36.12	23.92	4.83
50	25.79	36.16	23.99	4.85
75	25.60	36.22	24.10	4.85
100	25.21	36.38	24.34	4.57
150	23.48	36.71	25.11	3.83
200	21.17	36.77	25.81	3.73
250	19.22	36.67	26.26	3.85
300	17.88	36.52	26.48	3.76
400	15.89	36.19	26.71	3.55
500	13.96	35.94	26.94	3.71
600	11.49	35.60	27.17	3.52

STATION 17

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.9	0.8	0.5	0.0	1.2
9	1.3	0.1	0.0	1.8	1.4
18	1.4	0.5	0.0	0.7	0.3
45	2.0	0.4	0.0	4.0	0.6
90	1.5	0.0	-	0.5	1.4
134	2.3	-	1.0	-	0.4
178	2.4	0.0	0.0	-	0.7
267	1.5	1.3	8.0	-	-
352	4.8	0.9	-	1.7	2.7
437	2.4	-	1.5*	-	-
521	4.2	1.6	14.0	0.8	0.0
676	2.6	1.6	16.5	-	0.5

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.9	0.8	0.5	0.0	1.2
10	1.3	0.1	0.0	1.8	1.4
20	1.4	0.5	0.0	0.7	0.3
30	1.6	0.5	0.0	1.8	0.4
50	1.9	0.3	0.0	4.0	0.7
75	1.7	0.1	<0.5	2.3	1.1
100	1.7	0.0	0.5	0.5	1.1
150	2.3	0.0	0.5	-	0.5
200	2.2	0.3	2.0	-	1.0
250	1.7	1.1	6.5	-	1.5
300	2.8	1.1	9.0	-	2.1
400	3.4	1.1	11.0	1.4	1.9
500	3.8	1.5	13.5	0.8	0.3
600	3.4	1.6	15.5	-	0.3

STATION Standard 1

DATE April 17, 1954 LAT. 26°21' N. LONG. 76°43' W. TIME 23
DEPTH 4664 WIND 9 , - BAR. 15 AIR TEMP: dry 25.0°C, wet 23.3°C
HUMIDITY 87 % WEATHER 63 CLOUDS: type - , amt. 9 SEA: dir. 18 , amt. 3
SWELL: dir. - , amt. - VIS. 5 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.87	36.49	24.53	4.88
7	24.90	36.53	24.55	4.88
14	24.90	36.55	24.56	4.86
33	24.71	36.55	24.62	4.81
70	24.03	36.59	24.86	4.78
108	22.94	36.63	25.21	4.70
148	21.96	36.62	25.48	4.74
229	19.39	36.67	26.21	4.32
312	18.26	36.53	26.40	4.32
485	15.91	36.10	26.63	3.97
665	12.33	35.57	26.99	3.41
849	8.31	35.14	27.36	3.32

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.87	36.49	24.53	4.88
10	24.90	36.54	24.56	4.87
20	24.85	36.55	24.58	4.84
30	24.75	36.55	24.61	4.82
50	24.44	36.57	24.72	4.80
75	23.88	36.60	24.91	4.76
100	23.16	36.63	25.14	4.71
150	21.88	36.62	25.50	4.72
200	20.14	36.67	26.02	4.42
250	19.10	36.64	26.27	4.32
300	18.42	36.55	26.37	4.32
400	17.20	36.32	26.50	4.17
500	15.62	36.05	26.66	3.91
600	13.66	35.75	26.86	3.56
800	9.42	35.24	27.26	3.34

STATION Standard 1

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.2	0.0	<0.5	1.8	1.0
7	2.5	0.2	<0.5	-	1.2
14	1.7	0.4	3.0	-	0.7
33	0.9	<0.1	0.0	3.9	0.4
70	1.4	0.3	<0.5	0.0	0.8
108	1.7	0.3	0.0	-	1.6
148	2.4	0.5	<0.5	2.7	-
229	1.4	0.1	1.0	0.6	0.6
312	0.9	0.4	4.0	-	0.6
485	1.9	1.1	3.5	3.6	-
665	2.4	1.9	3.5	-	2.3
849	3.5	-	5.5	-	0.3

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.2	0.0	<0.5	1.8	1.0
10	2.1	0.3	1.5	2.4	1.0
20	1.4	0.3	2.0	3.1	0.6
30	1.0	0.1	0.5	3.7	0.5
50	1.1	0.2	<0.5	2.0	0.6
75	1.4	0.3	<0.5	0.2	0.9
100	1.6	0.3	0.0	1.0	1.4
150	2.4	0.5	<0.5	2.6	1.3
200	1.8	0.2	1.0	1.3	0.8
250	1.3	0.2	2.0	0.8	0.6
300	1.0	0.4	3.5	1.4	0.6
400	1.4	0.8	4.0	2.6	1.0
500	1.9	1.2	3.5	3.6	1.5
600	2.2	1.6	3.5	-	2.0
700	2.6	1.9	4.0	-	1.9
800	3.2	-	5.0	-	0.8

STATION Standard 2

DATE April 18, 1954 LAT. 26°20' N. LONG. 76°42' W. TIME 02
DEPTH 4846 WIND 9 , - BAR. 17 AIR TEMP: dry 22.2°C, wet 20.6°C
HUMIDITY 86% WEATHER 55 CLOUDS: type - , amt. 9 SEA: dir. 34 , amt. 3
SWELL: dir. 34 , amt. 1 VIS. 4 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.88	36.53	24.55	4.79
9	24.90	36.51	24.53	4.70
18	24.88	36.51	24.54	4.72
42	24.57	36.53	24.65	4.88
84	23.99	36.56	24.84	4.97
126	22.80	36.62	25.24	4.95
169	21.82	36.83	25.68	4.54
257	18.89	36.57	26.27	4.51
348	17.80	36.47	26.46	4.52
532	14.86	35.96	26.76	3.97
719	10.97	35.39	27.10	3.38
909	7.27	35.07	27.46	3.78

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.88	36.53	24.55	4.79
10	24.90	36.51	24.53	4.70
20	24.85	36.51	24.55	4.74
30	24.73	36.52	24.59	4.81
50	24.51	36.53	24.67	4.91
75	24.17	36.55	24.78	4.96
100	23.51	36.57	24.99	4.96
150	22.29	36.76	25.49	4.69
200	20.56	36.74	25.96	4.52
250	19.06	36.58	26.23	4.51
300	18.40	36.52	26.35	4.51
400	17.06	36.35	26.55	4.37
500	15.43	36.05	26.70	4.07
600	13.42	35.72	26.88	3.64
800	9.36	35.22	27.25	3.50

STATION Standard 3

DATE April 18, 1954 LAT. 26°18' N. LONG. 76°42' W. TIME 05
DEPTH 5029 WIND 7 , - BAR. 18 AIR TEMP: dry 22.2°C, wet 20.6°C
HUMIDITY 86% WEATHER 02 CLOUDS: type 0 , amt. 9 SEA: dir. 03 , amt. 2
SWELL: dir. 35 , amt. 2 VIS. 5 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.83	36.51	24.55	4.97
9	24.85	36.53	24.56	4.89
18	24.85	36.54	24.57	4.89
44	24.59	36.58	24.68	5.01
89	23.94	36.58	24.87	5.00
134	22.69	36.64	25.29	5.01
180	20.80	36.80	25.94	4.52
273	18.59	36.58	26.35	4.71
367	17.73	36.45	26.47	4.60
558	14.37	35.91	26.83	3.95
752	10.12	35.31	27.19	3.39
948	6.68	35.06	27.53	4.23

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.83	36.51	24.55	4.97
10	24.85	36.53	24.56	4.89
20	24.83	36.54	24.58	4.90
30	24.74	36.56	24.62	4.96
50	24.54	36.58	24.69	5.01
75	24.21	36.58	24.79	5.00
100	23.69	36.59	24.96	5.00
150	21.97	36.72	25.55	4.80
200	20.21	36.75	26.06	4.59
250	19.01	36.63	26.28	4.69
300	18.40	36.55	26.38	4.69
400	17.21	36.36	26.52	4.48
500	15.48	36.08	26.71	4.14
600	13.38	35.75	26.91	3.71
800	9.20	35.22	27.28	3.47

STATION Standard 3

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	7.7	0.5	0.0	2.0	0.5
9	7.2	0.2	0.0	-	0.8
18	8.6	0.4	0.5	1.9	0.6
44	7.1	0.3	0.5	-	0.5
89	1.0	0.2	0.0	-	1.0
134	1.3	0.6	0.0	-	0.8
180	1.6	0.3	0.0	-	0.2
273	1.8	-	-	-	0.2
367	1.4	0.6	3.0	-	0.3
558	1.4	1.1	6.5	-	1.4
752	1.4	-	4.0	1.8	1.0
948	1.7	-	4.5	-	0.1

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	7.7	0.5	0.0	2.0	0.5
10	7.2	0.2	0.0	1.9	0.8
20	8.4	0.4	0.5	1.9	0.6
30	7.9	0.4	0.5	-	0.6
50	6.2	0.3	0.5	-	0.6
75	2.8	0.2	<0.5	-	0.8
100	1.0	0.3	0.0	-	0.9
150	1.4	0.5	0.0	-	0.6
200	1.6	0.3	<0.5	-	0.2
250	1.7	0.4	1.0	-	0.2
300	1.7	0.5	2.0	-	0.2
400	1.4	0.7	3.5	-	0.5
500	1.4	0.9	5.5	-	1.1
600	1.4	1.1	6.0	-	1.3
700	1.4	-	4.5	-	1.1
800	1.5	-	4.0	1.8	0.8

STATION Standard 4

DATE April 18, 1954 LAT. 26°18' N. LONG. 76°47' W. TIME 08
DEPTH 4846 WIND 7 , - BAR. 17 AIR TEMP: dry 22.5°C, wet 19.4°C
HUMIDITY 74% WEATHER 02 CLOUDS: type 0 , amt. 9 SEA: dir. 03 , amt. 2
SWELL: dir. 35 , amt. 2 VIS. 5 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.83	36.58	24.61	4.97
9	24.84	36.55	24.58	4.92
18	24.84	36.55	24.58	4.96
44	24.75	36.55	24.61	4.99
89	23.91	36.62	24.91	5.00
134	22.98	36.75	25.29	4.77
180	21.45	36.78	25.74	4.60
272	18.92	36.60	26.28	4.55
365	17.93	36.47	26.43	4.58
552	14.79	35.97	26.78	4.03
740	10.43	35.33	27.15	3.41
931	6.85	35.07	27.52	4.16

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.83	36.58	24.61	4.97
10	24.84	36.55	24.58	4.93
20	24.84	36.55	24.58	4.97
30	24.83	36.55	24.58	4.98
50	24.64	36.56	24.65	5.00
75	24.18	36.59	24.81	5.00
100	23.73	36.66	25.00	4.94
150	22.43	36.77	25.46	4.70
200	20.77	36.74	25.90	4.58
250	19.38	36.64	26.19	4.56
300	18.66	36.57	26.33	4.56
400	17.43	36.39	26.49	4.48
500	15.78	36.12	26.68	4.19
600	13.60	35.77	26.88	3.74
800	9.21	35.21	27.27	3.50

STATION Standard 5

DATE April 18, 1954 LAT. 26°17' N. LONG. 76°46' W. TIME 12
DEPTH 4681 WIND 11 , - BAR. 18 AIR TEMP: dry 22.2°C, wet 19.4°C
HUMIDITY 77% WEATHER 02 CLOUDS: type 0 , amt. 9 SEA: dir. 03 , amt. 3
SWELL: dir. 03 , amt. 2 VIS. 5 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.81	36.56	24.60	4.91
9	24.81	36.53	24.58	4.91
18	24.81	36.54	24.58	4.94
45	24.78	36.53	24.58	5.06
91	23.67	36.63	24.99	5.07
137	22.87	36.79	25.35	5.17
184	21.02	36.81	25.88	4.51
278	18.76	36.60	26.32	4.53
373	17.83	36.49	26.47	4.46
563	14.40	35.93	26.84	3.89
756	9.93	35.32	27.23	3.36
950	6.45	35.07	27.57	4.43

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.81	36.56	24.60	4.91
10	24.81	36.53	24.58	4.91
20	24.81	36.54	24.58	4.95
30	24.80	36.53	24.58	5.00
50	24.64	36.54	24.63	5.06
75	24.02	36.59	24.86	5.06
100	23.59	36.67	25.05	5.15
150	22.31	36.80	25.52	4.94
200	20.54	36.77	25.98	4.52
250	19.29	36.65	26.22	4.53
300	18.59	36.58	26.35	4.53
400	17.40	36.41	26.52	4.38
500	15.64	36.12	26.71	4.07
600	13.47	35.79	26.93	3.67
800	9.05	35.23	27.31	3.46

STATION Standard 5

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	7.8	0.3	0.0	-	-
9	4.4	0.0	0.0	-	1.7
18	0.6	0.2	0.5	0.0	2.4
45	0.7	0.6	0.0	-	0.4
91	-	0.5	0.0	0.0	0.5
137	4.3	0.3	1.0	3.1	1.2
184	3.2	1.0	0.0	-	1.3
278	1.2	0.1*	3.5	-	1.5
373	1.4	-	4.5	-	1.4
563	4.3	1.5	8.5	-	1.1
756	2.4	1.8	15.5	-	0.9
950	4.5	2.1	10.5	-	1.8

*Questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	7.8	0.3	0.0	-	-
10	4.4	0.0	0.0	-	1.7
20	0.6	0.2	0.5	0.0	2.2
30	0.6	0.4	<0.5	0.0	1.5
50	0.9	0.6	0.0	0.0	0.4
75	1.9	0.5	0.0	0.0	0.5
100	2.8	0.5	<0.5	0.0	0.6
150	4.0	0.5	1.0	3.1	1.2
200	2.8	1.0	0.5	-	1.3
250	1.8	1.1	2.5	-	1.4
300	1.2	1.2	3.5	-	1.5
400	1.8	1.3	5.0	-	1.4
500	3.3	1.4	7.0	-	1.2
600	3.9	1.6	10.0	-	1.1
700	2.9	1.7	13.5	-	1.0
800	2.8	1.9	14.5	-	1.1

STATION Standard 6

DATE April 18, 1954 LAT. 26°19' N. LONG. 76°49' W. TIME 15
DEPTH 4755 WIND 8 , - BAR. 19 AIR TEMP: dry 22.8°C, wet 19.4°C
HUMIDITY 74% WEATHER 02 CLOUDS: type 4 , amt. 8 SEA: dir. 03 , amt. 3
SWELL: dir. 03 , amt. 2 VIS. 7 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.80	36.56	24.60	4.89
9	24.80	36.56	24.60	4.92
18	24.80	36.54	24.59	4.92
45	24.69	36.58	24.65	4.98
92	23.67	36.64	25.00	4.99
139	22.55	36.85	25.49	4.61
186	20.81	36.78	25.92	4.51
280	18.59	36.58	26.35	4.56
376	17.61	36.38	26.44	4.43
568	14.26	35.84	26.80	3.97
762	9.73	35.23	27.20	3.41
958	6.17	35.75*	28.14	4.24

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.80	36.56	24.60	4.89
10	24.80	36.56	24.60	4.92
20	24.80	36.54	24.59	4.93
30	24.79	36.56	24.60	4.95
50	24.59	36.58	24.68	4.98
75	24.05	36.60	24.86	4.99
100	23.52	36.66	25.06	4.91
150	22.11	36.84	25.60	4.58
200	20.40	36.75	26.01	4.51
250	19.16	36.64	26.25	4.56
300	18.40	36.55	26.38	4.54
400	17.25	36.32	26.48	4.38
500	15.58	36.04	26.66	4.14
600	13.44	35.71	26.87	3.78
800	8.96	-	-	3.46

STATION Standard 7

DATE April 18, 1954 LAT. 26°20' N. LONG. 76°49' W. TIME 18
DEPTH 4060 WIND 9 , - BAR. 19 AIR TEMP: dry 22.8°C, wet 19.4°C
HUMIDITY 74% WEATHER 02 CLOUDS: type 6 , amt. 8 SEA: dir. 04 , amt. 3
SWELL: dir. 03 , amt. 3 VIS. 4 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.81	36.51	24.56	4.91
10	24.81	36.51	24.56	4.95
20	24.82	36.51	24.56	4.10*
48	24.68	36.51	24.60	5.00
96	23.70	36.61	24.97	5.01
144	22.72	36.74	25.35	4.71
193	21.14	36.74	25.80	4.52
292	18.48	36.53	26.34	4.56
390	17.40	36.36	26.48	4.51
589	13.53	35.78	26.91	3.69
783	9.55	35.21	27.21	3.41
980	5.94	35.04	27.61	4.78
1179	4.59	35.01	27.75	5.83
1477	4.18	34.99	27.78	6.12
1975	4.18	34.99*	27.78	6.11
2470	3.66	34.97	27.82	6.34

*Value questionable

STATION Standard 7

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.81	36.51	24.56	4.91
10	24.81	36.51	24.56	4.95
20	24.82	36.51	24.56	4.97
30	24.81	36.51	24.56	4.98
50	24.64	36.51	24.61	5.01
75	24.13	36.56	24.80	5.01
100	23.64	36.63	25.00	4.98
150	22.52	36.74	25.41	4.68
200	20.90	36.72	25.85	4.53
250	19.42	36.61	26.16	4.55
300	18.41	36.52	26.35	4.56
400	17.21	36.33	26.50	4.46
500	15.29	36.04	26.73	3.99
600	13.29	35.74	26.92	3.63
800	9.30	35.19	27.24	3.45
1000	5.77	35.04	27.63	4.92
1200	4.55	35.01	27.76	5.86
1500	4.16	34.99	27.78	6.11
2000	3.92	34.98	27.80	6.12

STATION Standard 7

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.4	0.0	0.5	-	2.8
10	0.6	0.6	<0.5	-	2.5
20	1.2	0.1	0.0	1.4	0.2
48	1.2	0.0	0.5	-	1.2
96	0.5	0.5	0.0	-	0.7
144	1.2	0.5	1.0	1.5	0.3
193	1.7	0.4	3.5	-	-
292	1.1	0.6	1.0	-	1.7
390	1.7	0.5	3.5	-	0.0
589	2.2	1.2	2.5	-	<0.1
783	2.6	2.0	12.0	-	0.7
980	2.5	1.9	1.5	2.1	0.5
1179	3.3	1.8	3.0	-	0.6
1477	2.9	1.2	1.0	-	0.5
1975	2.3	-	11.0	-	2.3
2475	3.5	1.6	11.5	-	0.1

STATION Standard 7

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.4	0.0	0.5	-	2.8
10	0.6	0.6	<0.5	-	2.5
20	1.2	0.1	0.0	1.4	0.2
30	1.2	<0.1	<0.5	-	0.5
50	1.2	0.0	0.5	-	1.2
75	0.8	0.3	<0.5	-	0.9
100	0.5	0.5	0.0	-	0.7
150	1.2	0.5	1.5	1.5	0.4
200	1.6	0.4	3.5	-	0.8
250	1.3	0.5	2.0	-	1.3
300	1.2	0.6	1.5	-	1.7
400	1.7	0.6	3.5	-	0.0
500	2.0	0.9	3.0	-	0.0
600	2.2	1.2	3.0	-	0.1
700	2.4	1.7	8.0	-	0.4
800	2.6	2.0	11.0	-	0.7
1000	2.5	1.9	1.5	2.1	0.5
1200	3.3	1.8	3.0	-	0.6
1500	2.9	1.2	1.0	-	0.5
2000	2.3	-	11.0	-	2.3
2500	3.5	1.6	11.5	-	0.1

STATION Standard 8

DATE April 18, 1954 LAT. 26°21' N. LONG. 76°46' W. TIME 22
DEPTH 4206 WIND 9 , - BAR. 18 AIR TEMP: dry 22.2°C, wet 20.6°C
HUMIDITY 86% WEATHER 02 CLOUDS: type 0 , amt. 9 SEA: dir. 04 , amt. 2
SWELL: dir. 04 , amt. 3 VIS. 6 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.77	36.55	24.60	4.95
10	24.78	36.53	24.58	4.93
20	24.79	36.53	24.58	4.93
48	24.63	36.56	24.65	5.00
96	24.00	36.56	24.84	5.01
145	22.68	36.60	25.26	5.01
193	21.30	36.80	25.80	4.54
291	18.74	36.56	26.30	4.55
389	17.59	36.44	26.49	4.46
587	13.94	35.84	26.87	3.91
785	9.52	35.25	27.25	3.42
983	5.95	35.06	27.63	4.80

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.77	36.55	24.60	4.95
10	24.78	36.53	24.58	4.93
20	24.79	36.53	24.58	4.93
30	24.75	36.54	24.60	4.96
50	24.62	36.56	24.66	5.00
75	24.36	36.56	24.73	5.01
100	23.90	36.56	24.87	5.01
150	22.53	36.63	25.32	4.95
200	21.07	36.78	25.85	4.54
250	19.64	36.65	26.13	4.54
300	18.65	36.55	26.31	4.54
400	17.41	36.41	26.51	4.43
500	15.64	36.10	26.69	4.14
600	13.62	35.79	26.89	3.82
800	9.22	35.22	27.27	3.46

STATION Standard 9

DATE April 19, 1954 LAT. 26°19' N. LONG. 76°46' W. TIME 01
DEPTH 4389 WIND 8 , - BAR. 18 AIR TEMP: dry 22.8°C, wet 21.1°C
HUMIDITY 86% WEATHER 02 CLOUDS: type 0 , amt. 9 SEA: dir. 06 , amt. 2
SWELL: dir. 04 , amt. 3 VIS. 6 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.77	36.55	24.60	4.88
9	24.78	36.53	24.58	4.88
19	24.78	36.53	24.58	4.86
47	24.76	36.53	24.59	4.87
94	24.10	36.57	24.82	4.84
142	22.70	36.61	25.26	4.97
190	21.41	36.79	25.76	4.47
285	18.89	36.60	26.29	4.50
381	17.48	36.39	26.48	4.30
573	14.25	35.90	26.85	3.83
767	9.86	35.26	27.20	3.29
960	6.15	35.06	27.60	4.56

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.77	36.55	24.60	4.88
10	24.78	36.53	24.58	4.88
20	24.78	36.53	24.58	4.86
30	24.77	36.53	24.59	4.87
50	24.74	36.53	24.60	4.86
75	24.45	36.55	24.70	4.85
100	23.92	36.57	24.87	4.89
150	22.48	36.65	25.35	4.86
200	21.09	36.77	25.83	4.48
250	19.69	36.67	26.13	4.52
300	18.68	36.57	26.32	4.47
400	17.21	36.35	26.52	4.26
500	15.61	36.10	26.70	4.02
600	13.60	35.78	26.89	3.65
800	9.18	35.19	27.26	3.38

STATION Standard 10

DATE April 19, 1954 LAT. 26°20' N. LONG. 76°50' W. TIME 04
DEPTH 4077 WIND 7 , - BAR. 19 AIR TEMP: dry 23.3°C, wet 21.7°C
HUMIDITY 86% WEATHER 03 CLOUDS: type 0 , amt. 9 SEA: dir. 06 , amt. 2
SWELL: dir. 04 , amt. 3 VIS. 7 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.70	36.52	24.60	4.90
10	24.73	36.52	24.59	4.91
19	24.71	36.51	24.59	4.91
48	24.74	36.51	24.58	4.92
95	23.74	36.56	24.92	4.92
143	22.95	36.75	25.29	4.69
191	21.37	36.81	25.79	4.49
288	18.67	36.55	26.31	4.60
385	17.56	36.42	26.49	4.37
578	14.01	35.89	26.89	3.91
772	9.41	35.22	27.24	3.38
968	5.90	35.07	27.64	4.73

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.70	36.52	24.60	4.90
10	24.73	36.52	24.59	4.91
20	24.72	36.51	24.59	4.91
30	24.72	36.51	24.59	4.91
50	24.69	36.51	24.60	4.92
75	24.14	36.52	24.77	4.92
100	23.69	36.59	24.96	4.89
150	22.71	36.77	25.38	4.65
200	21.05	36.78	25.85	4.51
250	19.54	36.64	26.15	4.55
300	18.56	36.54	26.33	4.57
400	17.32	36.38	26.51	4.34
500	15.57	36.12	26.72	4.10
600	13.43	35.79	26.93	3.76
800	8.84	35.17	27.30	3.46

STATION Standard 11

DATE April 19, 1954 LAT. 26°19' N. LONG. 76°46' W. TIME 07
DEPTH 4297 WIND 2 , - BAR. 18 AIR TEMP: dry 23.3°C, wet 22.2°C
HUMIDITY 91% WEATHER 65 CLOUDS: type 8 , amt. 8 SEA: dir. - , amt. -
SWELL: dir. 04 , amt. 1 VIS. 7 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.74	36.49	24.57	4.91
10	24.77	36.51	24.57	4.90
19	24.76	36.53	24.59	4.91
48	24.75	36.53	24.59	4.92
96	23.98	36.58	24.86	5.01
144	22.86	36.74	25.31	4.74
192	21.06	36.78	25.85	4.46
289	18.79	36.58	26.30	4.46
387	17.50	36.40	26.48	4.37
582	13.97	35.81	26.84	3.80
778	9.64	35.24	27.22	3.28
974	6.22	35.02	27.56	4.50

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.74	36.49	24.57	4.91
10	24.77	36.51	24.57	4.90
20	24.76	36.53	24.59	4.91
30	24.76	36.53	24.59	4.91
50	24.72	36.53	24.60	4.93
75	24.36	36.54	24.72	4.97
100	23.91	36.60	24.90	4.99
150	22.61	36.75	25.39	4.69
200	20.84	36.76	25.90	4.46
250	19.58	36.66	26.16	4.46
300	18.66	36.56	26.32	4.45
400	17.29	36.36	26.50	4.33
500	15.55	36.06	26.68	4.03
600	13.53	35.74	26.87	3.68
800	9.21	35.20	27.26	3.33

STATION Standard 12

DATE April 19, 1954 LAT. 26°19' N. LONG. 76°48' W. TIME 10
DEPTH 4297 WIND 4 , - BAR. 18 AIR TEMP: dry 22.8°C, wet 21.7°C
HUMIDITY 91% WEATHER 65 CLOUDS: type 8 , amt. 9 SEA: dir. - , amt. -
SWELL: dir. 04 , amt. 2 VIS. 5 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.73	36.51	24.58	4.87
10	24.77	36.53	24.59	4.91
20	24.75	36.53	24.59	4.91
50	24.70	36.53	24.61	4.96
100	23.61	36.60	24.99	4.96
150	22.76	36.78	25.37	4.69
200	20.59	36.74	25.95	4.50
300	18.56	36.55	26.34	4.59
400	17.30	36.36	26.50	4.31
600	13.30	35.71	26.90	3.68
800	8.82	35.16	27.29	3.39
1000	5.64	35.03	27.64	4.91

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.73	36.51	24.58	4.87
10	24.77	36.53	24.59	4.91
20	24.75	36.53	24.59	4.91
30	24.73	36.53	24.60	4.93
50	24.70	36.53	24.61	4.96
75	24.13	36.55	24.80	4.96
100	23.61	36.60	24.99	4.96
150	22.76	36.78	25.37	4.69
200	20.59	36.74	25.95	4.50
250	19.48	36.65	26.17	4.54
300	18.56	36.55	26.34	4.59
400	17.30	36.36	26.50	4.31
500	15.36	36.02	26.69	3.95
600	13.30	35.71	26.90	3.68
800	8.82	35.16	27.29	3.39
1000	5.64	35.03	27.64	4.91

STATION Standard 13

DATE April 19, 1954 LAT. 26°18' N. LONG. 76°47' W. TIME 13
DEPTH 4059 WIND -, - BAR. 20 AIR TEMP: dry 22.2°C, wet 21.7°C
HUMIDITY 95% WEATHER 01 CLOUDS: type 0, amt. 8 SEA: dir. -, amt. -
SWELL: dir. 04, amt. 2 VIS. 7 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.72	36.42	24.52	4.91
10	24.76	36.51	24.58	4.97
20	24.76	36.50	24.57	4.92
50	24.71	36.53	24.61	4.95
100	23.70	36.59	24.95	5.01
150	22.62	36.78	25.41	4.73
200	20.59	36.75	25.96	4.54
300	18.63	36.36*	26.17	4.56
400	17.29	36.36	26.50	4.38
600	13.32	35.72	26.90	3.77
800	8.82	35.15	27.28	3.52
1000	5.58	35.01	27.63	5.01

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.72	36.42	24.52	4.91
10	24.76	36.51	24.58	4.97
20	24.76	36.50	24.57	4.92
30	24.74	36.51	24.58	4.93
50	24.71	36.53	24.61	4.95
75	24.21	36.54	24.76	4.98
100	23.70	36.59	24.95	5.01
150	22.62	36.78	25.41	4.73
200	20.59	36.75	25.96	4.54
250	19.53	36.65	26.16	4.55
300	18.63	36.56	26.33	4.56
400	17.29	36.36	26.50	4.38
500	15.37	36.03	26.70	4.03
600	13.32	35.72	26.90	3.77
800	8.82	35.15	27.28	3.52
1000	5.58	35.01	27.63	5.01

STATION Special 5

DATE April 16, 1954 LAT. 30°00' N. LONG. 77°00' W. TIME 01
DEPTH 942 WIND 3 , 17 BAR. 21 AIR TEMP: dry 22.8°C, wet 22.2°C
HUMIDITY 95% WEATHER 02 CLOUDS: type 4 , amt. 1 SEA: dir. 17 , amt. 0
SWELL: dir. 14 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	22.38	36.51	25.28	5.00
10	21.62	36.46	25.45	4.82
19	21.28	36.45	25.54	4.61
48	20.82	36.50	25.70	4.78
96	20.59*	36.55	25.80	4.62
145	19.67	36.56	26.06	4.63
194	19.28	36.56	26.16	4.63
292	18.32	36.55	26.40	4.49
391	17.84	36.47	26.45	4.58
590	15.89	36.13	26.66	3.99
790	11.61	35.49	27.06	3.47
890	9.54	35.14	27.16	4.18

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	22.38	36.51	25.28	5.00
10	21.62	36.46	25.45	4.82
20	21.27	36.45	25.54	4.62
30	21.07	36.47	25.61	4.70
50	20.80	36.51	25.72	4.77
75	20.50	36.53	25.81	4.67
100	20.20	36.55	25.91	4.62
150	19.54	36.56	26.09	4.63
200	19.25	36.56	26.17	4.61
250	18.65	36.56	26.32	4.52
300	18.23	36.55	26.42	4.51
400	17.75	36.46	26.47	4.55
500	16.90	36.32	26.57	4.25
600	15.76	36.10	26.67	3.90
800	11.50	35.46	27.06	3.51

STATION Special 5

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	5.2	0.8	2.5	0.0	0.5
10	3.1	0.1	<0.5	-	1.7
19	3.1	0.0	6.0	-	0.8
48	2.3	0.3	2.5	-	0.3
96	3.0	0.4	1.5	-	0.2
145	3.0	0.3	0.0	-	1.6
194	2.7	0.4	0.5	-	0.6
292	1.4	0.4	1.5	-	0.3
391	1.7	0.5	1.5	0.0	0.0
590	1.6	0.8	7.0	-	1.4
790	2.3	1.5	11.5	-	1.1
990	2.4	0.8	10.0	-	0.1

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	5.2	0.8	2.5	0.0	0.5
10	3.1	0.1	<0.5	-	1.7
20	3.1	0.0	6.0	-	0.8
30	2.8	0.1	5.0	-	0.6
50	2.3	0.3	2.5	-	0.3
75	2.7	0.4	2.0	-	0.3
100	3.0	0.4	1.5	-	0.2
150	3.0	0.3	0.0	-	1.6
200	2.7	0.4	0.5	-	0.6
250	2.1	0.4	1.0	-	0.5
300	1.4	0.4	1.5	-	0.3
400	1.7	0.5	1.5	0.0	0.0
500	1.7	0.7	4.5	-	0.7
600	1.6	0.8	7.0	-	1.4
700	2.0	1.2	9.5	-	1.3
800	2.3	1.5	11.5	-	1.1
1000	2.4	0.8	10.0	-	0.1

STATION Special 6

DATE April 16, 1954 LAT. 29°00' N. LONG. 77°00' W. TIME 09
DEPTH 1116 WIND 7 , 14 BAR. 19 AIR TEMP: dry 23.9°C, wet 21.7°C
HUMIDITY 83% WEATHER 03 CLOUDS: type 8 , amt. 8 SEA: dir. 16 , amt. 2
SWELL: dir. 14 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.04	36.36	24.68	4.79
10	24.05	36.34	24.66	4.63
20	23.69	36.37	24.79	4.63
50	22.06	36.45	25.32	4.98
100	20.75	36.56	25.77	4.90
150	20.02	36.55*	25.96	4.85
200	19.48	36.64	26.17	4.49
300	18.19	36.51	26.40	4.64
400	17.49	36.40	26.49	4.36
600	14.25	35.83	26.79	3.94
800	9.35	35.23	27.26	3.39
1000	5.99	35.03	27.60	4.73

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.04	36.36	24.68	4.79
10	24.05	36.34	24.66	4.63
20	23.69	36.37	24.79	4.63
30	22.94	36.40	25.03	4.78
50	22.06	36.45	25.32	4.98
75	21.40	36.52	25.56	4.94
100	20.75	36.56	25.77	4.90
150	20.02	36.61	26.00	4.85
200	19.48	36.64	26.17	4.49
250	18.80	36.59	26.30	4.55
300	18.19	36.51	26.40	4.64
400	17.49	36.40	26.49	4.36
500	16.10	36.15	26.63	4.17
600	14.25	35.83	26.79	3.94
800	9.35	35.23	27.26	3.39
1000	5.99	35.03	27.60	4.73

STATION Special 6

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.2	0.3	<0.5	-	0.6
10	1.5	0.2	1.5	-	0.3
20	1.8	0.1	<0.5	-	1.5
50	2.3	0.3	0.0	0.0	0.8
100	1.3	0.3	1.0	-	0.3
150	3.5	0.4	0.0	-	0.9
200	1.0	0.4	0.5	1.3	1.3
300	0.5	0.5	2.5	-	0.3
400	1.0	0.5	1.5	2.7	0.4
600	1.5	1.0	4.5	-	0.3
800	2.6	1.7	13.0	2.0	0.4
1000	2.0	1.6	20.5	-	1.0

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.2	0.3	<0.5	-	0.6
10	1.5	0.2	1.5	-	0.3
20	1.8	0.1	<0.5	-	1.5
30	2.0	0.2	<0.5	-	1.3
50	2.3	0.3	0.0	0.0	0.8
75	1.8	0.3	0.5	-	0.6
100	1.3	0.3	1.0	-	0.3
150	3.5	0.4	0.0	-	0.9
200	1.0	0.4	0.5	1.3	1.3
250	0.8	0.5	1.5	1.7	0.8
300	0.5	0.5	2.5	2.0	0.3
400	1.0	0.5	1.5	2.7	0.4
500	1.3	0.8	3.0	2.6	0.4
600	1.5	1.0	4.5	2.4	0.3
700	2.1	1.4	9.0	2.2	0.4
800	2.6	1.7	13.0	2.0	0.4
1000	2.0	1.6	20.5	-	1.0

STATION Special 7

DATE April 16, 1954 LAT. 28°00' N. LONG. 77°00' W. TIME 18
DEPTH 1079 WIND 7 , 17 BAR. 20 AIR TEMP: dry 25.0°C, wet 22.8°C
HUMIDITY 83% WEATHER 01 CLOUDS: type 8 , amt. 4 SEA: dir. 17 , amt. 2
SWELL: dir. 00 , amt. 0 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	25.87	-	-	4.72
9	25.87	-	-	4.70
18	25.24	-	-	4.66
45	23.45	-	-	4.88
91	22.78	-	-	4.79
137	21.73	-	-	4.63
183	20.54	-	-	4.46
277	18.71	-	-	4.36
371	17.86	-	-	4.37
561	14.77	-	-	-
754	10.90	-	-	3.36
851	8.34	-	-	3.43

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	25.87	-	-	4.72
10	25.80	-	-	4.69
20	25.07	-	-	4.68
30	24.32	-	-	4.78
50	23.40	-	-	4.87
75	23.06	-	-	4.83
100	22.59	-	-	4.76
150	21.37	-	-	4.57
200	20.14	-	-	4.43
250	19.14	-	-	4.38
300	18.54	-	-	4.37
400	17.43	-	-	4.22
500	15.84	-	-	3.80
600	14.12	-	-	3.52
800	9.74	-	-	3.38

STATION Special 7

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	-	0.2	1.5	2.3	1.1
9	-	0.0	0.0	0.1	0.9
18	-	0.3	0.0	-	2.0
45	-	0.0	<0.5	-	1.2
91	-	0.2	2.0	-	0.3
137	-	0.2	<0.5	-	1.3
183	-	0.3	0.5	-	1.7
277	-	0.3	2.5	-	1.2
371	-	0.6	2.5	-	0.2
561	-	1.2	12.0	-	0.6
754	-	1.0	9.0	1.5	0.5
851	-	1.9	4.5	-	1.4

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	-	0.2	1.5	2.3	1.1
10	-	0.0	0.0	0.1	0.9
20	-	0.3	0.0	-	2.0
30	-	0.2	0.0	-	1.6
50	-	0.0	0.5	-	1.1
75	-	0.1	1.5	-	0.6
100	-	0.2	1.5	-	0.5
150	-	0.2	<0.5	-	1.4
200	-	0.3	1.0	-	1.6
250	-	0.3	2.0	-	1.3
300	-	0.4	2.5	-	0.9
400	-	0.7	4.0	-	0.3
500	-	1.0	9.0	-	0.5
600	-	1.2	11.5	-	0.6
700	-	1.0	10.0	-	0.5
800	-	1.4	7.0	-	0.9

STATION Special 8

DATE April 17, 1954 LAT. 28°00' N. LONG. 78°00' W. TIME 01
DEPTH 1042 WIND 5 , 17 BAR. 17 AIR TEMP: dry 25.0°C, wet 23.3°C
HUMIDITY 87% WEATHER 01 CLOUDS: type 8 , amt. 2 SEA: dir. 17 , amt. 2
SWELL: dir. 14 , amt. 1 VIS. 8 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	24.43	36.42	24.61	4.82
9	24.43	36.42	24.61	4.81
18	23.94	36.43	24.76	4.80
46	22.65	36.55	25.23	4.80
92	21.99	36.54*	25.41	4.74
139	21.07	36.69	25.78	4.39
185	19.52	36.67	26.18	4.28
280	17.08	36.34	26.54	4.16
376	15.35	36.05	26.72	3.90
569	11.27	35.44	27.09	3.36
765	7.46	35.07	27.43	3.78
863	5.84	35.03	27.62	4.72

*Value questionable

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	24.43	36.42	24.61	4.82
10	24.37	36.42	24.63	4.81
20	23.83	36.44	24.80	4.80
30	23.30	36.49	25.00	4.80
50	22.60	36.56	25.25	4.80
75	22.20	36.60	25.40	4.78
100	21.80	36.64	25.54	4.66
150	20.68	36.69	25.89	4.36
200	19.09	36.62	26.25	4.27
250	17.77	36.44	26.45	4.21
300	16.74	36.28	26.58	4.13
400	14.82	35.96	26.77	3.82
500	12.69	35.63	26.96	3.47
600	10.62	35.36	27.14	3.37
800	6.86	35.04	27.49	4.00

STATION Special 8

OBSERVED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	0.8	0.1	1.5	-	0.5
9	1.1	0.5	0.0	-	0.5
18	1.3	-	0.0	-	1.2
46	0.9	0.4	0.5	3.9	1.0
92	0.3	0.0	0.0	-	0.4
139	0.7	0.3	1.0	-	1.5
185	0.9	0.5	2.5	-	0.0
280	1.5	-	5.0	3.6	0.6
376	1.3	0.8	5.0	-	1.4
569	3.0	1.7	17.5	-	0.7
765	2.6	1.8	3.0*	0.2	1.1
863	2.1	1.4	16.0	-	0.7

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (µg at/l)	PO_4-P (µg at/l)	NO_3-NO_2 (µg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	0.8	0.1	1.5	-	0.5
10	1.1	0.5	0.0	-	0.5
20	1.3	0.5	0.0	-	1.2
30	1.1	0.4	<0.5	-	1.1
50	0.8	0.4	0.5	3.9	0.9
75	0.5	0.1	<0.5	-	0.6
100	0.4	<0.1	0.0	-	0.6
150	0.8	0.4	1.5	-	1.1
200	1.0	0.5	3.0	-	0.1
250	1.3	0.6	4.0	-	0.4
300	1.4	0.7	5.0	3.6	0.8
400	1.5	0.9	6.5	-	1.3
500	2.4	1.4	13.0	-	0.9
600	2.9	1.7	17.0	-	0.8
700	2.7	1.8	17.0	-	1.0
800	2.4	1.7	16.0	0.2	1.0

STATION Special 9

DATE April 26, 1954 LAT. 28°00' N. LONG. 79°00' W. TIME 20
DEPTH 893 WIND 5 , 07 BAR. 18 AIR TEMP: dry 25.0°C, wet 22.2°C
HUMIDITY 79% WEATHER 02 CLOUDS: type 8 , amt. 2 SEA: dir. 09 , amt. 2
SWELL: dir. 08 , amt. 2 VIS. 9 WATER TRANS. -

OBSERVED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
1	26.25	36.10	23.81	4.69
9	25.98	36.09	23.88	4.73
18	25.93	36.09	23.90	4.73
46	24.12	36.46	24.73	4.91
92	23.26	36.67	25.14	4.91
139	22.11	36.67	25.47	4.74
185	-	36.65	-	4.91
280	18.53	36.64	26.41	4.56

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (‰)	σ_t	O_2 (ml/l)
0	26.25	36.10	23.81	4.69
10	25.97	36.09	23.89	4.73
20	25.85	36.10	23.93	4.75
30	25.04	36.24	24.29	4.82
50	24.06	36.49	24.77	4.91
75	23.61	36.62	25.00	4.91
100	23.07	36.67	25.20	4.86
150	21.84	36.66	25.54	4.80
200	20.59	36.65	25.88	4.90
250	19.31	36.64	26.21	4.71

STATION Special 9

OBSERVED

DEPTH (m)	TOTAL P (μg at/l)	PO_4-P (μg at/l)	NO_3-NO_2 (μg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
1	1.3	0.0	<0.5	1.7	1.1
9	1.5	0.4	3.0	-	0.4
18	1.4	0.5	0.0	-	1.4
46	1.0	0.3	0.5	0.3	0.8
92	1.5	0.9	0.0	-	1.7
139	1.0	0.6	0.0	0.8	0.7
185	1.1	0.1*	-	-	0.0
280	1.6	1.7	3.0	-	-

*Value questionable

INTERPOLATED

DEPTH (m)	TOTAL P (μg at/l)	PO_4-P (μg at/l)	NO_3-NO_2 (μg at/l)	ARABINOSE (mg/l)	TYROSINE (mg/l)
0	1.3	0.0	<0.5	1.7	1.1
10	1.5	0.4	3.0	-	0.4
20	1.4	0.5	0.0	-	1.4
30	1.2	0.4	<0.5	-	1.1
50	1.1	0.4	0.5	0.3	0.9
75	1.3	0.7	<0.5	0.5	1.4
100	1.4	0.9	0.0	0.6	1.5
150	1.0	0.7	<0.5	0.8	0.5
200	1.2	1.1	1.5	-	-
250	1.5	1.5	2.5	-	-

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