

**Hydrography of South Carolina  
Estuaries, With Emphasis on the  
North and South Edisto  
and Cooper Rivers**

**T.D. Mathews and M.H. Shealy, Jr.**

**South Carolina Marine Resources Center  
Technical Report Number 30  
July, 1978**



**South Carolina Wildlife and Marine Resources Department**

HYDROGRAPHY OF SOUTH CAROLINA ESTUARIES,  
WITH EMPHASIS ON THE NORTH AND SOUTH EDISTO AND COOPER RIVERS<sup>1</sup>

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Technical Report Number 30

July, 1978

<sup>1</sup>This work is a result of research sponsored by the Coastal Plains Regional Commission under Contract Number 10340031 and by the South Carolina Wildlife and Marine Resources Department.

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INTRODUCTION

In February 1973 the South Carolina Wildlife and Marine Resources Department initiated a major statewide estuarine research program. This ongoing project, "An Environmental Base Line Study of South Carolina Estuaries" (Estuarine Survey), is a combined effort of the Marine Resources Division's Marine Resources Research Institute (MRRI) and its Office of Marine Conservation and Management (OMCM). The broad objectives of this program are to determine the basic biological, chemical, and physical characteristics of the major estuaries of South Carolina, the seasonal changes in these characteristics, and their interactions over a several-year period.

The importance of this study is apparent when considering the future impact of pollution on estuaries that are now relatively clean. Background information will be available to assess the effects of increased industrialization, expansion of housing developments, growth of cities, and so on. The data will be particularly important in providing a basis for before and after comparisons for such major projects as Santee-Cooper re-division and expanded port facilities.

Another significant factor to be considered is that there have been no previous studies along the South Carolina coast of this intensity, i.e. monthly for two years. Most prior work was of a short duration or over a small area, such as the studies on Winyah Bay (Johnson, 1970), Port Royal (Ballentine, 1972), the Cooper River (Nelson, 1974), and Dill's Bluff Creek (Settlemyre and Gardner, 1975). Hence for the first time an extensive data base is being established for major South Carolina estuaries.

This report presents the hydrographic results of the first two years of the Estuarine Survey. The data in this report should provide a better understanding of some of South Carolina's major estuaries and point out areas for further work.

METHODS AND MATERIALS

Sampling Design

Thirty-three stations were selected throughout the state (Figure 1). Sampling locations were placed in one of two categories - Intensive Phase stations or Extensive Phase stations. Intensive Phase stations were occupied monthly and Extensive Phase stations quarterly throughout the annual cycle. A schedule of cruises conducted to stations in each phase is given in Table 1.

The Intensive Phase of the study was composed of a concentration of 17 stations, eight in the North Edisto River, four in the South Edisto River, and five in the Cooper River (Table 2). The Extensive

Phase consisted of 16 additional stations across the South Carolina coastal zone. Represented in these stations were a wide range of geographic locations, depths, and bottom types (Table 3).

Stations were selected to indicate present hydrographic conditions in a number of locations in the major estuaries of South Carolina. These estuaries generally fall into one of two groups: those with source waters originating well above the fall-line and those represented by coastal plain rivers. The former rivers, such as the South Edisto and Cooper, are subject to spring freshets and floods and carry heavy sediment loads. The latter, such as the North Edisto River, as a rule do not experience large variations in freshwater discharge and do not contain large quantities of suspended sediments.

The North Edisto was selected for intensive sampling because this river is an excellent example of a high-salinity estuary, characteristically mixo-polyhaline. Although this water course has no major freshwater flow, a large area of intermediate salinities is present. This estuary is relatively pristine and has minor connections with the South Edisto. Stations were selected to represent areas in both the main trunk of the river and its tributaries.

The South Edisto was selected for intensive sampling because this river is contiguous with the North Edisto and, unlike the North Edisto, has a large drainage basin responsible for considerable freshwater flow. As a result, the South Edisto is an excellent example of a low-salinity estuary, with the upper half characteristically limnetic to mixo-oligohaline and the seaward half mixo-mesohaline. Stations were spread over a sufficiently long transect to provide study areas extending throughout the salinity gradient from the river mouth inland to locations well above the permanent freshwater line. The South Edisto also remains relatively pristine.

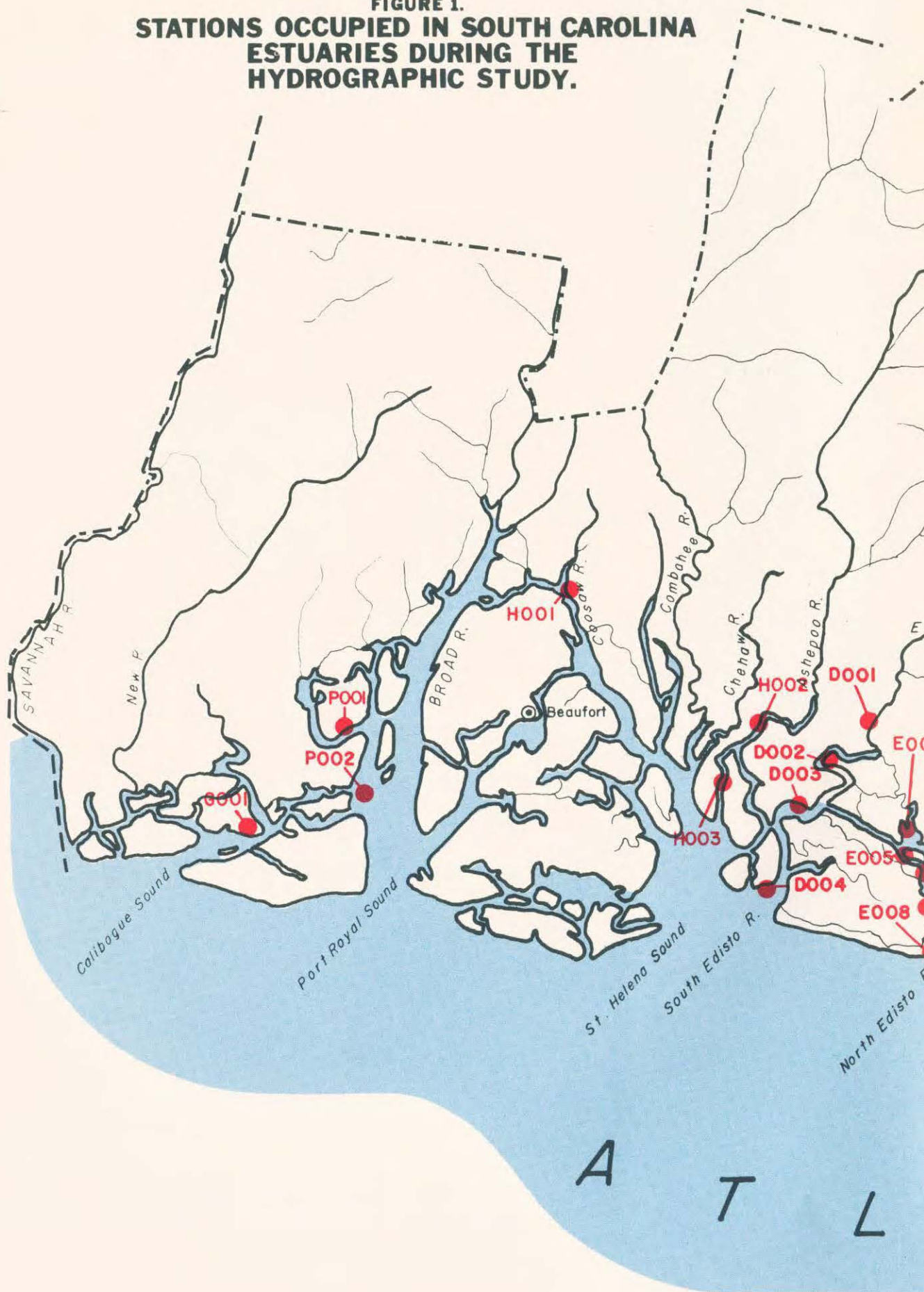
Both branches of the Edisto River have been less affected by man's activities than many of the other major estuaries in South Carolina. Thus our data will provide insight into physical and chemical water conditions in unpolluted coastal ecosystems and will define base line conditions prior to possible utilization of these estuaries by industries and municipalities.

The Cooper River was also selected for intensive sampling for a number of reasons. As a mixohaline ecosystem the Cooper River has zones of relatively high salinity in Charleston Harbor, low salinity (limnetic) above the permanent freshwater line, and intermediate salinity fluctuating from the river mouth inland. It also has one of the largest drainage basins on the East Coast as a result of the original diversion of the Santee River in 1941. The Cooper River also flows through the highly industrialized area of North Charleston.

In field investigations such as this one,



**FIGURE 1.**  
**STATIONS OCCUPIED IN SOUTH CAROLINA**  
**ESTUARIES DURING THE**  
**HYDROGRAPHIC STUDY.**





A N T I C O

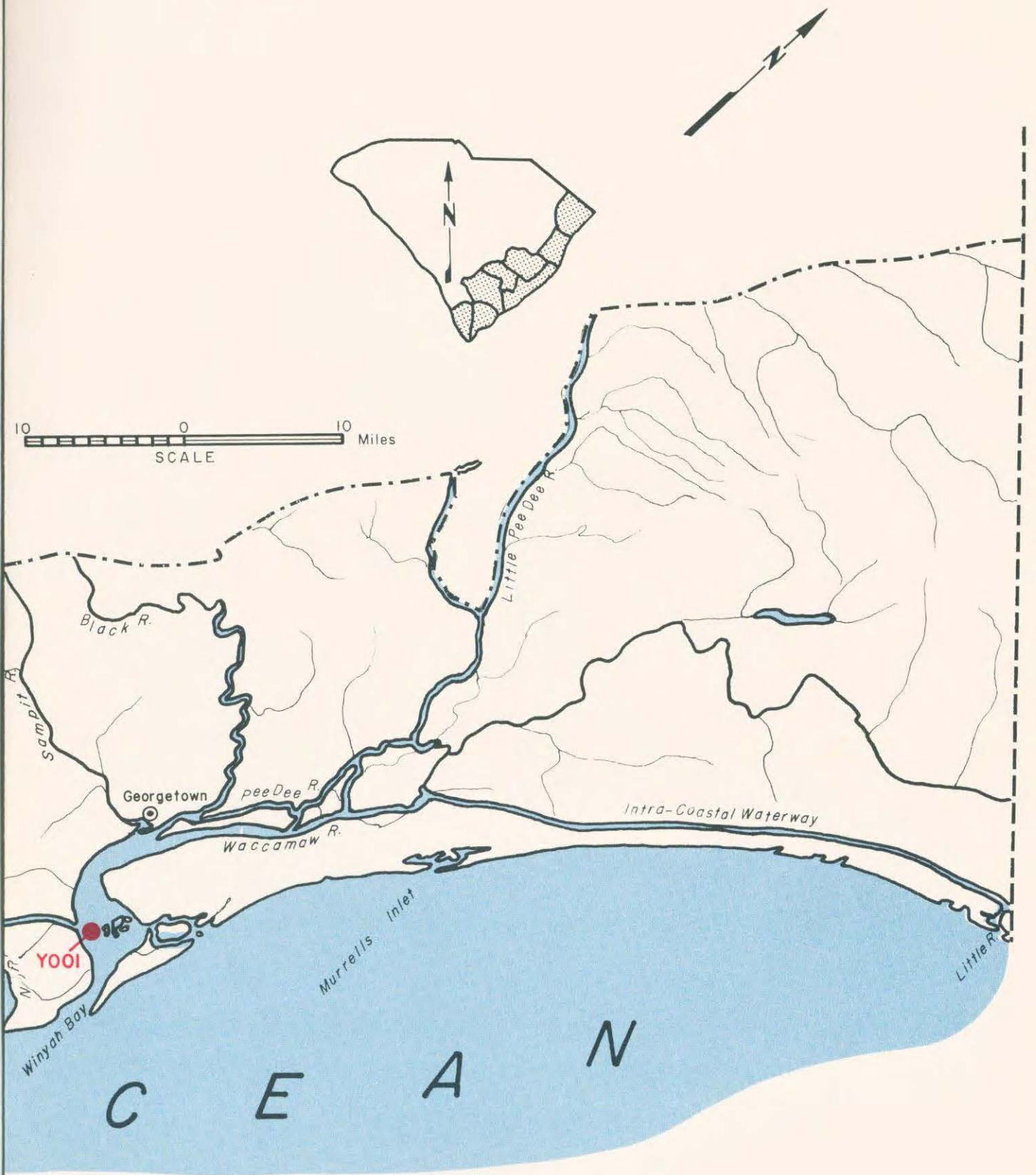


Table 1. Schedule of Estuarine Survey cruises across South Carolina during the first years of study from February 1973 through January 1975.

	Date	Cruise
1973	February	North and South Edisto, Cooper Rivers (Intensive Phase)
	March	North and South Edisto, Cooper Rivers (Intensive Phase)
	April	*Entire State (Intensive and Extensive Phase)
	May	North and South Edisto, Cooper Rivers (Intensive Phase)
	June	North and South Edisto, Cooper Rivers (Intensive Phase)
	July	*Entire State (Intensive and Extensive Phases)
	August	North and South Edisto, Cooper Rivers (Intensive Phase)
	September	North and South Edisto, Cooper Rivers (Intensive Phase)
	October	*Entire State (Intensive and Extensive Phase)
	November	North and South Edisto, Cooper Rivers (Intensive Phase)
	December	North and South Edisto, Cooper Rivers (Intensive Phase)
	1974	January
February		North and South Edisto, Cooper Rivers (Intensive Phase)
March		North and South Edisto, Cooper Rivers (Intensive Phase)
April		*Entire State (Intensive and Extensive Phase)
May		North and South Edisto, Cooper Rivers (Intensive Phase)
June		North and South Edisto, Cooper Rivers (Intensive Phase)
July		North and South Edisto, Cooper Rivers (Intensive Phase)
August		*Entire State (Intensive and Extensive Phases)
September		North and South Edisto, Cooper Rivers (Intensive Phase)
October		*Entire State (Intensive and Extensive Phases)
November		North and South Edisto, Cooper Rivers (Intensive Phase)
December		North and South Edisto, Cooper Rivers (Intensive Phase)
1975	January	*Entire State (Intensive and Extensive Phases)

\* North and South Edisto and Cooper Rivers; South Santee River; Winyah and Bull Bays; Price, Inlet, and Nowell Creeks; Charleston Harbor; Ashley and Stono Rivers; Rock Creek; Ashepoo River; Whale Branch; Port Royal Sound; Colleton River; and Calibogue Sound.

Table 2. Locations of 17 Estuarine Survey stations, Intensive Phase, occupied monthly in the North and South Edisto and Cooper Rivers, South Carolina, from February, 1973 through January, 1975.

Estuary	Station	Latitude	Longitude	Mean Depth (m)	Tidal Range (m)		Bottom Type
					Mean	Spring	
North Edisto	E001 - Yonges Island	32° 41.2'N	80° 10.4'W	7.4	2.0	2.3	sand-shell-mud (hard)
	E002 - Toogoodoo Creek	32° 41.3'N	80° 17.3'W	3.6	1.9	2.3	sand-shell-mud
	E003 - Bears Bluff	32° 38.8'N	80° 15.7'W	7.3	1.8	2.1	sand and shell
	E004 - Dawho River	32° 37.9'N	80° 18.6'W	4.7	1.8	2.1	sand
	E005 - Steamboat Creek	32° 36.2'N	80° 17.7'W	6.7	1.7	2.0	sand
	E006 - Wadmalaw Island	32° 36.5'N	80° 14.8'W	8.0	1.8	2.1	sand
	E007 - Point of Pines	32° 35.9'N	80° 13.5'W	7.5	1.7	2.0	mud
	E008 - Deveaux Bank	32° 33.6'N	80° 10.7'W	10.2	1.8	2.1	shell and sand
South Edisto	D001 - Snuggedy Swamp	32° 39.7'N	80° 24.8'W	2.8	1.9	2.2	sand
	D002 - Sampson Island	32° 36.3'N	80° 25.4'W	10.6	1.9	2.2	mud and shell
	D003 - Fenwick Island	32° 33.7'N	80° 23.7'W	4.2	1.9	2.2	sand
	D004 - Bay Point	32° 29.7'N	80° 21.2'W	7.3	1.8	2.1	sand
Cooper River	C001 - The Tee	33° 04.0'N	79° 55.5'W	10.0	1.2	1.4	mud - hard
	C002 - Big Island	32° 58.2'N	79° 55.5'W	7.4	1.4	1.7	sand
	C003 - North Charleston	32° 53.8'N	79° 57.6'W	6.8	1.5	1.8	shell and sand
	C004 - Mouth of Cooper	32° 51.1'N	79° 56.0'W	11.1	1.6	1.9	mud-sand-shell
	J003 - Cummings Point	32° 44.9'N	79° 51.6'W	9.7	1.5	1.8	shell and mud

Table 3. Locations of 16 Estuarine Survey stations, Extensive Phase, occupied quarterly in a number of estuaries throughout the South Carolina coastal zone from February, 1973 through January, 1975.

Estuary	Station	Latitude	Longitude	Mean Depth (m)	Tidal Range (m)		Bottom Type
					Mean	Spring	
Northern Region	Y001-Winyah Bay	33° 15.6'N	79° 15.4'W	4.2	1.0	1.2	mud
	S001-South Santee River	33° 08.8'N	79° 19.2'W	3.5	1.2	1.4	sand and clay
	B003-Bull Bay	32° 55.9'N	79° 36.2'W	5.0	1.5	1.7	mud and sand
	B002-Price Creek	32° 54.2'N	79° 40.7'W	7.8	1.6	1.8	sand and shell
Charleston Region	B001-Inlet Creek	32° 47.5'N	79° 49.5'W	4.2	1.6	1.8	sand and shell
	W001-Wando River*	32° 53.1'N	79° 52.6'W	3.5	1.8	2.1	sand and mud
	J001-Charleston Harbor**	32° 45.4'N	79° 55.1'W	6.6	1.6	1.8	mud and sand
	J002-Charleston Harbort	32° 47.1'N	79° 53.2'W	2.8	1.6	1.8	mud and silt
Southern Region	K001-Ashley River	32° 48.6'N	79° 58.1'W	5.5	1.6	1.9	mud
	F001-Stono River	32° 44.9'N	80° 00.7'W	5.0	1.6	1.8	shell and sand
	H002-Ashepoo River	32° 34.0'N	80° 29.9'W	5.8	1.9	2.2	sand
	H003-St. Helena Sound††	32° 30.9'N	80° 27.9'W	4.8	1.9	2.2	mud, sand, shell
	H001-Coosaw Rivers‡	32° 32.1'N	80° 43.7'W	5.2	2.2	2.5	mud, sand, shell
	P002-Port Royal Sound	32° 16.2'N	80° 43.7'W	5.7	2.1	2.5	mud and sand
	P001-Colleton Rivers§§	32° 16.2'N	80° 48.5'W	7.5	2.3	2.7	mud, sand, clay
	G001-Calibogue Sound	32° 10.9'N	80° 47.8'W	6.7	2.2	2.5	mud, sand, shell

\*Nowell Creek, \*\*Fort Johnson, †Hog Island, ††Rock Creek, ‡Whale Branch, §§Victoria Bluff

water quality values are, to some extent, influenced by the stations selected for monitoring. Thus, the parameters analyzed are affected by the distribution of stations versus salinity, water depth, bottom type and other physical, chemical and even biological parameters. For this reason, great effort was made to select stations that would reflect the wide array of environmental conditions found in South Carolina estuaries. In those estuaries having freshwater lines, an attempt was made to locate stations at the estuary mouths, at intermediate salinities, and below and above permanent freshwater lines. Stations were located over all water depths and bottom types characteristically found in the State's rivers, bays, and sounds.

#### Hydrographic Analyses

Six-liter capacity Van Dorn water sample bottle casts were made at all stations. Samples were collected 1 m below the water surface and 0.3 m above the bottom at each station. All water samples were returned for analysis by the chemical oceanography laboratory of the Marine Resources Research Institute, except for pH, which was measured in the field after July 1974.

Determined were dissolved oxygen concentrations, salinity, pH, turbidity, nitrate, nitrite, silicate, orthophosphate, and total suspended and settleable solids. In addition, water temperatures (by stem thermometer) and secchi disc readings were taken while stations were occupied. Samples for dissolved oxygen and turbidity analyses were fixed immediately upon collection in the field, while nutrients were frozen.

Dissolved oxygen was analyzed by modified Winkler-Carpenter titration (Strickland and Parsons, 1972), salinity by Beckman RS7B Induction Salinometer, pH by Corning Model 10 pH Meter, turbidity by Hach Model 2100A turbidimeter, total suspended solids by American Public Health Association (APHA) Standard Method 224C (APHA, 1971), settleable solids by Standard Method 224F (APHA, 1971) and remaining parameters by Technicon Auto Analyzer II.

The data are divided into two groups, representing Extensive and Intensive Phases of the survey. Quarterly data for all parameters at each of the 16 extensive stations are presented in Appendix 1. These data were gathered during the two 12-month cycles from February 1973 through January, 1975. Since they were based on single samples collected seasonally, they are presented but not discussed here.

Intensive Phase data are displayed in Appendix 2. These also cover the two-year period from February 1973 through January 1975. Mean surface and bottom physical and chemical water conditions are shown in Tables 4-5. Annual ranges for these same parameters are presented in Tables 6-9.

In addition, seasonal means for the 17 Intensive stations are graphically displayed in Figures 2-52, which include the following parameters: temperature, salinity, dissolved oxygen, turbidity, total and settleable solids, nitrate, silicate, and phosphate. Figure 42 shows Cooper River stations, while North and South Edisto Stations are illustrated on each figure, i.e. figures 2-41. Figures 53 and 54 also contain graphs of surface and bottom salinities displayed side by side for South Edisto and Cooper stations for the two-year period of this report. With each of the respective estuaries plotted on a single graph, quick comparisons between stations are possible. Wherever the abbreviation ND appears in this report, samples were collected and analyzed but measurable concentrations within the accuracy of the given method of analysis were not detected. Also wherever utilized, the abbreviation S stands for surface sample and B stands for bottom sample. For purposes of this report each annual cycle is divided into four quarters as follows: winter = January, February, March; spring = April, May, June; summer = July, August, September; and fall = October, November and December.

Van Dorn bottle casts made during this study were restricted to flood stage during daylight hours in order to minimize the number of variables independently influencing the data. Additional hydrographic studies are currently being conducted during all tide stages, day and night, at some of the same stations occupied during this investigation. These 25-hour studies are structured to provide further insight into tidal and day-night effects on South Carolina estuarine hydrography.

## RESULTS AND DISCUSSION

The reader should keep several points in mind when reviewing these data. Results include data from statewide cruises during April, July, and October, 1973, January, April, July, and October, 1974, and January, 1975, and on monthly cruises (i.e. data from 17 stations) encompassing the North and South Edisto and Cooper Rivers during remaining months. Atypical weather conditions prevailed during this period, including a record snowfall in February 1973 with an unusually mild winter the next year. Also record rainfall occurred in June 1973 followed by several months of abnormally low amounts of precipitation. Consequently, these studies are being continued to gather additional data for a more representative picture.

### Salinity

As might be expected, salinity was the most predictable of the parameters measured. In the Cooper River the salt wedge along the bottom extended to Big Island (Tables 4,5). Bottom salinities decreased from about 27 ‰ at Cummings Point to freshwater at the Tee, with surface samples being progressively lower at each station.

The South Edisto River has a salinity range similar to that of the Cooper River, with surface and bottom salinities decreasing upstream and surface values lower than bottom values. However, the South Edisto exhibited

Table 4.

Annual Means for major physical and chemical water characteristics monitored monthly, surface and bottom, at 17 stations in the North and South Edisto and Cooper Rivers, South Carolina during the first of two annual cycles of study, February, 1973 through January, 1974. (Standard deviations follow means in each column.)

	Water Temperature (°C)		Salinity (‰)		Dissolved Oxygen (mg/l)		pH		Turbidity (FTU)		Secchi Disc (m)	
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
<u>North Edisto:</u>												
E001-Yonges Island	22.0 ± 6.7	21.8 ± 6.8	20.7 ± 5.4	20.9 ± 5.5	6.9 ± 1.6	6.8 ± 1.7	7.2 ± 0.7	7.0 ± 0.8	10.6 ± 7.9	17.2 ± 16.2	0.7 ± 0.3	-
E002-Toogoodoo Creek	22.6 ± 6.7	-	20.2 ± 7.9	-	6.9 ± 1.7	-	7.2 ± 0.6	-	6.9 ± 4.1	-	0.9 ± 0.3	-
E003-Bears Bluff	21.7 ± 7.1	21.6 ± 6.8	22.7 ± 4.8	23.7 ± 4.9	6.8 ± 1.8	6.9 ± 1.5	7.2 ± 0.6	7.2 ± 0.6	9.9 ± 8.3	19.4 ± 13.1	1.0 ± 0.4	-
E004-Dawho River	22.2 ± 6.8	22.9 ± 5.8	20.4 ± 5.5	22.6 ± 4.9	6.7 ± 1.6	6.2 ± 1.0	7.2 ± 0.5	7.2 ± 0.6	8.8 ± 5.5	19.7 ± 11.8	0.9 ± 0.3	-
E005-Steamboat Creek	21.7 ± 7.0	21.5 ± 6.7	23.0 ± 5.2	23.9 ± 5.4	6.8 ± 1.5	6.4 ± 1.7	7.3 ± 0.5	7.3 ± 0.7	11.8 ± 8.5	20.8 ± 17.8	0.8 ± 0.3	-
E006-Wadmalaw	21.5 ± 6.8	21.6 ± 7.1	23.9 ± 5.0	24.9 ± 4.6	6.7 ± 1.6	6.5 ± 1.7	7.3 ± 0.6	7.3 ± 0.6	6.6 ± 4.1	19.7 ± 12.3	1.0 ± 0.4	-
E007-Point of Pines	21.5 ± 6.9	21.3 ± 6.9	24.9 ± 4.9	25.7 ± 4.4	6.7 ± 1.6	6.7 ± 1.5	7.3 ± 0.6	7.3 ± 0.7	8.2 ± 9.9	14.7 ± 11.9	1.0 ± 0.4	-
E008-DeVeaux Bank	21.4 ± 7.0	21.0 ± 6.7	27.5 ± 4.3	29.9 ± 3.5	7.1 ± 1.4	7.0 ± 1.3	7.3 ± 0.8	7.2 ± 0.8	8.2 ± 4.8	15.8 ± 8.5	1.0 ± 0.3	-
<u>South Edisto:</u>												
D001-Snuggedy Swamp*	20.7 ± 6.6	-	1.1 ± 0.1	-	6.9 ± 1.6	-	7.1 ± 0.4	-	8.8 ± 9.4	-	1.0 ± 1.1	-
D002-Sampson Island	21.4 ± 6.5	20.8 ± 6.7	1.7 ± 2.2	2.5 ± 3.2	7.1 ± 1.8	7.1 ± 1.7	7.0 ± 0.4	7.0 ± 0.5	18.3 ± 18.8	39.3 ± 32.0	0.6 ± 0.2	-
D003-Fenwick Island*	20.5 ± 7.2	-	8.3 ± 7.8	-	7.1 ± 1.7	-	7.1 ± 0.5	-	15.3 ± 12.2	-	0.7 ± 0.3	-
D004-Bay Point	21.2 ± 7.1	21.3 ± 7.0	24.7 ± 8.6	25.8 ± 6.8	7.2 ± 1.5	7.2 ± 1.3	7.2 ± 0.7	7.3 ± 0.6	12.1 ± 8.2	12.9 ± 8.4	1.0 ± 0.4	-
<u>Cooper River:</u>												
C001-The Tee	20.6 ± 7.4	20.6 ± 7.3	0.1 ± 0.0	0.1 ± 0.1	8.3 ± 1.8	8.3 ± 1.9	7.2 ± 0.2	7.2 ± 0.3	10.3 ± 10.7	10.6 ± 10.8	1.1 ± 0.5	-
C002-Big Island	21.0 ± 7.4	20.9 ± 7.1	1.0 ± 1.9	2.8 ± 5.8	8.3 ± 1.7	8.1 ± 1.8	7.2 ± 0.2	7.0 ± 0.4	10.3 ± 10.3	11.7 ± 9.6	1.1 ± 0.5	-
C003-N. Charleston	21.2 ± 7.0	21.2 ± 6.8	2.9 ± 3.3	4.0 ± 4.7	7.5 ± 1.8	7.5 ± 1.5	7.0 ± 0.4	6.9 ± 0.4	13.1 ± 11.0	10.9 ± 8.9	0.9 ± 0.5	-
C004-Mouth	20.8 ± 7.0	21.7 ± 6.7	4.5 ± 3.8	15.9 ± 9.5	7.5 ± 1.9	6.5 ± 1.6	7.0 ± 0.4	6.9 ± 0.7	9.9 ± 9.5	17.5 ± 10.7	1.0 ± 0.4	-
J003-Cummings Point**	23.5 ± 6.3	23.0 ± 5.9	16.0 ± 4.7	27.8 ± 3.2	6.6 ± 1.2	6.6 ± 1.0	6.9 ± 0.5	7.0 ± 0.7	8.3 ± 9.5	22.4 ± 18.0	1.1 ± 0.3	-

\*During first annual cycle samples were taken surface only at these two stations due to shallow depths.

\*\*Monitoring of Cummings Point station initiated in May, rather than February, 1973.



Table 4 (Continued).

	Total Solids (mg/l)		Settleable Solids (mg/l)		Nitrate (µg/l)		Nitrite (µg/l)		Silicate (µg/l)		Phosphate (µg/l)	
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
<u>North Edisto:</u>												
E001-Yonges Island	37.1 ± 26.2	62.3 ± 39.8	9.8 ± 5.2	27.1 ± 26.2	19.3 ± 16.7	23.3 ± 19.9	1.9 ± 1.3	4.5 ± 8.1	768.7 ± 175.0	746.9 ± 202.7	15.1 ± 7.8	31.1 ± 28.7
E002-Toogoodoo Creek	21.5 ± 12.4	-	7.8 ± 5.4	-	28.8 ± 27.3	-	1.2 ± 1.1	-	969.5 ± 198.2	-	28.6 ± 31.5	-
E003-Bears Bluff	32.1 ± 20.1	61.8 ± 34.2	6.1 ± 4.9	23.4 ± 17.3	28.5 ± 20.5	20.6 ± 17.0	3.6 ± 4.1	2.1 ± 1.7	737.6 ± 286.2	707.9 ± 280.2	21.1 ± 23.6	19.2 ± 11.8
E004-Dawho River	26.8 ± 13.6	69.7 ± 44.6	9.5 ± 6.9	35.5 ± 30.0	43.5 ± 61.5	15.1 ± 10.8	4.5 ± 4.4	3.9 ± 5.1	830.1 ± 345.4	779.2 ± 142.8	20.7 ± 8.3	22.6 ± 9.2
E005-Steamboat Creek	32.3 ± 20.9	66.7 ± 55.4	12.0 ± 8.5	30.9 ± 38.9	18.9 ± 19.6	18.9 ± 15.1	2.7 ± 2.1	3.9 ± 5.2	773.9 ± 360.0	786.8 ± 295.0	19.0 ± 12.1	47.2 ± 52.1
E006-Wadmalaw	19.6 ± 15.7	53.5 ± 28.3	7.1 ± 5.6	24.5 ± 20.8	18.0 ± 17.7	20.3 ± 18.5	3.2 ± 3.6	3.3 ± 2.7	690.8 ± 359.5	697.8 ± 219.0	23.4 ± 17.9	23.7 ± 13.4
E007-Point of Pines	30.0 ± 28.9	43.7 ± 20.4	13.9 ± 15.8	14.1 ± 9.6	17.5 ± 13.1	77.3 ± 130.7	4.0 ± 4.9	3.9 ± 4.0	691.7 ± 150.7	678.3 ± 176.3	17.6 ± 10.2	16.7 ± 12.5
E008-DeVeaux Bank	26.2 ± 18.2	44.0 ± 26.6	9.1 ± 8.0	20.3 ± 10.1	12.2 ± 8.7	11.2 ± 7.6	2.0 ± 1.9	3.3 ± 3.3	486.7 ± 113.9	425.0 ± 137.8	20.9 ± 32.5	23.1 ± 33.2
<u>South Edisto:</u>												
D001-Snuggedy Swamp	25.3 ± 32.5	-	17.7 ± 26.9	-	74.7 ± 106.3	-	3.2 ± 3.4	-	388.1 ± 668.5	-	27.1 ± 12.2	-
D002-Sampson Island	49.5 ± 54.6	117.3 ± 112.9	26.1 ± 43.4	72.9 ± 72.6	68.1 ± 110.8	95.6 ± 147.3	4.8 ± 5.4	4.5 ± 3.8	589.2 ± 577.7	470.4 ± 416.0	24.5 ± 13.0	22.5 ± 9.6
D003-Fenwick Island	60.6 ± 65.7	-	31.3 ± 51.7	-	107.3 ± 135.4	-	4.7 ± 4.4	-	610.2 ± 387.5	-	34.0 ± 29.6	-
D004-Bay Point	43.6 ± 28.6	46.0 ± 34.4	15.0 ± 11.4	13.7 ± 15.8	50.9 ± 93.3	37.8 ± 48.2	2.1 ± 2.6	1.7 ± 1.1	477.1 ± 260.4	400.4 ± 223.0	17.7 ± 10.9	23.7 ± 18.8
<u>Cooper River:</u>												
C001-The Tee	3.8 ± 1.9	5.1 ± 2.7	1.9 ± 1.0	2.2 ± 1.8	82.0 ± 88.2	85.3 ± 87.0	3.1 ± 3.2	3.3 ± 3.2	424.7 ± 402.4	321.2 ± 290.2	10.4 ± 5.3	15.8 ± 13.3
C002-Big Island	6.2 ± 3.3	15.5 ± 24.1	2.8 ± 1.7	7.5 ± 15.9	77.9 ± 81.0	90.4 ± 78.5	1.7 ± 0.9	2.1 ± 2.7	556.3 ± 424.2	609.6 ± 699.2	21.8 ± 33.3	12.9 ± 11.9
C003-N. Charleston	10.3 ± 6.5	16.2 ± 16.9	3.3 ± 1.8	8.0 ± 10.5	81.5 ± 78.6	101.8 ± 82.3	3.2 ± 3.3	2.6 ± 2.5	475.7 ± 399.5	430.1 ± 323.8	12.7 ± 5.6	11.1 ± 7.0
C004-Mouth	10.5 ± 4.7	47.4 ± 53.8	2.2 ± 1.4	25.7 ± 32.3	76.0 ± 75.8	58.6 ± 61.3	2.9 ± 2.0	2.5 ± 1.5	655.9 ± 266.9	714.3 ± 219.3	45.2 ± 67.1	33.0 ± 32.5
J003-Cummings Point*	12.2 ± 10.0	62.3 ± 43.3	2.4 ± 3.8	32.4 ± 40.0	29.1 ± 13.2	21.8 ± 15.0	3.3 ± 3.8	3.9 ± 3.0	1130.0 ± 753.4	618.2 ± 284.6	22.7 ± 15.6	29.2 ± 13.3

\*May 1973 - January 1974

Table 5.  
Annual means for major physical and chemical water characteristics monitored monthly, surface and bottom, at 17 stations in the North and South Edisto and Cooper Rivers, South Carolina during the second of two annual cycles of study, February, 1974 through January, 1975. (Standard deviations follow means in each column.)

	Water Temperature (°C)		Salinity (‰)		Dissolved Oxygen (mg/l)		pH		Turbidity (FTU)		Disc (m)	
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
<b>North Edisto:</b>												
E001-Yonges Island	21.4±6.7	21.2±5.9	23.95±2.9	23.96±2.9	6.8±1.4	6.8±1.4	7.3±0.7	7.3±0.7	12.9±	17.8±11.0	0.8±0.3	-
E002-Toogoodoo Creek	21.4±10.5	22.5±7.7	23.44±2.9	24.60±2.5	6.7±1.4	6.5±1.4	7.3±0.5	7.3±0.5	7.6±	10.6±4.9	1.0±0.4	-
E003-Bears Bluff	21.8±5.7	21.1±6.1	25.32±2.4	25.39±2.3	6.9±1.4	7.0±1.3	7.3±0.6	7.2±0.5	15.3±	19.6±10.5	0.7±0.2	-
E004-Dawho River	21.0±6.7	20.4±6.5	22.74±6.3	23.91±5.1	7.0±1.4	7.1±1.2	7.2±0.7	7.3±0.7	9.8±	18.5±11.3	0.7±0.2	-
E005-Steamboat Creek	21.9±6.3	21.3±6.4	25.31±3.0	25.54±2.8	7.0±1.6	6.8±1.2	7.5±0.4	7.5±0.4	15.8±	23.2±11.4	0.7±0.3	-
E006-Wadmallow	21.6±6.1	20.9±6.3	26.46±2.4	27.16±2.2	7.0±1.1	6.8±1.2	7.4±0.4	7.5±0.4	11.6±	26.9±20.8	1.0±0.5	-
E007-Point of Pines	21.1±6.6	20.7±6.6	28.21±2.6	28.52±2.6	7.1±1.1	7.0±1.3	7.5±0.5	7.5±0.5	9.5±	17.4±9.3	1.0±0.4	-
E008-DeVeaux Bank	20.9±6.5	20.8±6.5	29.13±1.7	30.03±1.2	7.1±1.2	7.1±1.1	7.2±0.6	7.4±0.6	9.0±	18.0±5.7	1.0±0.3	-
<b>South Edisto:</b>												
D001-Snuggedy Swamp*	20.1±6.8	21.6±7.8	0.37±0.4	0.39±0.5	7.5±1.5	7.4±1.7	7.1±0.5	7.3±0.2	18.6±	28.1±27.5	0.6±0.2	-
D002-Sampson Island	20.5±7.0	20.1±6.7	3.31±4.1	3.73±4.4	7.6±1.2	7.7±1.4	7.2±0.6	7.0±0.7	25.4±	66.1±50.0	0.4±0.2	-
D003-Fenwick Island*	20.7±6.9	20.7±7.7	12.84±7.8	16.56±7.1	7.5±1.2	7.5±1.3	7.2±0.5	7.3±0.4	16.3±	37.3±13.2	0.5±0.1	-
D004-Bay Point	20.7±6.7	20.2±6.6	27.58±4.4	28.90±3.7	7.3±1.1	7.5±1.0	7.3±0.5	7.5±0.5	13.3±	20.3±9.8	0.8±0.6	-
<b>Cooper:</b>												
C001-The Tee	20.5±6.4	20.0±6.7	0.16±0.1	0.19±0.2	8.5±1.8	8.4±1.8	7.4±0.5	7.3±0.5	4.8±	5.6±1.6	1.6±0.4	-
C002-Big Island	20.8±6.4	20.3±6.6	0.90±1.5	1.00±1.9	8.4±1.8	8.3±1.7	7.3±0.5	7.3±0.6	5.6±	5.9±1.3	1.3±0.4	-
C003-N. Charleston	20.8±6.4	20.3±6.6	3.63±3.0	5.06±4.4	7.4±2.0	7.5±1.9	6.4±0.7	6.3±0.8	9.8±	8.2±4.8	1.2±0.4	-
C004-Mouth	20.9±6.6	20.6±6.7	5.27±2.6	10.81±2.4	7.6±1.7	7.0±1.7	7.1±0.7	7.2±0.7	7.2±	17.0±21.7	1.0±0.5	-
J003-Cummings Point	21.4±6.7	21.0±6.5	18.50±3.9	27.31±3.3	7.6±1.2	7.3±1.2	7.2±0.8	7.4±0.8	5.9±	41.2±31.5	1.1±0.3	-

\*Bottom sampling added at these two stations in June, 1974.

Table 5 (Continued).

	Total Solids (mg/l)		Settleable Solids (mg/l)		Nitrate (ug/l)		Nitrite (ug/l)		Silicate (ug/l)		Phosphate (ug/l)	
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
<u>North Edisto:</u>												
E001-Yonges Island	63.7+21.0	97.2+23.8	16.8+11.2	32.3+19.3	27.3+37.3	34.3+32.4	9.6+19.4	12.7+21.9	1070.5+370.6	1138.0+832.7	51.9+36.9	60.1+44.1
E002-Toooodoo Creek	55.9+18.5	68.6+9.7	17.8+12.8	11.6+4.7	11.4+8.0	13.5+7.2	2.5+1.6	2.5+1.1	1168.3+602.0	1385.9+961.7	45.3+21.7	61.2+11.1
IC03-Bears Bluff	79.2+33.4	83.1+31.8	23.5+18.7	24.1+21.6	27.1+24.7	19.9+12.6	9.5+16.4	3.0+2.2	1112.8+797.8	1014.4+630.7	57.6+39.3	70.0+41.8
E004-Dawho River	62.5+8.9	96.8+36.8	18.6+9.3	34.9+26.2	14.1+14.1	26.4+20.5	3.0+1.8	3.8+2.5	1091.7+713.9	1166.2+733.2	37.3+25.9	67.6+41.4
E005-Steamboat Creek	76.3+22.3	97.3+38.3	20.5+11.3	37.8+33.1	39.6+66.0	22.0+15.3	4.3+6.0	4.2+4.5	938.6+664.0	1234.3+771.9	88.2+74.5	62.9+41.5
E006-Wadmalaw	86.4+55.2	121.7+78.6	26.4+32.9	32.4+36.0	19.6+19.1	61.7+111.8	3.8+3.1	3.8+2.7	1025.0+693.3	867.3+593.1	43.6+25.3	64.7+64.2
E007-Point of Pines	56.6+17.0	94.0+30.4	14.0+12.0	29.9+16.4	19.3+15.1	18.0+13.6	4.6+6.1	5.9+6.3	676.1+323.7	657.6+387.9	40.3+32.9	55.5+44.3
E008-DeVeaux Bank	25.6+33.6	94.8+25.5	25.6+23.2	38.7+32.2	13.2+10.3	14.3+16.0	2.4+1.9	2.0+1.7	717.9+553.7	498.8+169.3	29.4+16.7	38.5+34.9
<u>South Edisto:</u>												
D001-Snuggedy Swamp*	38.1+42.9	90.3+74.0	19.4+21.9	59.9+58.3	45.2+48.7	45.1+29.6	2.5+3.2	1.7+1.6	494.1+874.2	676.6+990.5	45.6+32.6	58.0+51.4
D002-Sampson Island	47.6+29.0	188.3+231.0	14.8+14.1	139.0+201.3	38.9+54.1	53.6+51.7	2.4+2.1	4.0+2.2	539.6+248.8	578.7+359.3	52.7+36.5	62.2+62.6
D003-Fenwick Island*	54.6+16.3	121.3+53.2	16.2+10.2	51.3+34.2	22.1+13.8	23.6+21.1	2.4+1.6	5.2+4.8	1277.4+1047.1	11373.4+1181.6	60.4+55.5	78.8+39.4
D004-Bay Point	89.1+31.2	102.7+28.3	33.7+26.3	33.6+18.4	16.5+16.5	10.7+8.6	2.9+2.9	1.8+1.6	538.4+384.5	541.0+348.7	32.1+19.4	48.6+21.1
<u>Cooper River:</u>												
C001-The Tee	3.7+2.4	5.1+2.9	1.7+1.5	2.7+2.1	42.2+32.6	66.5+86.4	2.1+0.9	2.5+1.4	673.7+484.8	667.3+403.0	8.5+9.6	17.5+10.1
C002-Big Island	7.1+2.6	14.2+16.2	2.3+2.1	8.6+14.4	71.7+37.8	51.3+40.7	2.3+0.8	2.7+0.9	697.9+611.5	7341.4	12.2+10.8	12.2+9.2
C003-N. Charleston	15.4+6.5	22.7+12.0	8.0+10.1	8.5+8.4	46.1+42.9	48.0+35.6	3.9+1.7	3.6+2.2	1764.9+1112.4	1248.8+701.2	19.0+13.5	29.4+12.9
C004-Mouth	20.3+9.0	59.1+57.9	4.0+2.2	24.5+34.9	57.5+66.1	38.9+40.2	3.8+3.2	4.2+3.4	1587.3+1040.3	1531.5+789.8	23.4+10.4	27.8+15.2
J003-Cummings Point	38.8+21.4	201.5+143.2	8.3+8.4	96.9+97.2	28.9+19.6	10.2+5.1	4.5+3.2	4.3+2.1	1204.8+827.6	566.1+273.5	36.4+37.6	91.5+65.3

\*Bottom sampling added at these two stations in June, 1974.

Table 6  
Annual ranges (lows and highs) for major physical and chemical characteristics of surface waters monitored monthly at 17 stations in the North and South Edisto and Cooper Rivers, South Carolina during the first of two annual cycles of study, February, 1973 through January, 1974.

	Water Temperature (°C)		Salinity (‰)		Dissolved Oxygen (mg/l)		pH		Turbidity (FTU)		Secchi Disc (m)		Total Solids (mg/l)		Settleable Solids (mg/l)		Nitrate (µg/l)		Nitrite (µg/l)		Silicate (µg/l)		Phosphate (µg/l)	
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
<u>North Edisto:</u>																								
E001-Yonges Island	11.2	30.1	13.9	28.3	5.1	10.7	6.1	7.8	3.2	28.0	0.3	1.1	7.2	73.4	3.2	18.6	4.5	45.7	0.7	4.0	400.4	1053.8	0.6	25.2
E002-Toogoodoo Creek	11.6	30.4	11.9	28.4	4.8	11.2	5.7	7.8	3.3	16.0	0.5	1.6	6.0	41.0	1.6	15.6	1.0	67.6	0.0	2.7	590.1	1222.4	4.8	125.3
E003-Bears Bluff	9.0	29.9	16.2	29.1	4.4	10.7	6.2	7.8	2.2	33.5	0.3	1.3	3.6	66.8	0.8	12.4	1.6	52.9	0.5	11.3	274.0	1271.5	1.8	92.9
E004-Dawho River	9.4	30.5	12.6	27.1	4.5	10.6	6.4	7.9	4.8	24.0	0.4	1.4	7.4	37.0	1.2	20.2	1.8	157.4	0.8	11.9	147.5	1299.6	7.2	33.6
E005-Steamboat Creek	9.2	30.0	15.0	30.7	4.9	10.4	6.4	8.0	4.7	34.0	0.2	1.3	8.4	76.0	2.0	29.6	2.0	59.6	0.8	7.6	0.0	1405.0	0.0	42.0
E006-Wadmalaw	8.8	29.8	15.5	30.0	4.7	10.4	6.4	8.0	3.2	17.0	0.4	1.5	4.8	51.2	1.2	17.2	4.6	59.6	0.6	11.6	477.7	976.5	8.0	74.4
E007-Point of Pines	8.3	29.6	17.2	31.2	5.1	10.3	6.3	8.1	2.6	39.0	0.5	1.5	4.0	92.0	8.0	43.6	4.9	39.7	0.7	17.1	477.7	976.5	0.0	39.6
E008-Deveaux Bank	9.2	30.2	20.4	32.5	5.3	10.4	6.1	8.1	3.7	19.0	0.3	1.5	9.8	67.8	1.2	26.0	2.2	29.3	0.7	6.4	330.2	702.5	0.0	120.8
<u>South Edisto:</u>																								
D001-Snuggedy Swamp*	7.2	28.3	0.0	0.3	4.9	10.3	6.4	7.6	2.7	37.0	0.2	1.1	2.4	104.0	0.0	73.2	12.6	399.4	0.0	9.2	10.5	2451.7	7.2	50.4
D002-Sampson Island	7.6	29.0	0.0	7.2	4.8	10.6	6.2	7.3	4.4	67.0	0.2	0.8	5.2	192.0	2.8	143.2	4.4	386.9	0.2	17.5	28.1	1517.4	7.2	44.4
D003-Fenwick Island*	6.6	29.5	0.1	24.2	4.5	10.8	6.5	8.0	2.0	42.0	0.1	1.2	17.6	231.2	1.0	166.0	13.3	368.8	0.0	12.9	35.1	1138.1	6.0	120.0
D004-Bay Point	8.1	29.0	9.3	34.1	5.1	10.6	5.9	8.0	1.8	31.0	0.2	2.0	8.4	78.8	1.0	32.4	1.0	240.2	0.1	7.0	28.1	913.3	4.8	36.6
<u>Cooper:</u>																								
C001-The Tee	8.7	29.0	0.0	0.2	5.8	11.2	6.9	7.5	1.8	32.0	0.4	2.0	2.0	8.2	0.2	3.2	8.1	245.9	0.0	11.1	35.1	1376.9	3.6	18.0
C002-Big Island	8.8	29.4	0.1	5.3	5.7	11.0	6.9	7.4	2.1	31.0	0.4	2.0	1.2	11.0	0.8	6.0	6.3	236.0	0.1	2.9	112.4	1299.6	2.4	120.0
C003-N. Charleston	10.2	29.4	0.1	9.8	5.1	10.4	6.2	7.7	2.6	34.0	0.4	2.2	2.6	23.2	0.2	5.0	4.1	198.2	0.1	12.9	140.5	1391.0	3.0	22.8
C004-Mouth	10.6	29.2	0.7	13.5	4.4	10.6	6.5	7.7	1.3	28.0	0.4	1.8	4.4	21.6	0.4	4.0	8.8	198.0	0.4	7.3	295.1	1131.0	0.0	202.8
J003-Cummings Point**12.3	29.8	29.8	9.4	22.8	5.2	9.0	6.2	7.5	1.9	33.0	0.7	1.8	0.6	24.0	0.2	6.8	6.0	42.6	0.4	10.5	288.0	2725.7	6.0	48.0

\*During first annual cycle samples were taken surface only at these two stations due to shallow depths.

\*\*Monitoring of Cummings Point station initiated in May, rather than February, 1973.

Table 7

Annual ranges (lows and highs) for major physical and chemical characteristics of bottom waters monitored monthly at 17 stations in the North and South Edisto and Cooper Rivers, South Carolina during the first of two annual cycles of study, February, 1973 through January, 1974.

	Water Temperature (°C)		Salinity (‰)		Dissolved Oxygen (mg/l)		pH		Turbidity (FTU)		Secchi Disc (m)		Total Solids (mg/l)		Settleable Solids (mg/l)		Nitrate (µg/l)		Nitrite (µg/l)		Silicate (µg/l)		Phosphate (µg/l)	
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
<u>North Edisto:</u>																								
E001-Yonges Island	10.4	30.1	14.0	28.7	4.3	10.6	5.9	7.9	3.9	47.5			10.4	124.0	0.4	76.8	2.6	58.8	0.2	21.0	562.0	1271.5	1.5	94.8
E002-Toogoodoo Creek	9.4	29.8	16.4	30.8	4.8	10.2	6.3	8.0	1.6	45.0			27.2	111.0	1.8	54.0	2.2	46.4	0.0	5.0	330.2	1271.5	1.2	43.8
E003-Bears Bluff	14.2	30.1	14.2	28.2	4.9	7.8	6.2	7.8	5.5	43.0			24.0	144.4	4.6	85.2	2.9	25.9	0.7	13.0	505.8	990.5	7.8	40.2
E004-Dawho River	9.4	29.9	15.6	31.3	4.5	10.4	5.7	8.1	2.0	65.0			9.8	194.8	3.0	130.2	4.8	51.7	0.6	11.6	400.4	1405.0	1.0	143.4
E005-Steamboat Creek	9.2	29.9	17.7	30.4	4.3	10.3	6.5	8.0	2.6	47.0			20.6	103.8	2.6	68.8	4.5	50.3	0.8	9.5	428.5	1306.7	0.4	45.0
E006-Wadmalaw	8.1	29.5	17.9	31.2	5.1	10.4	6.0	8.1	2.6	45.5			10.6	79.4	0.2	23.6	10.8	342.6	0.8	9.2	484.7	1138.1	0.4	49.8
E007-Point of Pines	8.7	29.1	22.1	34.4	5.4	10.2	6.0	8.0	7.3	35.0			11.0	82.0	3.4	37.6	1.7	26.7	1.0	9.8	189.7	653.3	6.0	125.7
E008-Deveaux Bank																								
<u>South Edisto:</u>																								
D001-Snuggedy Swamp	7.2	29.0	0.1	10.8	4.5	10.6	6.2	7.8	4.2	84.0			4.6	275.6	1.4	184.4	14.0	409.2	0.0	11.6	42.2	1208.3	7.8	34.8
D002-Sampson Island																								
D003-Fenwick Island																								
D004-Bay Point	8.6	29.0	14.2	34.0	5.7	10.4	6.3	8.0	2.1	32.0			1.8	104.2	1.0	54.6	2.1	131.5	0.4	3.2	49.2	730.6	7.2	61.8
<u>Cooper:</u>																								
C001-The Tee	8.7	28.8	0.0	0.3	5.8	11.2	6.8	7.6	2.4	32.0			0.4	9.2	0.2	6.0	4.6	239.1	0.1	10.8	35.1	976.5	0.0	39.0
C002-Big Island	9.1	29.3	0.0	9.5	6.1	11.6	6.0	7.5	2.3	31.0			0.8	88.4	0.4	55.2	4.8	225.1	0.8	10.7	63.2	2281.5	2.4	44.4
C003-N. Charleston	11.2	29.1	0.1	13.7	5.8	10.2	6.0	7.5	1.2	28.5			3.6	53.6	1.2	32.0	4.3	199.6	0.0	8.5	154.6	1046.7	1.2	21.6
C004-Mouth	11.6	29.2	2.0	26.2	4.3	9.1	5.7	7.9	2.1	33.0			14.0	144.4	2.2	104.8	3.1	168.7	0.3	5.0	386.4	1117.0	4.8	111.0
J003-Cummings Point*	12.4	29.4	21.4	31.5	5.2	8.0	6.2	8.0	1.3	54.0			2.4	139.6	1.4	115.2	3.2	41.3	1.7	9.1	372.3	843.0	7.8	48.0

\*Monitoring of Cummings Point station initiated in May, rather than February, 1973.

Table 8  
Annual ranges (lows and highs) for major physical and chemical characteristics of surface waters monitored monthly at 17 stations in the North and South Edisto and Cooper Rivers, South Carolina during the second of two annual cycles of study, February, 1974 through January, 1975.

	Water Temperature (°C)		Salinity (°/oo)		Dissolved Oxygen (mg/l)		pH		Turbidity (FTU)		Secchi Disc (m)		Total Solids (mg/l)		Settleable Solids (mg/l)		Nitrate (µg/l)		Nitrite (µg/l)		Silicate (µg/l)		Phosphate (µg/l)	
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
<b>North Edisto:</b>																								
E001-Yonges Island	9.4	29.5	17.8	27.8	5.1	9.1	5.8	8.0	4.9	31.0	0.4	1.3	24.4	93.2	0.4	31.2	0.0	116.5	0.0	57.4	569.0	2597.8	7.2	120.0
E002-Toogoodoo Creek	9.5	29.7	17.6	27.9	5.2	8.9	6.6	7.9	3.0	15.0	0.5	1.5	22.0	84.4	2.4	42.4	0.7	19.7	0.7	4.8	744.7	2838.1	20.4	82.0
E003-Bears Bluff	13.0	28.8	21.6	28.9	4.5	8.8	6.2	7.9	6.0	34.0	0.4	1.2	42.8	154.0	7.6	60.8	7.3	70.4	1.1	46.5	456.7	3224.5	13.2	120.0
E004-Dawho River	9.8	28.6	9.4	28.3	5.0	9.0	5.9	8.0	6.0	16.0	0.4	1.0	52.4	79.2	4.0	30.8	3.2	44.3	0.3	6.1	295.1	2908.4	6.6	77.0
E005-Steamboat Creek	10.5	29.2	19.4	29.1	5.2	10.8	6.7	8.1	5.0	32.0	0.3	1.1	41.6	101.2	2.0	38.0	0.4	211.5	0.0	20.7	407.5	2662.5	19.8	252.0
E006-Wadmalaw	10.4	28.2	22.2	30.5	5.4	8.9	6.6	8.0	3.3	50.0	0.4	2.4	28.8	209.2	4.4	96.8	5.3	60.3	0.3	7.6	639.3	3076.9	12.0	75.0
E007-Point of Pines	10.2	29.3	22.2	31.1	5.6	8.8	6.4	7.9	6.0	16.0	0.4	1.6	28.0	81.2	0.8	33.6	6.7	43.1	0.0	19.9	407.4	1398.1	7.8	103.8
E008-DeVeaux Bank	10.8	29.2	25.1	30.9	5.3	9.1	6.2	7.9	4.9	18.0	0.4	1.6	34.4	126.4	0.0	61.2	3.5	34.3	0.7	5.6	323.2	2311.2	6.0	60.0
<b>South Edisto:</b>																								
D001-Snuggedy Swamp	8.6	28.5	0.1	1.5	5.7	10.5	6.1	7.5	5.5	64.0	0.2	1.0	5.2	152.4	0.4	75.6	1.4	171.4	0.0	6.2	70.3	3231.5	10.8	98.0
D002-Sampson Island	9.2	29.0	0.1	14.1	5.4	9.4	6.2	7.9	11.0	48.0	0.2	0.6	5.2	98.4	0.0	44.8	2.9	191.9	0.1	7.6	161.6	927.3	19.2	120.0
D003-Fenwick Island	9.3	29.1	0.7	30.2	5.8	9.6	6.2	7.9	7.1	26.0	0.3	0.7	27.2	77.2	4.4	38.8	6.4	42.5	0.6	5.4	337.2	3751.3	13.8	172.0
D004-Bay Point	9.5	29.6	19.5	33.5	5.8	9.1	6.6	8.1	3.0	27.0	0.4	2.6	32.0	141.6	3.2	84.0	5.8	52.6	0.0	7.9	84.3	1405.0	10.0	68.0
<b>Cooper:</b>																								
C001-The Tee	11.1	28.8	0.0	0.4	6.1	11.6	6.5	8.0	2.9	8.9	0.7	2.2	0.0	6.8	0.0	4.4	2.6	125.0	0.6	3.4	112.4	1440.0	0.0	30.0
C002-Big Island	12.0	28.6	0.1	4.6	6.2	10.9	6.8	8.1	3.4	8.8	0.9	1.8	2.8	12.0	0.0	5.0	14.8	264.0	1.2	3.7	49.2	2230.0	0.0	33.6
C003-N. Charleston	12.1	28.4	0.2	10.4	4.2	10.2	6.0	8.1	3.2	46.0	0.4	1.7	8.0	25.6	0.0	30.8	9.6	163.4	1.7	7.6	309.1	3533.6	0.0	39.0
C004-Mouth	11.6	28.8	2.5	13.5	6.0	10.4	6.1	8.1	4.7	14.0	0.6	1.4	12.8	40.8	1.2	7.6	8.2	222.5	0.0	10.5	224.8	3891.7	10.5	40.0
J003-Cummings Point	11.8	29.2	12.7	26.0	6.4	9.4	6.0	7.9	3.0	11.0	0.5	1.5	0.0	72.0	0.0	20.8	3.7	71.7	2.8	11.7	590.1	3442.3	0.0	135.0

Table 9  
Annual ranges (lows and highs) for major physical and chemical characteristics of bottom waters monitored monthly at 17 stations in the North and South Edisto and Cooper Rivers, South Carolina, during the second of two annual cycles of study, February, 1974 through January, 1975.

	Water Temperature (°C)		Salinity (‰)		Dissolved Oxygen (mg/l)		pH		Turbidity (FTU)		Secchi Disc	Total Solids (mg/l)		Settleable Solids (mg/l)		Nitrate (µg/l)		Nitrite (µg/l)		Silicate (µg/l)		Phosphate (µg/l)	
	Low	High	Low	High	Low	High	Low	High	Low	High		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
<b>North Edisto:</b>																							
E001-Yonges Island	9.4	28.7	17.9	27.9	4.7	9.1	6.0	7.9	3.9	38.0		59.2	135.2	16.0	72.8	14.7	99.1	2.0	57.4	660.4	2725.7	4.8	129.0
E002-Toogoodoo Creek	9.5	29.7	20.2	28.0	5.2	8.7	6.6	7.8	4.5	18.0		57.6	79.2	7.2	18.0	2.2	21.9	1.4	4.0	442.6	3470.4	49.2	73.0
E003-Bears Bluff	11.0	28.9	21.6	28.8	5.4	9.0	6.3	7.9	6.0	40.0		35.6	133.6	1.2	58.0	10.7	47.7	0.4	6.2	498.8	2627.4	22.2	135.0
E004-Dawho River	9.4	28.3	13.1	28.9	5.4	8.9	5.9	8.0	7.0	40.0		43.2	154.4	5.8	93.2	6.0	65.3	0.8	8.2	435.6	3154.2	25.0	137.0
E005-Steamboat Creek	10.3	29.4	20.2	29.4	5.4	8.6	6.7	8.1	5.0	42.0		34.8	148.4	0.0	109.6	2.5	50.0	1.1	15.1	660.4	3224.5	18.0	125.0
E006-Wadmalaw	9.4	28.4	22.5	30.4	5.3	8.6	6.7	8.1	9.0	86.0		71.2	347.2	0.0	112.0	5.1	335.5	1.0	9.6	323.2	2550.1	7.2	163.0
E007-Point of Pines	10.0	29.5	23.0	32.1	4.6	8.7	6.5	8.1	10.0	42.0		32.0	150.4	2.8	55.2	5.1	45.4	1.7	19.6	140.5	1398.1	7.2	135.0
E008-DeVeaux Bank	9.4	28.8	27.0	31.6	5.7	9.2	6.3	8.0	10.5	27.0		69.2	138.0	13.6	104.0	2.6	49.7	0.0	4.0	238.9	807.9	12.6	105.0
<b>South Edisto:</b>																							
D001-Snuggedy Swamp	8.3	28.7	0.0	1.4	5.6	10.4	7.0	7.4	6.0	85.0		16.4	220.0	14.8	172.4	9.8	84.7	0.0	4.2	126.5	2669.5	0.0	107.0
D002-Sampson Island	9.0	29.1	0.1	14.9	5.6	10.3	5.8	7.9	12.0	150.0		30.4	796.0	1.6	685.8	5.0	187.2	0.3	6.7	168.6	1180.2	16.8	160.0
D003-Fenwick Island	9.5	28.6	5.5	30.4	6.0	9.5	6.7	7.8	20.0	59.0		59.2	198.0	16.4	112.8	2.3	54.6	1.2	14.0	140.5	3364.9	32.4	125.0
D004-Bay Point	8.8	29.3	21.2	33.5	6.2	9.3	6.9	8.1	3.0	32.0		64.0	146.0	6.0	60.0	0.7	26.3	0.0	5.6	133.5	1405.0	13.2	147.0
<b>Cooper:</b>																							
C001-The Tee	11.4	28.7	0.0	0.5	5.9	11.0	6.6	8.0	3.6	9.5		0.0	9.2	0.0	5.6	14.1	309.9	0.9	6.2	189.7	1398.0	4.2	31.8
C002-Big Island	11.6	28.7	0.1	5.4	6.1	10.9	6.5	8.1	4.3	9.5		4.0	56.8	0.4	46.4	23.6	164.2	1.2	3.7	49.2	1071.0	0.0	25.0
C003-N. Charleston	11.8	28.6	0.2	13.7	5.4	10.2	5.8	7.9	4.0	21.0		8.4	43.2	1.2	24.8	16.6	114.9	0.6	7.3	323.2	2732.6	11.4	50.0
C004-Mouth	12.2	28.9	3.9	16.1	4.5	9.5	6.1	8.0	6.1	85.0		19.2	220.0	0.4	121.6	8.1	156.4	0.5	12.1	569.1	3020.8	2.4	53.4
J003-Cummings Point	12.2	29.0	19.4	32.8	5.3	9.0	6.1	8.1	3.2	99.0		86.8	490.4	0.4	297.6	4.4	20.0	2.3	8.2	210.8	1138.1	25.2	185.0

smaller differences in surface and bottom salinities than did the Cooper (Tables 4,5).

Several explanations are possible for the salinity differences between the South Edisto and Cooper Rivers. An obvious one is that there is simply more runoff from the Santee-Cooper system than from the Edisto, i.e. about 15,000 cfs for the Cooper River (Nelson, 1974) vs. 2,680 cfs for the Edisto River (U. S. Geological Survey, 1974). Another is that tidal action and velocity are sufficiently strong in the Edisto River to produce more vertical mixing than in the Cooper River. A third explanation concerns the shape and size of the respective river mouths. The mouth of the Edisto River is wide and shallow in comparison to the mouth of Charleston Harbor or Cooper River, and the sides taper rather quickly to a comparatively narrow riverbed (moving upstream from the mouth). Hence, vertical mixing would be greater in the South Edisto River (Pritchard, 1954). In actual fact some combination of these explanations is probably the real reason for the observed salinity differences.

Of the three estuaries considered, the North Edisto had the smallest mean salinity variation with distance from the mouth (see Tables 4,5). The difference in surface and bottom values at each station was on the order of 1-2 ‰ with the surface lower in each case. In addition, both surface and bottom salinities were much higher than in either the South Edisto or the Cooper Rivers.

A comparison of the salinity data obtained in the present study with values from other areas points out distinct differences in estuarine salinity structures. Work done in rivers contiguous to the Chesapeake Bay has shown far less compression of isohalines than in either the South Edisto River or Charleston Harbor. For example, Brehmer (1970) reported salinity ranges for the York River (average discharge about 2,200 cfs) of approximately 15-27 ‰ at river mile 5 to fresh water at river mile 35 - 48 for 1968-1969. The South Edisto River ranged from average salinities of about 8-16 ‰ at D003, river mile 5, to fresh at D001, river-mile 19 (Tables 4,5).

As suggested above, runoff alone may not account for the different salinity structures in the York and South Edisto Rivers. Unless several estuaries with similar drainage basins and average discharges can be statistically compared, any explanation for differing salinity structures will be largely speculative, especially since each estuary is in essence unique.

#### Dissolved Oxygen

Dissolved oxygen concentrations did not vary significantly between 1973 and 1974 with respect to station, estuary, or depth, i.e. surface vs. bottom (Tables 4, 5). Graphs of dissolved oxygen illustrate

that mean oxygen concentrations ( $\pm 1$  standard deviation) overlap distinctly (Figure 55), thereby obviating any comparisons between stations or estuaries.

A comparison of data from this study with information from elsewhere, however, indicates that oxygen concentrations, though highly variable, seldom fall below 4-5 mg/l in an estuary. The lowest concentration measured in the Edisto or Cooper Rivers was 4.3 mg/l (Table 6). The only oxygen concentrations <4.0 mg/l were recorded at Extensive Phase stations (see Appendix 1, p. 91, 99, 101, 102. Similar results were reported by Brehmer (1970), Johnson (1970), Ballentine (1972), and Skidaway (1973 a,b).

Using per cent oxygen saturation values derived from a table of oxygen solubility (APHA, 1971) and mean oxygen, salinity, and temperature data (Tables 4,5), it is possible to compare the three estuaries with respect to variations in dissolved oxygen. In general, oxygen saturation seemed to vary with salinity, while not necessarily varying inversely with temperature (Figures 56-58). Both the North and South Edisto Rivers exhibited these characteristics (Figures 56,57), whereas the Cooper River had oxygen saturation varying inversely with temperature at stations C001 and C002 and directly with salinity at J003 (Figure 58). It should also be noted that stations C003 and C004 were undersaturated in comparison to C001 and C002.

Since the concentration of dissolved oxygen normally varies inversely with temperature and salinity, other factors must account for the observed variations in oxygen concentration and percent saturation. These would include primary productivity, respiration, turbulent mixing, and runoff from industrial sites, cities, and swamps. Runoff from the heavily industrialized North Charleston area might in fact be the reason for relative undersaturation at Cooper River stations C003 and C004.

#### Turbidity and Solids

Turbidity, like dissolved oxygen, was statistically the same at any point in the three rivers examined in this study (Figure 59). No obvious trends or patterns were evident due to the statistical overlap of the data. In terms of sample variation or standard deviation, two stations were noticeable, Cooper River station J003 and South Edisto River station D002. Both of these stations were highly variable compared to others (see Figure 59 and Tables 4-9).

Settleable and total solids were also quite variable, but not statistically different from station to station (Figures 60, 61). As for solids, the most predominant characteristic of these data is perhaps the size of the standard deviation for stations J003 and D002 (Figures 60,61). Tables 4-9 also illustrate the extremely wide range of solid values encountered.



## Nutrients

Of all the parameters measured, nutrients are usually the most variable and least predictable in keeping with their complex biogeochemical cycles. With our data, however, it appeared that the nutrients were not as variable as solids, cf. Figures 60, 61, 62, 63, 64. As in the case for oxygen, turbidity, and solids, the nutrient data were essentially the same from year to year at all stations (Figures 62-64). No station was particularly variable compared to others, although large standard deviations and wide-ranging values were encountered.

Nutrient data from other areas also had wide ranges. Turner and Hopkins (1974) reported nutrient concentrations in the Tampa Bay area ranging from 10.5-952.4  $\mu\text{g/l}$  for silicate (an annual mean of 562.0  $\mu\text{g/l}$ ), 1.1-644.9  $\mu\text{g/l}$  for nitrate (an annual mean of 32.4  $\mu\text{g/l}$ ), and 103.5-2562.6  $\mu\text{g/l}$  for phosphate (an annual mean of 876  $\mu\text{g/l}$ ). Thayer (1971), however, reported much lower values for North Carolina estuarine waters with nitrate being 0-37.1  $\mu\text{g/l}$  and phosphate 0-43.8  $\mu\text{g/l}$ .

Nutrient concentrations from this report (Tables 4-9) ranged from 0-3892  $\mu\text{g/l}$  for silicate, 0-409.2  $\mu\text{g/l}$  for nitrate, and 0-252.0  $\mu\text{g/l}$  for phosphate. When these data are compared to the above and other values (Williams, 1972, Flemer et al., 1975, and Ho and Barrett, 1975), it is evident that there are tremendous differences in nutrient concentrations with respect to geographical location. These differences may be real, i.e., caused by differing amounts of runoff, mineral deposits, and biological activity, or apparent, i.e. the result of sample decomposition or contamination. Based on quality control experiments conducted as part of this study, it was found that nutrient concentrations could vary significantly with time even though frozen. Consistent sample collection, preservation, and analytical techniques were found to reduce this error to an acceptable level. Since most laboratories are aware of these problems and have the technical expertise necessary to reduce analytical errors, it can be concluded that the nutrient variations reported above are real and indicative of the complexity of estuarine nutrient cycles.

## SUMMARY AND CONCLUSIONS

The hydrography of the Cooper and North and South Edisto Rivers for two annual cycles (February 1973 to January 1975) has been presented in this report. Variations and trends of major physical and chemical parameters were discussed in comparison with data from other locations.

Three major conclusions were drawn:

1. The isohalines of the Cooper and

South Edisto Rivers are relatively compressed in comparison to some other southeastern estuaries,

2. Dissolved oxygen concentrations seldom fall below 4 mg/l for typical southeastern estuaries, and

3. The extremely variable nature of most parameters measured illustrates the complexity of the many physical, chemical, and biological cycles occurring in estuaries.

## ACKNOWLEDGEMENTS

The publication of this report would not have been possible without the help of many persons. Water samples and data for physical parameters were collected under the day-to-day supervision of Field Party Chiefs John V. Miglarese and C. R. Richter. Drs. Edwin B. Joseph, Victor G. Burrell, Jr., Paul A. Sandifer, and Frank W. Stapor, Jr. and other members of the editorial board are thanked for their careful reviews of the manuscript. Special thanks are extended to Evelyn Myatt for art work, to Virginia Young and Kathy Austin for sample analyses, and to Mary Anne Carson, Mary Alice Schramm, and Louise Hodges for manuscript typing. Miss A. Nickie Kopacka and Dr. Pete Eldridge are especially thanked for computer processing of data. Dr. Dale Calder, B. B. Boothe, Craig Reeves, Sally Lumpkin, Emily Jenkins, Cindy Floyd, Anne Leonard, Magdalene Maclin, Karen Turner, Dan Lesesne, Bruce Stender, Charles Farmer, Charles Boardman, A. S. Lachicotte, John LaRoche, Lindsay Oswald, Vincent Taylor, James Yarnell, and Ed Burch assisted in various ways. Grants from the Coastal Plains Regional Commission, Contract Number 10340031, made much of this research possible.

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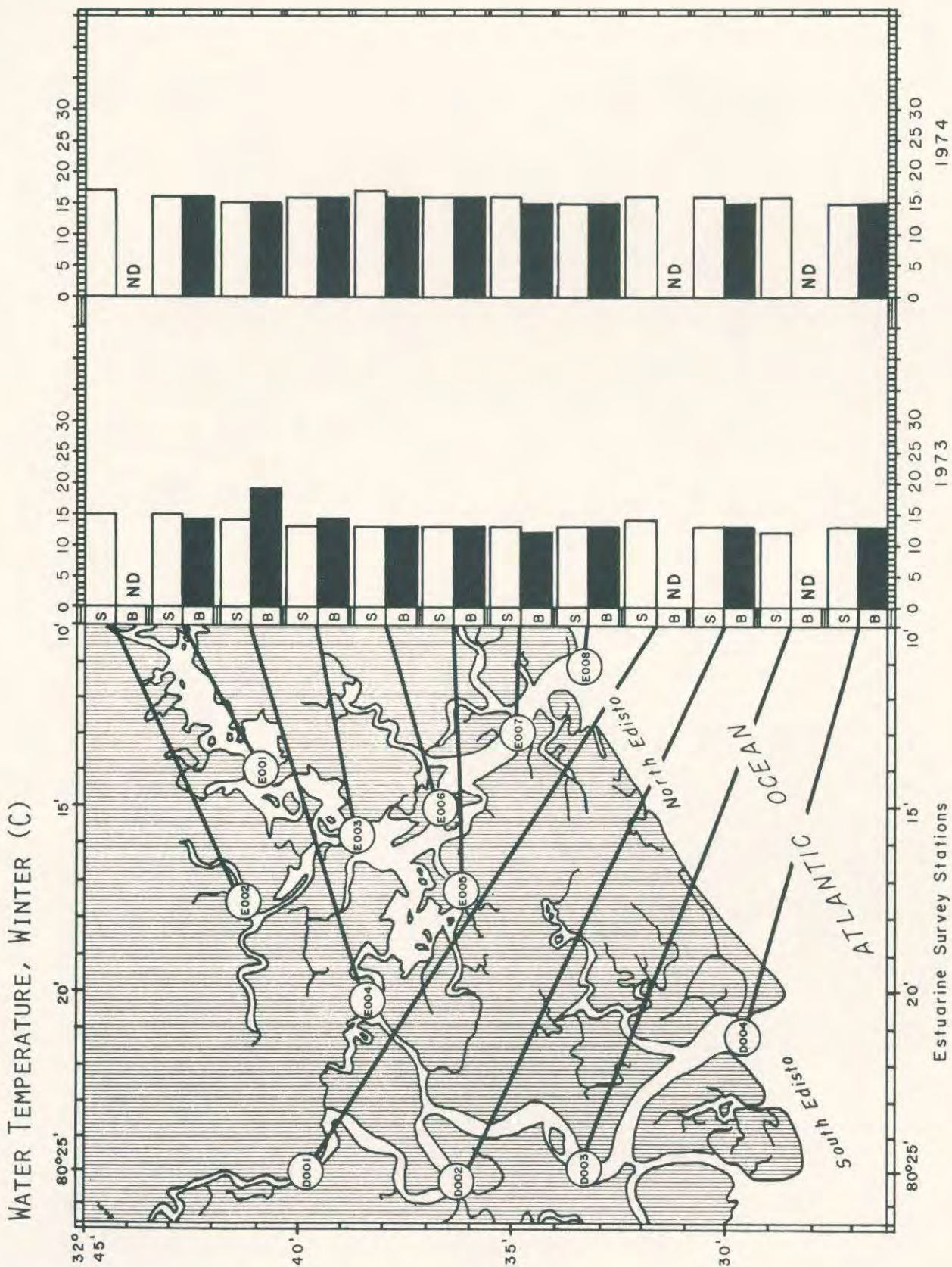


Figure 2. Surface and bottom winter (seasonal mean, three months combined) water temperatures at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

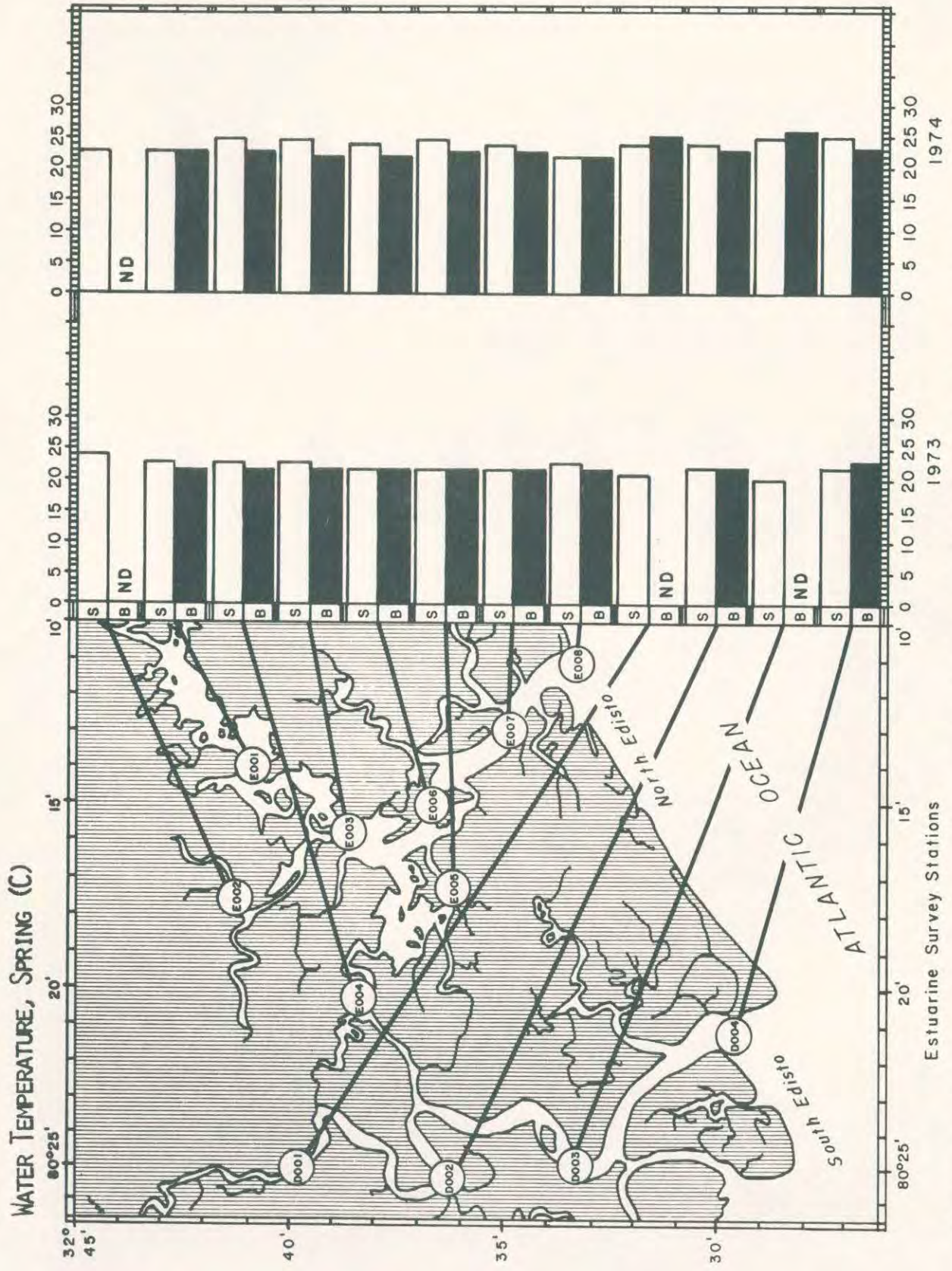


Figure 3. Surface and bottom spring (seasonal mean, three months combined) water temperatures at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

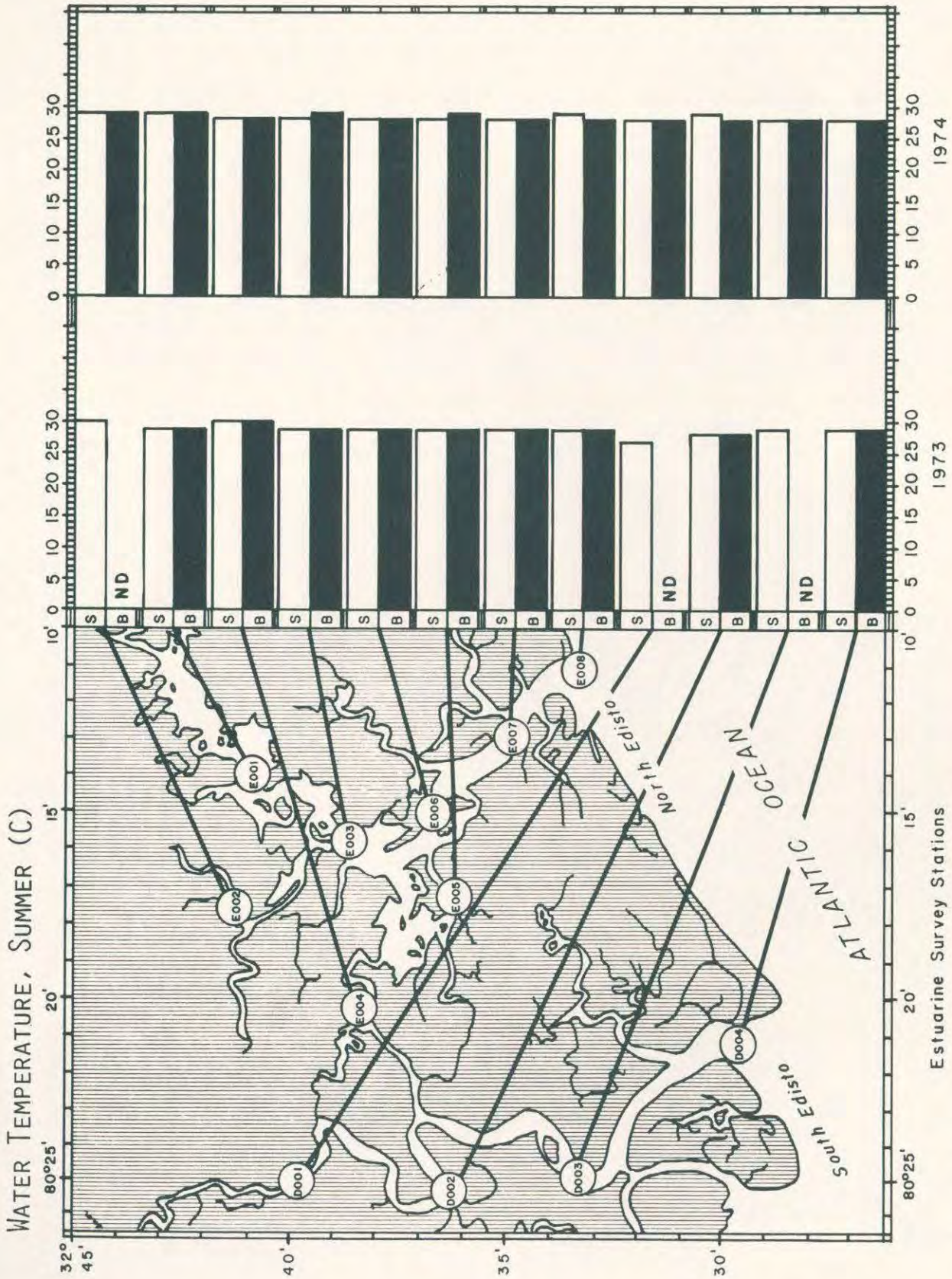


Figure 4. Surface and bottom summer (seasonal mean, three months combined) water temperatures at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

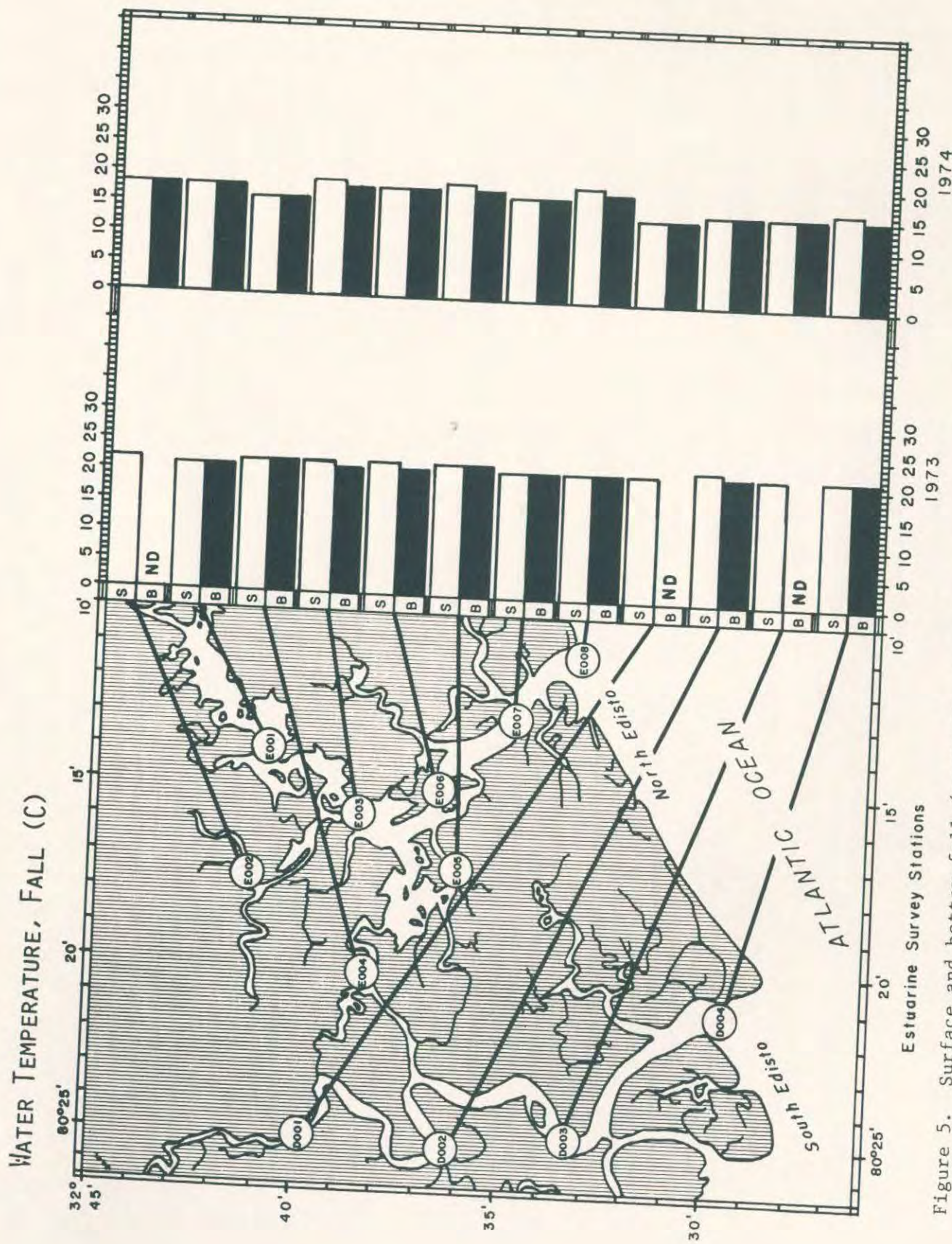


Figure 5. Surface and bottom fall (seasonal mean, three months combined) water temperatures at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

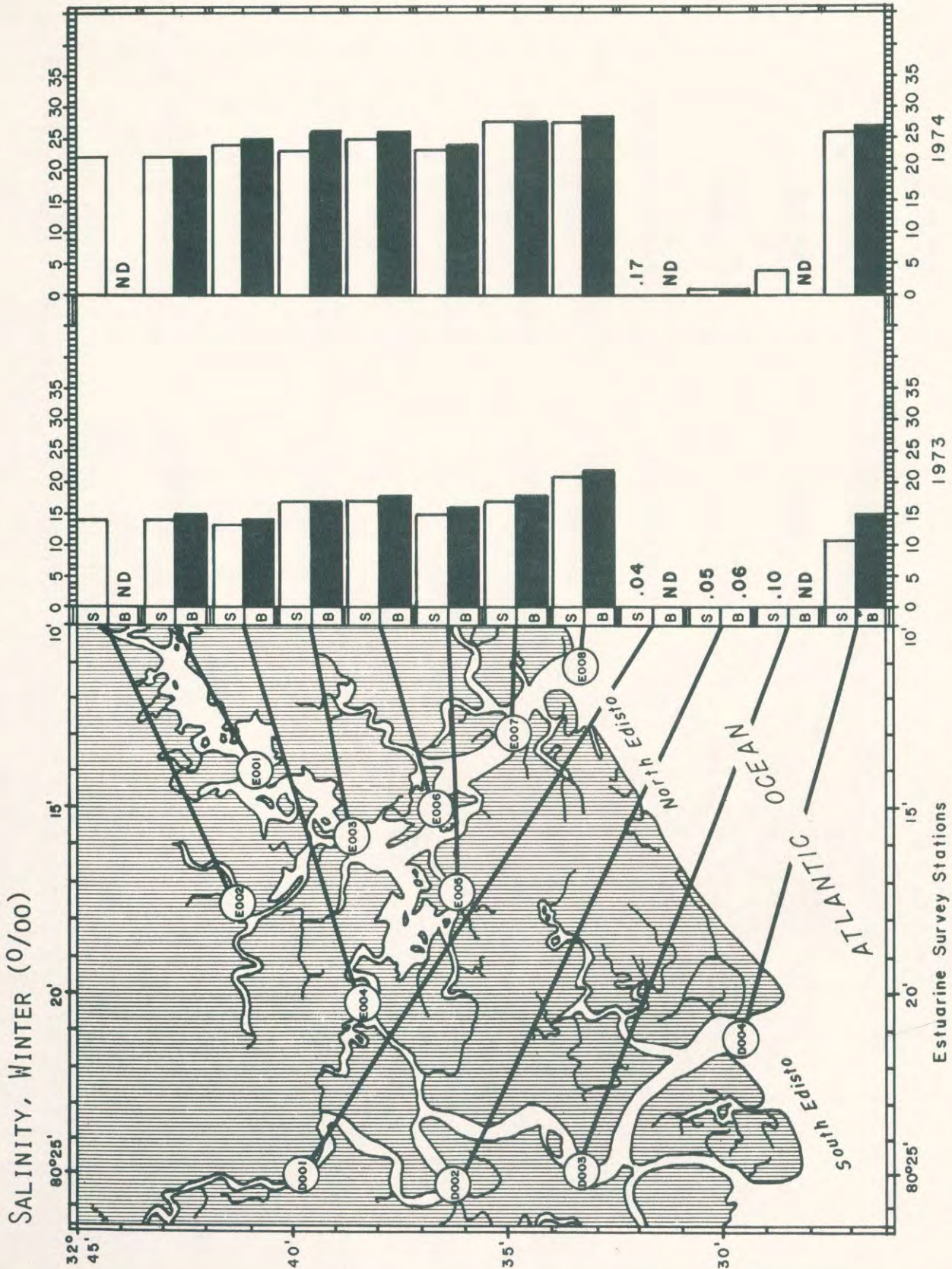


Figure 6. Surface and bottom winter (seasonal mean, three months combined) salinities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

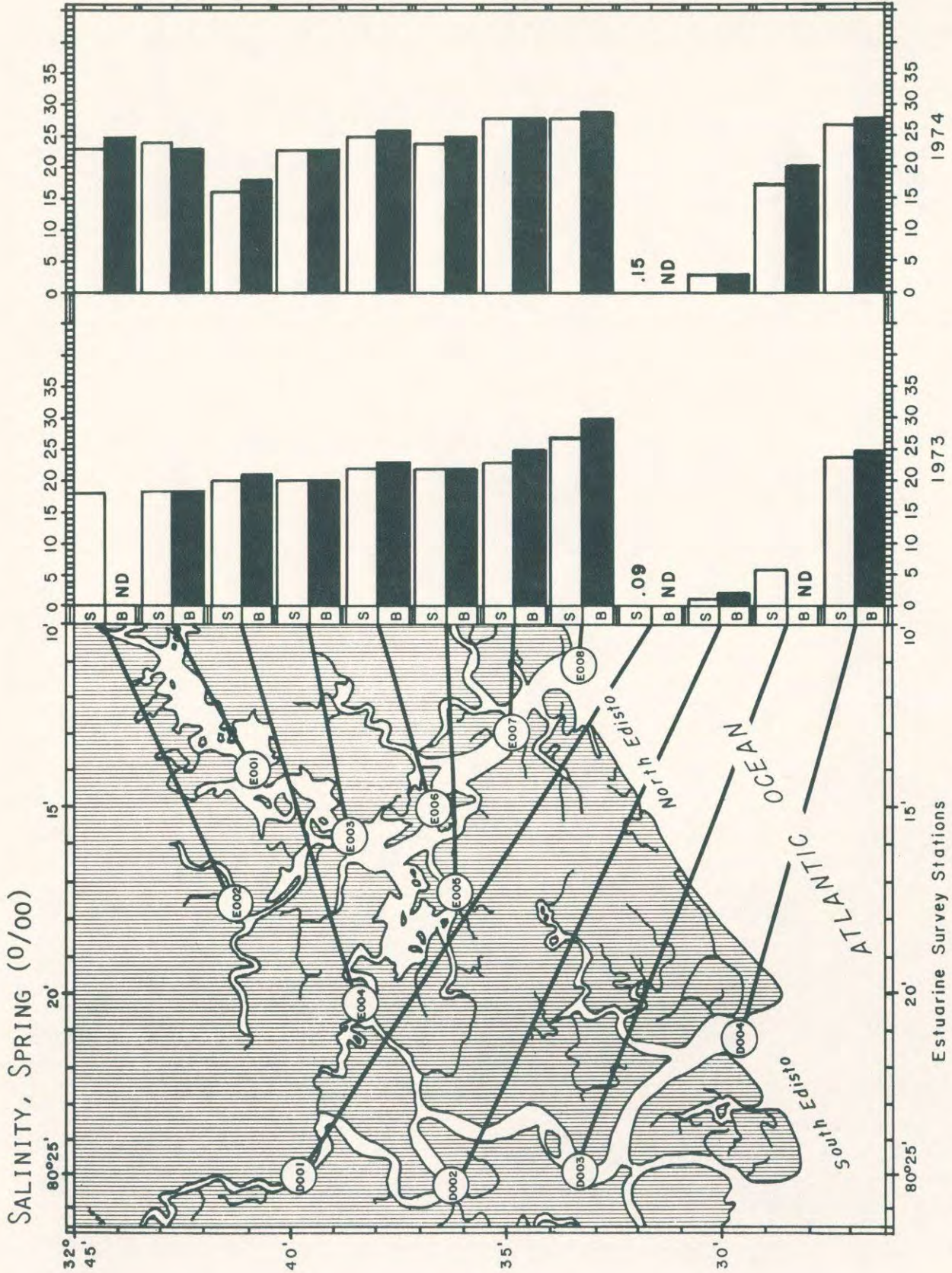


Figure 7. Surface and bottom spring (seasonal mean, three months combined) salinities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.



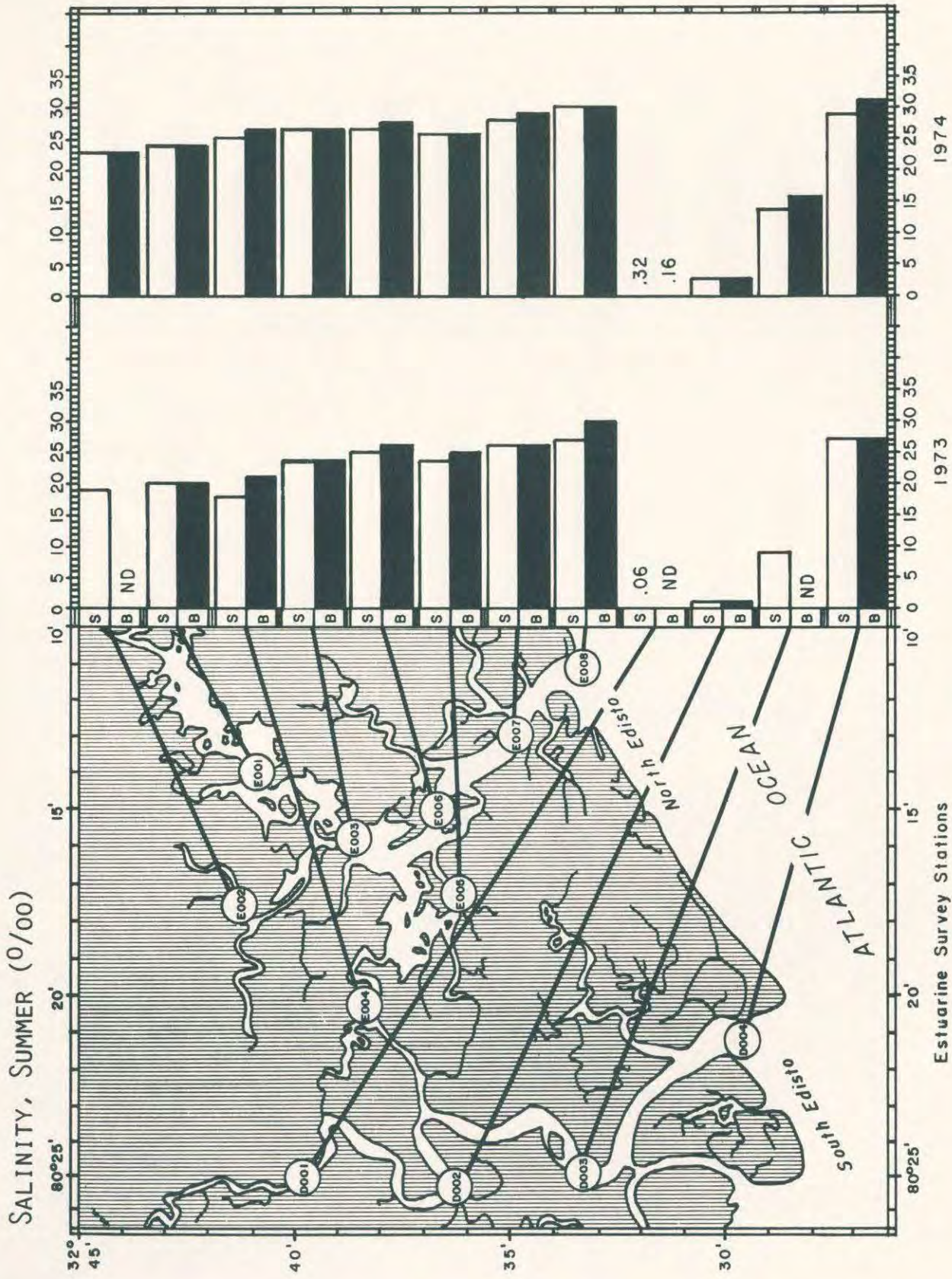


Figure 8. Surface and bottom summer (seasonal mean, three months combined) salinities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

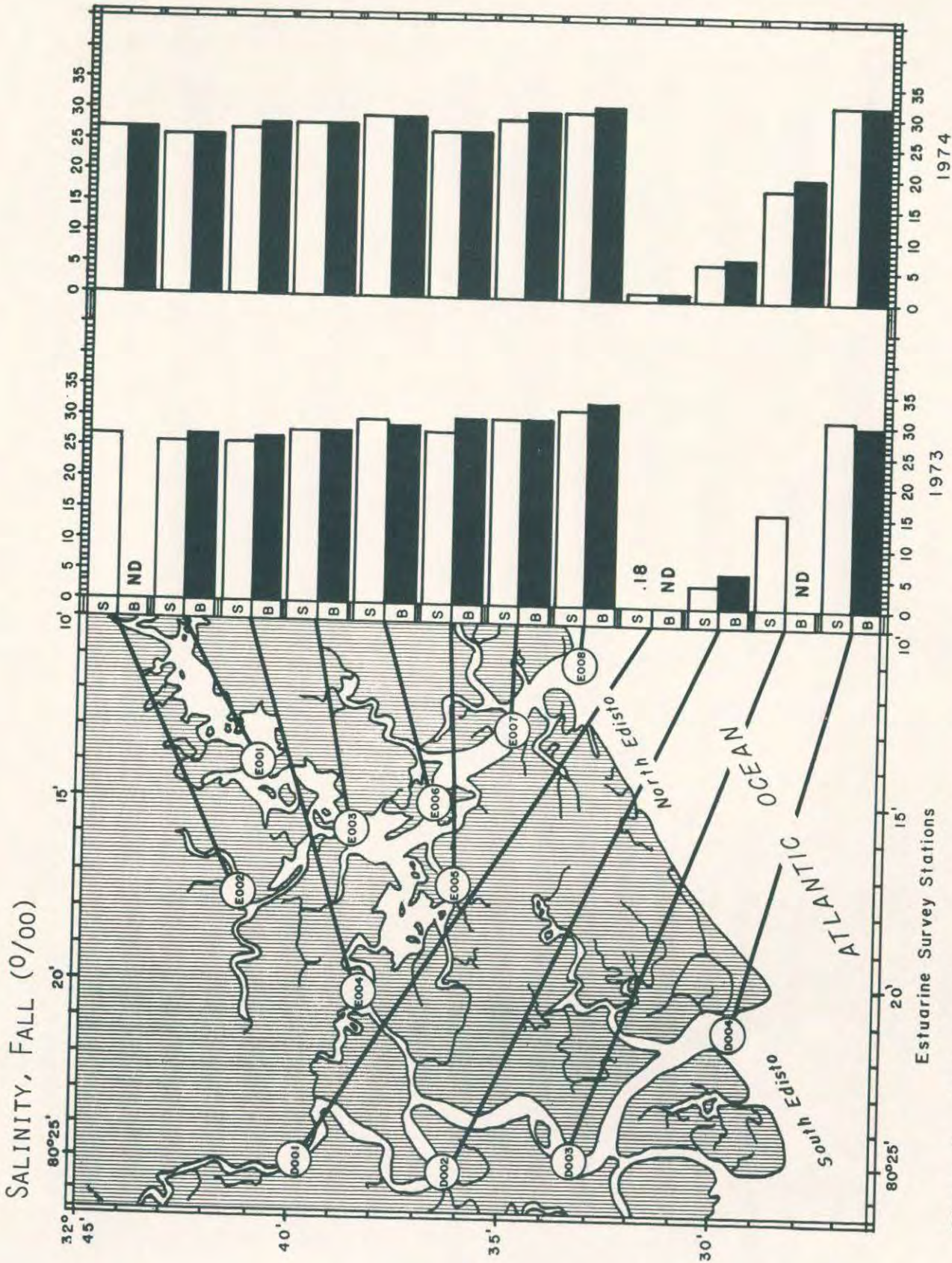


Figure 9. Surface and bottom fall (seasonal mean, three months combined) salinities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

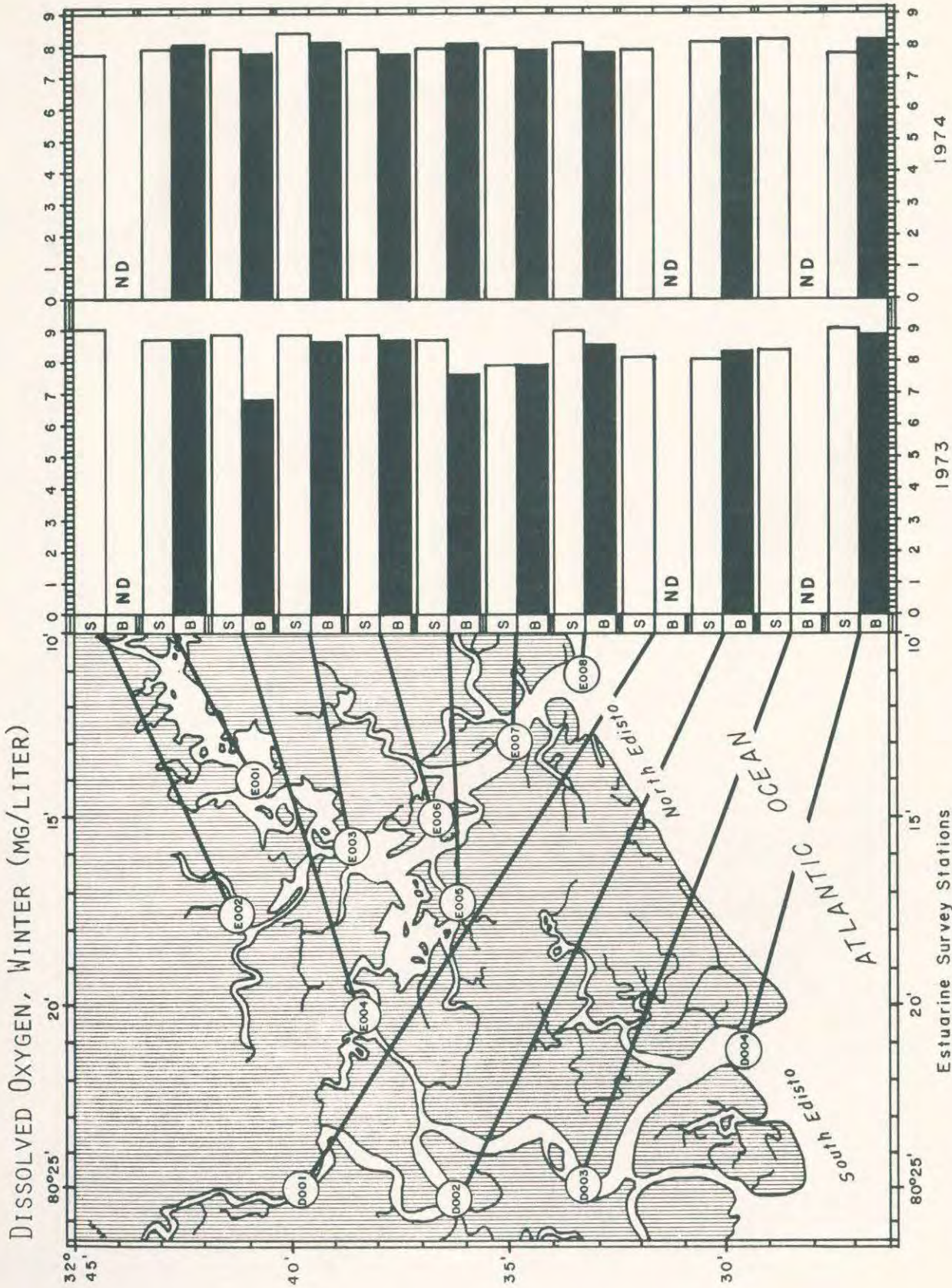


Figure 10. Surface and bottom winter (seasonal mean, three months combined) dissolved oxygen concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

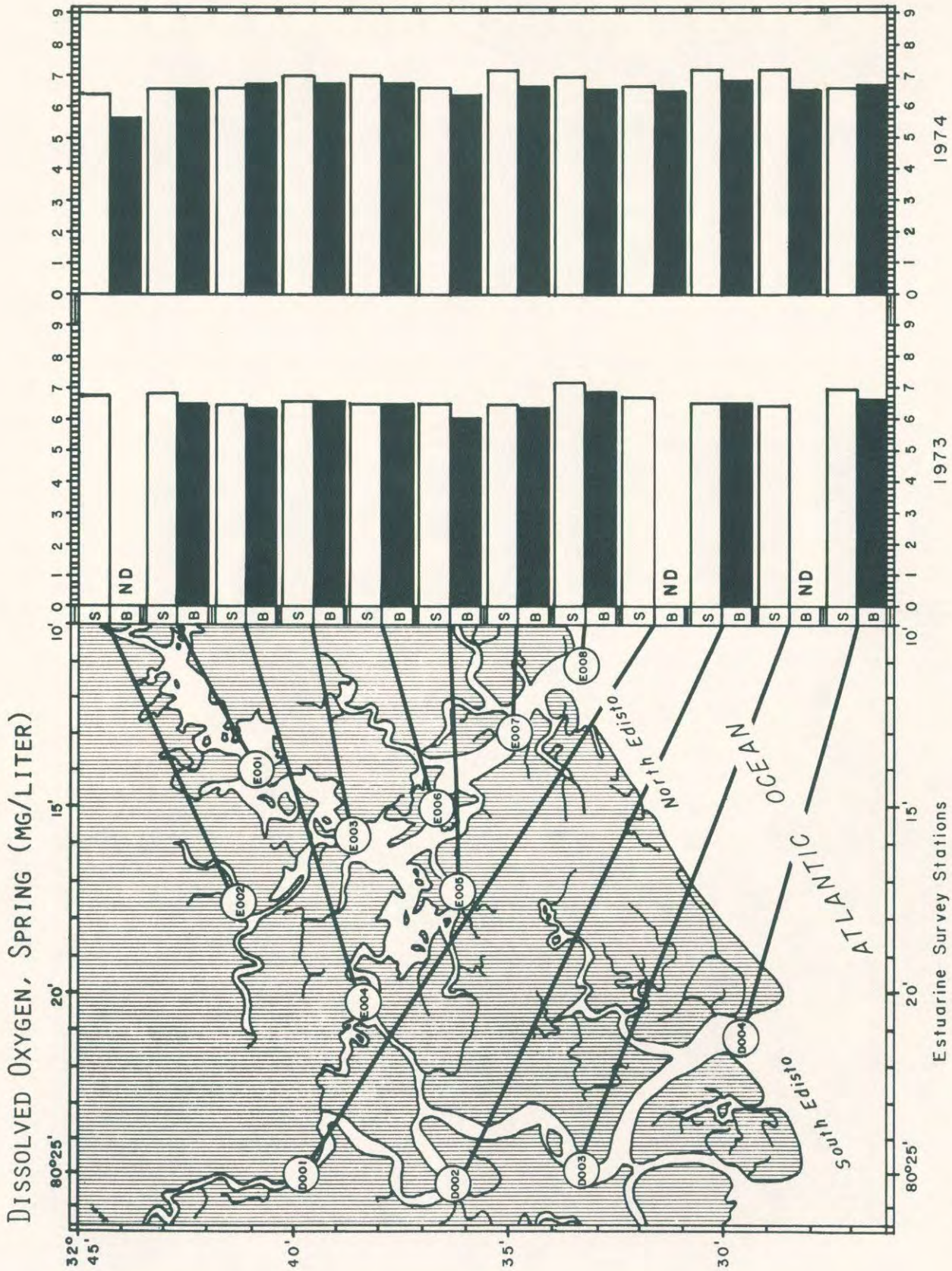


Figure 11. Surface and bottom spring (seasonal mean, three months combined) dissolved oxygen concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

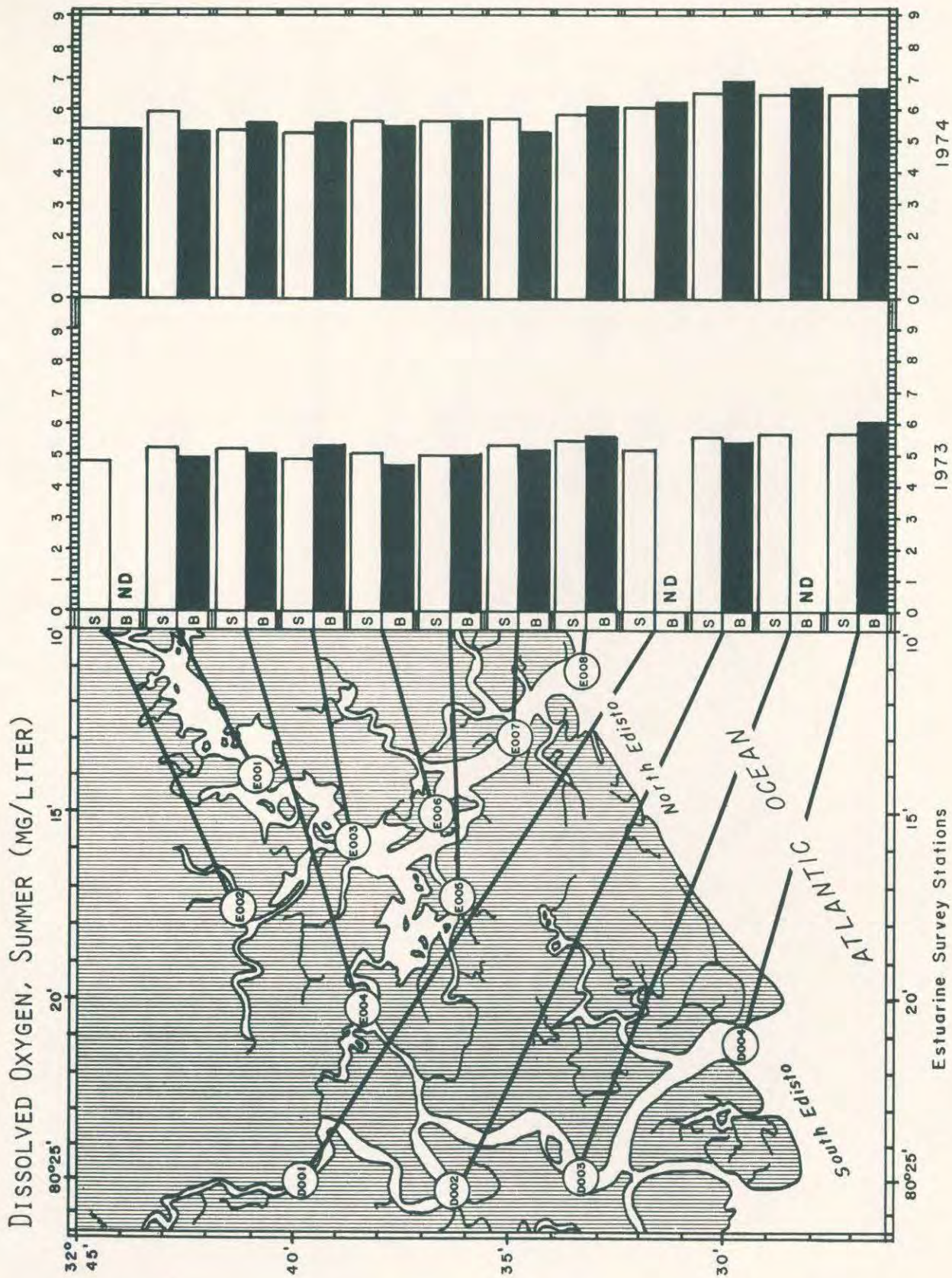


Figure 12. Surface and bottom summer (seasonal mean, three months combined) dissolved oxygen concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

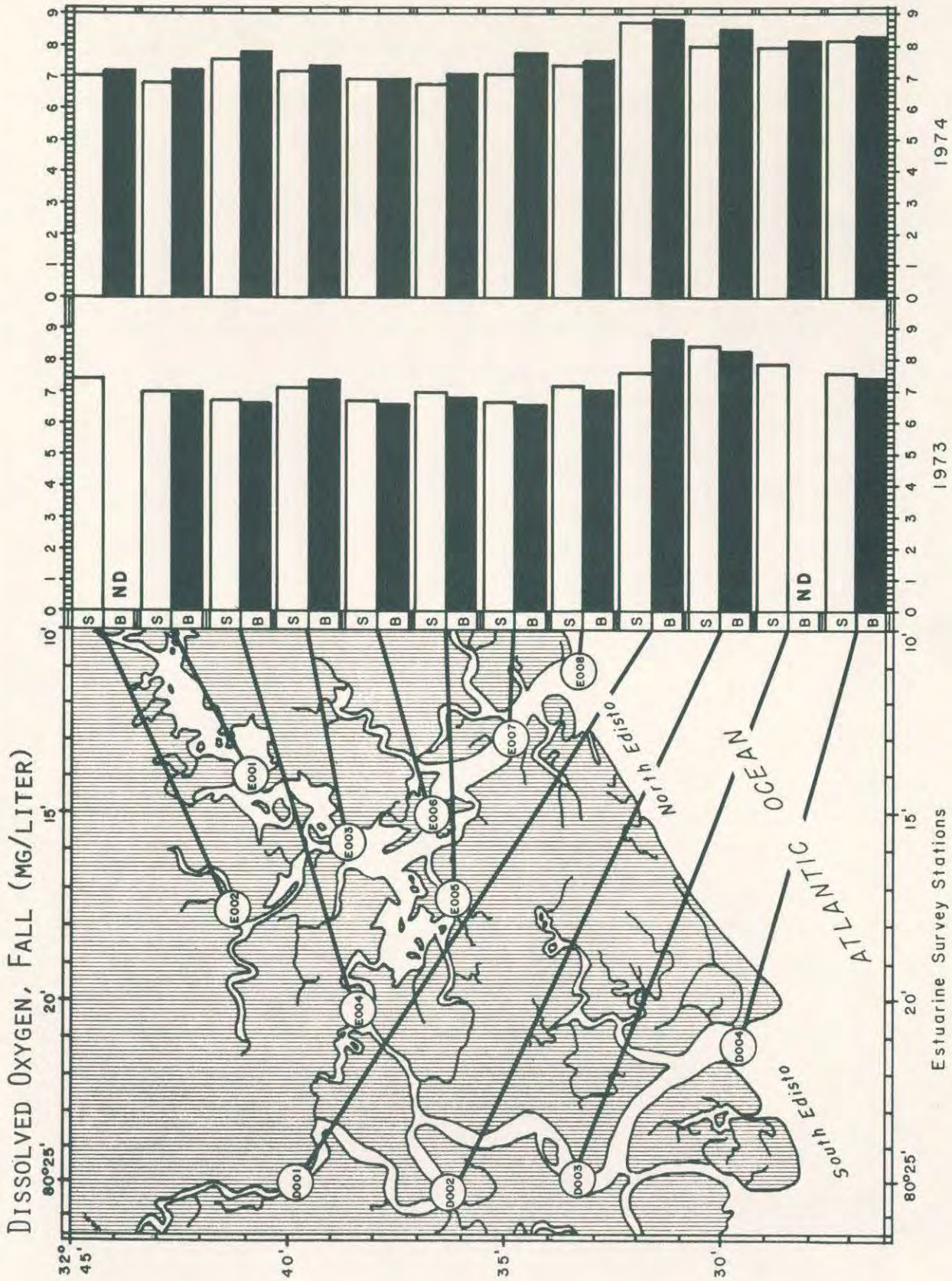


Figure 13. Surface and bottom fall (seasonal mean, three months combined) dissolved oxygen concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

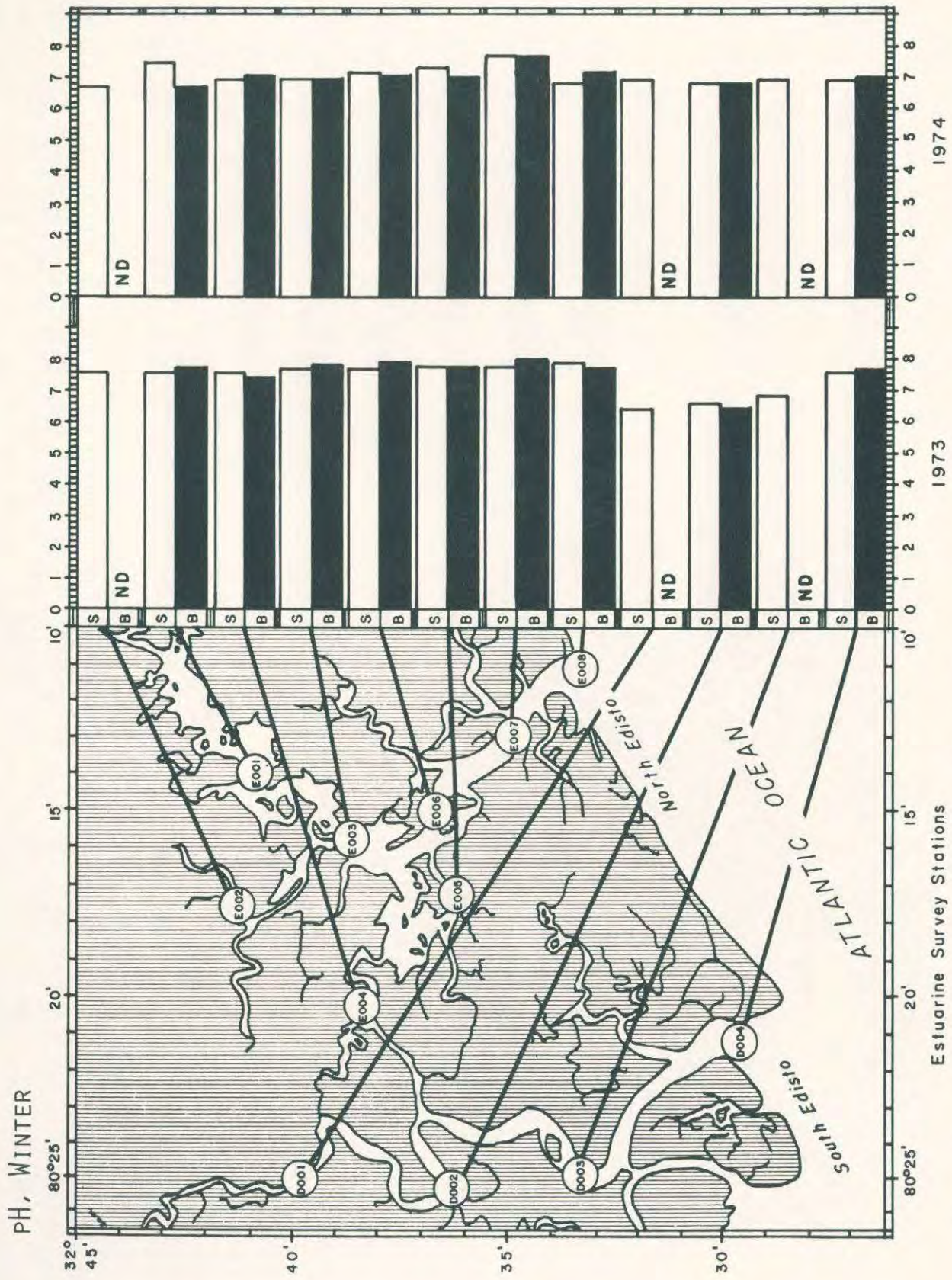


Figure 14. Surface and bottom winter (seasonal mean, three months combined) potential hydrogen ion concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

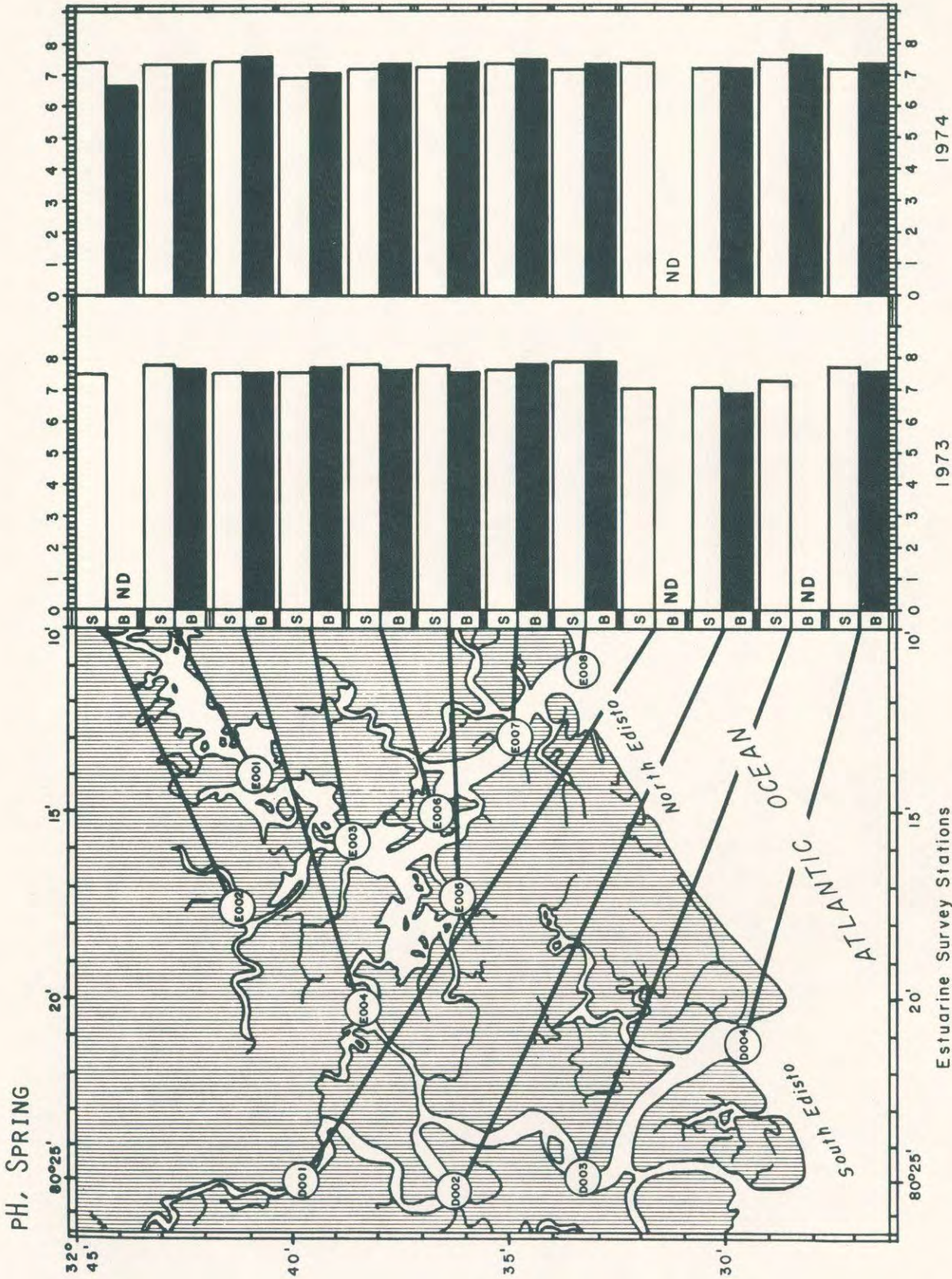


Figure 15. Surface and bottom spring (seasonal mean, three months combined) potential hydrogen ion concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.



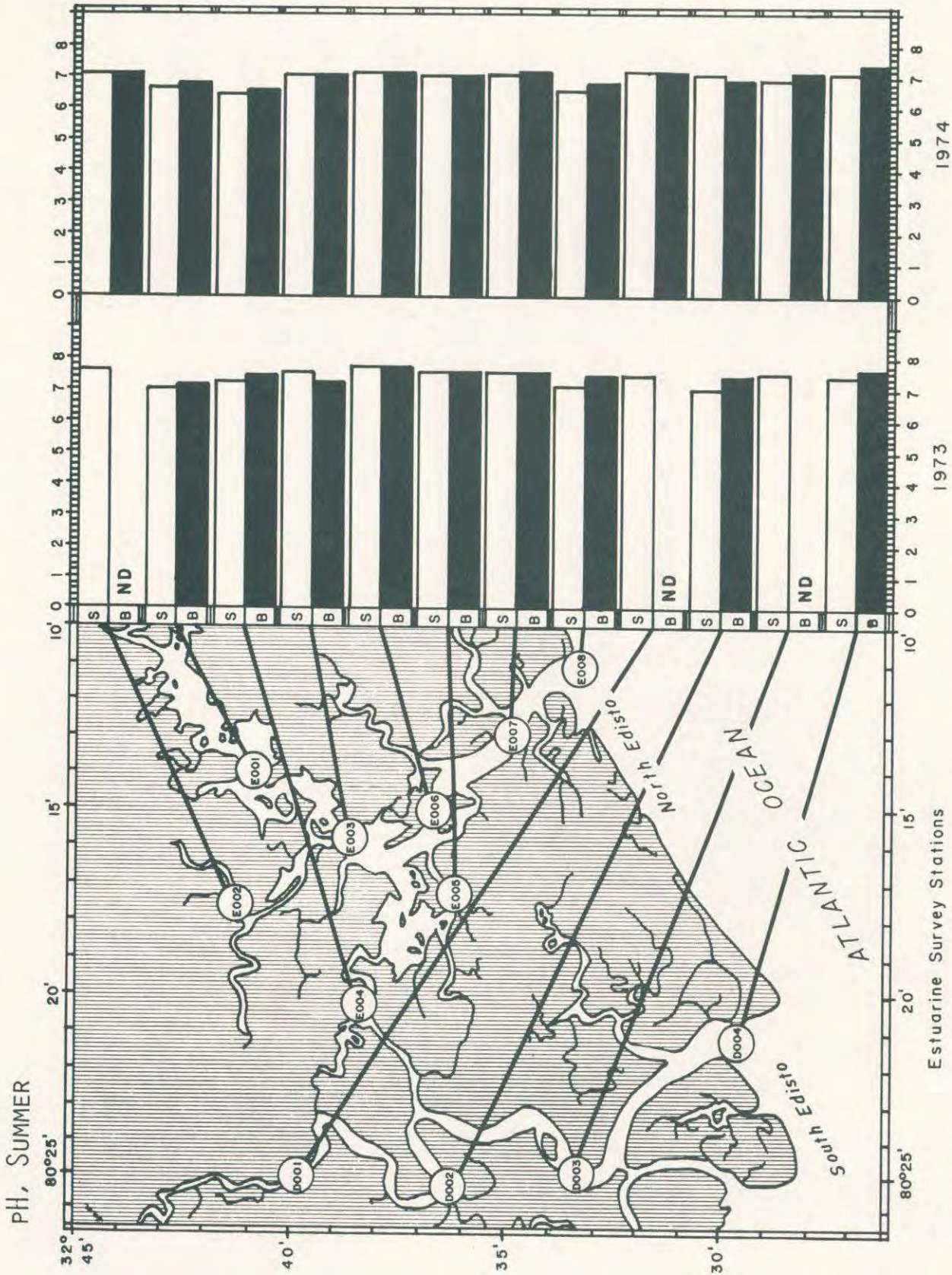


Figure 16. Surface and bottom summer (seasonal mean, three months combined) potential hydrogen ion concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

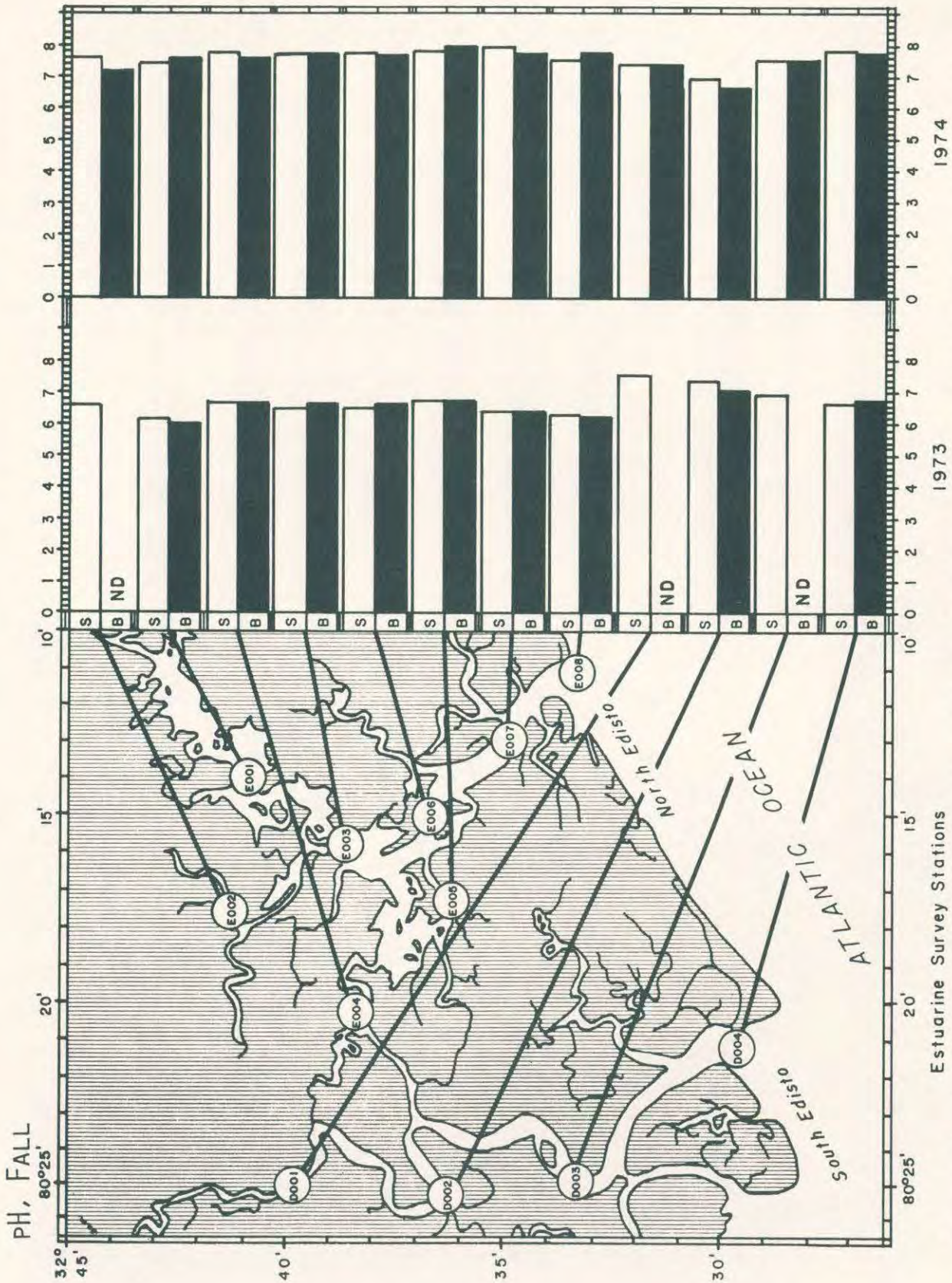


Figure 17. Surface and bottom fall (seasonal mean, three months combined) potential hydrogen ion concentrations at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

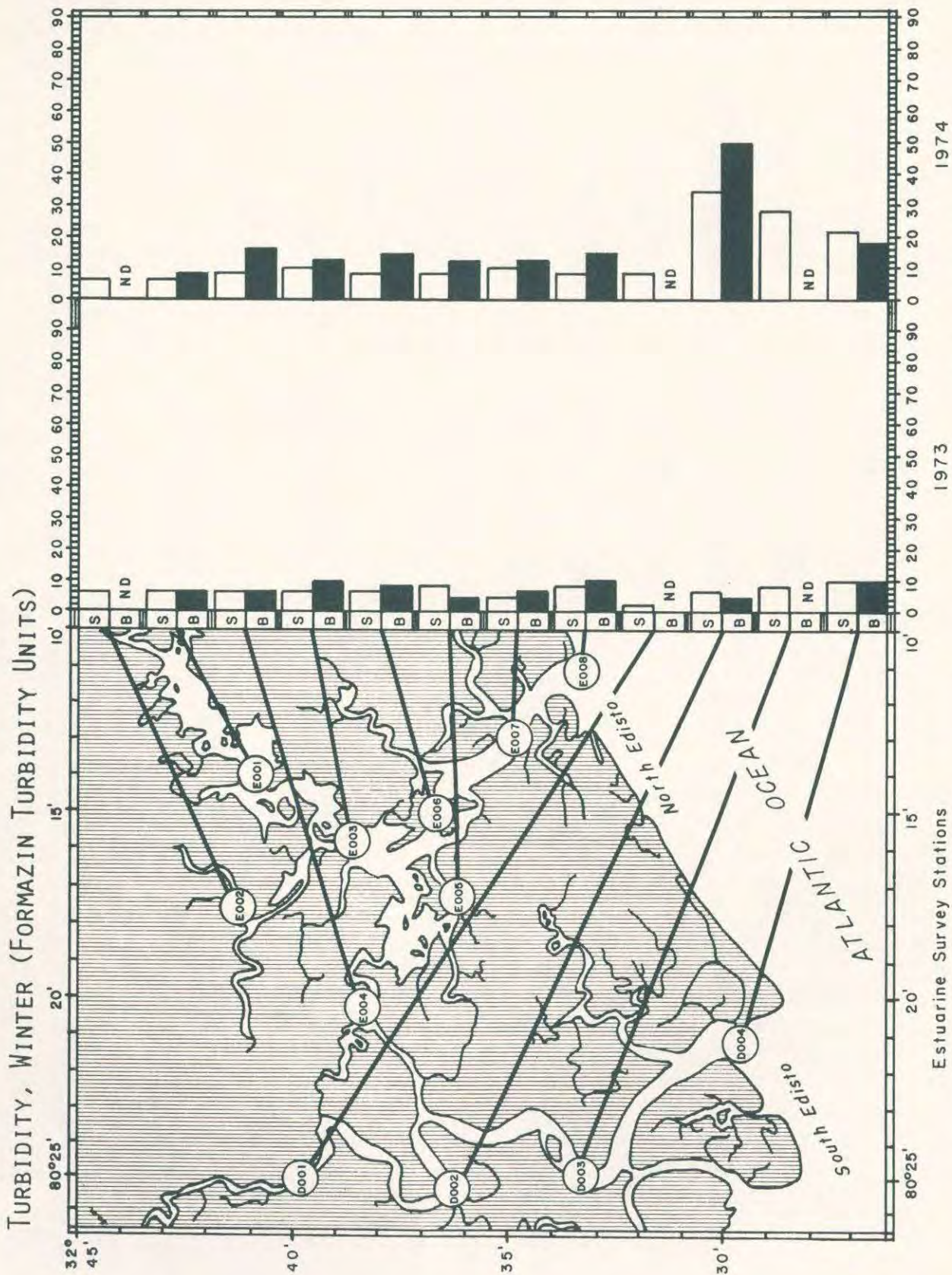


Figure 18. Surface and bottom winter (seasonal mean, three months combined) turbidities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

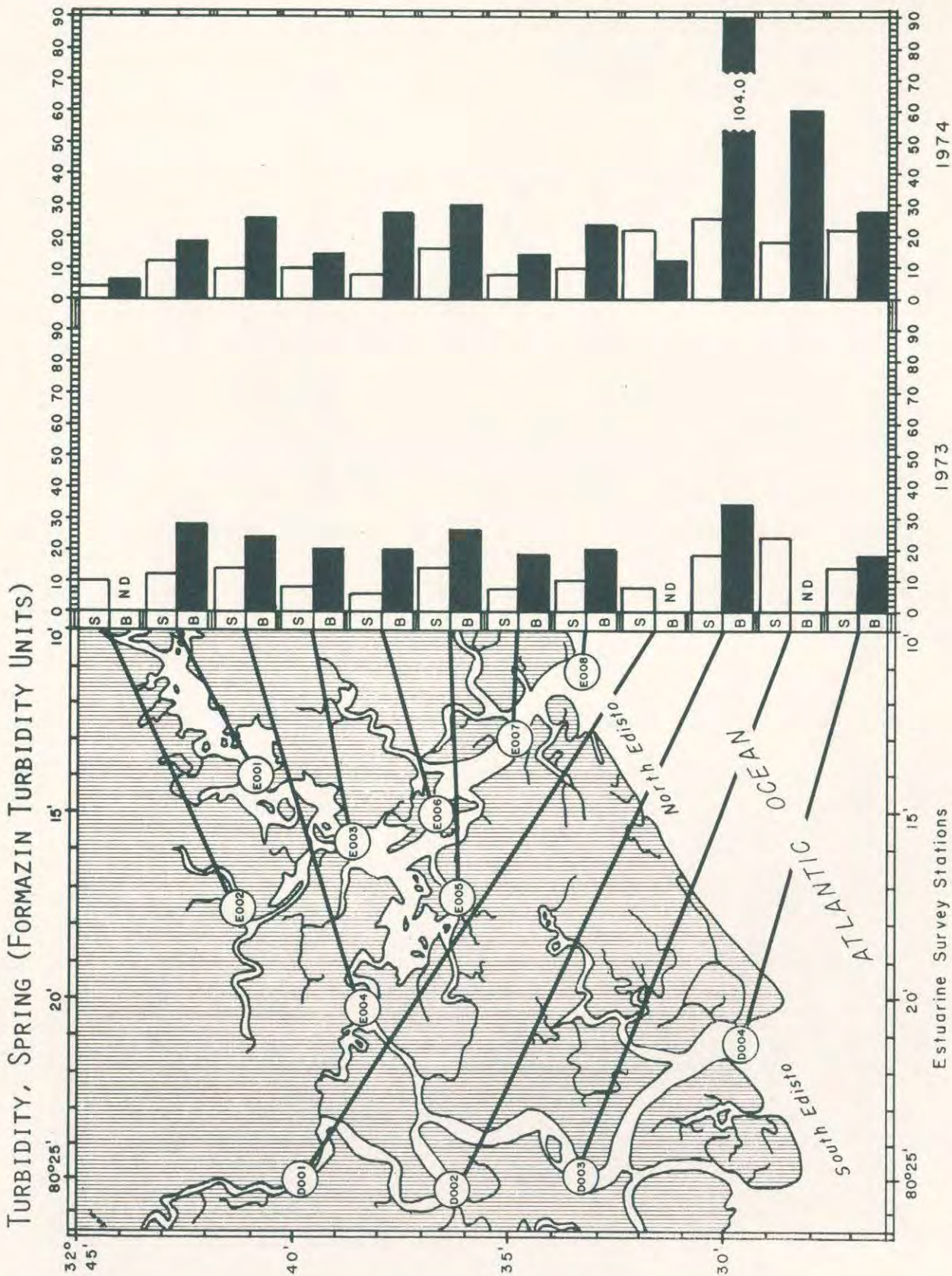


Figure 19. Surface and bottom spring (seasonal mean, three months combined) turbidities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

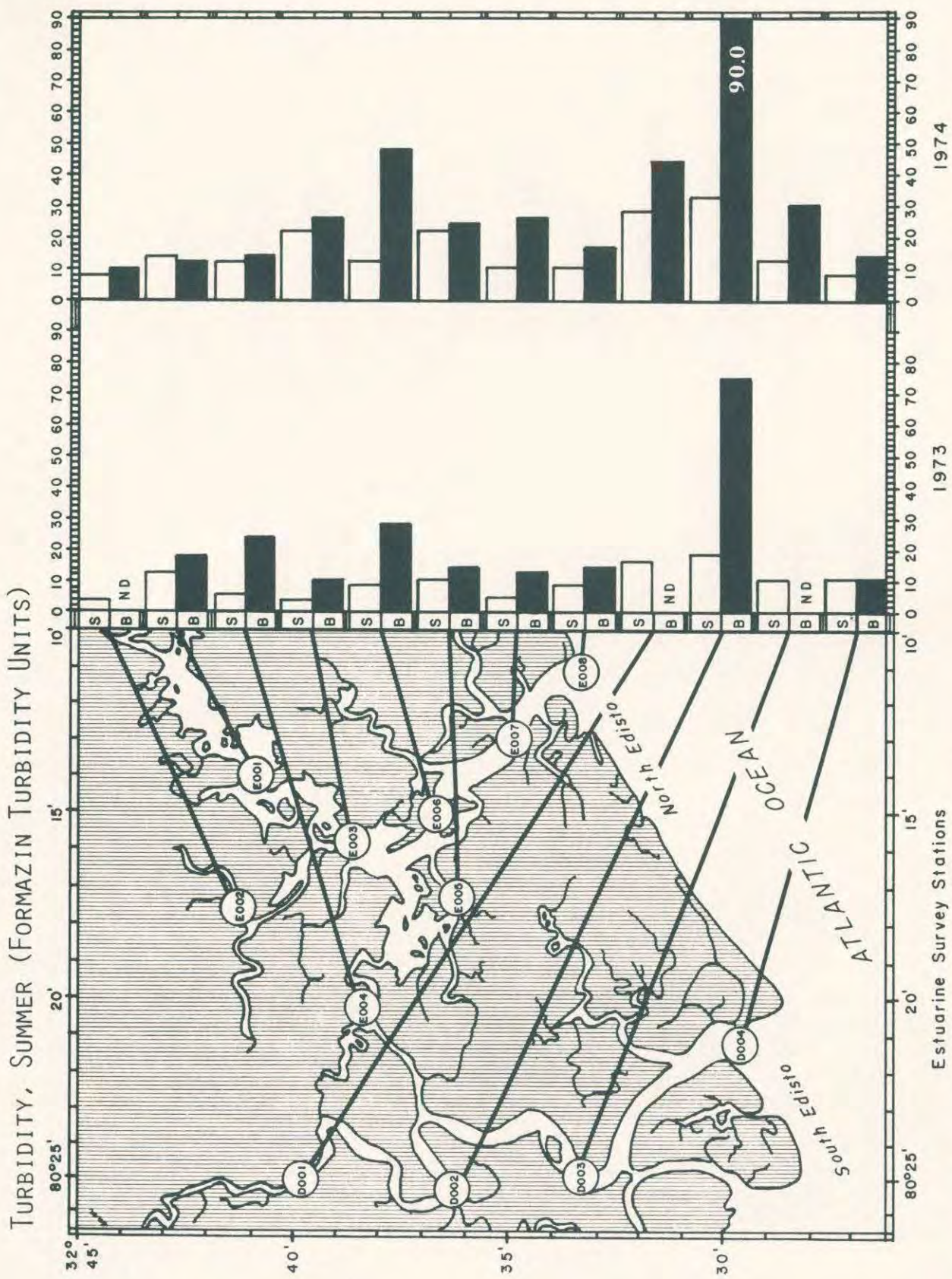


Figure 20. Surface and bottom summer (seasonal mean, three months combined) turbidities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

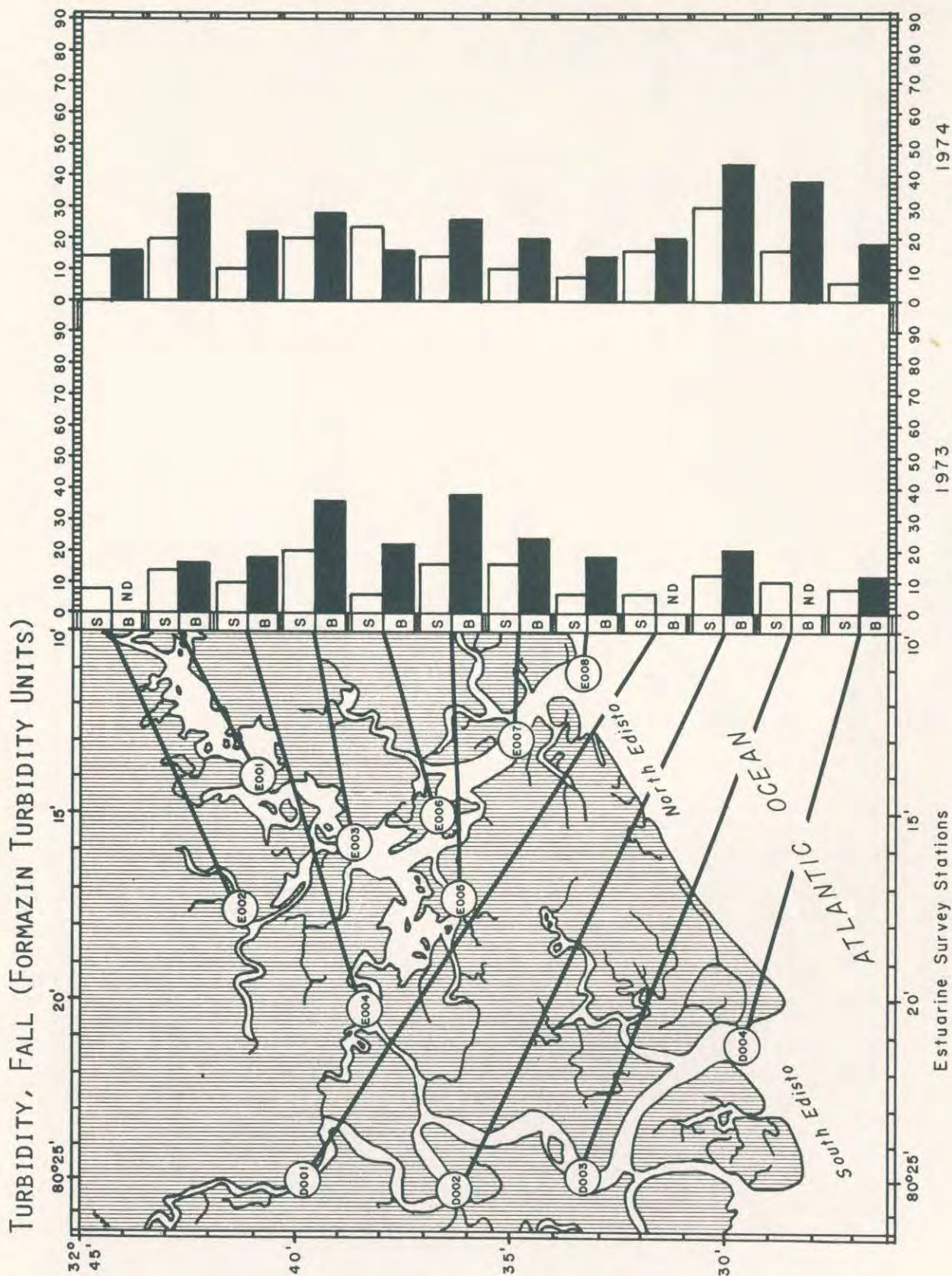


Figure 21. Surface and bottom fall (seasonal mean, three months combined) turbidities at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

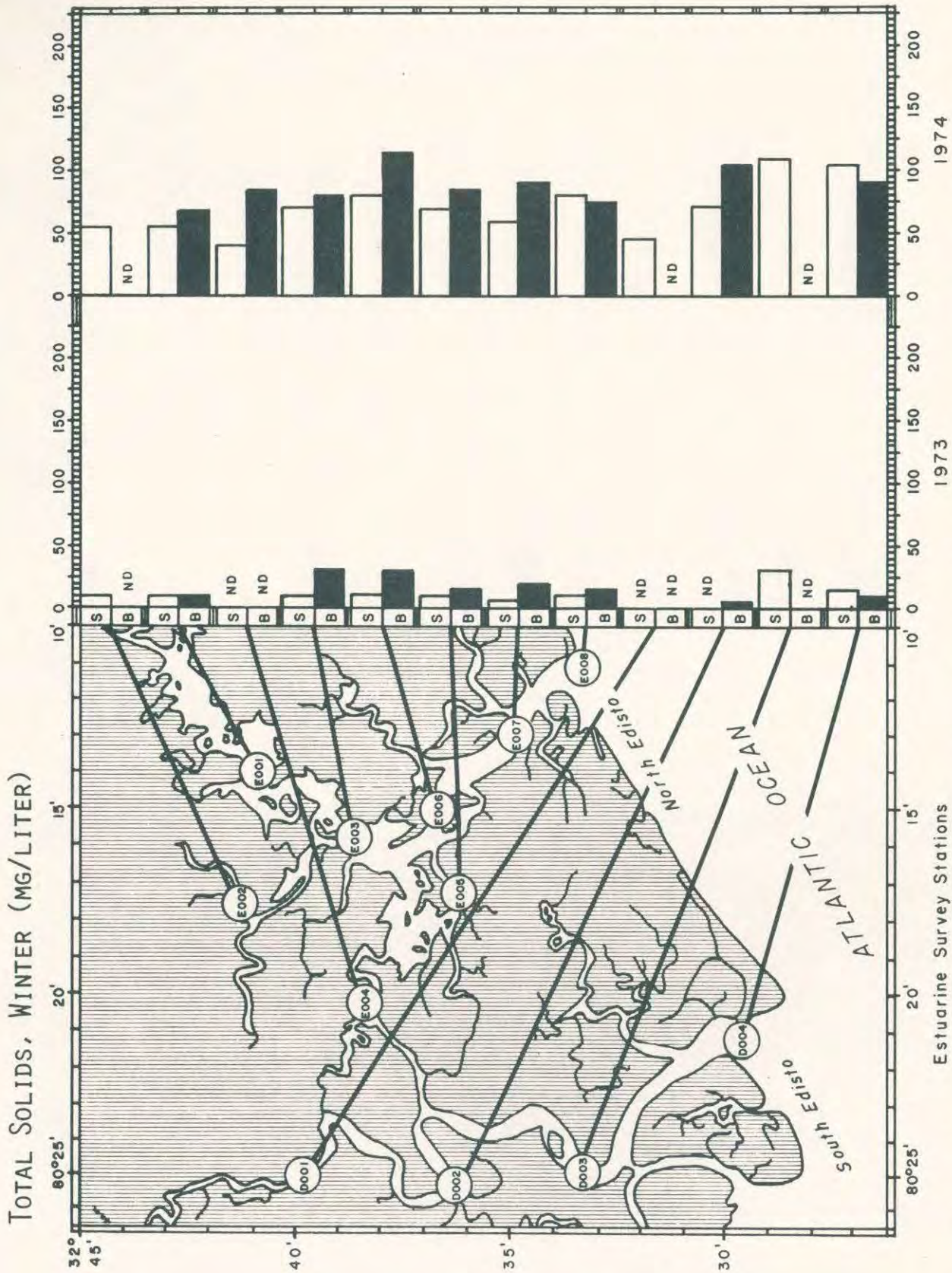


Figure 22. Surface and bottom winter (seasonal mean, three months combined) total solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

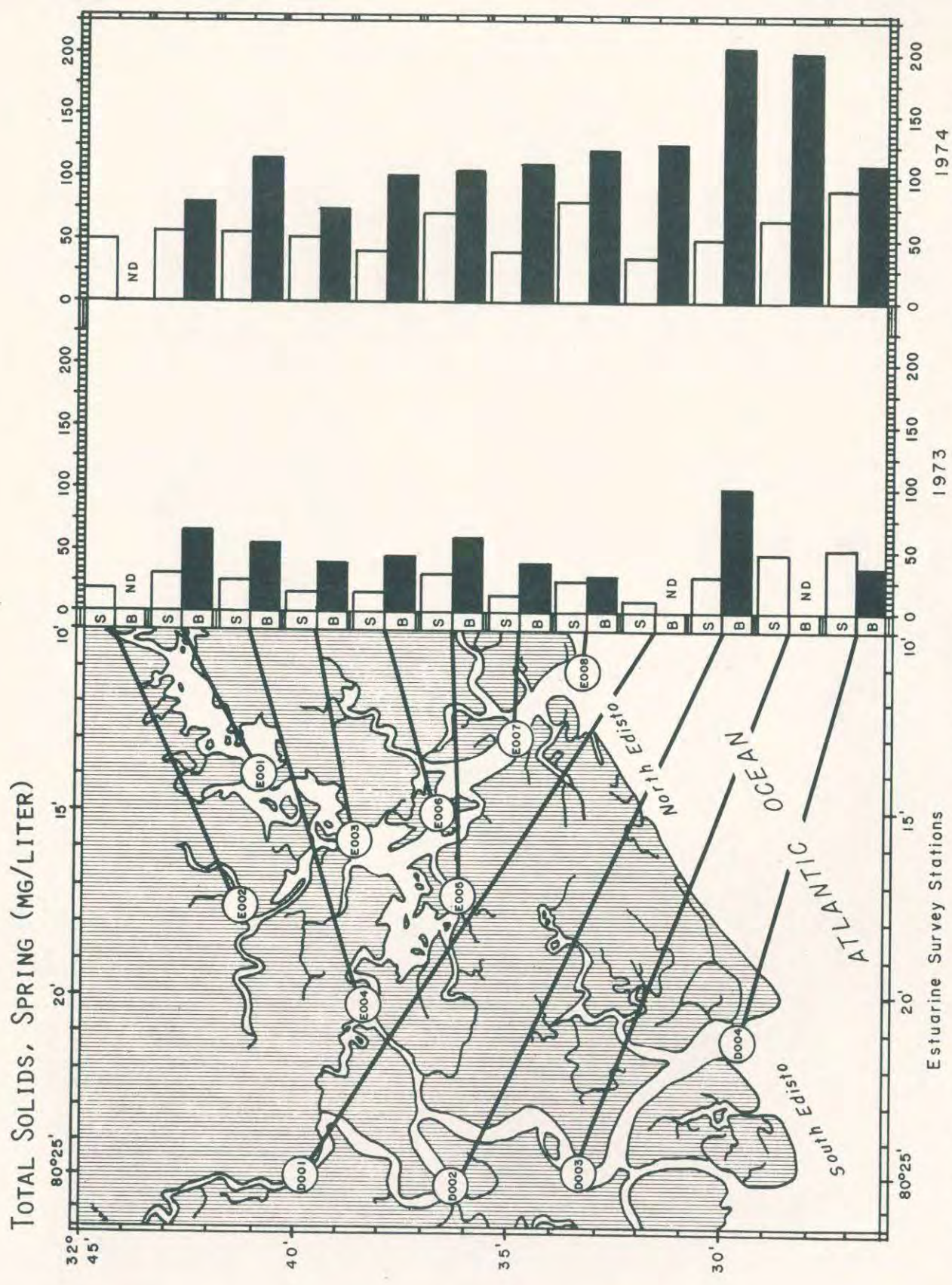


Figure 23. Surface and bottom spring (seasonal mean, three months combined) total solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.



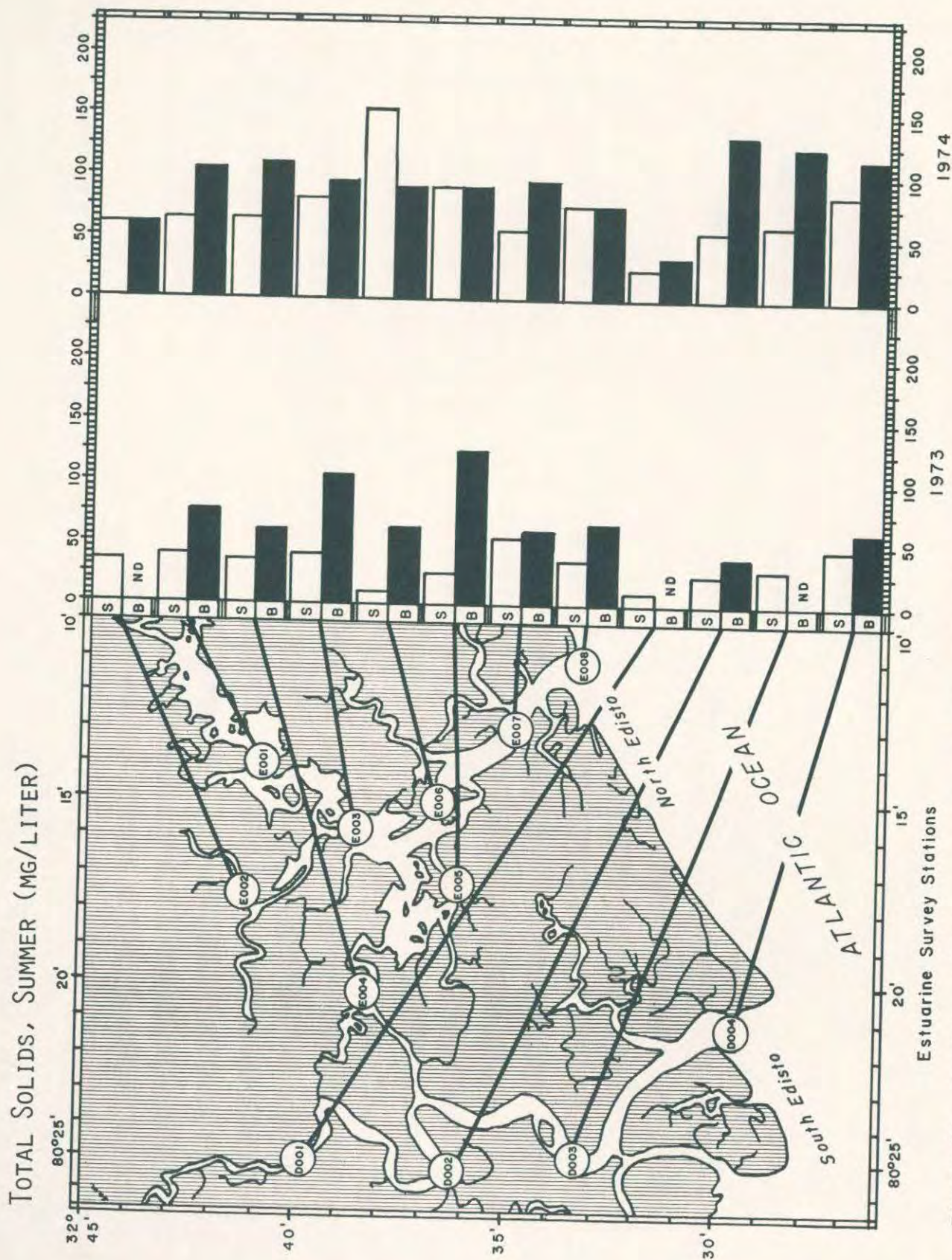


Figure 24. Surface and bottom summer (seasonal mean, three months combined) total solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

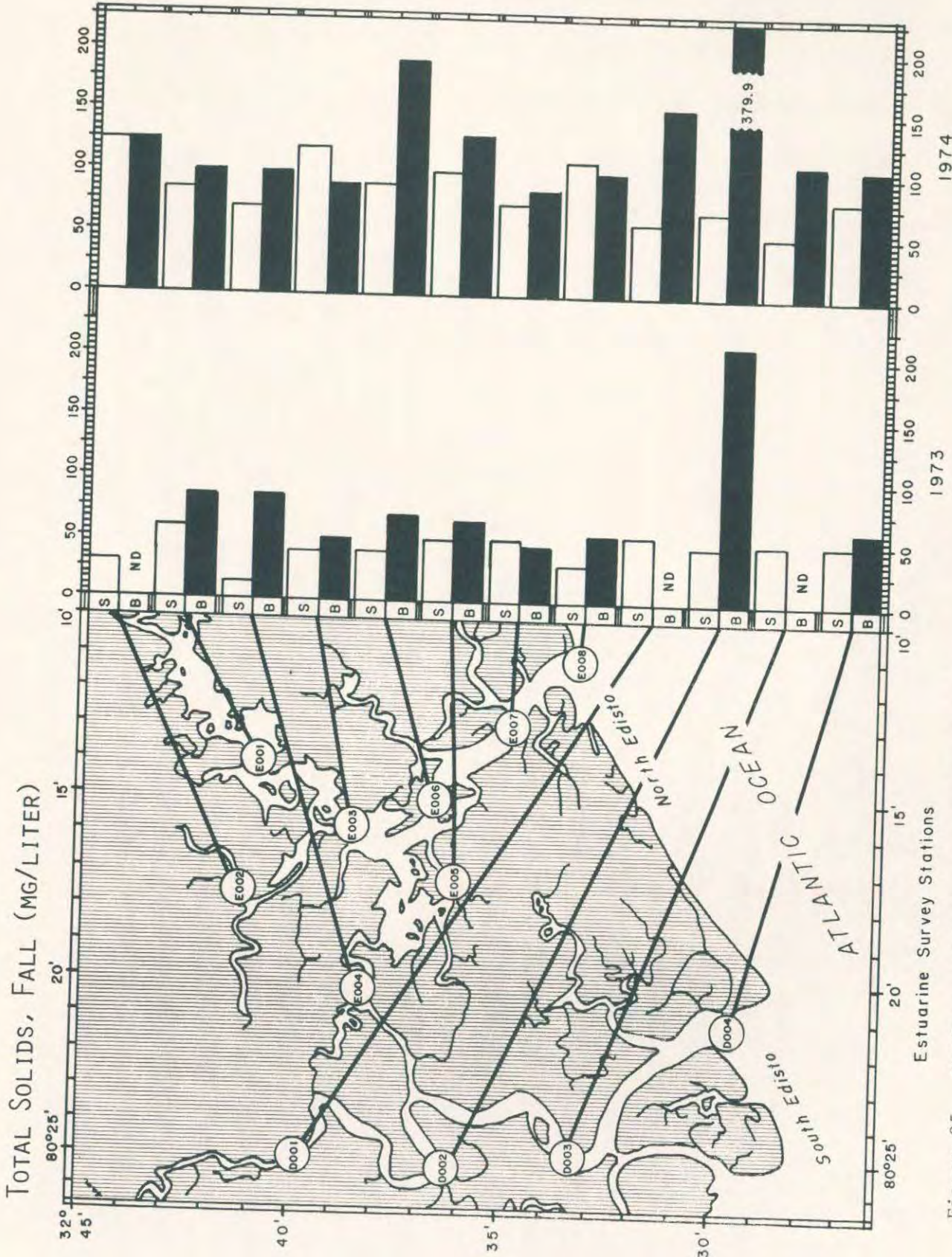


Figure 25. Surface and bottom fall (seasonal mean, three months combined) total solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

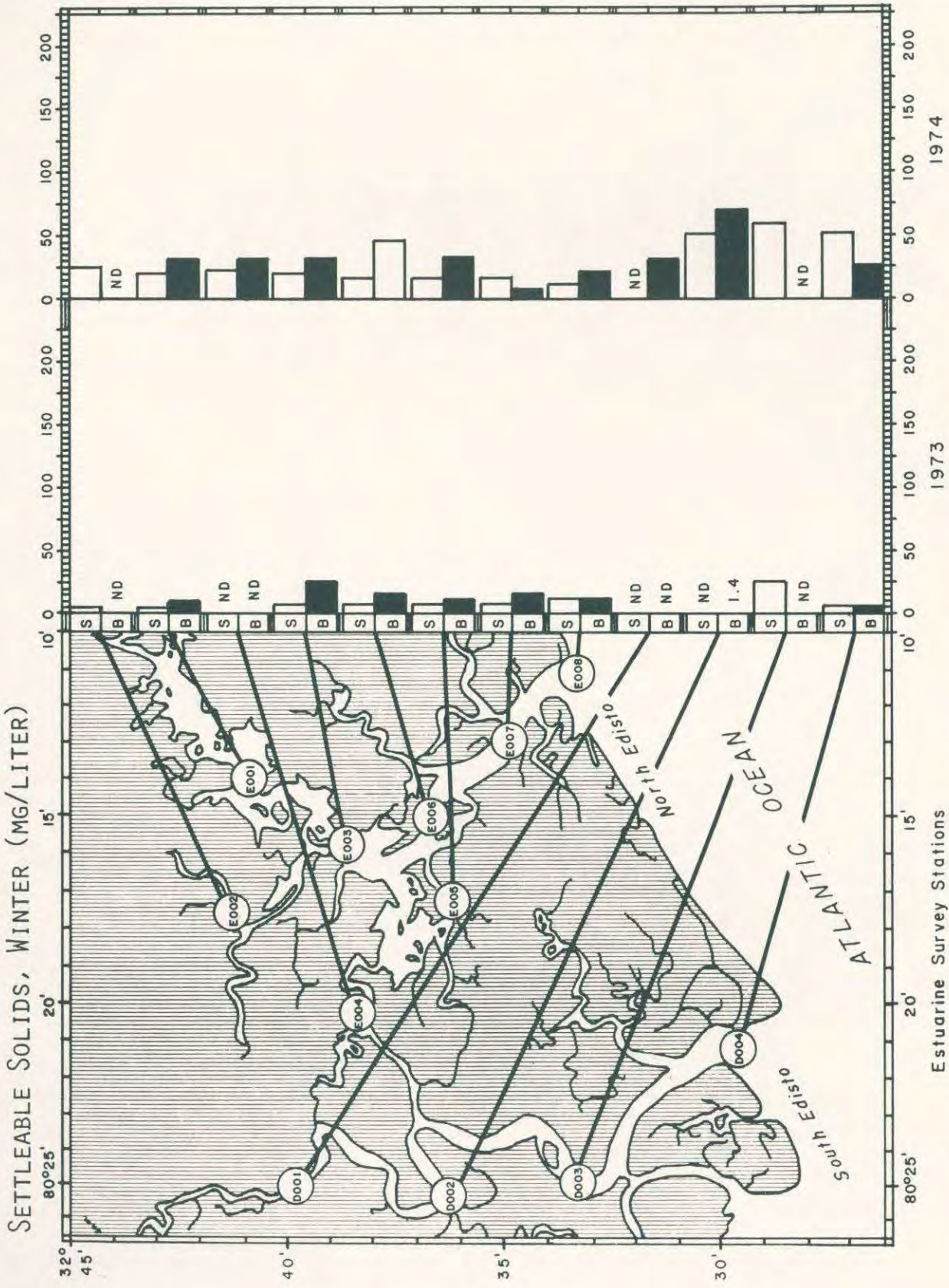


Figure 26. Surface and bottom winter (seasonal mean, three months combined) settleable solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

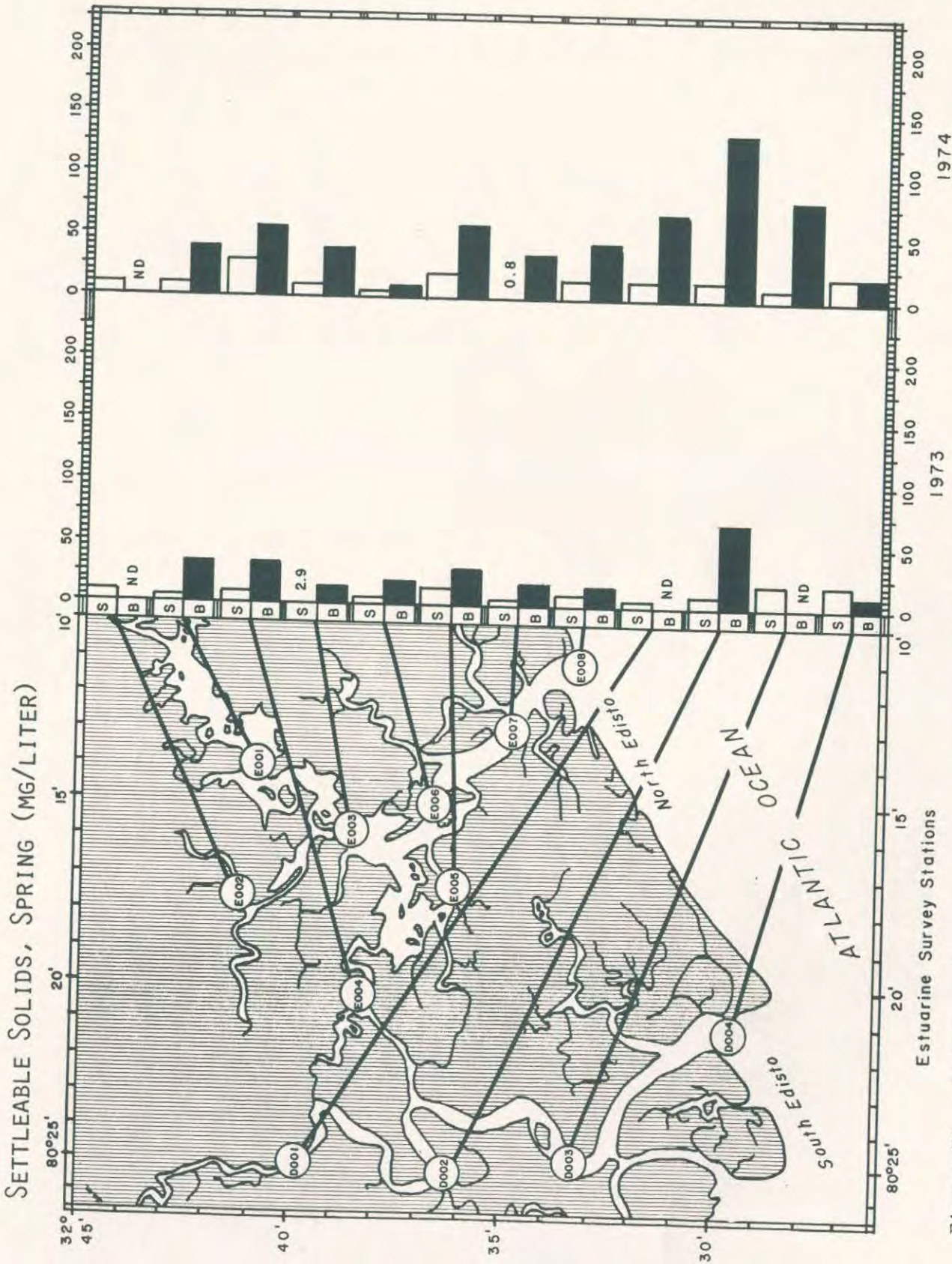


Figure 27. Surface and bottom spring (seasonal mean, three months combined) settleable solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

SETTLEABLE SOLIDS, SUMMER (MG/LITER)

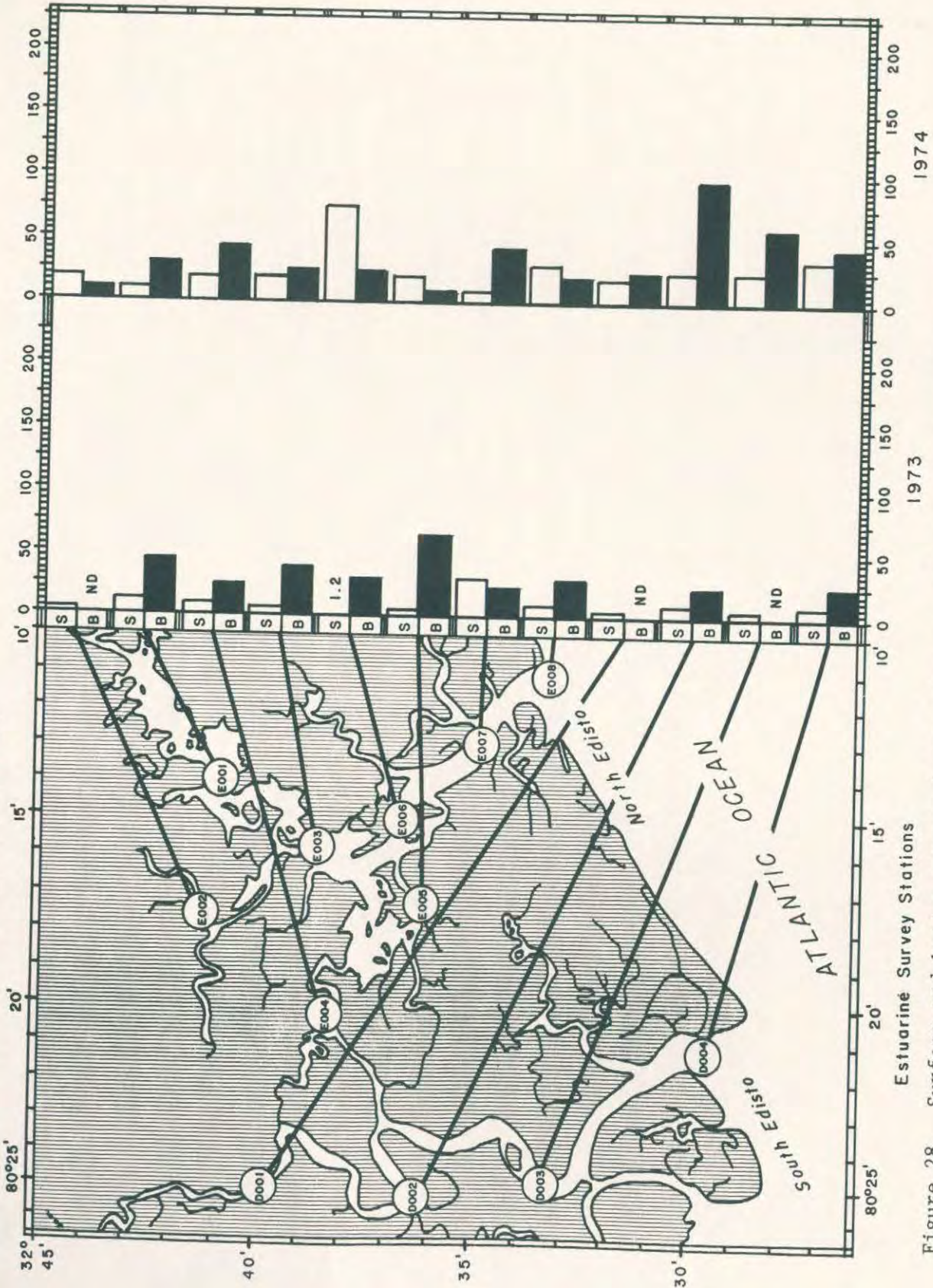


Figure 28. Surface and bottom summer (seasonal mean, three months combined) settleable solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

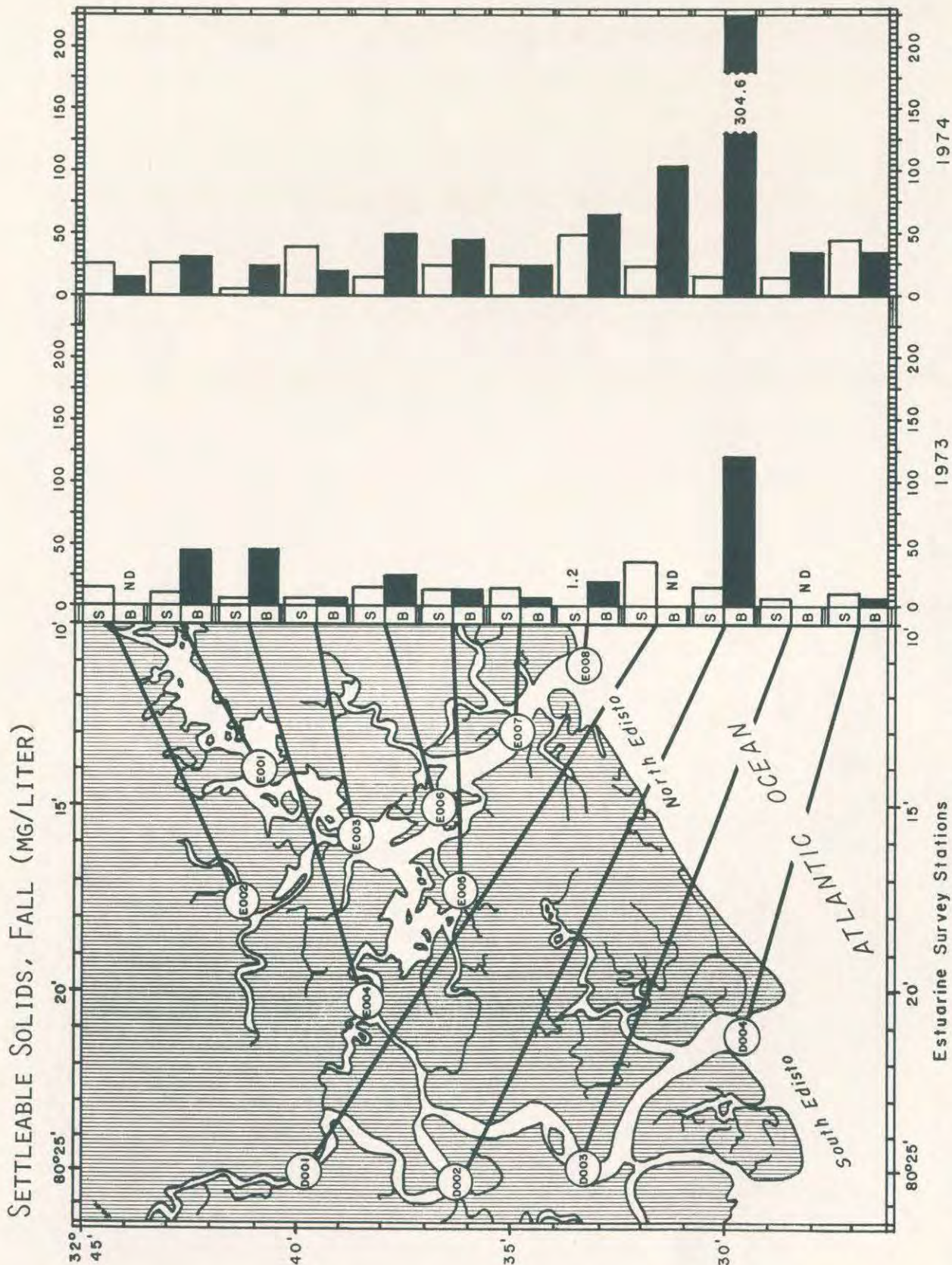


Figure 29. Surface and bottom fall (seasonal mean, three months combined) settleable solids at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

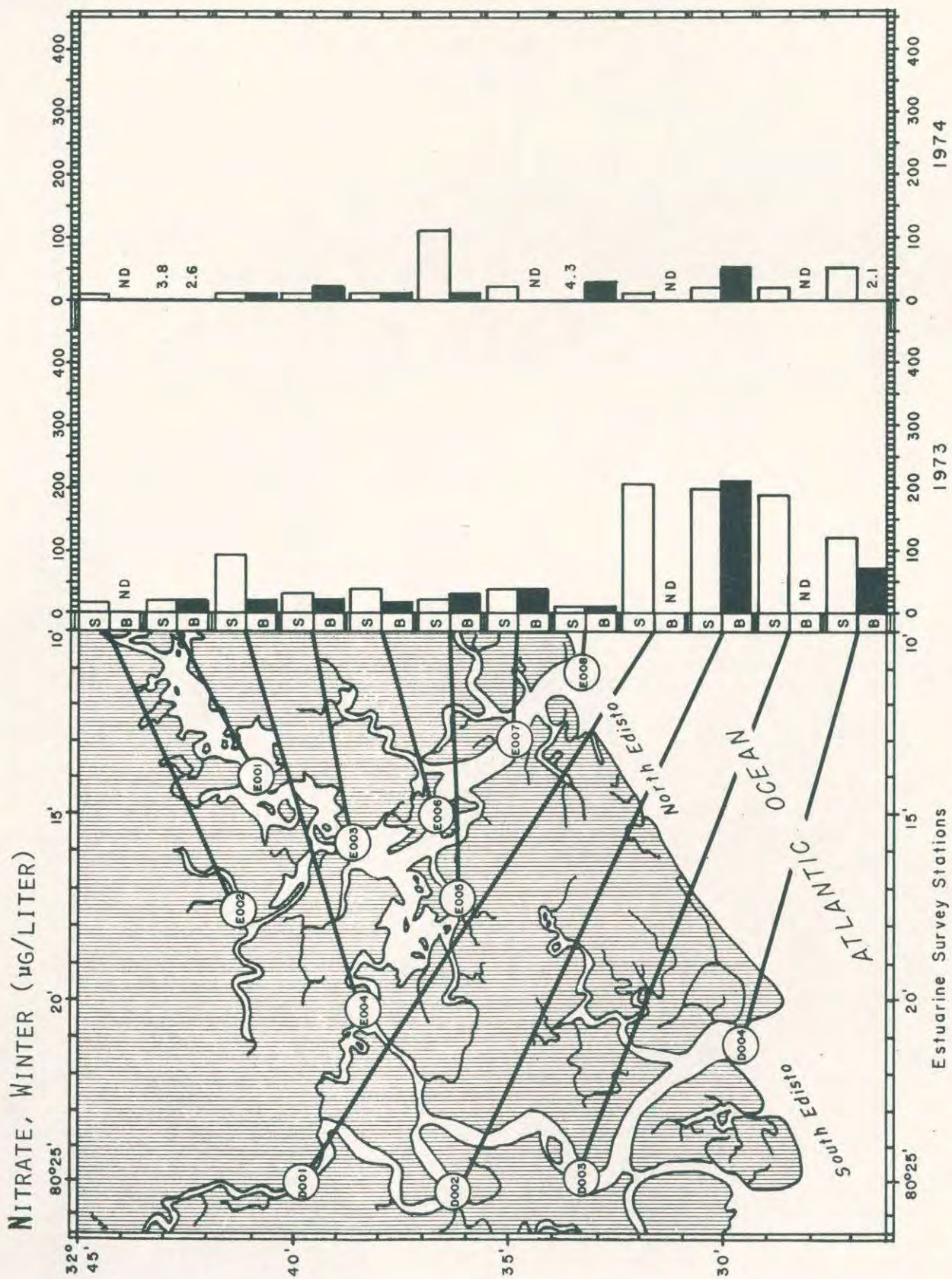


Figure 30. Surface and bottom winter (seasonal mean, three months combined) nitrates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

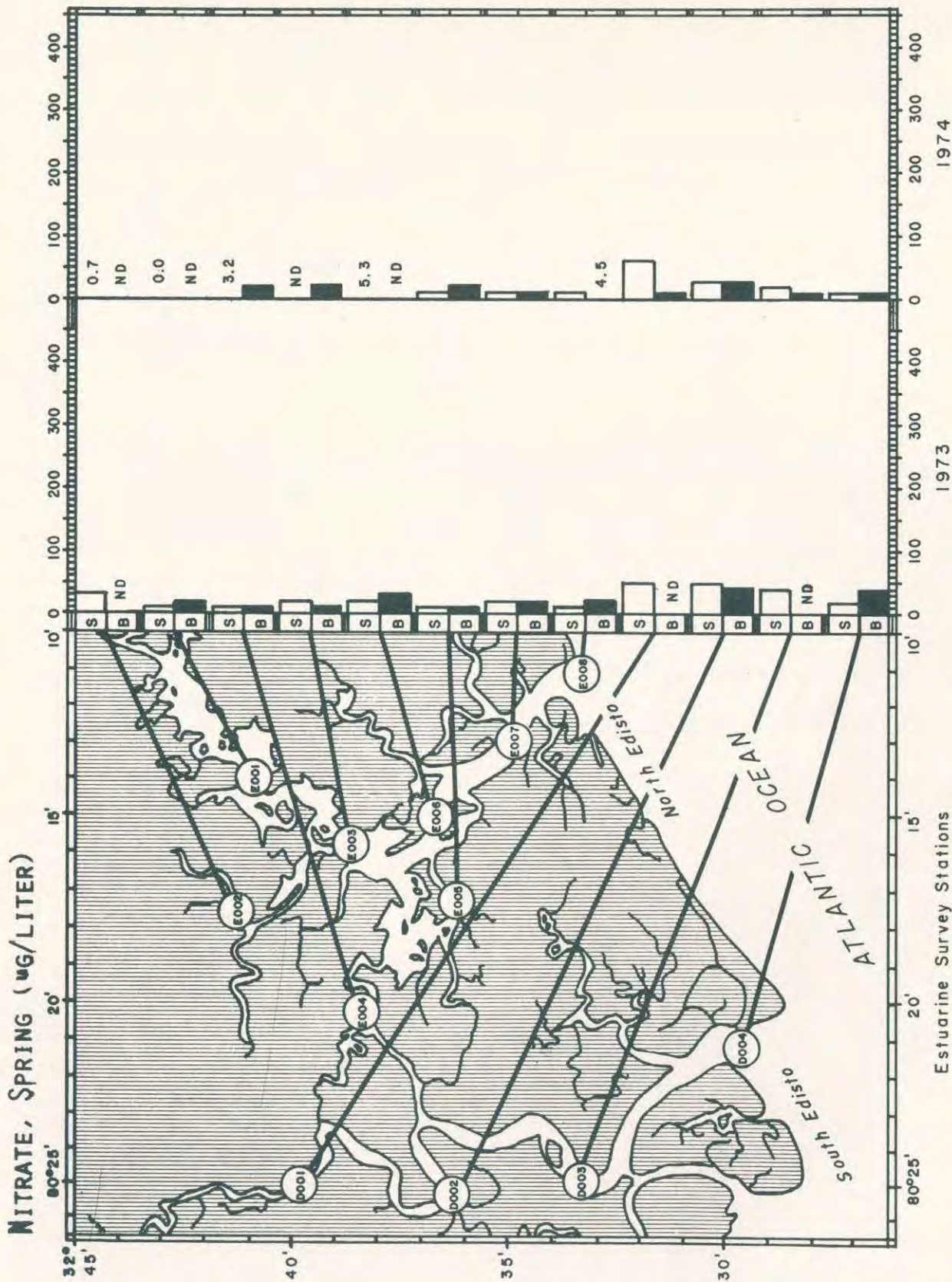


Figure 31. Surface and bottom spring (seasonal mean, three months combined) nitrates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.



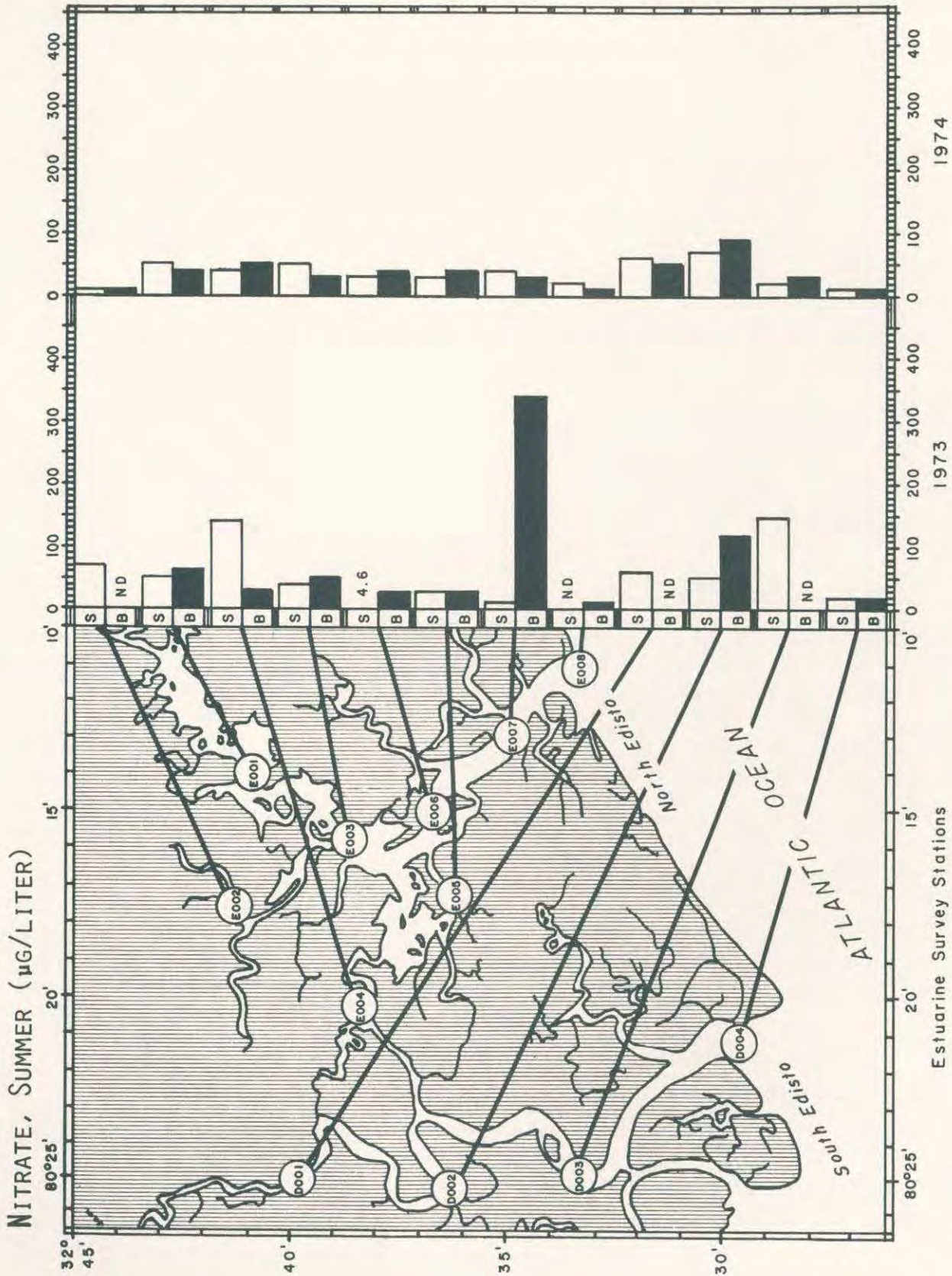


Figure 32. Surface and bottom summer (seasonal mean, three months combined) nitrates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

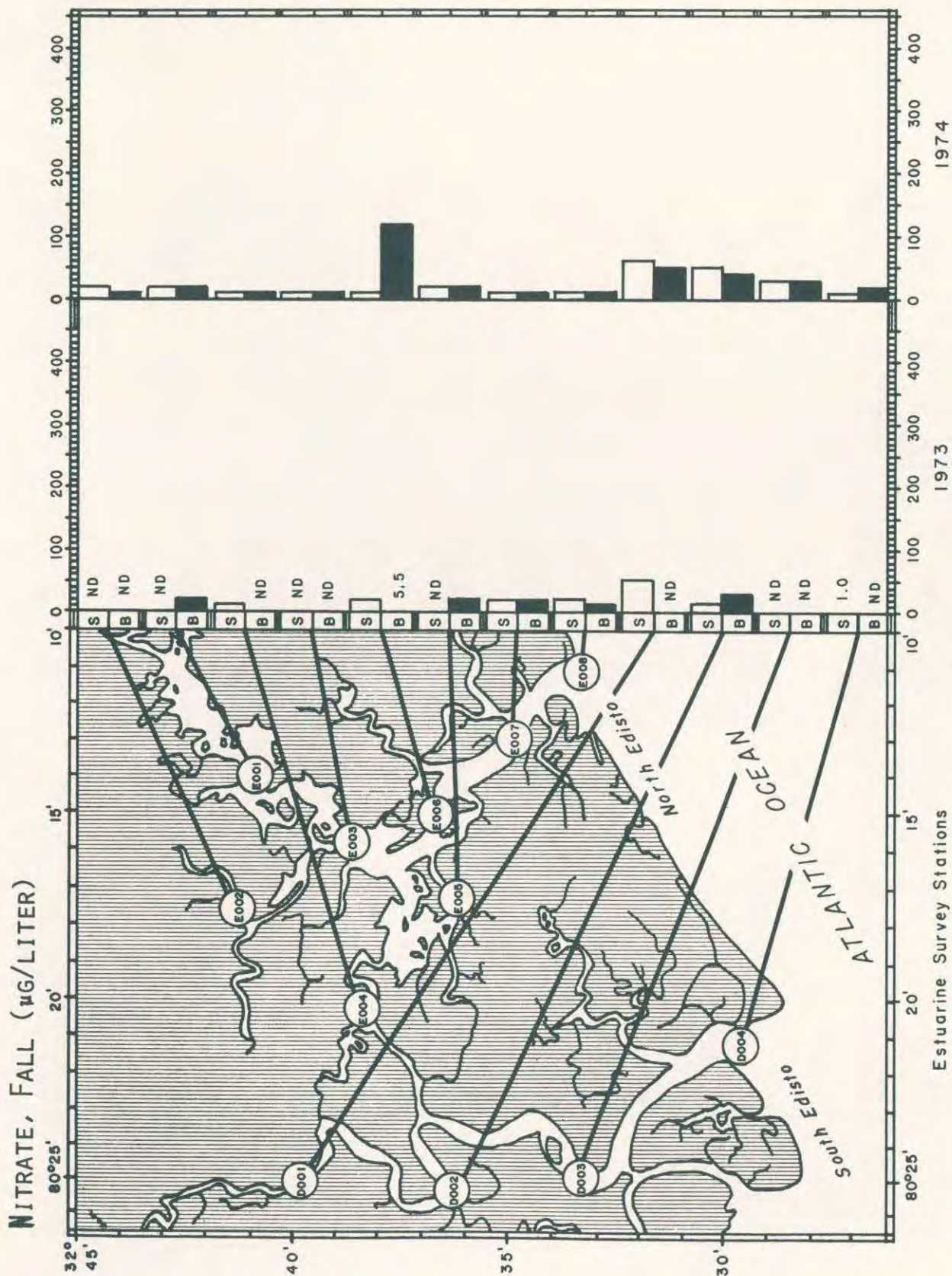


Figure 33. Surface and bottom fall (seasonal mean, three months combined) nitrates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

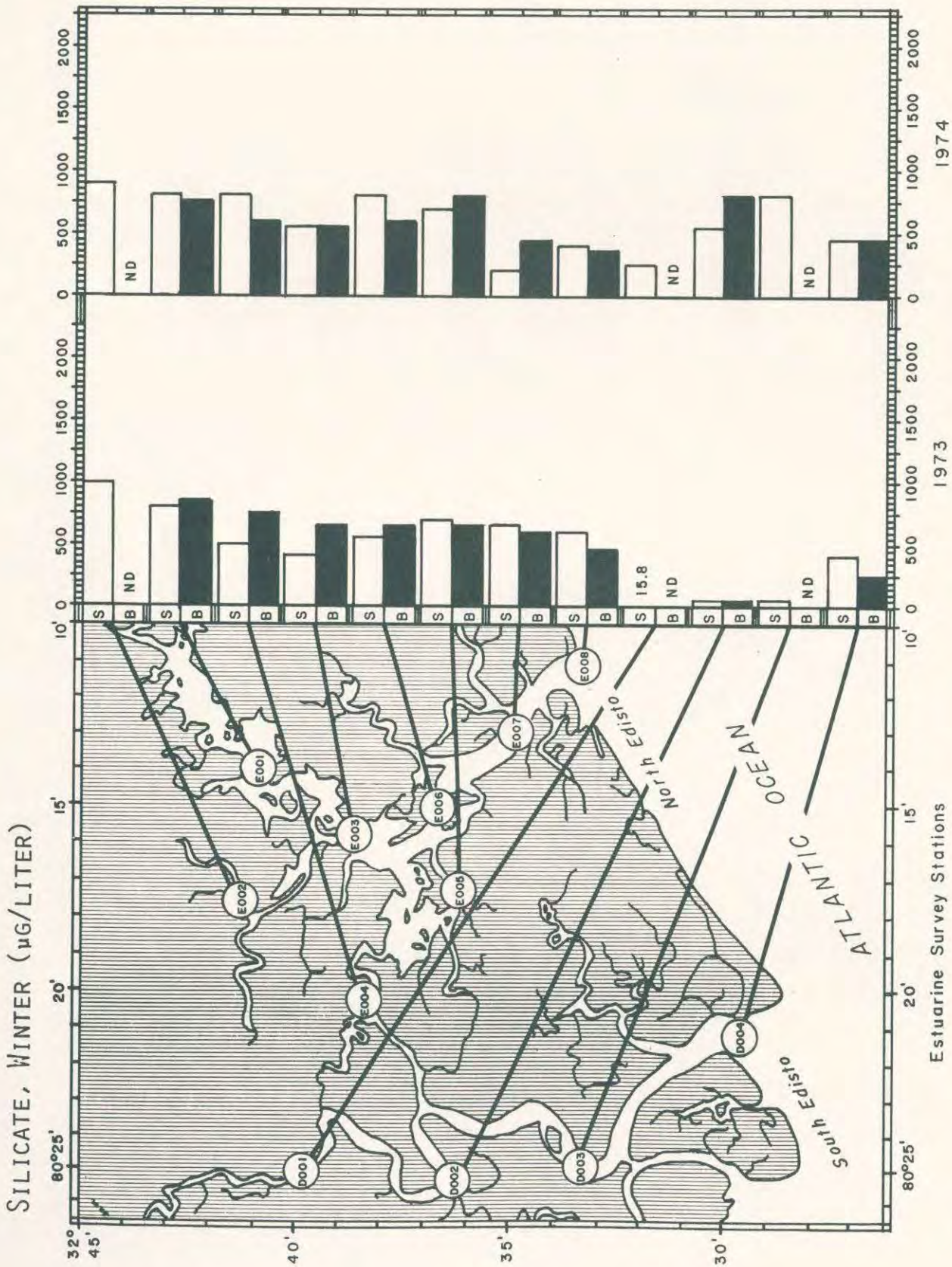


Figure 34. Surface and bottom winter (seasonal mean, three months combined) silicates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

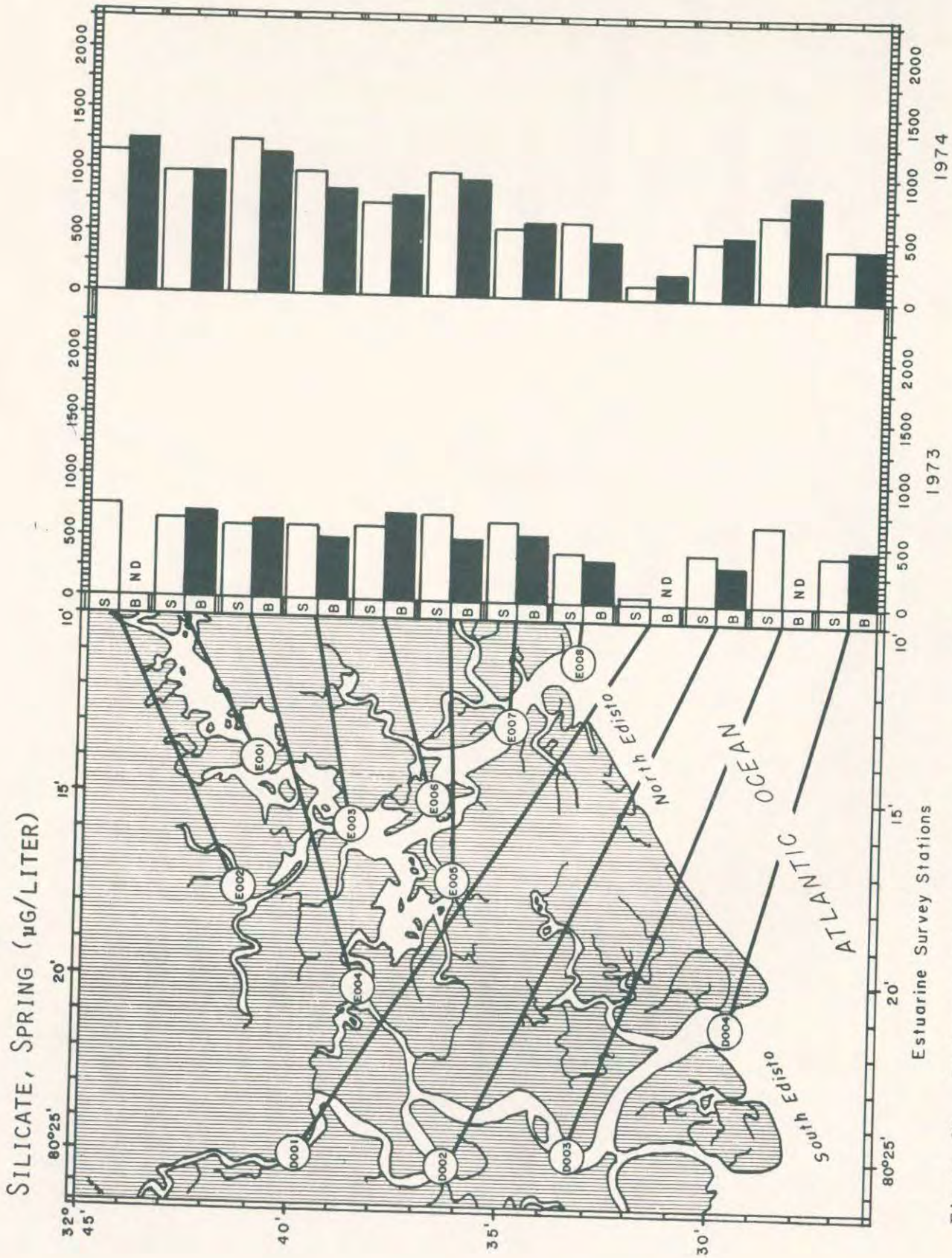


Figure 35. Surface and bottom spring (seasonal mean, three months combined) silicates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

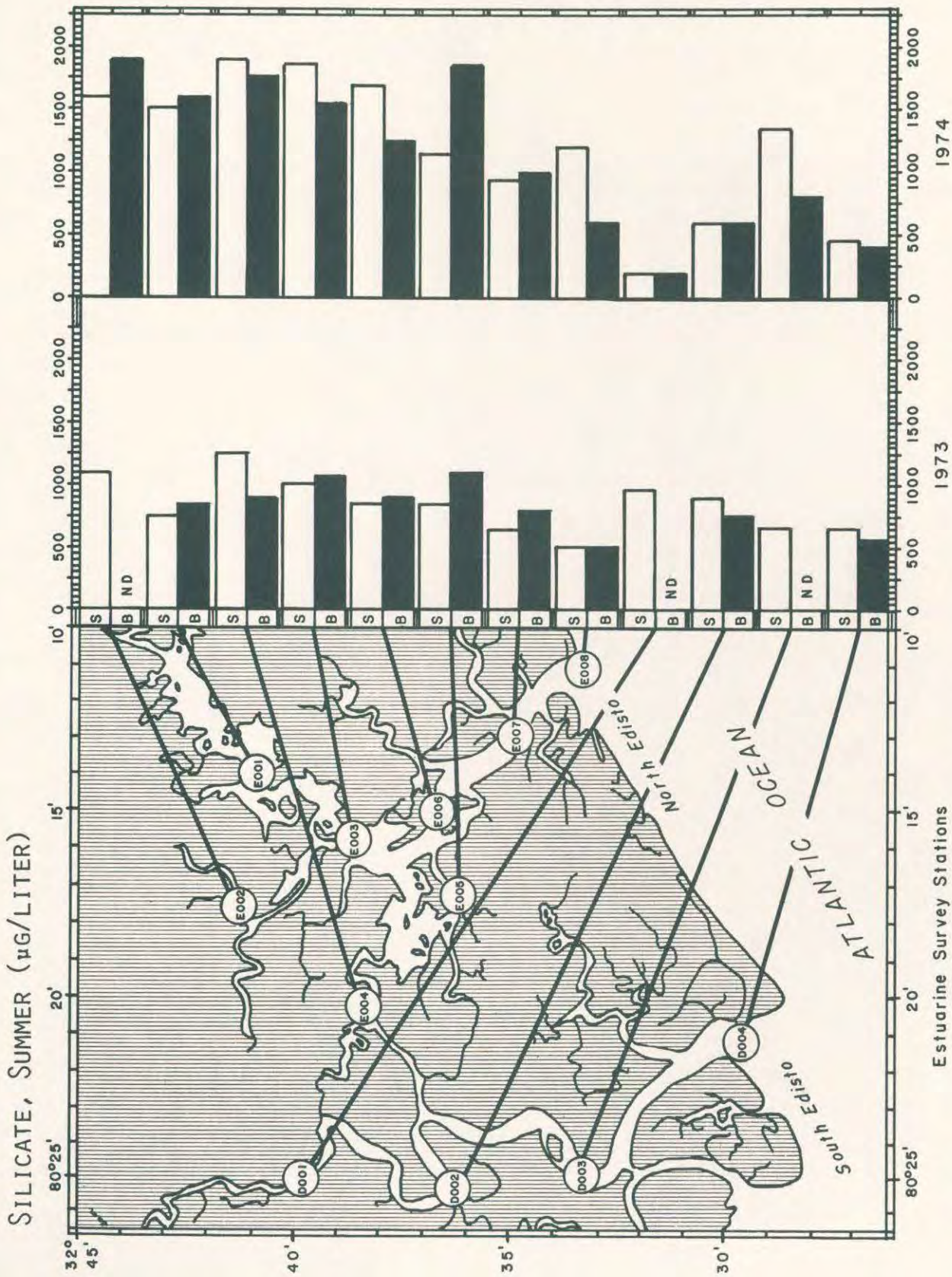


Figure 36. Surface and bottom summer (seasonal mean, three months combined) silicates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

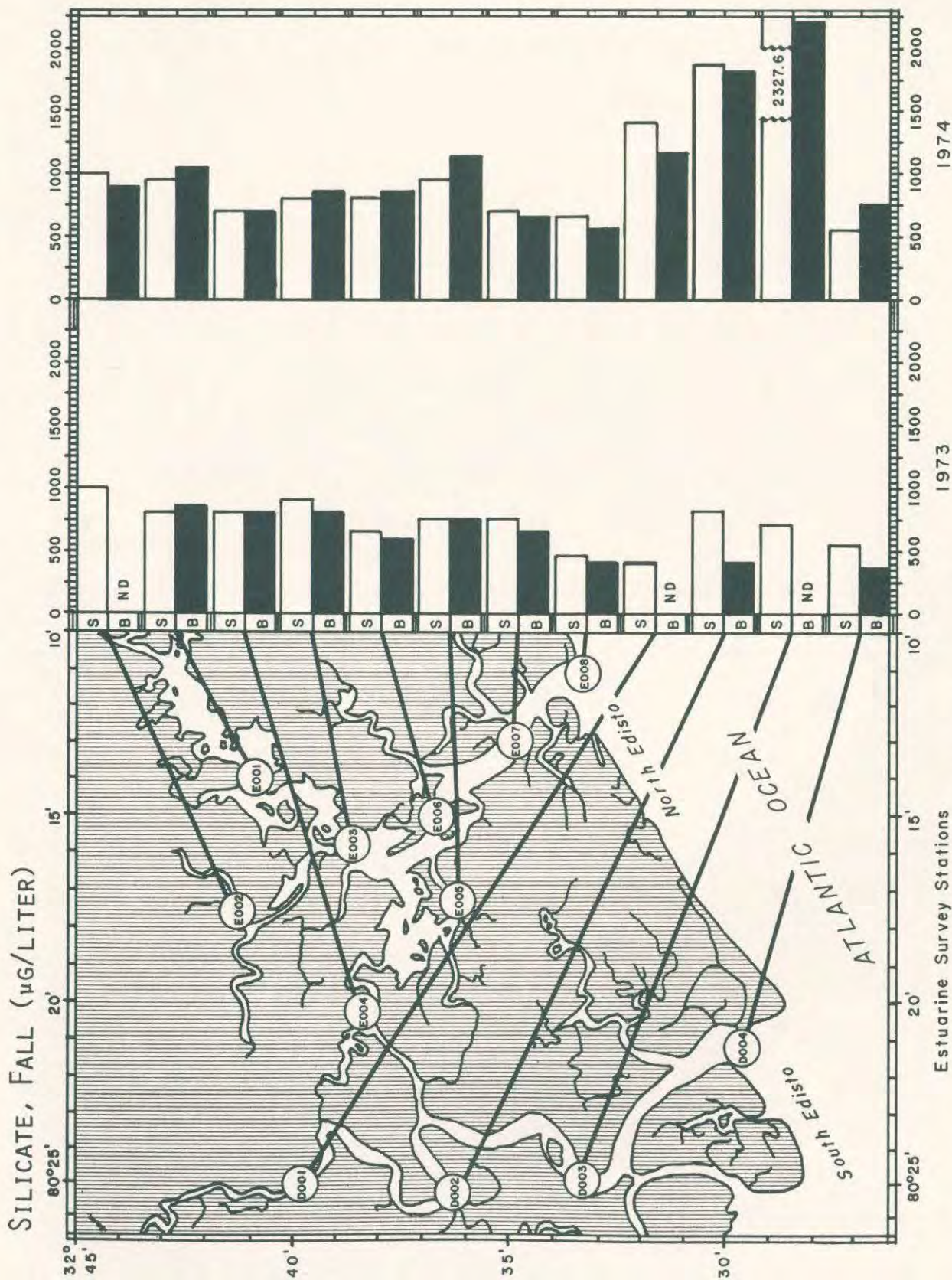


Figure 37. Surface and bottom fall (seasonal mean, three months combined) silicates at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

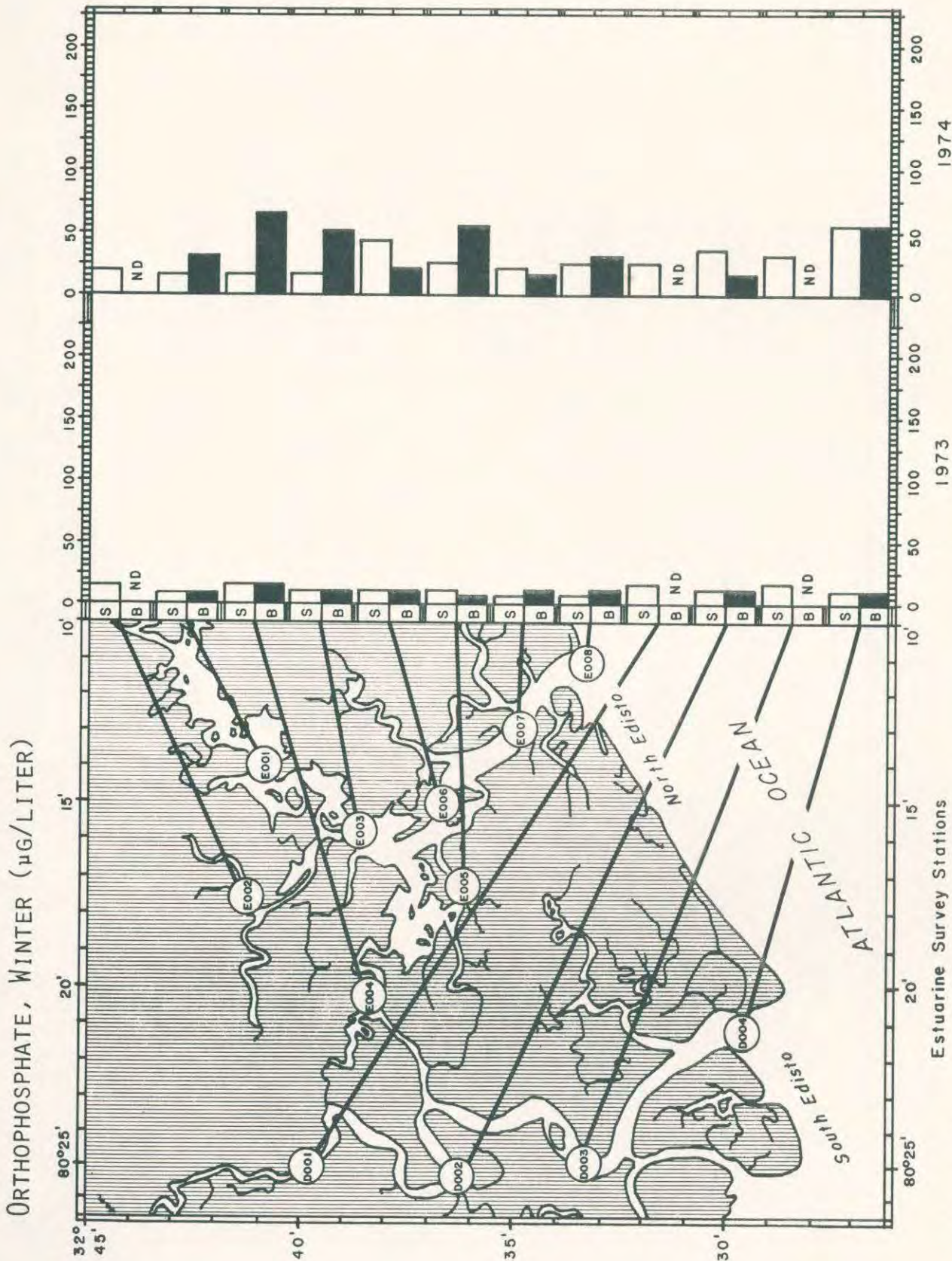


Figure 38. Surface and bottom winter (seasonal mean, three months combined) orthophosphate at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

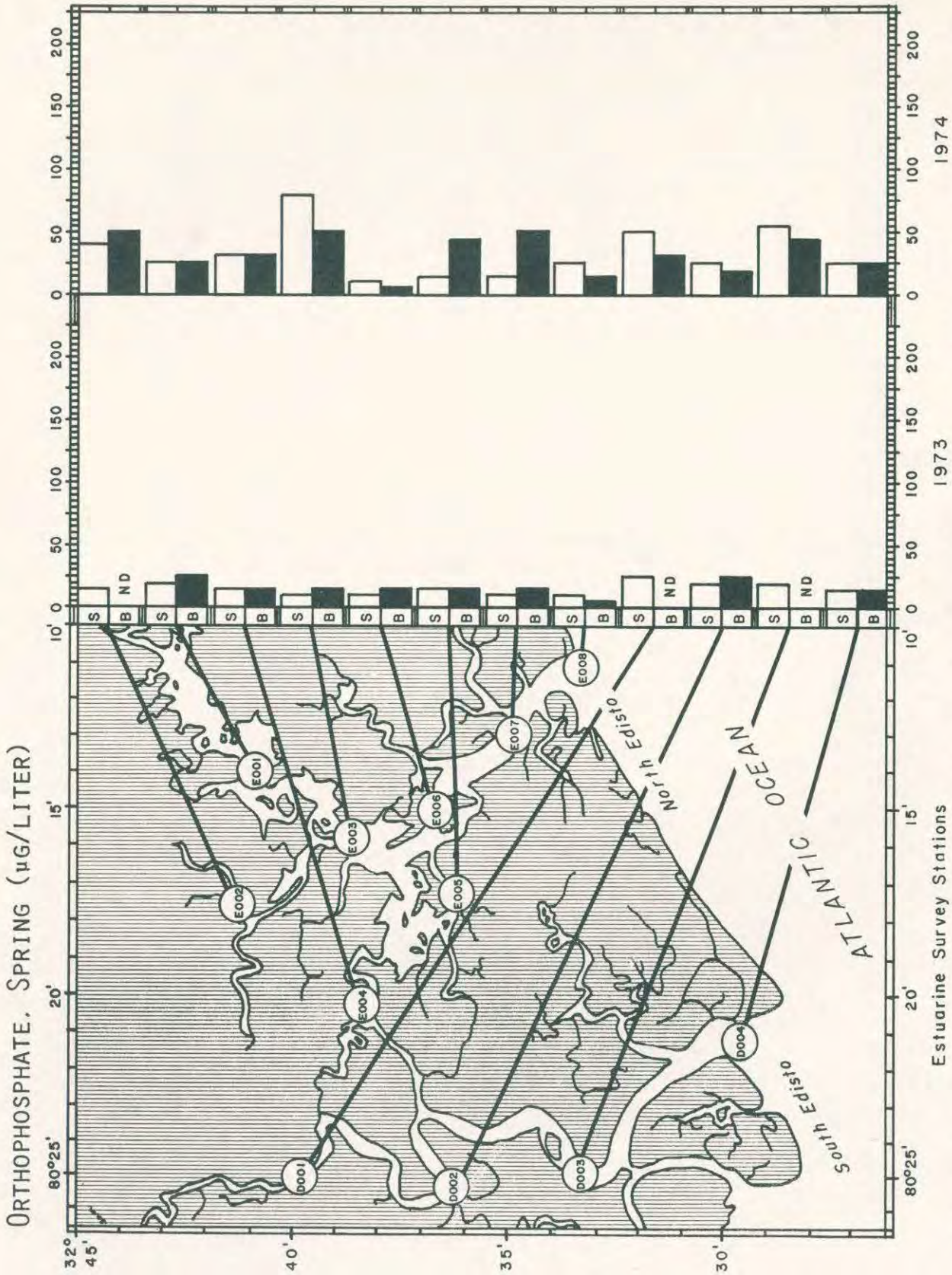


Figure 39. Surface and bottom spring (seasonal mean, three months combined) orthophosphate at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.



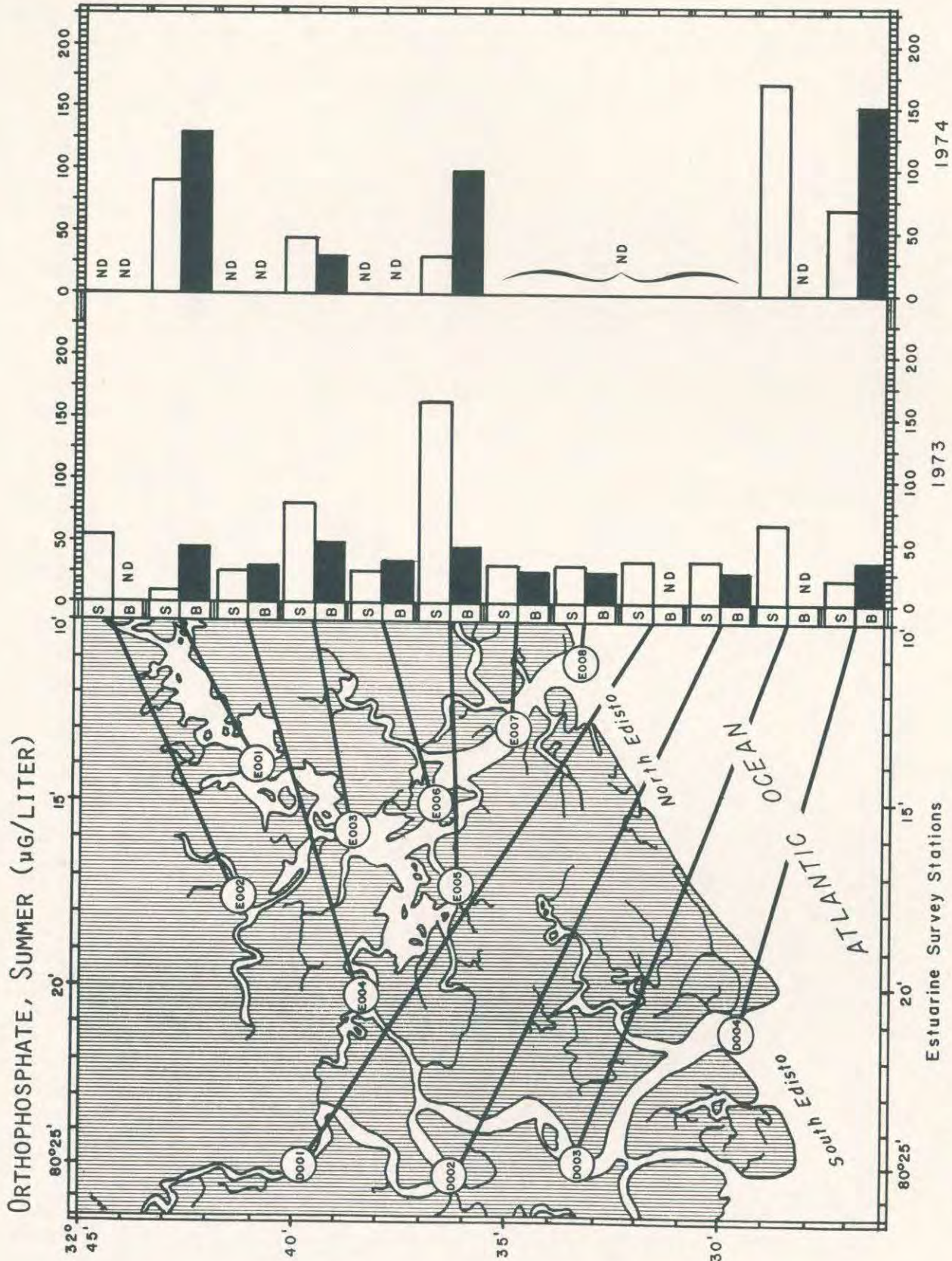


Figure 40. Surface and bottom summer (seasonal mean, three months combined) orthophosphate at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

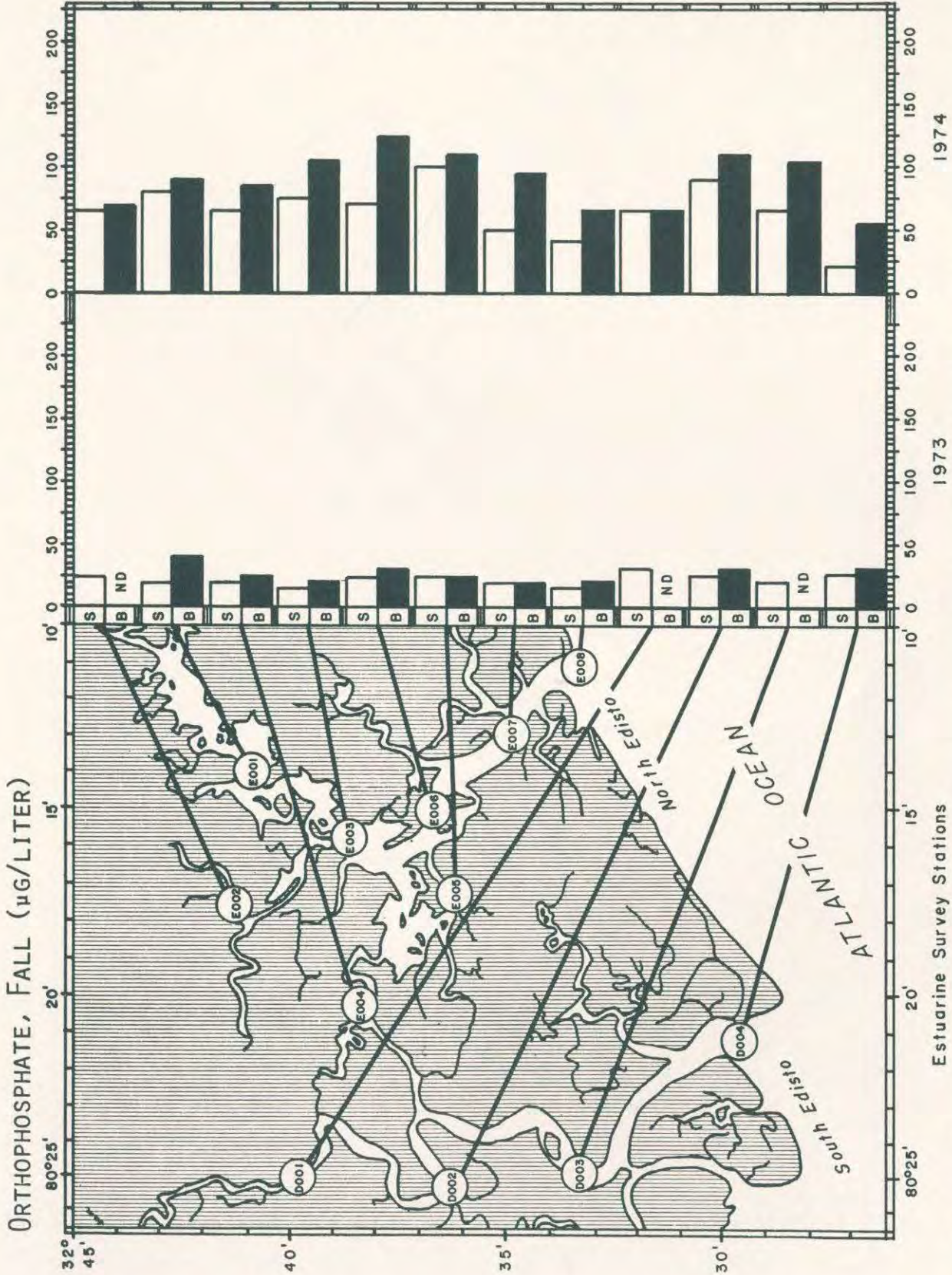


Figure 41. Surface and bottom fall (seasonal mean, three months combined) orthophosphate at 12 monitoring sites throughout the North and South Edisto River estuaries, South Carolina, during each of the two annual cycles, 1973 and 1974.

## COOPER RIVER STATION LOCATIONS

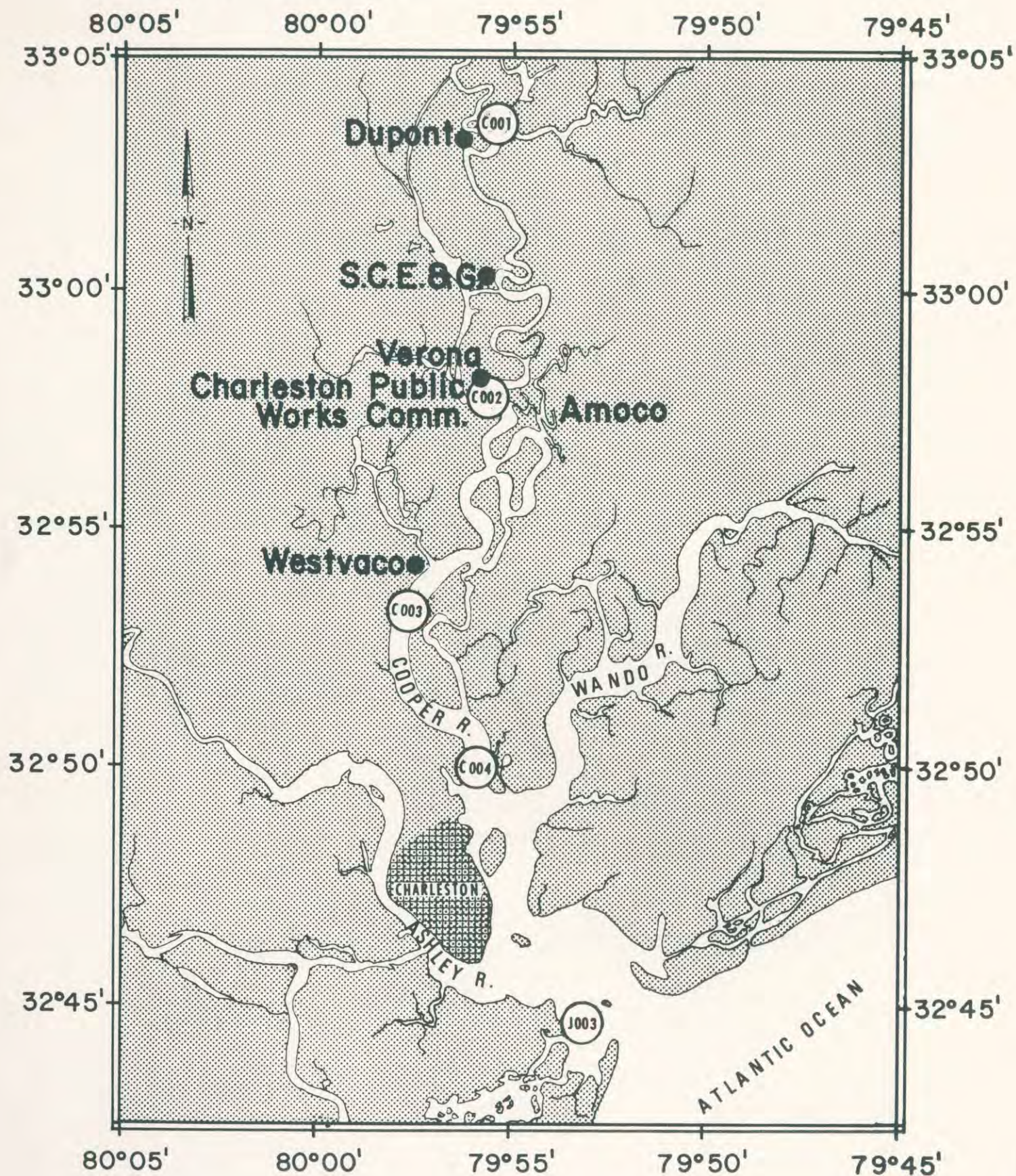


Figure 42. Locations for stations occupied in the Charleston Harbor-Cooper River estuary, South Carolina, during the first two years of study from February, 1973 through January, 1975.

Figure 43.

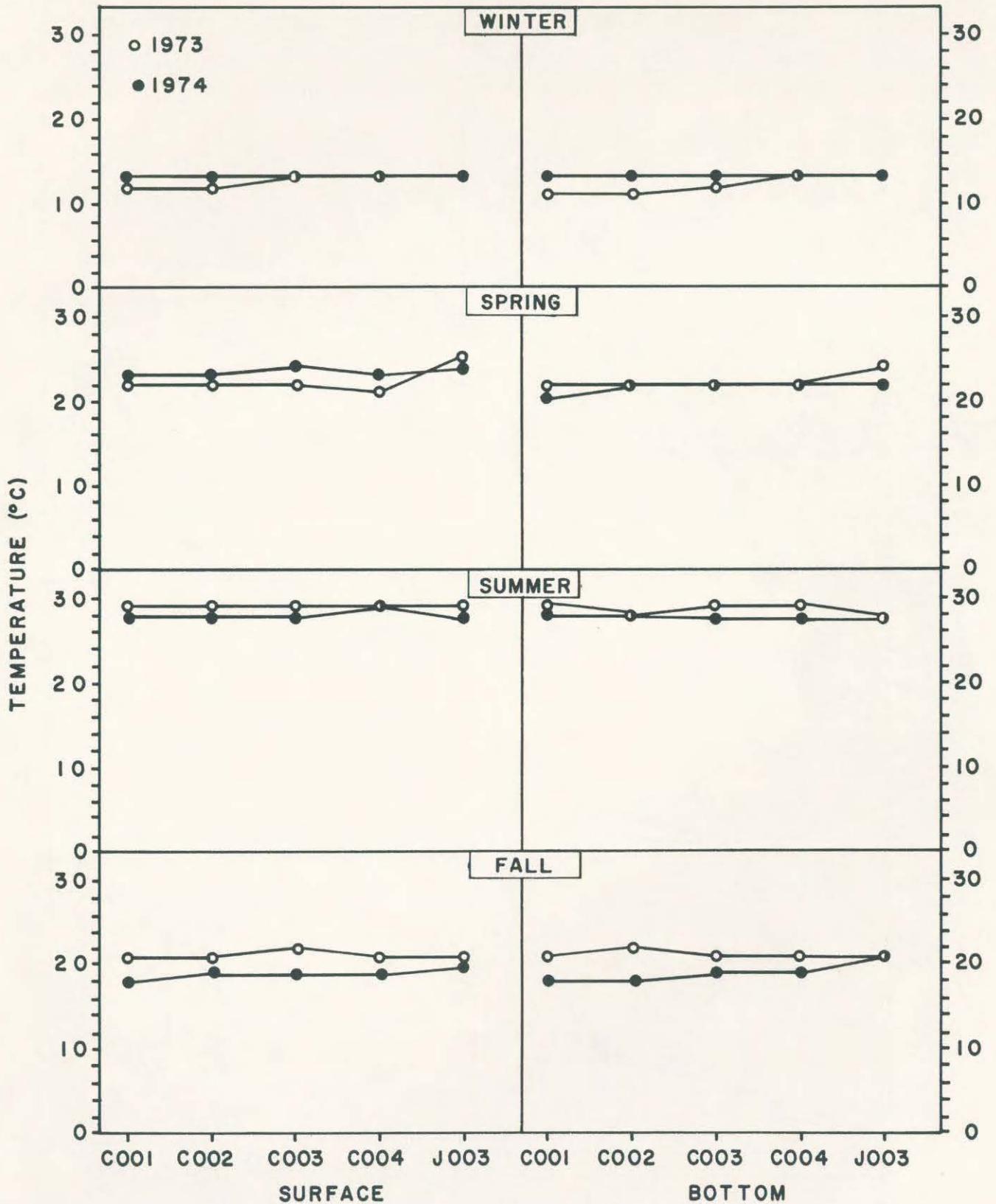


Figure 43. Surface and bottom water temperatures (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 44.

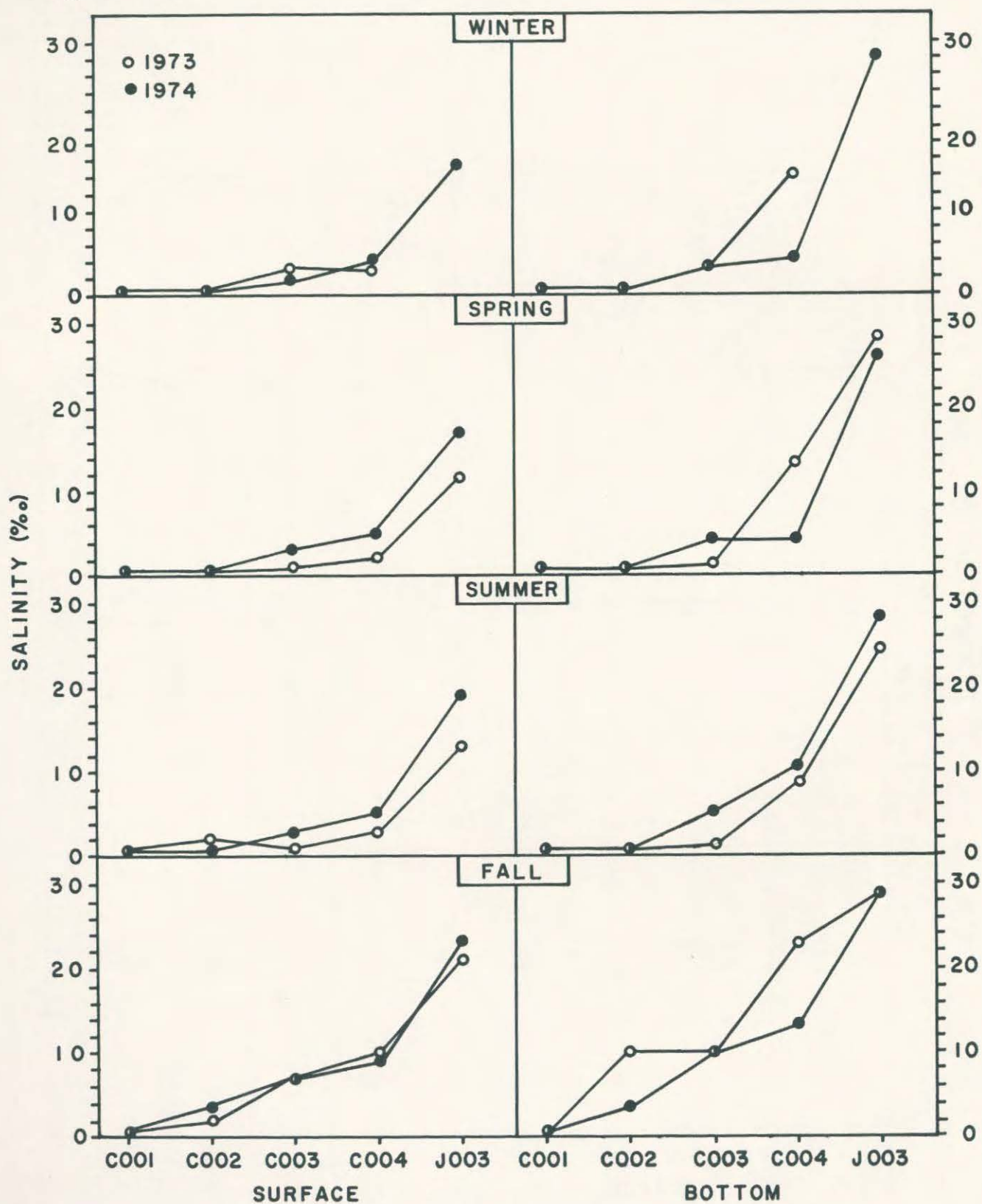


Figure 44.

Surface and bottom salinities (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 45.

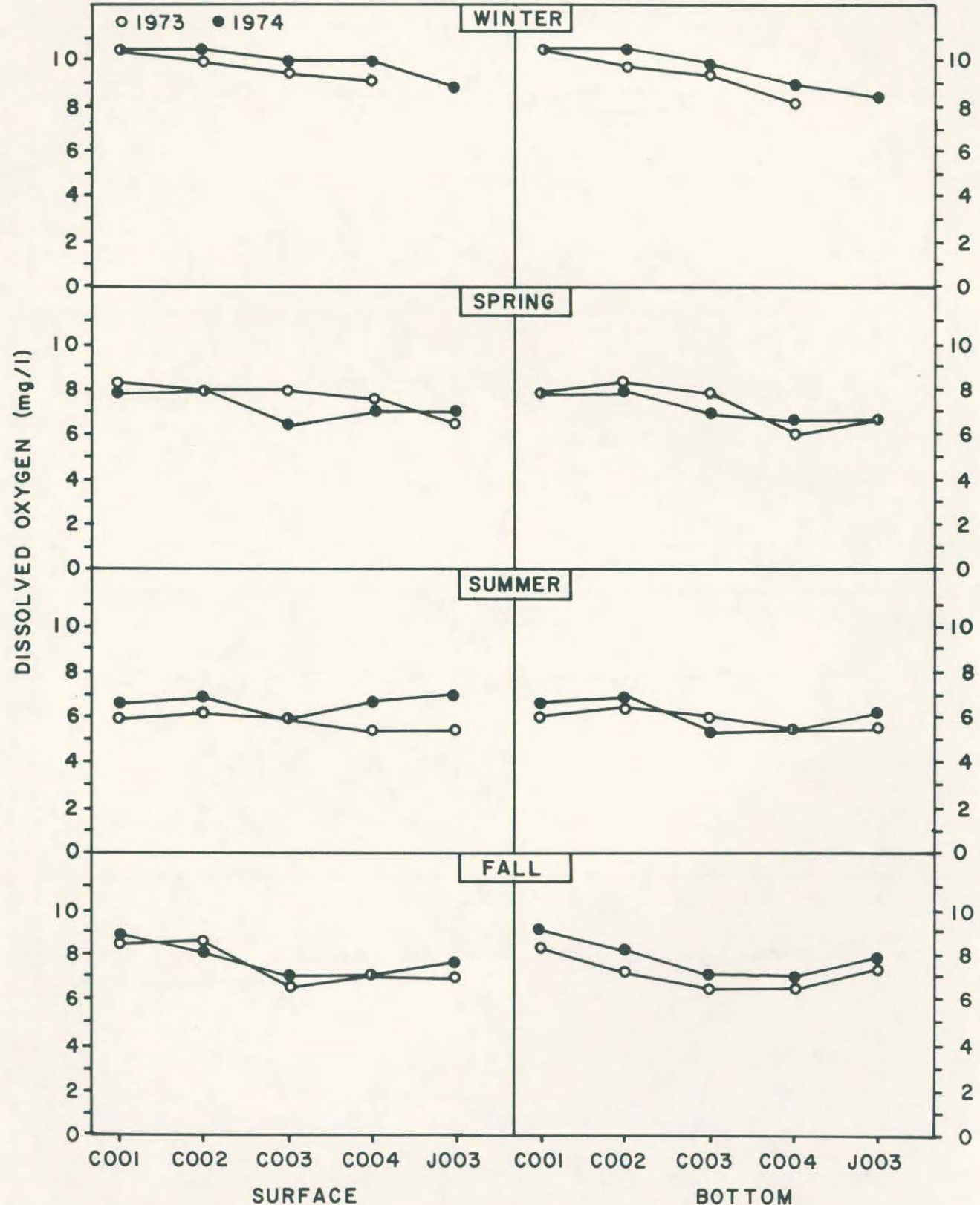


Figure 45.

Surface and bottom dissolved oxygen concentrations (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 46.

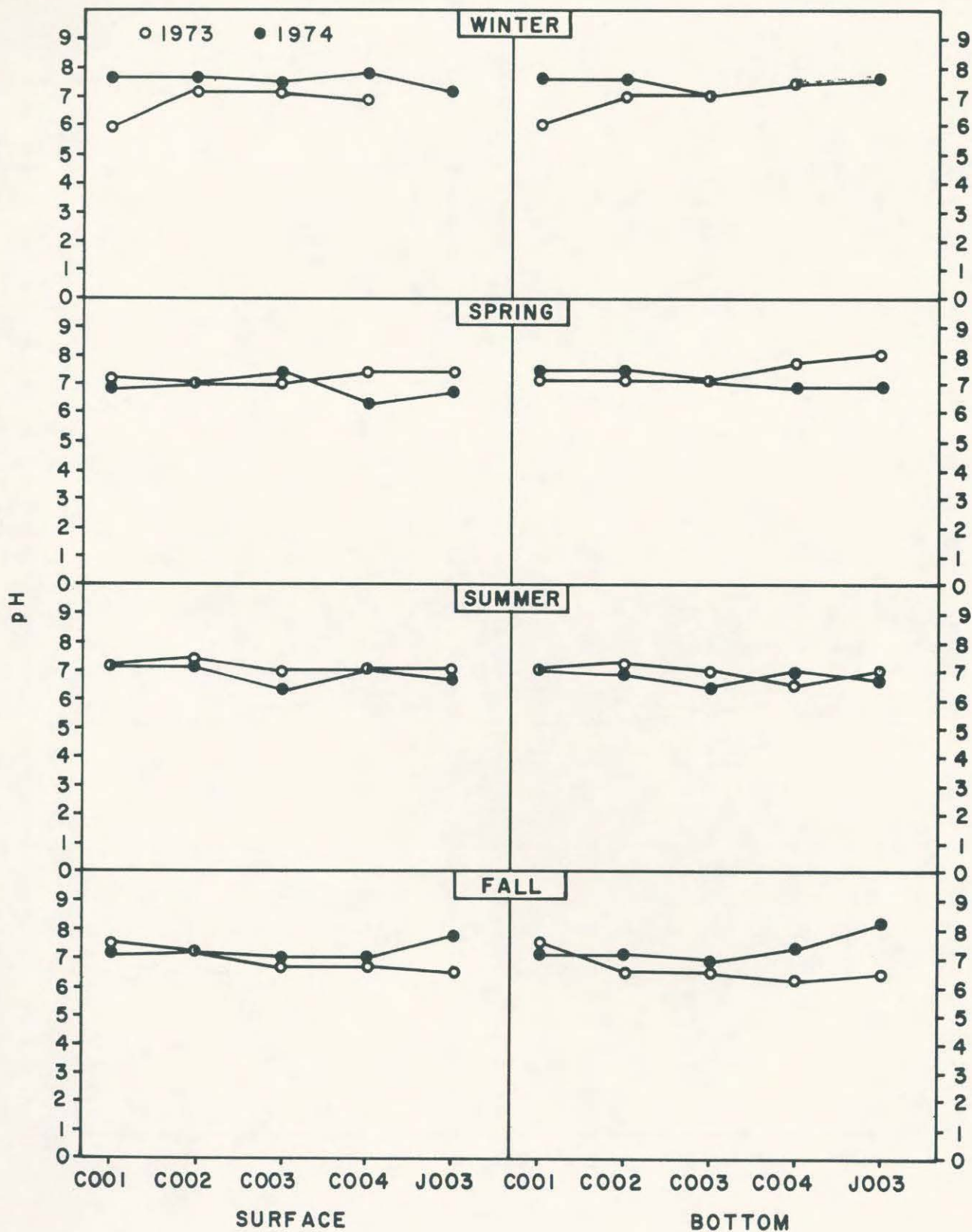


Figure 46. Surface and bottom potential hydrogen ion concentrations (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 47.

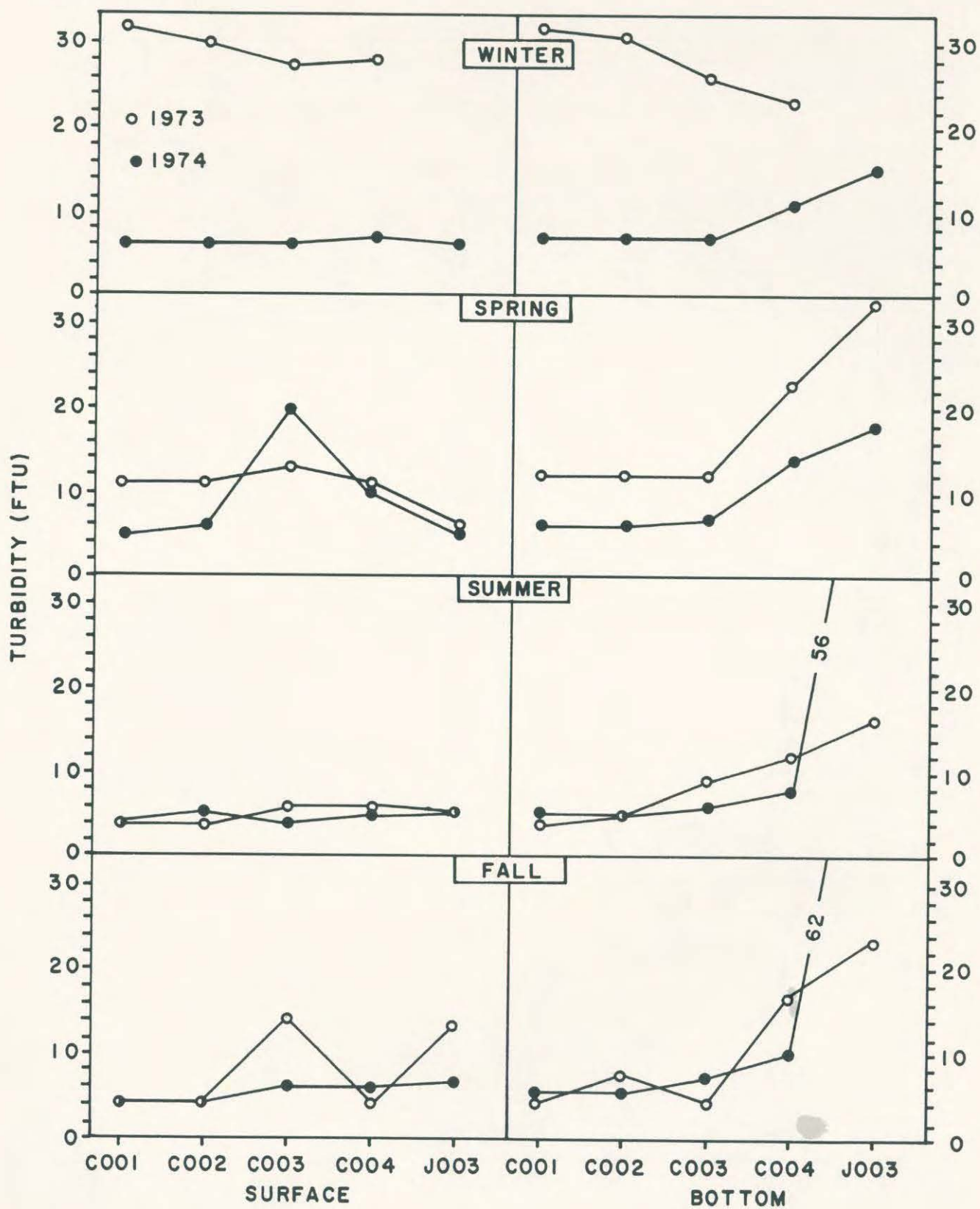


Figure 47. Surface and bottom turbidities (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.



Figure 48.

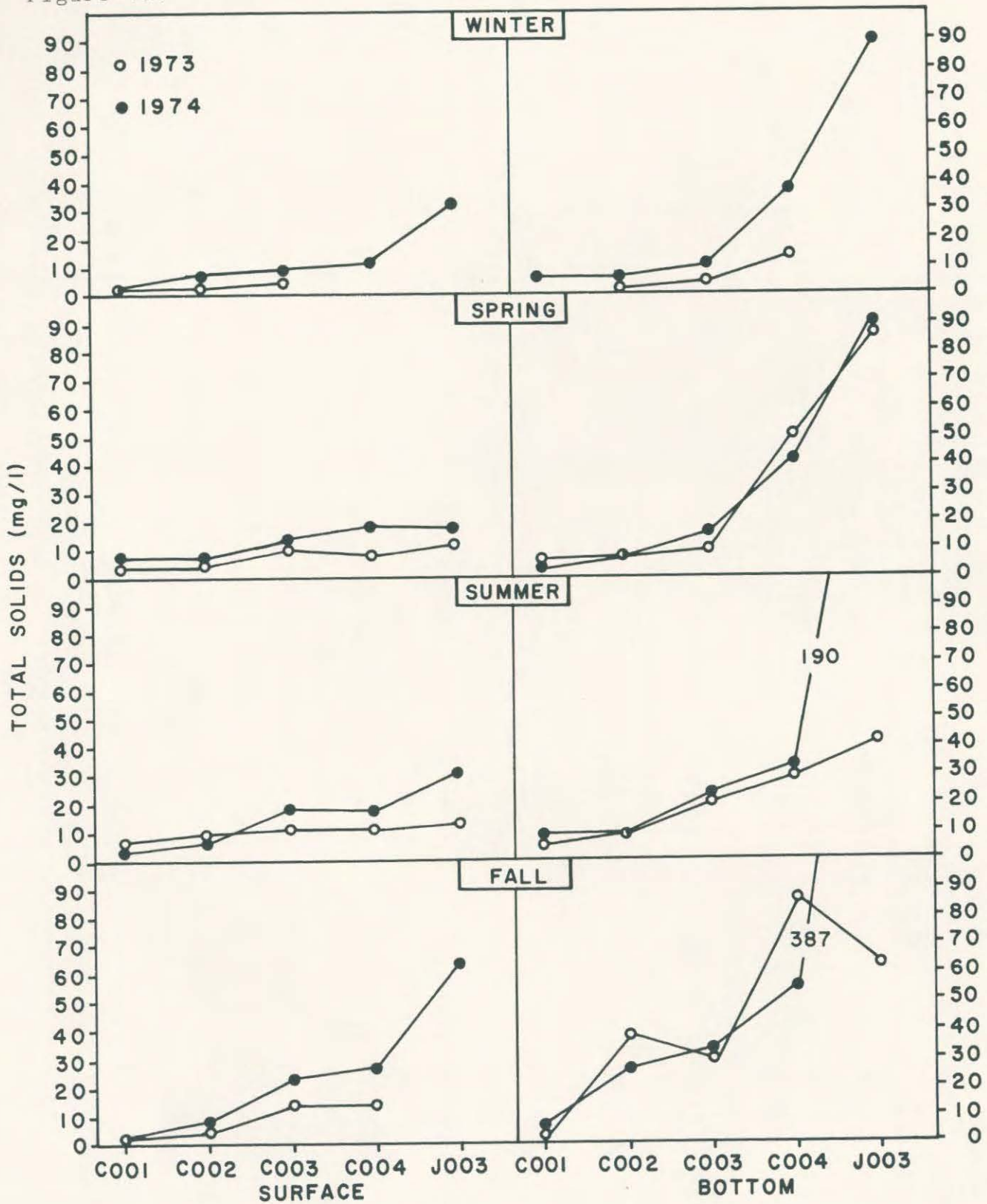


Figure 48.

Surface and bottom total solids (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 49.

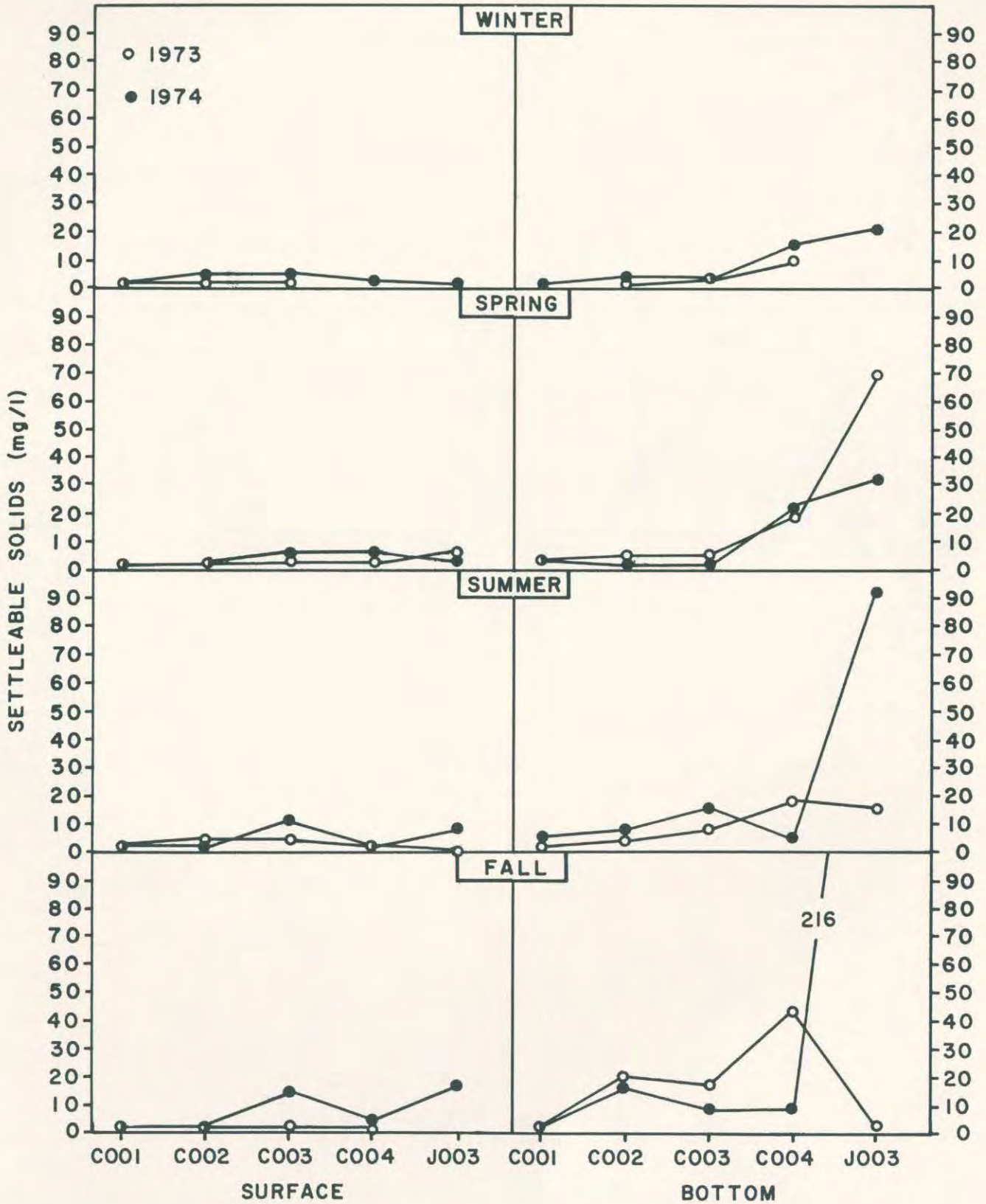


Figure 49.

Surface and bottom settleable solids (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 50.

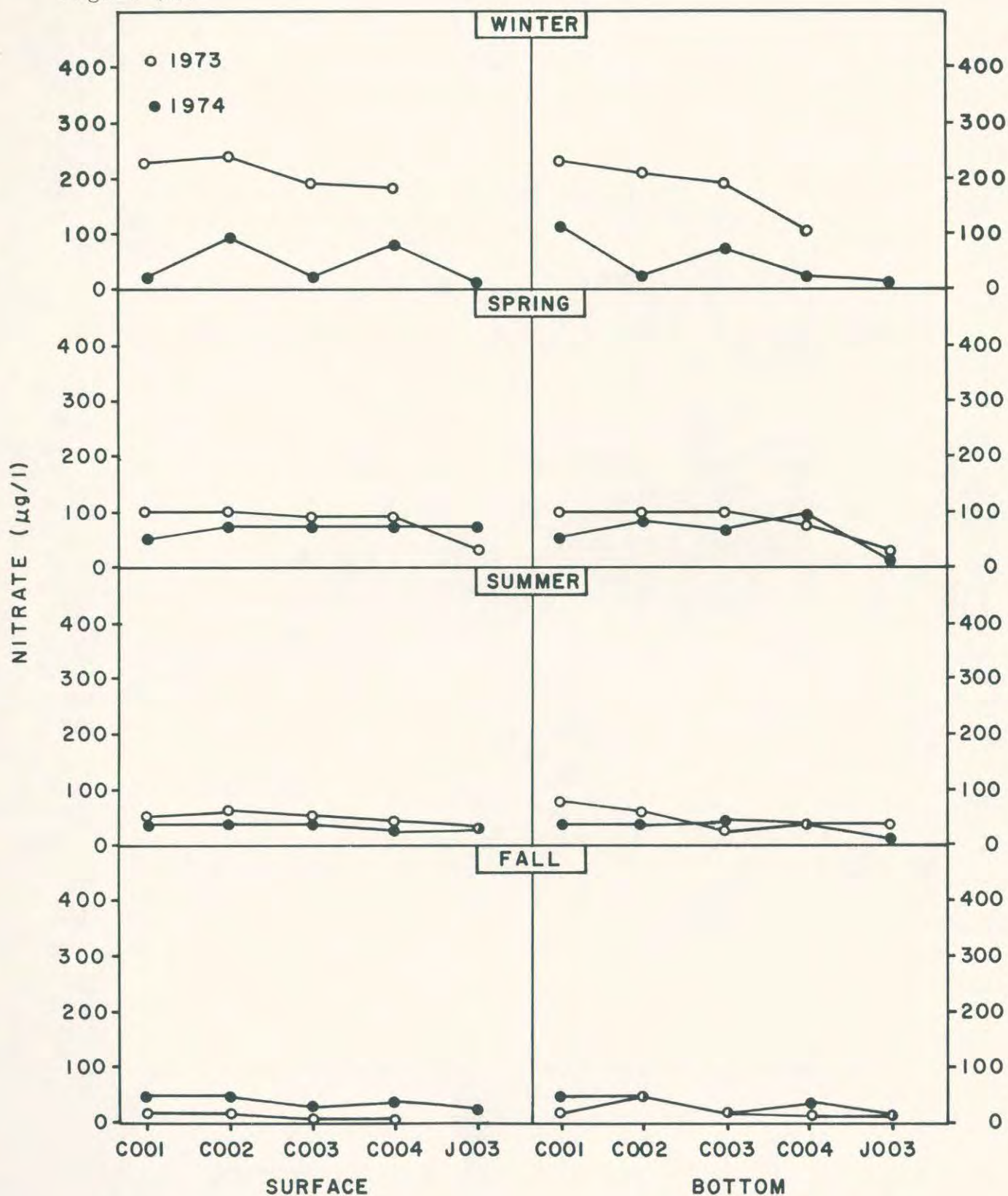


Figure 50. Surface and bottom nitrates (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 51.

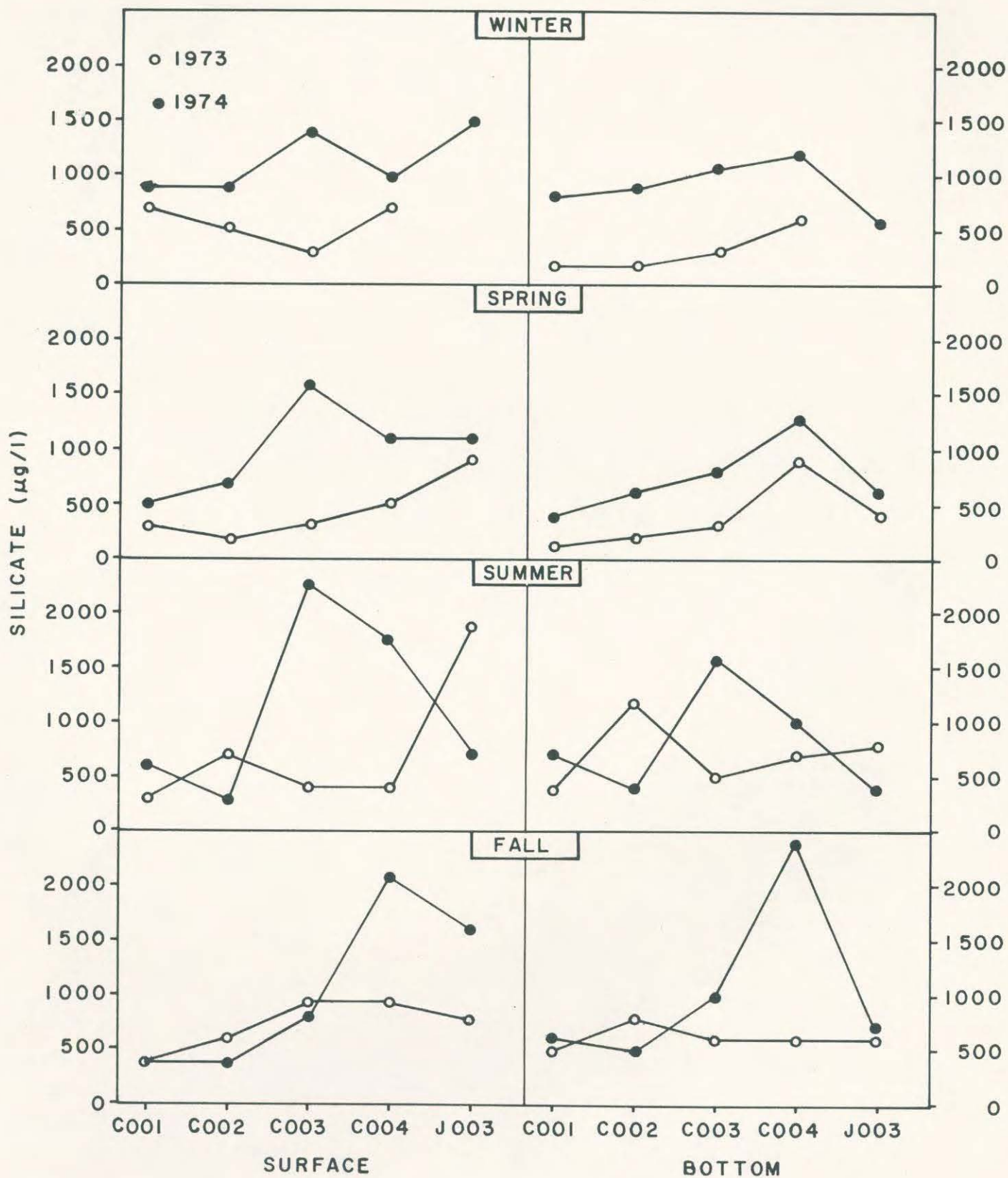


Figure 51. Surface and bottom silicates (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 52.

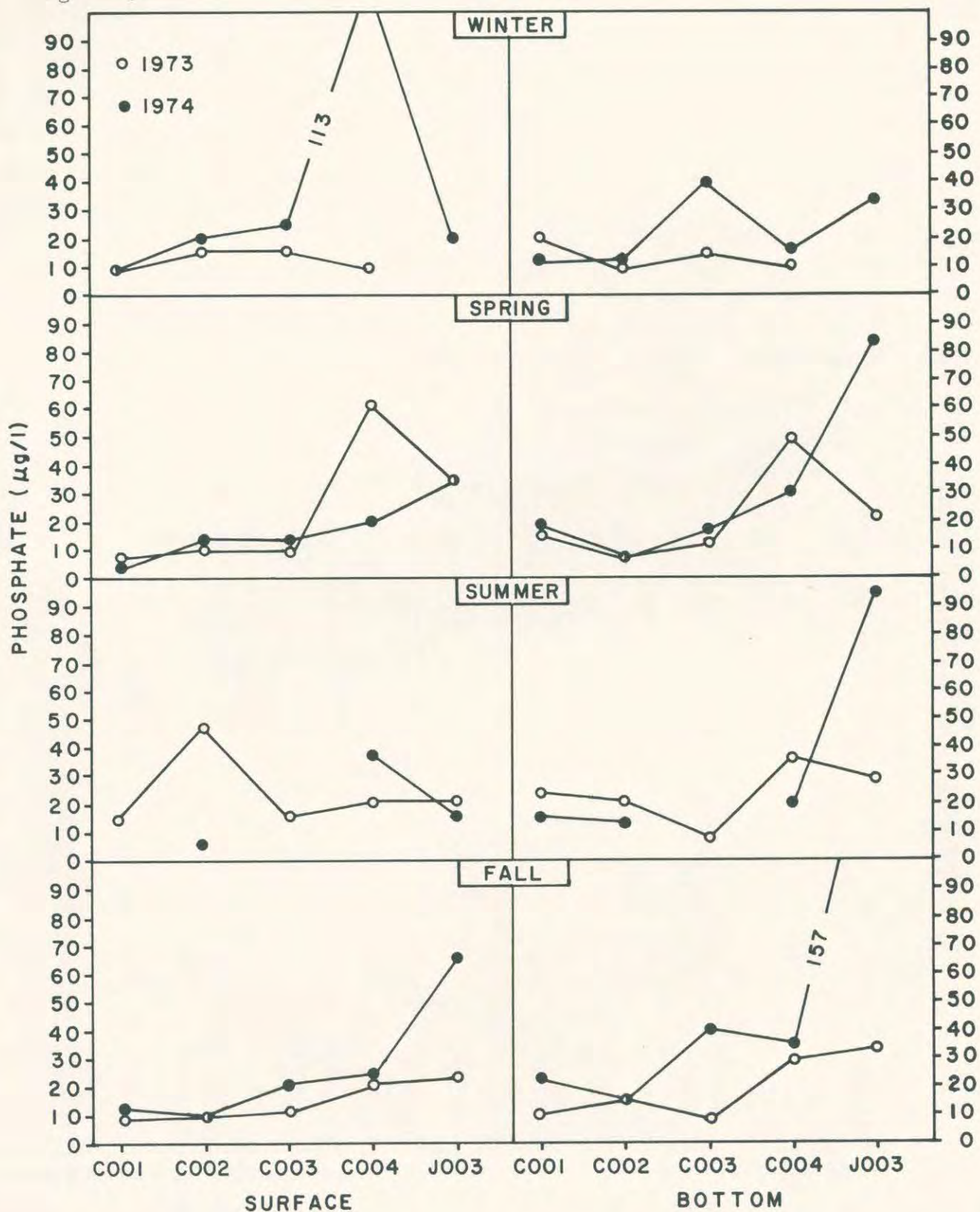


Figure 52. Surface and bottom orthophosphate (seasonal means, three months combined) in the Charleston Harbor-Cooper River estuary, South Carolina, during each of the two annual cycles, 1973 and 1974.

Figure 53. Cooper River

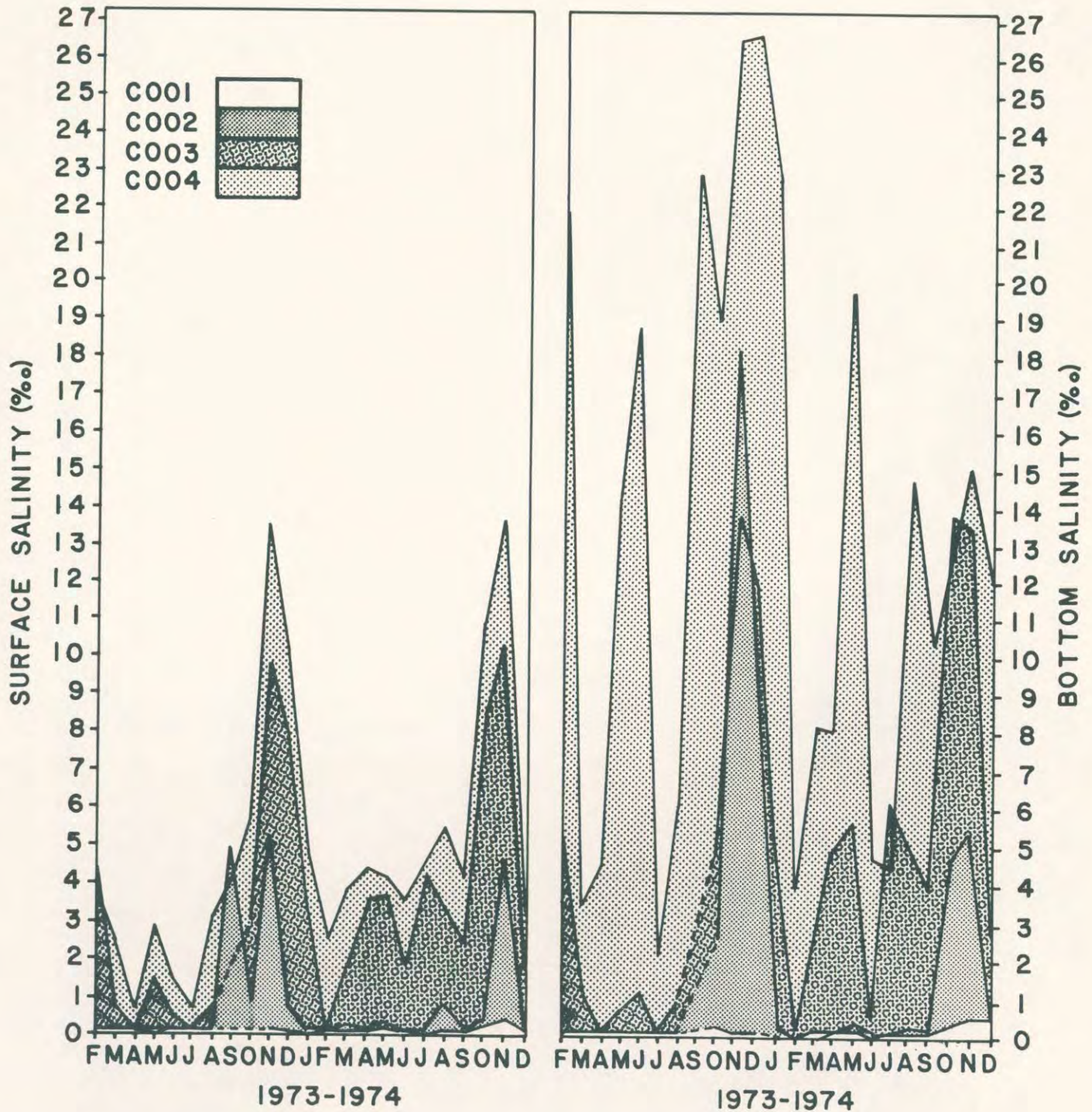


Figure 53. Monthly surface and bottom salinities throughout the Cooper River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

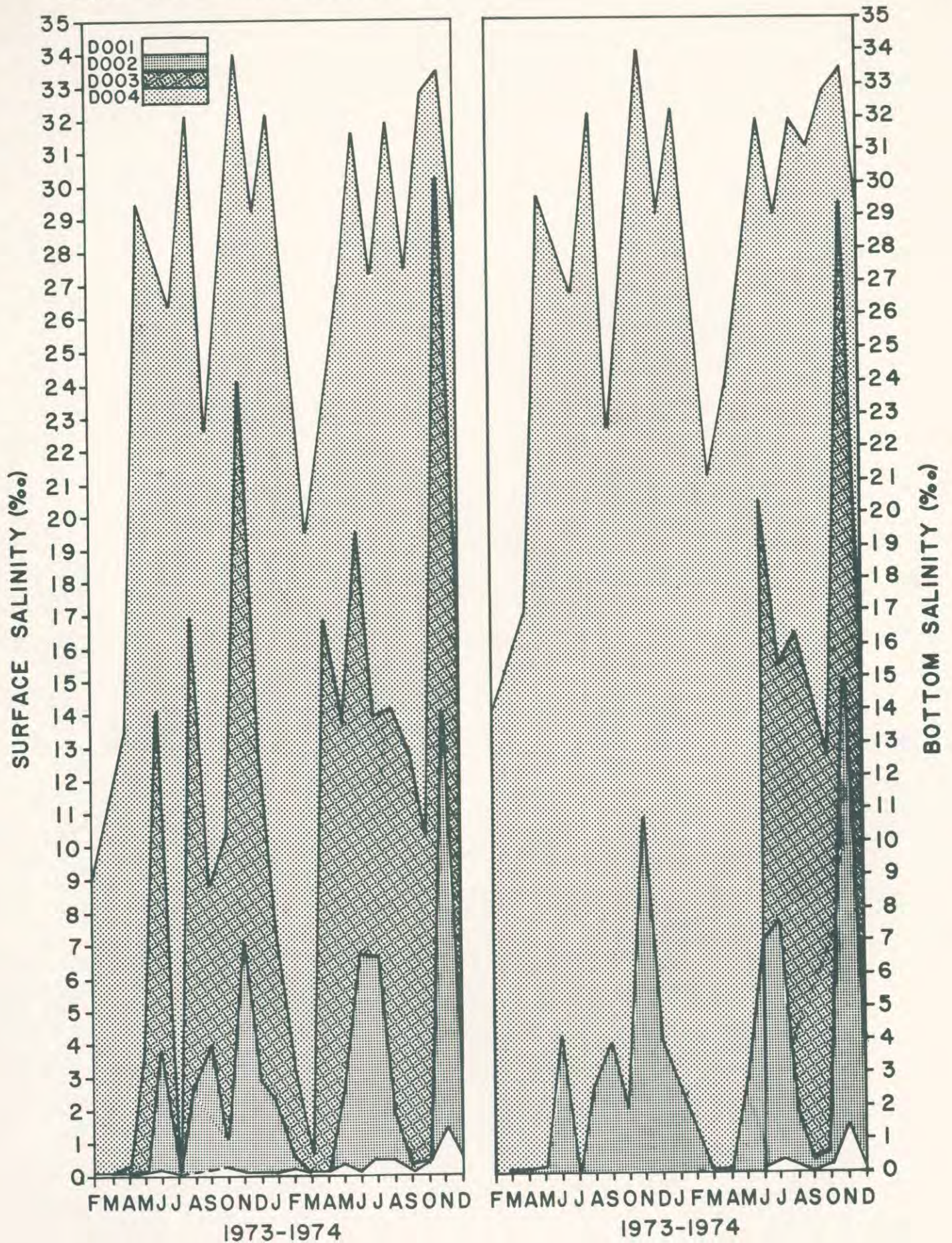


Figure 54. Monthly surface and bottom salinities throughout the South Edisto estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

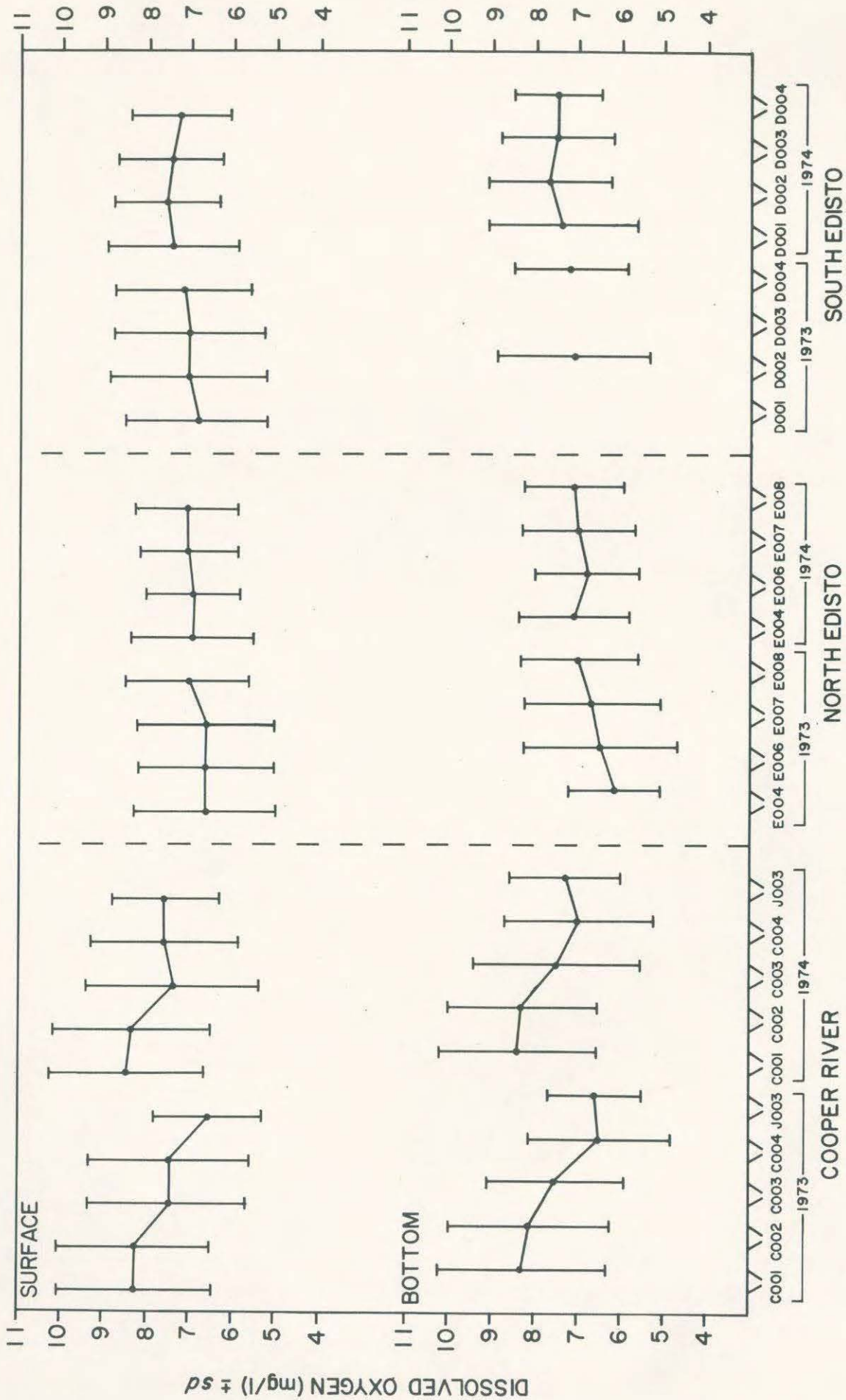


FIGURE 55. DISSOLVED OXYGEN CONCENTRATIONS (ANNUAL MEANS, SURFACE VERSUS BOTTOM) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.



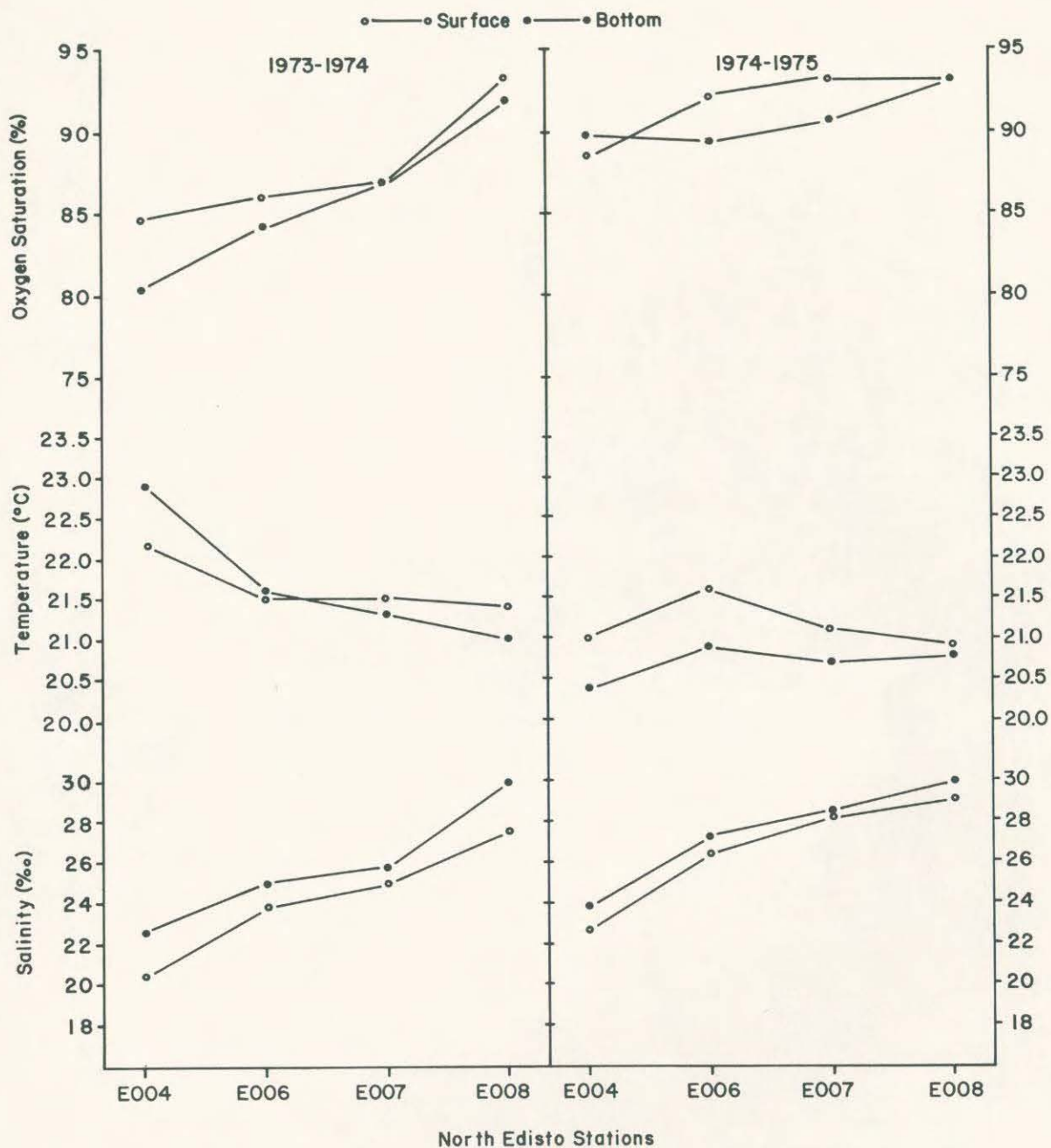


FIGURE 56. SALINITY, WATER TEMPERATURE, AND DISSOLVED OXYGEN SATURATION (ANNUAL MEANS, SURFACE VERSUS BOTTOM) IN THE NORTH EDISTO ESTUARY, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.

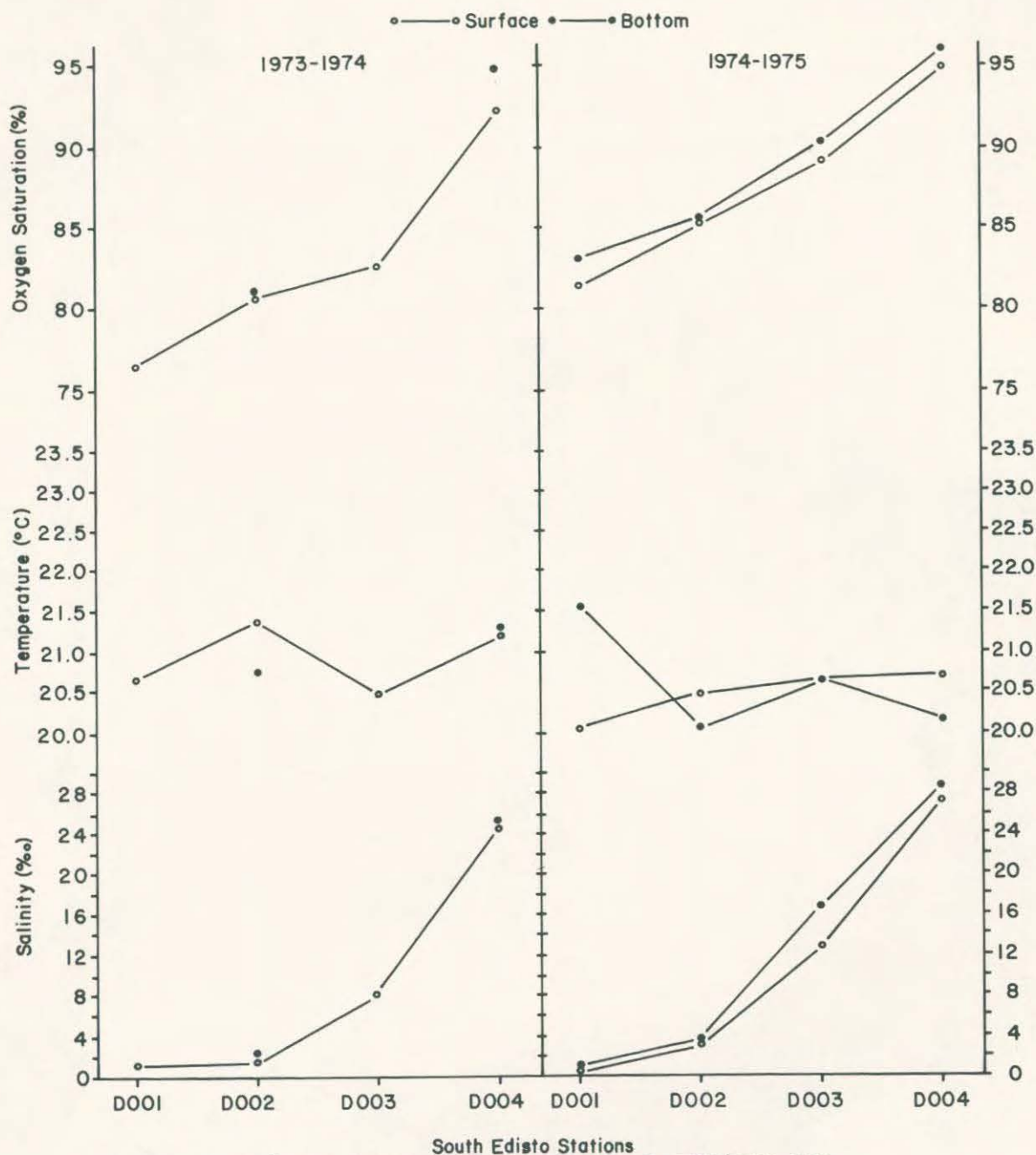


FIGURE 57. SALINITY, WATER TEMPERATURE, AND DISSOLVED OXYGEN SATURATION (ANNUAL MEANS, SURFACE VERSUS BOTTOM) THROUGHOUT THE SOUTH EDISTO ESTUARY, SOUTH CAROLINA, DURING THE TWO ANNUAL CYCLES FROM FEBRUARY, 1973 THROUGH JANUARY, 1975. DURING THE FIRST YEAR DATA WERE TAKEN ONLY AT THE SURFACE FOR STATIONS D001 (SNUGGEDY SWAMP) AND D003 (FENWICK ISLAND) DUE TO THE SHALLOW DEPTHS AT THESE LOCATIONS.

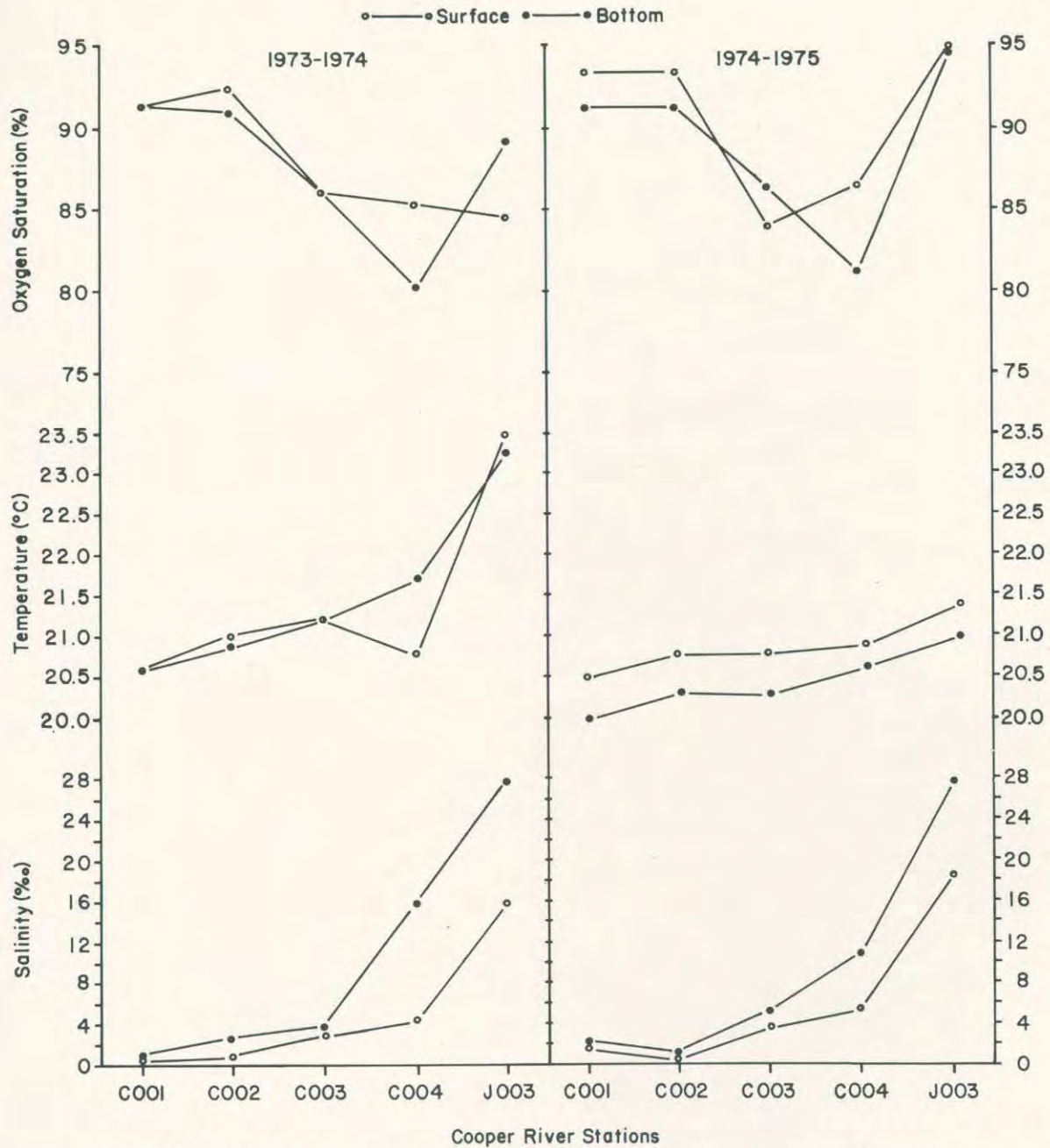


FIGURE 58. SALINITY, WATER TEMPERATURE, AND DISSOLVED OXYGEN SATURATION (ANNUAL MEANS, SURFACE VERSUS BOTTOM) IN THE CHARLESTON HARBOR-COOPER RIVER ESTUARY, SOUTH CAROLINA, DURING THE TWO ANNUAL CYCLES FROM FEBRUARY, 1973 THROUGH JANUARY, 1975.

FIGURE 59. SURFACE AND BOTTOM TURBIDITIES (ANNUAL MEANS) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.

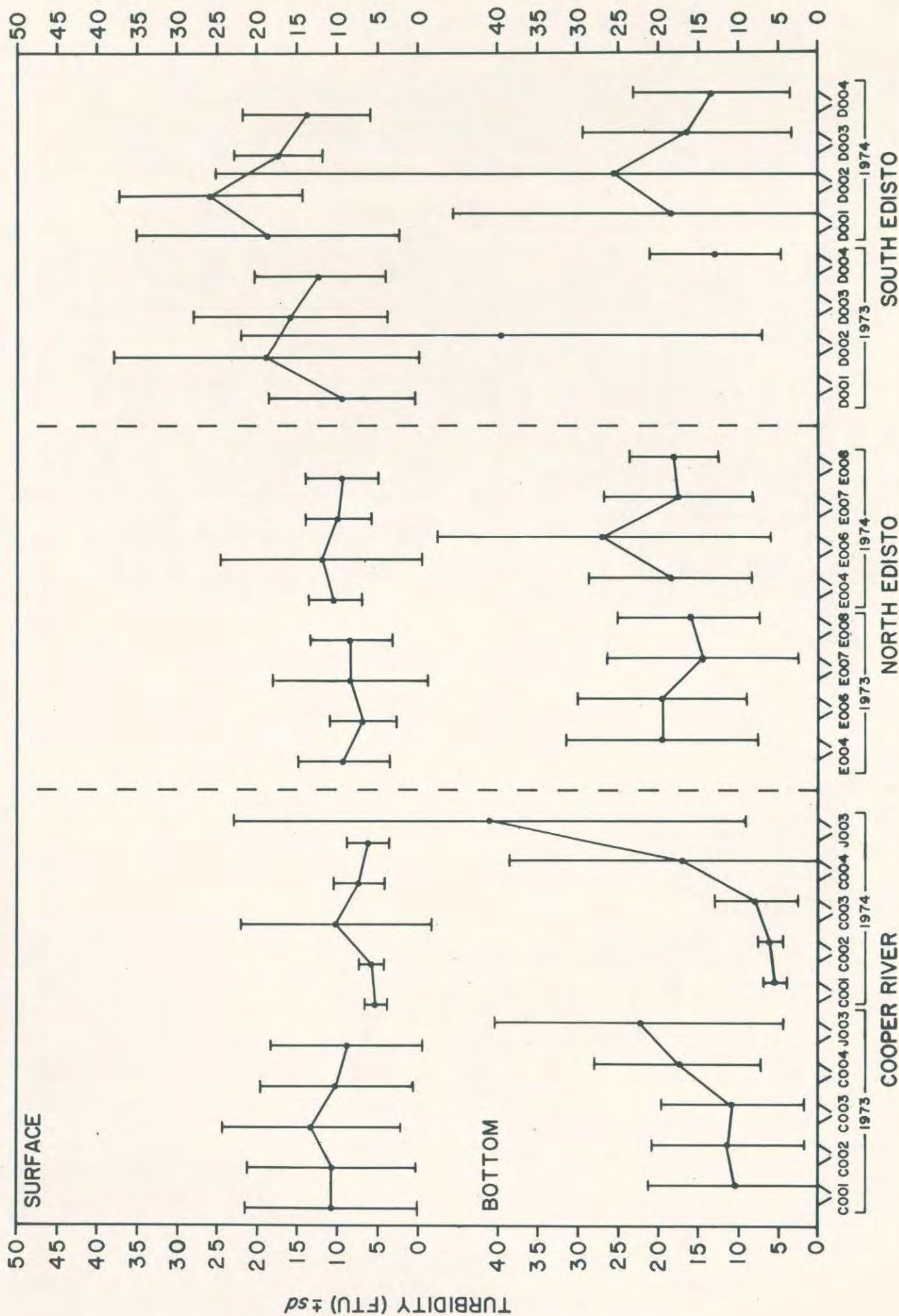


FIGURE 60. SURFACE AND BOTTOM TOTAL SOLIDS (ANNUAL MEANS) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.

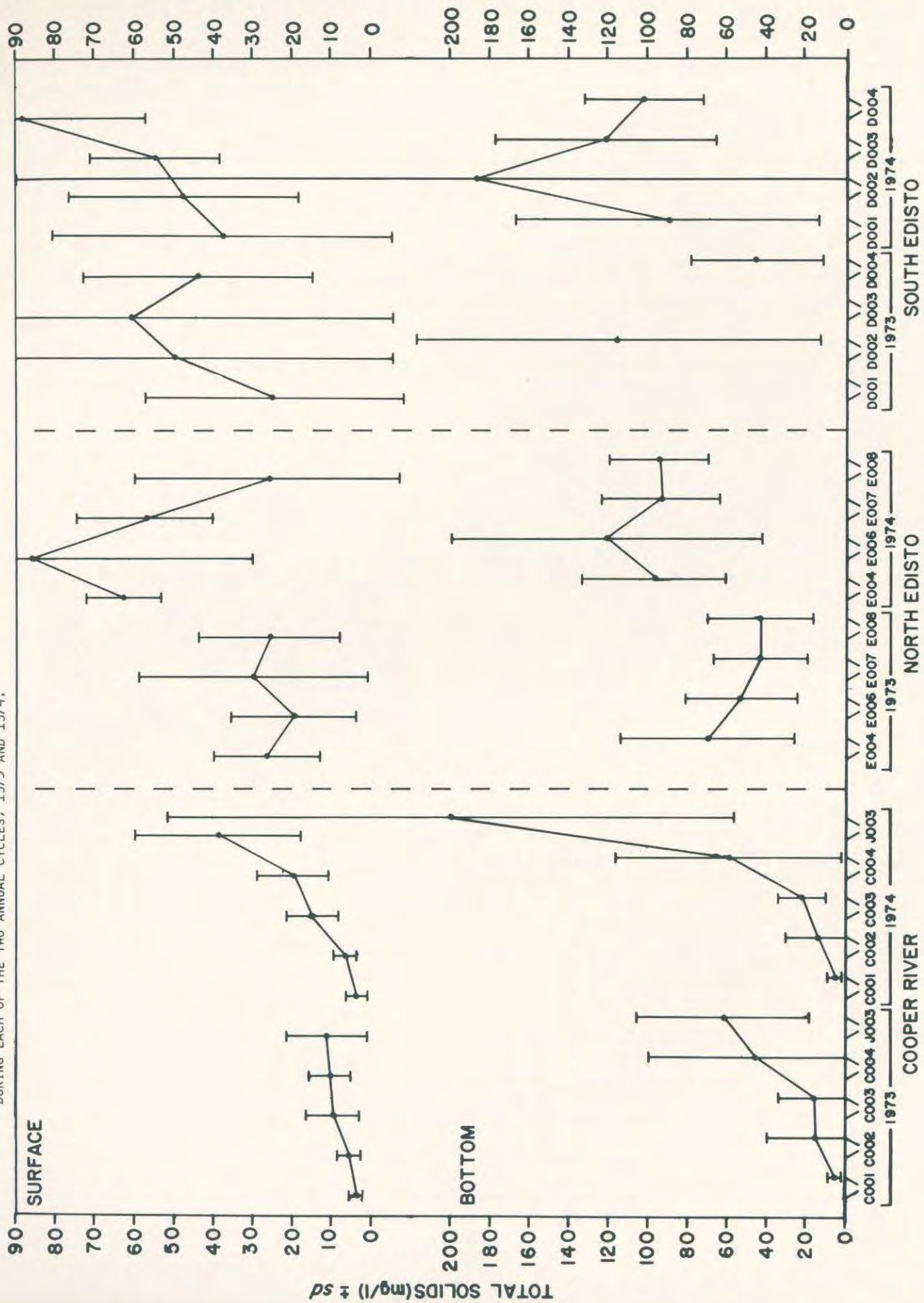


FIGURE 61. SURFACE AND BOTTOM SETTLEABLE SOLIDS (ANNUAL MEANS) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.

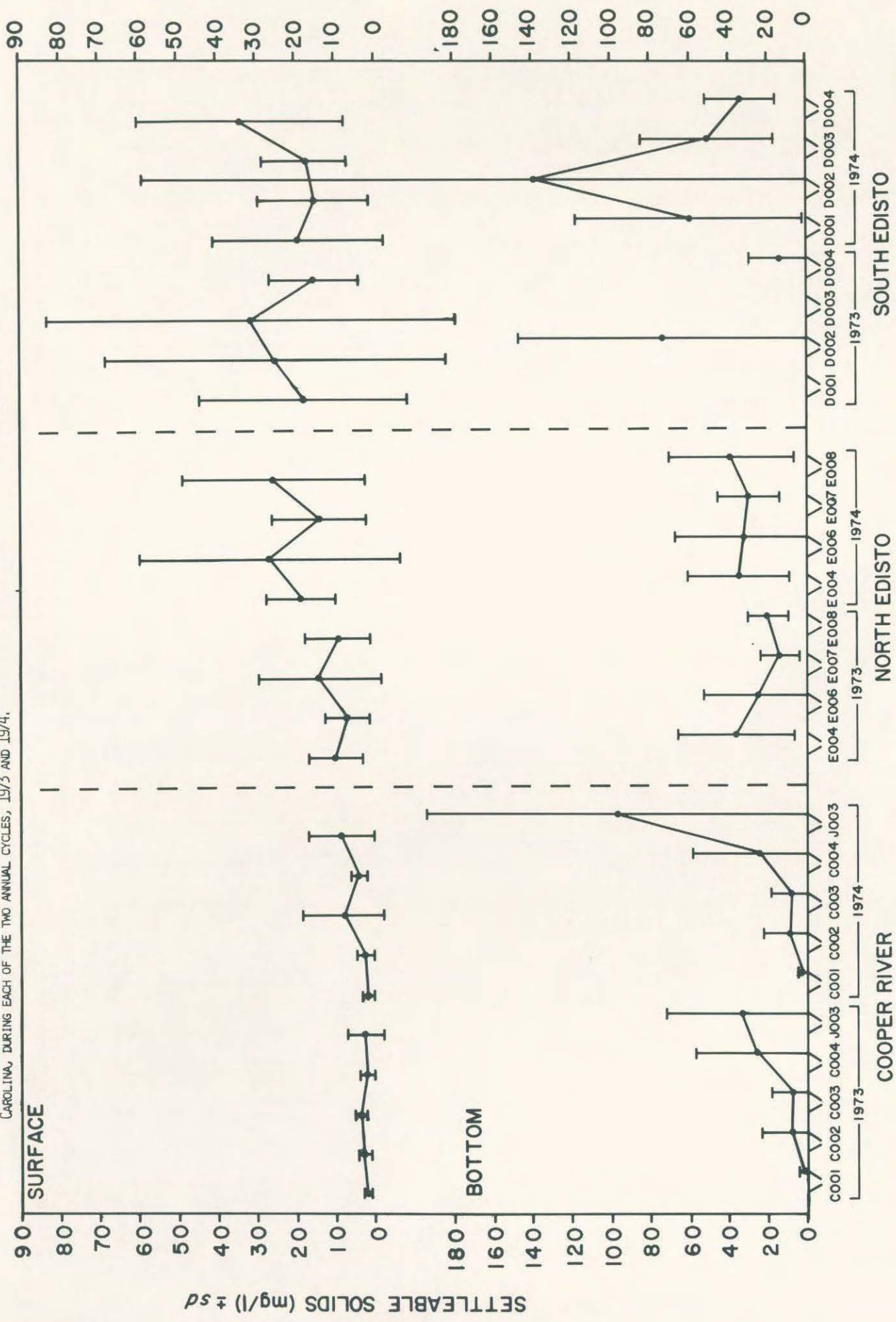


FIGURE 62. SURFACE AND BOTTOM NITRATES (ANNUAL MEANS) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.

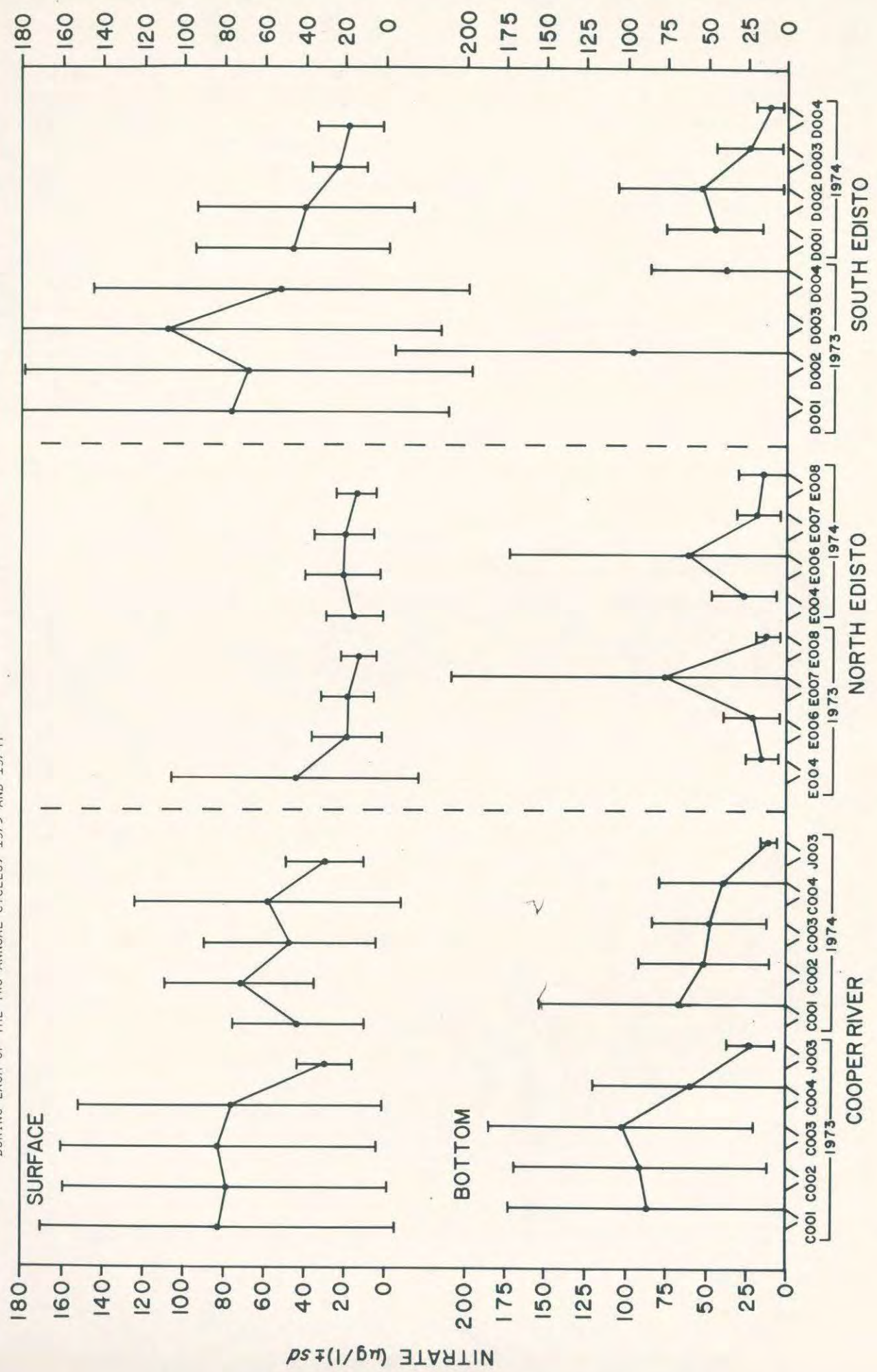


FIGURE 63. SURFACE AND BOTTOM ORTHOPHOSPHATE (ANNUAL MEANS) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.

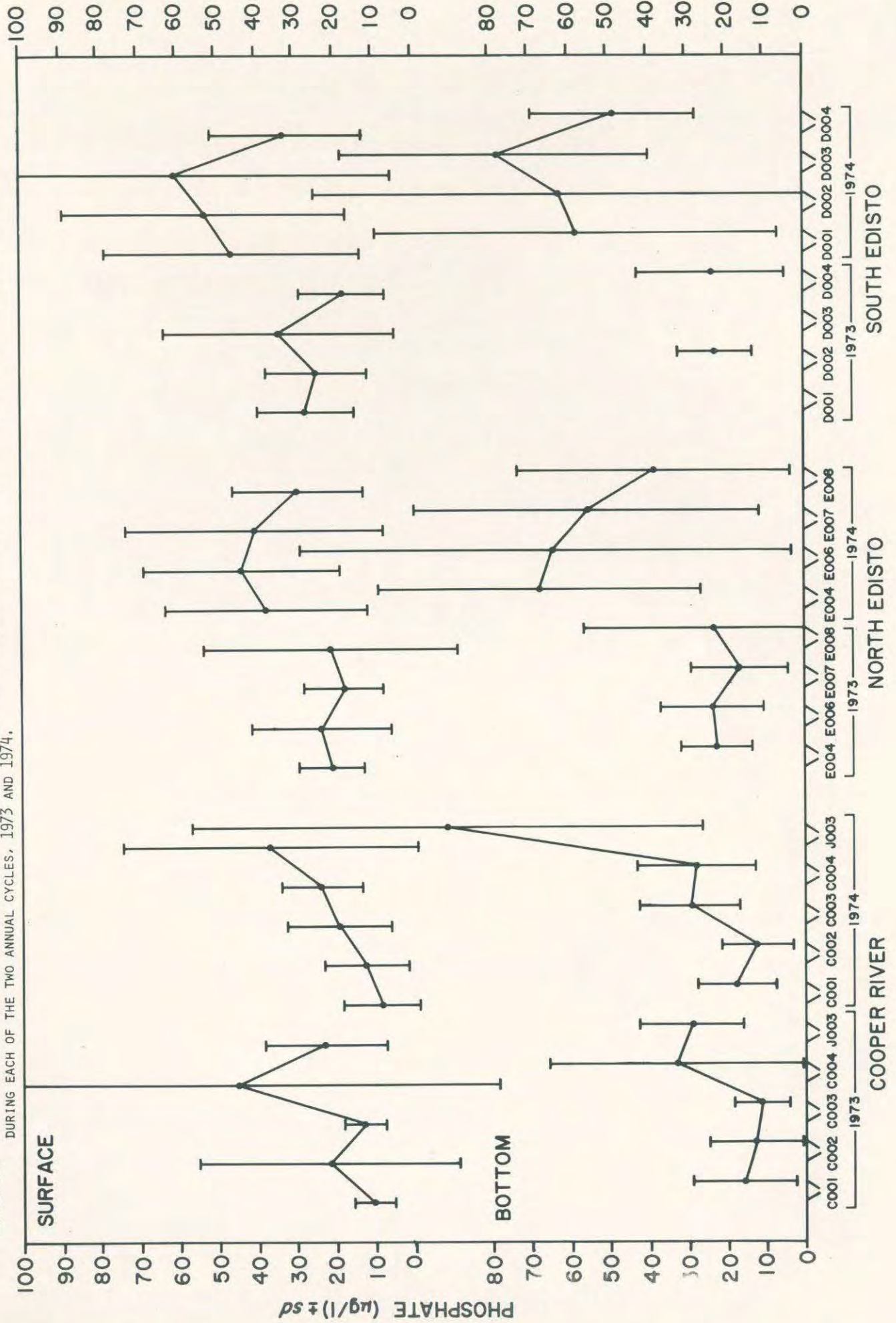
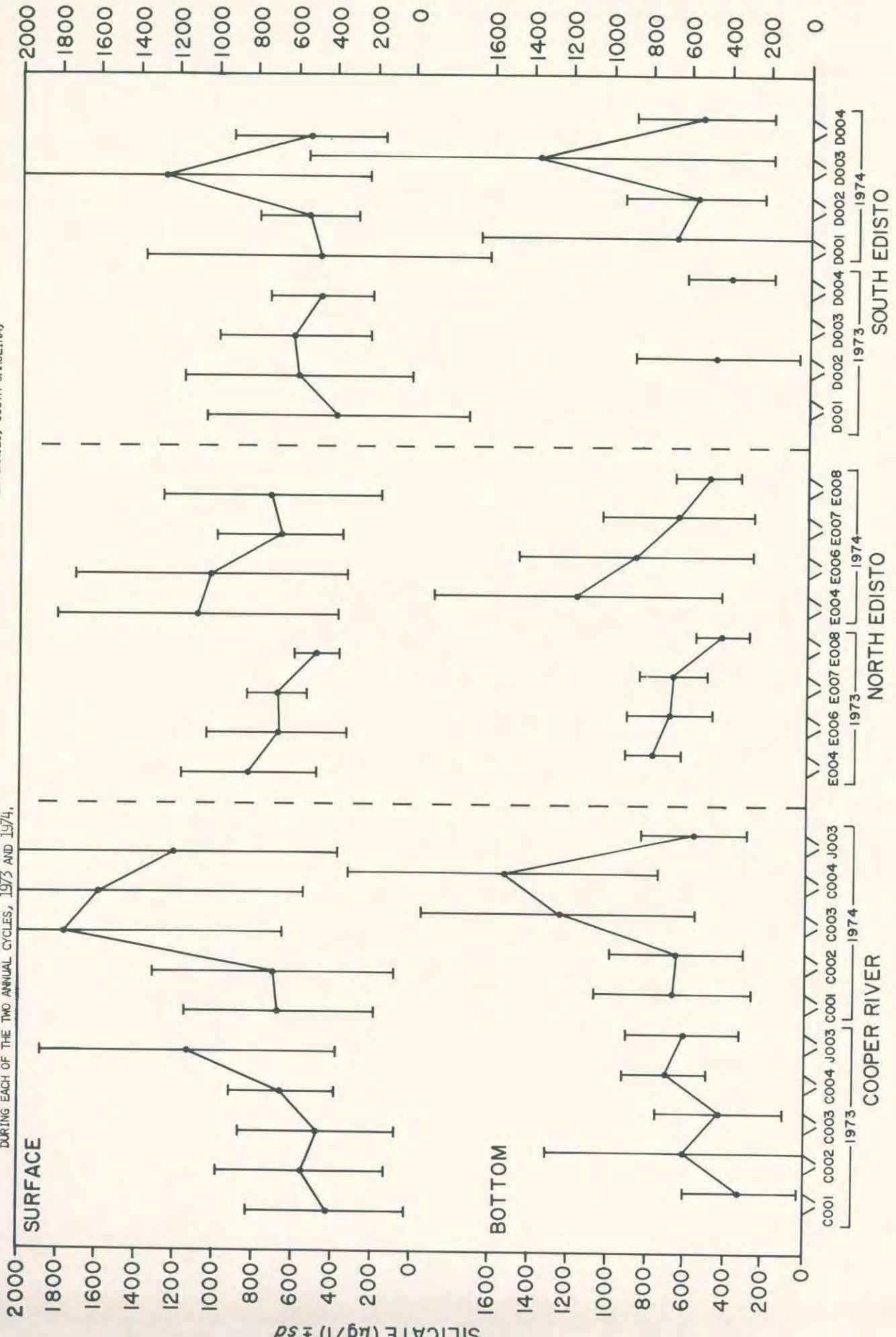




FIGURE 64. SURFACE AND BOTTOM SILICATES (ANNUAL MEANS) THROUGHOUT THE NORTH AND SOUTH EDISTO AND COOPER RIVER ESTUARIES, SOUTH CAROLINA, DURING EACH OF THE TWO ANNUAL CYCLES, 1973 AND 1974.



## APPENDIX 1

An appendix of physical and chemical values resulting from analysis of individual water samples, surface and bottom, collected during each of the four seasons (quarterly) of the two annual cycles from February, 1973 through January, 1975 at 16 estuarine locations throughout the South Carolina coastal zone (Extensive Phase stations). Individual hydrographic monitoring values for an additional 17 stations along monthly cruise transects in the North and South Edisto and Cooper River estuaries are shown in Appendix 2.

Appendix Table 1a. Physical and chemical characteristics of water samples collected quarterly at Station Y001, Winyah Bay estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	18.80	28.50	20.50	15.40
Bottom	18.70	28.40	21.00	11.60
<u>Salinity (‰)</u>				
Surface	0.05	4.77	15.36	0.87
Bottom	0.04	6.90	25.88	0.85
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	6.80	5.80	7.60	8.00
Bottom	6.70	-	7.20	7.70
<u>pH</u>				
Surface	6.70	7.10	6.60	6.90
Bottom	6.50	7.30	6.70	6.80
<u>Turbidity (FTU)*</u>				
Surface	20.00	43.50	17.00	29.00
Bottom	17.00	180.00	37.00	29.00
<u>Secchi disk (m)</u>				
	0.60	0.40	0.60	0.20
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	11.80	84.60	-	-
Bottom	10.80	-	64.20	-
<u>Settleable Solids</u>				
Surface	5.80	77.40	-	-
Bottom	4.80	-	25.40	-
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	109.20	96.80	24.50	22.10
Bottom	144.40	77.40	9.40	3.40
<u>Nitrites</u>				
Surface	0.00	8.50	2.80	1.70
Bottom	2.90	12.20	7.40	1.50
<u>Silicates</u>				
Surface	42.20	-	1405.00	245.50
Bottom	98.40	-	1405.00	470.70
<u>Phosphates</u>				
Surface	0.60	3.60	16.80	6.00
Bottom	33.00	27.00	39.00	19.20

\*FTU = Formazin Turbidity Units

Appendix Table 1a. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	15.40	18.20	27.20	16.50	10.00
Bottom	11.60	18.00	26.30	16.60	10.20
Salinity (‰)					
Surface	0.87	0.40	1.71	9.55	1.83
Bottom	0.85	0.25	1.84	12.26	2.31
Dissolved Oxygen (mg/liter)					
Surface	8.00	7.10	4.10	7.80	9.30
Bottom	7.70	7.30	5.10	7.40	9.20
pH					
Surface	6.90	-	7.20	7.50	6.50
Bottom	6.80	-	7.10	7.70	6.90
Turbidity (FTU)*					
Surface	29.00	32.00	44.00	10.00	17.00
Bottom	29.00	45.00	125.00	32.00	84.00
Secchi disk (m)	0.20	0.40	0.40	0.70	0.30
<u>Solids</u> (mg/liter)					
Total Solids					
Surface	-	-	65.20	35.20	182.40
Bottom	-	65.20	212.00	83.60	-
Settleable Solids					
Surface	-	-	23.20	16.00	55.60
Bottom	-	23.20	116.00	22.00	-
<u>Nutrients</u> (µg/liter)					
Nitrates					
Surface	22.10	-	132.40	156.80	215.80
Bottom	3.40	-	27.40	156.90	138.00
Nitrites					
Surface	1.70	-	2.00	0.70	4.70
Bottom	1.50	-	3.40	4.10	5.50
Silicates					
Surface	245.50	-	252.90	1334.80	1180.20
Bottom	470.70	-	407.50	-	779.80
Phosphates					
Surface	6.00	19.20	-	-	5.40
Bottom	19.20	18.00	-	73.00	6.60

\*FTU = Formazin Turbidity Units

Appendix Table 1b. Physical and chemical characteristics of water samples collected quarterly at Station S001, South Santee River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<b>Water Temperature (C)</b>				
Surface	19.80	29.70	19.80	16.30
Bottom	-	29.50	20.20	12.70
<b>Salinity (‰)</b>				
Surface	0.12	12.16	19.66	17.38
Bottom	-	12.61	23.09	17.77
<b>Dissolved Oxygen (mg/liter)</b>				
Surface	6.80	5.50	7.30	8.30
Bottom	-	5.70	7.30	8.60
<b>pH</b>				
Surface	6.80	7.40	6.70	6.30
Bottom	-	7.40	7.00	6.70
<b>Turbidity (FTU)*</b>				
Surface	20.00	22.50	17.00	19.00
Bottom	-	44.50	22.00	18.00
<b>Secchi disk (m)</b>				
	0.70	0.50	0.60	0.30
<b>Solids (mg/liter)</b>				
<b>Total Solids</b>				
Surface	13.40	43.00	27.40	-
Bottom	-	106.00	-	-
<b>Settleable Solids</b>				
Surface	7.80	38.20	5.80	-
Bottom	-	77.20	-	-
<b>Nutrients (µg/liter)</b>				
<b>Nitrates</b>				
Surface	60.60	5.30	-	17.50
Bottom	-	20.70	-	2.00
<b>Nitrites</b>				
Surface	0.30	9.40	-	2.10
Bottom	-	10.80	-	0.80
<b>Silicates</b>				
Surface	400.40	-	1405.00	1405.00
Bottom	-	-	1060.80	709.50
<b>Phosphates</b>				
Surface	3.00	1.20	25.80	1.20
Bottom	-	-	19.20	1.20

\*FTU = Formazin Turbidity Units

Appendix Table 1b. (Continued).

Parameter	1974				1975
	January	April	August	October	*January
Water Temperature (C)					
Surface	16.30	21.10	27.30	15.80	9.30
Bottom	12.70	-	27.30	15.80	9.30
Salinity (‰)					
Surface	17.38	4.33	16.10	15.47	0.49
Bottom	17.77	-	16.68	15.60	0.45
Dissolved Oxygen (mg/liter)					
Surface	8.30	9.80	5.90	8.80	10.30
Bottom	8.60	-	6.10	8.70	10.30
pH					
Surface	6.30	7.30	6.70	7.50	7.00
Bottom	6.70	-	6.60	7.60	6.80
Turbidity (FTU)**					
Surface	19.00	23.00	16.00	15.00	62.00
Bottom	18.00	-	18.00	17.00	64.00
Secchi disk (m)	0.30	0.60	0.50	0.70	
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	-	45.60	51.20	60.00	67.60
Bottom	-	-	55.60	59.60	110.00
Settleable Solids					
Surface	-	6.40	10.40	9.20	10.00
Bottom	-	-	12.40	2.40	44.80
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	17.50	-	11.40	53.20	116.50
Bottom	2.00	-	67.20	40.40	133.80
Nitrites					
Surface	2.10	-	2.30	2.80	4.20
Bottom	0.80	-	2.80	2.30	4.40
Silicates					
Surface	1405.00	-	695.50	3512.50	189.70
Bottom	709.50	-	1109.9	2739.80	428.60
Phosphates					
Surface	1.20	22.20	-	-	34.00
Bottom	1.20	-	-	110.00	70.50

\* Changed to Intensive Station "SS04" after December 1974.

\*\* FTU = Formazin Turbidity Units

Appendix Table 1c. Physical and chemical characteristics of water samples collected quarterly at Station B003, Bull Bay estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<b>Water Temperature (C)</b>				
Surface	22.00	30.00	20.10	15.10
Bottom	-	29.50	20.00	10.40
<b>Salinity (‰)</b>				
Surface	22.78	32.07	33.96	33.06
Bottom	-	32.07	34.20	33.19
<b>Dissolved Oxygen (mg/liter)</b>				
Surface	7.20	5.20	6.80	8.00
Bottom	-	5.00	7.50	8.40
<b>pH</b>				
Surface	7.80	7.70	7.10	6.50
Bottom	-	7.70	7.30	6.80
<b>Turbidity (FTU)*</b>				
Surface	9.20	15.00	23.00	7.00
Bottom	-	26.00	47.00	24.00
Secchi disk (m)	1.20	1.00	0.80	0.30
<b>Solids (mg/liter)</b>				
<b>Total Solids</b>				
Surface	11.80	5.40	43.60	-
Bottom	-	-	86.40	-
<b>Settleable Solids</b>				
Surface	2.60	0.60	2.80	-
Bottom	-	-	33.60	-
<b>Nutrients (µg/liter)</b>				
<b>Nitrates</b>				
Surface	4.00	11.30	-	3.80
Bottom	-	-	-	-
<b>Nitrites</b>				
Surface	1.80	4.10	-	0.80
Bottom	-	-	-	-
<b>Silicates</b>				
Surface	583.10	1299.60	484.70	365.30
Bottom	-	1110.00	639.30	379.30
<b>Phosphates</b>				
Surface	4.20	6.00	14.40	1.80
Bottom	-	8.40	42.00	43.80

\*FTU = Formazin Turbidity Units

Appendix Table 1c. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	15.10	24.60	27.60	14.60	10.80
Bottom	10.40	20.80	27.50	14.40	10.90
Salinity (‰)					
Surface	33.06	33.13	31.15	32.81	32.68
Bottom	33.19	33.15	31.16	32.78	32.68
Dissolved Oxygen (mg/liter)					
Surface	8.00	6.90	6.00	8.00	9.10
Bottom	8.40	6.50	5.60	8.00	7.90
pH					
Surface	6.50	7.90	6.40	8.00	7.50
Bottom	6.80	8.00	6.50	8.00	7.90
Turbidity (FTU)*					
Surface	7.00	11.00	9.00	7.00	11.00
Bottom	24.00	11.00	18.00	11.00	13.00
Secchi disk (m)	0.30	1.10	0.80	0.90	0.90
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	-	88.00	60.40	-	78.00
Bottom	-	-	-	-	97.60
Settleable Solids					
Surface	-	8.40	16.80	-	20.40
Bottom	-	-	-	-	16.80
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	3.80	-	-	7.10	2.90
Bottom	-	-	14.00	7.10	3.90
Nitrites					
Surface	0.80	-	-	1.00	0.60
Bottom	-	-	1.40	1.30	0.00
Silicates					
Surface	365.30	-	899.20	646.30	168.60
Bottom	379.30	-	702.50	618.20	161.60
Phosphates					
Surface	1.80	33.60	-	45.00	-
Bottom	43.80	15.60	-	45.00	23.00

\*FTU = Formazin Turbidity Units



Appendix Table 1d. Physical and chemical characteristics of water samples collected quarterly at Station B002, Price Creek estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
Water Temperature (C)				
Surface	19.90	29.70	19.60	14.50
Bottom	19.90	29.20	19.60	10.30
Salinity (‰)				
Surface	23.47	33.41	34.33	33.03
Bottom	23.41	33.23	34.15	33.40
Dissolved Oxygen (mg/liter)				
Surface	6.50	4.80	5.90	7.80
Bottom	6.60	4.80	5.30	7.80
pH				
Surface	7.50	7.70	7.50	6.20
Bottom	7.60	7.60	7.50	6.70
Turbidity (FTU)*				
Surface	3.20	13.50	21.00	7.50
Bottom	2.80	14.00	32.00	1.60
Secchi disk (m)	1.00	0.90	0.50	0.50
<u>Solids (mg/liter)</u>				
Total Solids				
Surface	16.60	2.80	-	-
Bottom	16.60	10.40	-	-
Settleable Solids				
Surface	8.60	0.80	-	-
Bottom	3.40	1.20	-	-
<u>Nutrients (µg/liter)</u>				
Nitrates				
Surface	3.80	-	-	1.20
Bottom	0.80	11.30	-	-
Nitrites				
Surface	0.60	-	-	0.60
Bottom	0.60	4.80	-	-
Silicates				
Surface	716.60	1081.90	1004.60	421.50
Bottom	674.40	1208.30	1067.80	393.40
Phosphates				
Surface	4.20	5.40	25.80	2.40
Bottom	9.60	120.00	27.60	15.60

\*FTU = Formazin Turbidity Units

Appendix Table 1d. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	14.50	24.80	27.20	13.00	10.90
Bottom	10.30	21.70	26.80	13.70	10.80
Salinity (‰)					
Surface	33.03	32.94	29.62	33.38	32.84
Bottom	33.40	32.95	29.99	33.42	32.86
Dissolved Oxygen (mg/liter)					
Surface	7.80	7.00	5.40	7.40	8.50
Bottom	7.80	6.90	4.50	7.50	8.80
pH					
Surface	6.20	7.30	6.00	7.60	7.90
Bottom	6.70	7.70	6.10	7.90	8.10
Turbidity (FTU)*					
Surface	7.50	11.00	11.00	3.60	8.30
Bottom	1.60	13.00	12.00	11.00	9.10
Secchi disk (m)	0.50	1.00	0.70	0.80	1.30
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	-	-	66.40	-	92.80
Bottom	-	70.00	55.60	74.80	78.40
Settleable Solids					
Surface	-	-	41.20	-	42.00
Bottom	-	3.20	1.60	0.40	24.00
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	1.20	-	1.30	15.40	-
Bottom	-	-	1.50	10.70	-
Nitrites					
Surface	0.60	-	1.20	3.50	-
Bottom	-	-	1.30	4.00	-
Silicates					
Surface	421.50	-	793.80	1081.90	210.80
Bottom	393.40	-	702.50	829.00	196.70
Phosphates					
Surface	2.40	28.80	-	45.00	0.00
Bottom	15.60	15.60	-	55.00	0.00

\*FTU = Formazin Turbidity Units

Appendix Table 1e. Physical and chemical characteristics of water samples collected quarterly at Station B001, Inlet Creek estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	22.00	27.80	24.60	15.00
Bottom	-	27.80	24.40	14.70
<u>Salinity (‰)</u>				
Surface	24.57	29.88	33.72	22.76
Bottom	-	30.26	33.75	23.47
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	5.30	4.20	6.10	8.00
Bottom	-	4.30	6.10	7.80
<u>pH</u>				
Surface	7.50	7.60	6.10	7.70
Bottom	-	7.70	6.10	7.70
<u>Turbidity (FTU)*</u>				
Surface	9.50	9.80	8.40	7.70
Bottom	-	9.50	12.00	7.30
Secchi disk (m)	0.90	0.80	1.00	0.50
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	14.60	23.80	68.40	-
Bottom	-	24.80	-	87.60
<u>Settleable Solids</u>				
Surface	9.00	9.80	26.80	-
Bottom	-	10.80	-	42.40
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	13.70	6.20	-	2.60
Bottom	-	4.30	-	13.40
<u>Nitrites</u>				
Surface	2.80	2.90	-	0.60
Bottom	-	3.40	-	1.30
<u>Silicates</u>				
Surface	713.00	-	1152.10	491.70
Bottom	-	1292.60	1257.50	547.90
<u>Phosphates</u>				
Surface	9.60	4.20	45.60	3.00
Bottom	-	1.80	120.00	4.20

\*FTU = Formazin Turbidity Units

Appendix Table 1e. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	15.00	21.40	27.80	21.60	11.40
Bottom	14.70	17.80	27.80	21.60	12.00
Salinity (‰)					
Surface	22.76	28.54	29.46	33.43	24.38
Bottom	23.47	28.70	29.51	33.44	29.13
Dissolved Oxygen (mg/liter)					
Surface	8.00	6.60	4.20	13.50	8.40
Bottom	7.80	6.50	3.60	12.30	8.60
pH					
Surface	7.70	7.40	6.40	8.00	7.90
Bottom	7.70	7.60	6.50	8.00	7.80
Turbidity (FTU)*					
Surface	7.70	7.60	11.00	21.00	5.00
Bottom	7.30	6.90	19.00	24.00	9.00
Secchi disk (m)	0.50	0.90	0.60	0.40	1.40
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	-	57.20	59.60	-	66.40
Bottom	87.60	57.20	66.80	102.00	72.40
Settleable Solids					
Surface	-	10.40	27.60	-	23.60
Bottom	42.40	11.20	28.80	3.60	25.60
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	2.60	-	13.50	4.40	16.90
Bottom	13.40	-	12.30	3.70	13.70
Nitrites					
Surface	0.60	-	2.60	2.60	0.60
Bottom	1.30	-	3.10	2.60	0.30
Silicates					
Surface	491.70	-	2479.80	323.20	660.40
Bottom	547.90	-	2571.10	309.10	372.40
Phosphates					
Surface	3.00	-	-	73.00	0.00
Bottom	4.20	-	-	90.00	-

\*FTU = Formazin Turbidity Units

Appendix Table 1f. Physical and chemical characteristics of water samples collected quarterly at Station W001, Wando River estuary\*\*, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	16.80	29.00	26.40	14.90
Bottom	-	29.00	26.10	14.70
<u>Salinity (‰)</u>				
Surface	6.85	11.63	18.47	11.21
Bottom	-	12.17	18.39	11.17
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	7.50	5.60	8.30	9.40
Bottom	-	4.90	7.20	9.40
<u>pH</u>				
Surface	7.30	7.50	6.50	8.10
Bottom	-	7.50	6.40	8.00
<u>Turbidity (FTU)*</u>				
Surface	15.50	5.00	7.00	4.90
Bottom	-	6.80	16.00	5.50
Secchi disk (m)	0.90	1.00	1.00	0.50
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	24.20	14.80	18.60	26.40
Bottom	-	17.60	24.00	-
<u>Settleable Solids</u>				
Surface	9.40	2.40	3.00	5.20
Bottom	-	3.60	6.80	-
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	20.30	26.60	7.40	-
Bottom	-	16.40	-	3.80
<u>Nitrites</u>				
Surface	3.50	3.50	7.30	-
Bottom	3-20	3.20	-	0.10
<u>Silicates</u>				
Surface	948.40	1264.50	990.50	562.00
Bottom	-	1004.60	934.30	274.00
<u>Phosphates</u>				
Surface	12.00	12.60	77.40	6.00
Bottom	-	13.20	103.20	3.00

\*FTU = Formazin Turbidity Units

\*\*Nowell Creek

Appendix Table 1f. (Continued).

Parameter	1974				1975
	January	April	August	October	January
<u>Water Temperature (C)</u>					
Surface	14.90	22.80	29.00	21.90	11.20
Bottom	14.70	18.80	28.80	22.00	11.20
<u>Salinity (‰)</u>					
Surface	11.21	9.14	11.83	16.62	12.85
Bottom	11.17	9.20	11.36	16.62	13.37
<u>Dissolved Oxygen (mg/liter)</u>					
Surface	9.40	7.60	5.40	6.00	9.90
Bottom	9.40	8.10	4.80	6.40	9.60
<u>pH</u>					
Surface	8.10	7.80	7.10	7.20	7.20
Bottom	8.00	7.80	7.10	7.20	7.30
<u>Turbidity (FTU)*</u>					
Surface	4.90	10.00	16.00	7.00	2.90
Bottom	5.50	16.00	15.00	6.00	3.80
Secchi disk (m)	0.80	1.00	1.00	0.50	1.70
<u>Solids (mg/liter)</u>					
<u>Total Solids</u>					
Surface	26.40	-	-	47.60	38.40
Bottom	-	44.40	-	64.00	49.20
<u>Settleable Solids</u>					
Surface	5.20	-	-	4.00	1.60
Bottom	-	-	-	14.80	5.60
<u>Nutrients (µg/liter)</u>					
<u>Nitrates</u>					
Surface	-	54.10	-	3.90	44.50
Bottom	3.80	77.10	-	3.20	33.60
<u>Nitrites</u>					
Surface	-	1.70	-	2.40	1.00
Bottom	0.10	3.40	-	2.10	0.70
<u>Silicates</u>					
Surface	562.00	899.20	597.10	983.50	1053.80
Bottom	274.00	892.20	-	969.50	955.40
<u>Phosphates</u>					
Surface	6.00	68.40	-	22.00	10.50
Bottom	3.00	73.20	-	40.00	0.00

\*FTU = Formazin Turbidity Units

Appendix Table 1g. Physical and chemical characteristics of water samples collected quarterly at Station J001, Charleston Harbor,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	17.60	28.00	26.20	17.40
Bottom	17.80	28.00	26.20	13.20
<u>Salinity (‰)</u>				
Surface	10.29	22.10	19.56	12.42
Bottom	10.89	15.36	20.27	25.14
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	8.20	5.20	6.70	9.50
Bottom	7.80	5.10	7.60	7.90
<u>pH</u>				
Surface	7.70	7.80	6.30	7.70
Bottom	7.80	7.60	6.30	7.80
<u>Turbidity (FTU)*</u>				
Surface	15.00	4.80	3.80	4.10
Bottom	21.50	13.00	3.80	6.40
Secchi disk (m)	0.60	1.30	1.00	0.70
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	23.00	15.20	-	-
Bottom	36.60	40.20	22.00	-
<u>Settleable Solids</u>				
Surface	5.00	1.60	-	-
Bottom	11.40	7.80	7.20	-
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	107.40	42.30	-	24.10
Bottom	58.10	25.30	-	2.70
<u>Nitrites</u>				
Surface	3.20	6.70	-	2.20
Bottom	4.20	3.40	-	2.20
<u>Silicates</u>				
Surface	1405.00	1131.00	3428.00	1124.00
Bottom	674.40	934.30	3709.20	505.80
<u>Phosphates</u>				
Surface	18.00	28.20	18.00	21.00
Bottom	12.00	-	18.00	4.80

\*FTU = Formazin Turbidity Units

\*\*off Ft. Johnson

Appendix Table 1g. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	17.40	21.80	29.00	21.80	10.70
Bottom	13.20	18.00	27.80	21.80	10.80
Salinity (‰)					
Surface	12.42	18.03	14.91	20.77	13.51
Bottom	25.14	23.32	21.80	21.49	16.24
Dissolved Oxygen (mg/liter)					
Surface	9.50	7.50	5.20	6.30	9.60
Bottom	7.90	7.50	4.60	6.20	9.20
pH					
Surface	7.70	6.40	7.00	7.40	7.20
Bottom	7.80	7.50	7.10	7.60	7.30
Turbidity (FTU)*					
Surface	4.10	8.00	11.00	10.00	4.60
Bottom	6.40	25.00	14.00	27.00	5.10
Secchi disk (m)	0.70	1.00	1.20	0.50	1.40
<u>Solids</u> (mg/liter)					
Total Solids					
Surface	-	-	-	59.60	36.80
Bottom	-	103.00	50.00	101.60	-
Settleable Solids					
Surface	-	-	-	0.00	0.80
Bottom	-	13.80	13.60	23.20	-
<u>Nutrients</u> (µg/liter)					
Nitrates					
Surface	24.10	56.70	54.30	22.60	47.10
Bottom	2.70	34.20	15.30	21.60	64.50
Nitrites					
Surface	2.20	2.80	15.70	2.60	1.60
Bottom	2.20	0.80	14.80	3.60	2.00
Silicates					
Surface	1124.00	892.20	779.80	1138.10	843.00
Bottom	505.80	885.20	597.10	1109.90	1016.70
Phosphates					
Surface	21.00	54.00	-	55.00	3.00
Bottom	4.80	45.60	-	105.00	33.00

\*FTU = Formazin Turbidity Units



Appendix Table 1h. Physical and chemical characteristics of water samples, collected quarterly at Station J002, Charleston Harbor,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
Water Temperature (C)				
Surface	17.50	27.40	26.20	13.70
Bottom	17.60	-	25.90	13.70
Salinity (‰)				
Surface	12.47	26.55	28.38	19.14
Bottom	15.70	-	28.97	25.18
Dissolved Oxygen (mg/liter)				
Surface	8.40	5.60	8.70	8.60
Bottom	8.20	-	7.20	8.00
pH				
Surface	7.60	7.40	6.30	7.80
Bottom	7.50	-	6.30	8.00
Turbidity (FTU)*				
Surface	16.50	4.80	12.00	6.00
Bottom	14.00	-	33.00	15.00
Secchi disk (m)	0.90	1.20	0.80	0.60
<u>Solids</u> (mg/liter)				
Total Solids				
Surface	13.20	29.60	23.60	45.60
Bottom	19.60	-	80.80	65.20
Settleable Solids				
Surface	4.40	11.60	-	-
Bottom	9.20	-	15.60	0.00
<u>Nutrients</u> (µg/liter)				
Nitrates				
Surface	78.10	12.90	-	2.50
Bottom	83.60	-	-	6.00
Nitrites				
Surface	3.10	3.20	-	0.70
Bottom	1.80	-	-	2.10
Silicates				
Surface	920.30	730.60	583.10	386.40
Bottom	1145.10	-	962.40	484.70
Phosphates				
Surface	22.80	10.20	56.40	55.80
Bottom	22.80	-	120.00	15.00

\*FTU = Formazin Turbidity Units

\*\*off Hog Island

Appendix Table 1h. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	13.70	21.20	29.00	21.20	11.10
Bottom	13.70	-	28.40	21.50	11.70
Salinity (‰)					
Surface	19.14	15.93	18.97	22.68	20.05
Bottom	25.18	-	22.72	25.53	27.60
Dissolved Oxygen (mg/liter)					
Surface	8.60	8.40	5.90	6.20	9.20
Bottom	8.00	-	5.40	6.50	8.80
pH					
Surface	7.80	6.50	6.80	7.70	7.20
Bottom	8.00	-	6.80	7.80	7.50
Turbidity (FTU)*					
Surface	6.00	7.00	11.00	7.20	5.40
Bottom	15.00	-	20.00	16.00	8.40
Secchi disk (m)	0.60	1.00	1.20	0.70	1.60
<u>Solids</u> (mg/liter)					
Total Solids					
Surface	-	39.20	49.60	47.20	45.60
Bottom	65.20	-	74.00	-	64.40
Settleable Solids					
Surface	-	14.00	-	-	2.40
Bottom	0.00	-	31.20	-	1.20
<u>Nutrients</u> (µg/liter)					
Nitrates					
Surface	2.50	45.10	-	30.70	48.00
Bottom	6.00	-	31.80	24.60	19.80
Nitrites					
Surface	0.70	1.40	-	2.60	1.70
Bottom	2.10	-	16.50	3.40	0.50
Silicates					
Surface	386.40	1405.00	2416.60	1222.40	864.10
Bottom	484.70	-	1046.70	871.10	393.40
Phosphates					
Surface	55.80	21.60	-	50.00	0.00
Bottom	15.00	-	-	95.00	8.00

\*FTU = Formazin Turbidity Units

Appendix Table 1i. Physical and chemical characteristics of water samples collected quarterly at Station K001, Ashley River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	17.50	29.50	26.50	14.10
Bottom	18.50	29.30	26.30	14.20
<u>Salinity (‰)</u>				
Surface	6.97	15.54	17.59	14.24
Bottom	7.57	15.73	18.69	14.19
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	7.30	5.30	6.60	8.40
Bottom	7.30	4.60	6.40	8.40
<u>pH</u>				
Surface	7.20	-	6.40	6.70
Bottom	7.30	7.90	6.40	7.40
<u>Turbidity (FTU)*</u>				
Surface	19.00	6.00	6.90	5.60
Bottom	25.00	7.60	24.00	7.40
<u>Secchi disk (m)</u>				
	0.50	1.10	1.00	0.60
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	25.60	19.80	-	-
Bottom	39.20	18.00	42.00	-
<u>Settleable Solids</u>				
Surface	8.00	5.00	-	-
Bottom	6.80	3.00	23.60	-
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	85.80	48.60	-	30.90
Bottom	74.60	34.70	-	-
<u>Nitrites</u>				
Surface	0.00	8.80	-	3.10
Bottom	2.80	5.60	-	-
<u>Silicates</u>				
Surface	751.70	-	3077.00	772.70
Bottom	962.40	1215.30	1383.90	-
<u>Phosphates</u>				
Surface	31.20	28.20	174.00	115.80
Bottom	18.00	32.40	110.50	-

\*FTU = Formazin Turbidity Units

Appendix Table 11. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	14.10	21.30	28.60	21.30	11.30
Bottom	14.20	17.60	28.20	21.30	11.20
Salinity (‰)					
Surface	14.24	13.23	7.91	18.53	14.35
Bottom	14.19	13.55	12.91	18.70	17.71
Dissolved Oxygen (mg/liter)					
Surface	8.40	10.10	3.80	6.50	9.10
Bottom	8.40	7.40	4.30	6.20	9.00
pH					
Surface	6.70	6.90	7.00	7.20	7.60
Bottom	7.40	6.70	6.90	7.30	7.80
Turbidity (FTU)*					
Surface	5.60	7.00	10.00	12.00	6.80
Bottom	7.40	28.00	52.00	54.00	12.00
Secchi disk (m)	0.60	0.90	0.50	0.60	0.70
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	-	29.20	-	-	-
Bottom	-	76.00	125.20	164.00	65.60
Settleable Solids					
Surface	-	-	-	-	-
Bottom	-	34.40	72.80	52.40	10.80
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	30.90	108.50	-	55.40	-
Bottom	-	19.50	-	60.60	55.30
Nitrites					
Surface	3.10	5.60	-	3.10	-
Bottom	-	3.60	-	5.20	2.40
Silicates					
Surface	772.70	1580.60	765.70	948.40	1145.10
Bottom	-	1046.70	2866.20	1194.30	948.40
Phosphates					
Surface	115.80	120.00	-	100.00	124.50
Bottom	-	120.00	-	175.00	99.00

\*FTU = Formazin Turbidity Units

Appendix Table 1j. Physical and chemical characteristics of water samples collected quarterly at Station F001, Stono River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
Water Temperature (C)				
Surface	18.20	29.90	20.60	13.60
Bottom	18.30	29.90	20.60	13.60
Salinity (‰)				
Surface	10.43	11.03	21.95	20.54
Bottom	10.52	11.02	21.81	20.56
Dissolved Oxygen (mg/liter)				
Surface	7.70	5.30	6.70	8.20
Bottom	7.60	4.30	7.00	8.00
pH				
Surface	7.60	7.30	-	7.40
Bottom	7.50	7.30	-	7.70
Turbidity (FTU)*				
Surface	9.20	160.00	22.00	3.90
Bottom	13.00	160.00	12.00	5.50
Secchi disk (m)	0.70	0.60	0.50	0.50
<u>Solids</u> (mg/liter)				
Total Solids				
Surface	23.80	51.40	60.40	-
Bottom	25.60	62.60	63.40	-
Settleable Solids				
Surface	6.60	19.40	23.20	-
Bottom	11.20	24.00	27.00	-
<u>Nutrients</u> (µg/liter)				
Nitrates				
Surface	36.40	34.90	-	20.70
Bottom	26.70	16.40	-	24.20
Nitrites				
Surface	7.70	7.40	-	1.40
Bottom	3.10	5.30	-	2.80
Silicates				
Surface	983.50	-	1004.60	955.40
Bottom	569.00	899.20	1011.60	1124.00
Phosphates				
Surface	27.00	37.20	48.00	34.80
Bottom	84.60	51.60	52.80	36.60

\*FTU = Formazin Turbidity Units

Appendix Table 1j. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	13.60	20.80	28.00	21.40	11.30
Bottom	13.60	17.30	27.50	21.50	11.20
Salinity (‰)					
Surface	20.54	18.55	9.88	21.10	14.34
Bottom	20.56	18.83	10.05	21.34	14.22
Dissolved Oxygen (mg/liter)					
Surface	8.20	7.70	3.40	6.80	9.20
Bottom	8.00	7.70	3.40	6.80	9.50
pH					
Surface	7.40	7.20	6.40	7.40	7.20
Bottom	7.70	7.00	6.50	7.80	7.30
Turbidity (FTU)*					
Surface	3.90	8.00	16.00	17.00	6.00
Bottom	5.50	14.00	17.00	20.00	6.00
Secchi disk (m)	0.50	1.00	0.50	0.40	0.90
<u>Solids</u> (mg/liter)					
Total Solids					
Surface	-	-	37.60	69.60	49.20
Bottom	-	41.60	37.60	68.40	-
Settleable Solids					
Surface	-	-	8.00	10.00	2.80
Bottom	-	3.60	9.60	6.80	-
<u>Nutrients</u> (µg/liter)					
Nitrates					
Surface	20.70	30.80	20.90	17.10	30.80
Bottom	24.20	18.20	51.20	6.80	38.30
Nitrites					
Surface	1.40	0.0	12.00	2.50	1.80
Bottom	2.80	1.40	18.80	2.60	3.00
Silicates					
Surface	955.40	1138.10	876.80	892.20	1102.90
Bottom	1124.00	1088.80	2276.10	800.80	1236.40
Phosphates					
Surface	34.80	58.20	-	105.00	68.00
Bottom	36.60	84.00	-	90.00	66.00

\*FTU = Formazin Turbidity Units

Appendix Table 1k. Physical and chemical characteristics of water samples collected quarterly at Station H002, Ashepoo River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
Water Temperature (C)				
Surface	16.80	30.10	27.20	15.70
Bottom	16.70	29.90	27.00	15.10
Salinity (‰)				
Surface	0.13	0.51	7.75	12.20
Bottom	0.20	0.50	7.74	12.34
Dissolved Oxygen (mg/liter)				
Surface	6.50	3.40	6.50	6.70
Bottom	6.50	3.20	7.10	7.80
pH				
Surface	6.60	6.90	6.60	6.50
Bottom	6.40	6.60	6.50	6.40
Turbidity (FTU)*				
Surface	8.20	10.20	8.90	27.00
Bottom	8.50	13.50	10.00	26.00
Secchi disk (m)	0.40	0.40	0.40	0.30
<u>Solids (mg/liter)</u>				
Total Solids				
Surface	18.60	12.40	14.60	68.00
Bottom	14.20	16.80	-	80.00
Settleable Solids				
Surface	9.80	3.20	-	30.00
Bottom	4.20	5.20	-	24.00
<u>Nutrients (µg/liter)</u>				
Nitrates				
Surface	2.80	78.30	52.50	9.50
Bottom	3.20	13.40	52.80	8.50
Nitrites				
Surface	2.80	1.10	28.00	0.00
Bottom	1.00	1.00	27.40	1.00
Silicates				
Surface	98.40	358.30	969.50	843.00
Bottom	91.30	302.10	1257.50	660.40
Phosphates				
Surface	18.00	71.40	3.60	32.40
Bottom	25.20	78.60	46.80	118.80

\*FTU = Formazin Turbidity Units

Appendix Table 1k. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	15.70	21.20	27.20	19.40	12.20
Bottom	15.10	21.00	27.20	19.50	12.20
Salinity (‰)					
Surface	12.20	3.98	5.70	12.33	11.58
Bottom	12.34	3.89	5.58	12.32	11.61
Dissolved Oxygen (mg/liter)					
Surface	6.70	7.30	4.80	7.30	9.20
Bottom	7.80	7.20	4.80	7.20	9.20
pH					
Surface	6.50	6.20	6.70	7.20	7.40
Bottom	6.40	6.40	6.60	7.20	7.50
Turbidity (FTU)*					
Surface	27.00	26.00	36.00	16.00	11.00
Bottom	26.00	25.00	38.00	20.00	18.50
Secchi disk (m)	0.30	0.40	0.30	0.50	0.70
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	68.00	44.80	-	33.60	29.20
Bottom	80.00	49.20	98.80	54.80	50.80
Settleable Solids					
Surface	30.00	8.80	-	4.80	7.20
Bottom	24.00	15.20	38.00	20.40	18.00
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	9.50	28.90	64.10	25.80	13.80
Bottom	8.50	30.00	67.80	33.50	11.30
Nitrites					
Surface	0.00	0.30	11.50	2.90	2.00
Bottom	1.30	2.20	13.40	2.90	2.00
Silicates					
Surface	843.00	674.40	835.90	533.90	1074.80
Bottom	660.40	674.40	835.90	611.20	1131.00
Phosphates					
Surface	32.40	49.20	-	65.00	48.90
Bottom	118.80	43.80	-	61.00	29.00

\*FTU = Formazin Turbidity Units



Appendix Table 11. Physical and chemical characteristics of water samples collected quarterly at Station H003, St. Helena Sound,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	16.20	29.70	27.40	15.20
Bottom	15.80	30.50	27.20	15.20
<u>Salinity (‰)</u>				
Surface	7.39	9.96	22.06	24.32
Bottom	12.01	15.98	23.91	24.08
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	7.70	4.40	7.30	8.20
Bottom	7.70	4.60	6.70	8.00
<u>pH</u>				
Surface	7.40	6.50	6.40	6.40
Bottom	7.50	6.80	6.30	6.40
<u>Turbidity (FTU)*</u>				
Surface	18.00	12.00	8.20	24.00
Bottom	22.00	43.00	9.80	25.00
<u>Secchi disk (m)</u>				
	0.50	0.40	0.40	0.30
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	24.60	29.40	-	86.00
Bottom	32.00	58.40	-	88.40
<u>Settleable Solids</u>				
Surface	6.60	4.60	-	21.20
Bottom	1.20	12.40	-	22.40
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	20.20	52.00	-	-
Bottom	24.20	57.80	-	8.10
<u>Nitrites</u>				
Surface	1.50	2.20	-	-
Bottom	1.70	6.60	-	1.40
<u>Silicates</u>				
Surface	702.50	1067.80	1278.60	779.80
Bottom	772.80	1060.80	997.60	674.40
<u>Phosphates</u>				
Surface	19.80	35.40	42.00	27.00
Bottom	23.40	51.60	42.00	9.60

\*FTU = Formazin Turbidity Units

\*\*Rock Creek

Appendix Table 11. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	15.20	26.00	27.80	19.60	11.80
Bottom	15.20	24.80	27.50	20.00	11.80
Salinity (‰)					
Surface	24.32	21.40	14.47	22.00	25.52
Bottom	24.08	21.76	21.01	25.54	25.87
Dissolved Oxygen (mg/liter)					
Surface	8.20	7.60	5.50	6.80	8.70
Bottom	8.00	6.60	4.80	7.10	9.20
pH					
Surface	6.40	6.40	6.10	7.80	7.70
Bottom	6.40	6.70	6.20	7.70	7.50
Turbidity (FTU)*					
Surface	24.00	28.00	36.00	15.00	9.40
Bottom	25.00	31.00	46.00	41.00	18.00
Secchi disk (m)	0.30	0.50	0.30	0.70	0.90
<u>Solids</u> (mg/liter)					
Total Solids					
Surface	86.00	-	148.80	56.00	65.20
Bottom	88.40	152.00	158.40	148.00	88.00
Settleable Solids					
Surface	21.20	-	76.40	11.60	0.00
Bottom	22.40	34.00	57.60	62.80	30.40
<u>Nutrients</u> (µg/liter)					
Nitrates					
Surface	-	-	44.90	33.90	11.30
Bottom	8.10	1.80	56.30	26.50	20.90
Nitrites					
Surface	-	-	20.10	2.50	5.50
Bottom	1.40	0.70	13.70	2.20	1.20
Silicates					
Surface	779.80	435.60	864.10	583.10	1334.80
Bottom	674.40	400.40	934.30	456.60	625.20
Phosphates					
Surface	27.00	21.00	-	0.00	33.60
Bottom	9.60	42.00	-	151.00	20.70

\*FTU = Formazin Turbidity Units

Appendix Table 1m. Physical and chemical characteristics of water samples collected quarterly at Station H001, Coosaw River estuary,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	16.50	31.00	28.90	16.50
Bottom	16.80	31.40	28.80	16.60
<u>Salinity (‰)</u>				
Surface	9.36	15.51	21.49	25.90
Bottom	10.42	15.59	21.44	25.87
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	8.30	6.00	8.50	7.20
Bottom	8.20	6.00	8.10	6.30
<u>pH</u>				
Surface	7.60	7.00	6.20	6.40
Bottom	7.60	7.00	6.30	6.40
<u>Turbidity (FTU)*</u>				
Surface	5.20	15.00	6.20	8.00
Bottom	5.90	20.00	10.20	6.00
Secchi disk (m)	0.90	0.80	0.30	0.40
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	7.60	27.20	-	-
Bottom	7.20	34.40	-	46.00
<u>Settleable Solids</u>				
Surface	4.00	4.40	-	-
Bottom	1.20	8.00	-	12.40
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	13.60	18.60	-	3.30
Bottom	16.30	27.50	-	7.80
<u>Nitrites</u>				
Surface	3.20	0.00	-	1.30
Bottom	3.60	0.10	-	0.30
<u>Silicates</u>				
Surface	660.40	625.20	1011.60	857.10
Bottom	793.80	688.50	990.50	871.10
<u>Phosphates</u>				
Surface	33.00	36.00	54.00	35.40
Bottom	17.40	40.80	90.00	76.20

\*FTU = Formazin Turbidity Units

\*\*Whale Branch

Appendix Table 1m. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	16.50	22.00	27.50	20.70	12.30
Bottom	16.60	21.00	27.50	20.60	12.40
Salinity (‰)					
Surface	25.90	21.77	23.30	22.63	26.77
Bottom	25.87	21.83	23.23	22.63	26.84
Dissolved Oxygen (mg/liter)					
Surface	7.20	6.10	4.90	6.70	8.20
Bottom	6.30	7.20	4.50	7.40	8.30
pH					
Surface	6.40	6.90	7.20	7.30	7.60
Bottom	6.40	7.10	7.20	7.30	7.50
Turbidity (FTU)*					
Surface	8.00	7.00	19.00	11.00	13.60
Bottom	6.00	9.00	22.00	11.00	3.50
Secchi disk (m)	0.40	0.50	0.50	0.90	1.50
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	-	-	66.80	56.40	-
Bottom	46.00	42.80	-	62.00	-
Settleable Solids					
Surface	-	-	7.20	7.20	-
Bottom	12.40	-	-	6.40	-
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	3.30	3.10	59.30	19.90	5.30
Bottom	7.80	0.00	33.30	27.30	3.40
Nitrites					
Surface	1.30	0.10	7.90	0.40	1.70
Bottom	0.30	0.00	5.90	0.30	1.90
Silicates					
Surface	857.10	758.70	2936.40	449.60	1018.60
Bottom	871.10	814.90	1250.50	414.50	871.10
Phosphates					
Surface	6.40	6.90	7.20	7.30	7.60
Bottom	6.40	7.10	7.20	7.30	7.50

\*FTU = Formazin Turbidity Units

Appendix Table 1n. Physical and chemical characteristics of water samples collected quarterly at Station P002, Port Royal Sound estuary,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
Water Temperature (C)				
Surface	16.30	30.50	27.60	17.80
Bottom	16.60	30.00	27.60	14.10
Salinity (‰)				
Surface	24.25	28.29	29.38	30.82
Bottom	24.08	28.71	29.25	30.86
Dissolved Oxygen (mg/liter)				
Surface	8.00	5.90	8.80	10.30
Bottom	8.00	6.10	8.20	8.20
pH				
Surface	8.10	7.60	6.20	6.80
Bottom	8.00	7.60	6.30	6.70
Turbidity (FTU)*				
Surface	13.00	31.00	16.00	12.00
Bottom	14.00	60.00	30.20	20.00
Secchi disk (m)	0.90	1.00	0.30	0.30
<u>Solids (mg/liter)</u>				
Total Solids				
Surface	23.00	79.20	49.60	79.60
Bottom	28.60	107.00	109.60	106.40
Settleable Solids				
Surface	18.20	36.80	0.00	10.40
Bottom	22.40	60.20	12.80	39.60
<u>Nutrients (ug/liter)</u>				
Nitrates				
Surface	15.20	42.80	-	-
Bottom	21.00	12.30	-	4.90
Nitrites				
Surface	3.80	1.70	-	-
Bottom	0.40	3.10	-	1.80
Silicates				
Surface	688.50	442.60	2205.90	548.00
Bottom	723.60	674.40	1313.70	484.70
Phosphates				
Surface	8.10	7.60	6.20	4.20
Bottom	8.00	7.60	6.30	20.40

\*FTU = Formazin Turbidity Units

\*\*off Dolphin Head region of Hilton Head Island

Appendix Table 1n. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	17.80	23.80	28.20	20.40	12.10
Bottom	14.10	19.80	28.20	20.40	12.00
Salinity (‰)					
Surface	30.82	29.50	29.85	30.08	31.43
Bottom	30.86	29.63	30.02	30.04	31.72
Dissolved Oxygen (mg/liter)					
Surface	10.30	5.60	6.10	7.40	8.70
Bottom	8.20	6.20	6.00	7.70	8.50
pH					
Surface	6.80	7.80	7.00	7.70	7.90
Bottom	6.70	7.90	7.10	7.80	8.00
Turbidity (FTU)*					
Surface	12.00	18.00	7.00	15.00	7.50
Bottom	20.00	24.00	12.00	26.00	9.60
Secchi disk (m)	0.30	0.70	1.10	0.70	1.10
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	79.60	-	-	-	-
Bottom	106.40	98.00	67.60	95.20	93.20
Settleable Solids					
Surface	10.40	-	-	-	-
Bottom	39.60	2.40	1.60	16.00	26.40
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	-	-	15.20	27.40	-
Bottom	4.90	-	9.50	28.30	-
Nitrites					
Surface	-	-	3.70	0.60	-
Bottom	1.80	-	3.10	2.50	-
Silicates					
Surface	548.00	548.00	850.00	470.60	548.00
Bottom	484.70	393.40	646.30	576.10	421.50
Phosphates					
Surface	4.20	18.00	-	46.00	56.40
Bottom	20.40	16.80	-	70.00	32.40

\*FTU - Formazin Turbidity Units

Appendix Table 10. Physical and chemical characteristics of water samples collected quarterly at Station P001, Colleton River estuary,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
Water Temperature (C)				
Surface	16.80	31.40	27.60	18.50
Bottom	16.90	30.60	28.30	14.70
Salinity (‰)				
Surface	22.36	25.37	27.42	30.51
Bottom	22.30	25.65	27.60	30.40
Dissolved Oxygen (mg/liter)				
Surface	7.80	5.70	8.10	7.70
Bottom	8.00	4.90	7.00	7.30
pH				
Surface	7.90	7.30	6.30	6.80
Bottom	7.90	7.40	6.30	6.60
Turbidity (FTU)*				
Surface	4.40	3.00	5.60	9.00
Bottom	5.80	9.90	7.40	11.00
Secchi disk (m)	1.30	1.80	1.40	0.50
<u>Solids (mg/liter)</u>				
Total Solids				
Surface	8.80	31.00	21.20	66.40
Bottom	6.00	33.20	-	56.00
Settleable Solids				
Surface	4.40	4.20	-	19.60
Bottom	3.20	0.00	-	0.00
<u>Nutrients (µg/liter)</u>				
Nitrates				
Surface	4.60	79.20	-	5.90
Bottom	3.00	70.60	-	1.50
Nitrites				
Surface	2.10	1.00	-	0.10
Bottom	2.20	2.20	-	0.30
Silicates				
Surface	793.80	660.40	1868.70	878.10
Bottom	800.90	962.40	2859.20	435.50
Phosphates				
Surface	20.40	31.80	24.00	18.00
Bottom	79.20	36.00	60.00	20.40

\*FTU = Formazin Turbidity Units

\*\*off Victoria Bluff

Appendix Table 10. (Continued).

Parameter	1974				1975
	January	April	August	October	January
<b>Water Temperature (C)</b>					
Surface	18.50	20.00	28.60	20.90	12.20
Bottom	14.70	20.00	28.20	20.90	12.10
<b>Salinity (‰)</b>					
Surface	30.51	29.45	28.97	28.89	30.59
Bottom	30.40	29.57	29.39	28.90	30.74
<b>Dissolved Oxygen (mg/liter)</b>					
Surface	7.70	7.00	5.30	7.40	8.40
Bottom	7.30	6.70	5.60	7.20	8.20
<b>pH</b>					
Surface	6.80	7.30	6.70	7.30	7.70
Bottom	6.60	7.50	6.90	7.40	7.50
<b>Turbidity (FTU)*</b>					
Surface	9.00	6.00	8.00	14.00	2.40
Bottom	11.00	34.00	18.00	14.00	2.00
Secchi disk (m)	0.50	0.90	1.00	15.60	2.00
<b>Solids (mg/liter)</b>					
<b>Total Solids</b>					
Surface	66.40	-	60.00	75.20	51.20
Bottom	56.00	129.60	81.20	75.60	-
<b>Settleable Solids</b>					
Surface	19.60	-	8.80	10.40	16.00
Bottom	0.00	33.60	11.60	15.60	-
<b>Nutrients (µg/liter)</b>					
<b>Nitrates</b>					
Surface	5.90	0.00	29.20	28.30	3.10
Bottom	1.50	1.30	13.30	25.40	1.40
<b>Nitrites</b>					
Surface	0.10	0.00	5.10	0.40	1.40
Bottom	0.30	0.10	4.20	0.50	1.40
<b>Silicates</b>					
Surface	878.10	702.50	2732.70	667.40	1081.90
Bottom	435.50	393.40	116.90	653.30	1222.40
<b>Phosphates</b>					
Surface	18.00	25.80	-	25.00	36.60
Bottom	20.40	18.00	-	90.00	71.40

\*FTU = Formazin Turbidity Units



Appendix Table 1p. Physical and chemical characteristics of water samples collected quarterly at Station G001, Calibogue Sound estuary,\*\* South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973			1974
	April	July	October	January
<u>Water Temperature (C)</u>				
Surface	16.80	30.30	27.90	18.90
Bottom	16.20	30.50	27.80	14.30
<u>Salinity (‰)</u>				
Surface	22.21	25.32	28.80	28.83
Bottom	22.23	25.40	28.63	28.81
<u>Dissolved Oxygen (mg/liter)</u>				
Surface	7.80	5.20	7.30	8.50
Bottom	7.70	5.00	8.10	7.20
<u>pH</u>				
Surface	7.80	7.30	6.00	6.90
Bottom	7.80	7.30	6.20	6.90
<u>Turbidity (FTU)*</u>				
Surface	3.60	7.90	8.40	8.90
Bottom	5.20	14.00	1.40	10.00
Secchi disk (m)	1.40	1.10	0.90	0.60
<u>Solids (mg/liter)</u>				
<u>Total Solids</u>				
Surface	6.20	36.40	-	62.00
Bottom	7.00	40.20	-	63.60
<u>Settleable Solids</u>				
Surface	5.60	7.20	-	18.00
Bottom	5.80	6.60	-	48.00
<u>Nutrients (µg/liter)</u>				
<u>Nitrates</u>				
Surface	19.50	61.50	-	-
Bottom	35.30	29.20	-	-
<u>Nitrites</u>				
Surface	7.40	0.80	-	-
Bottom	2.50	1.30	-	-
<u>Silicates</u>				
Surface	1134.50	1102.90	1348.80	562.00
Bottom	1053.80	1222.40	2711.70	442.60
<u>Phosphates</u>				
Surface	35.40	16.80	36.00	19.20
Bottom	17.40	32.40	36.00	7.20

\*FTU = Formazin Turbidity Units

\*\*off Marsh Island

Appendix Table 1p. (Continued).

Parameter	1974				1975
	January	April	August	October	January
Water Temperature (C)					
Surface	18.90	23.80	27.70	20.30	12.40
Bottom	14.30	20.40	27.90	20.10	12.40
Salinity (‰)					
Surface	28.83	28.41	27.43	29.80	30.31
Bottom	28.81	28.54	27.75	29.80	30.33
Dissolved Oxygen (mg/liter)					
Surface	8.50	7.10	5.30	7.40	8.60
Bottom	7.20	6.90	5.30	7.20	8.80
pH					
Surface	6.90	7.70	6.40	7.60	7.80
Bottom	6.90	7.70	6.60	7.50	7.60
Turbidity (FTU)*					
Surface	8.90	11.00	12.00	10.00	3.70
Bottom	10.00	16.00	49.00	15.00	3.40
Secchi disk (m)	0.60	1.20	0.70	0.90	1.50
<u>Solids (mg/liter)</u>					
Total Solids					
Surface	62.00	-	68.80	58.40	-
Bottom	63.60	-	197.20	-	-
Settleable Solids					
Surface	18.00	-	22.40	-	-
Bottom	48.00	-	102.80	-	-
<u>Nutrients (µg/liter)</u>					
Nitrates					
Surface	-	0.00	15.50	37.40	1.50
Bottom	-	2.10	10.60	30.90	1.10
Nitrites					
Surface	-	0.0	3.40	2.50	1.30
Bottom	-	0.0	3.40	3.40	1.40
Silicates					
Surface	562.00	576.10	948.40	835.90	674.40
Bottom	442.60	618.20	878.10	765.70	716.60
Phosphates					
Surface	19.20	12.00	-	119.00	1.90
Bottom	7.20	9.60	-	35.00	22.80

\*FTU = Formazin Turbidity Units

## APPENDIX 2

An appendix of physical and chemical values resulting from analysis of individual water samples, surface and bottom, collected monthly throughout the two annual cycles from February, 1973 through January, 1975 at 17 locations throughout the North and South Edisto and Charleston Harbor-Cooper River estuaries, South Carolina (Intensive Phase stations). Individual hydrographic values for an additional 16 stations monitored quarterly in a number of other estuaries throughout the South Carolina coastal zone are shown in Appendix 1.

Appendix Table 2a. Physical and chemical characteristics of water samples collected monthly at Station E001, Yorges Island, North Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	11.2	18.4	17.0	22.8	28.2	28.0	29.5	30.1	28.2	19.6	16.4	14.2
Bottom	10.4	18.4	16.4	22.6	28.2	27.5	29.4	30.1	28.1	19.3	16.6	14.0
Salinity (‰)												
Surface	14.90	13.86	15.35	16.25	23.94	14.10	22.00	24.35	23.10	27.02	28.29	25.38
Bottom	14.95	14.00	15.01	16.93	24.09	14.20	22.18	24.43	23.25	27.47	28.70	25.49
Dissolved Oxygen*												
Surface	10.7	6.8	7.8	6.8	5.7	5.5	5.1	5.1	5.7	7.1	7.8	8.3
Bottom	10.6	6.9	7.4	6.7	5.5	4.3	5.4	5.0	6.3	6.8	7.7	8.6
pH												
Surface	7.7	7.5	7.7	7.5	7.8	7.4	7.7	6.3	6.1	6.3	-	-
Bottom	7.9	7.5	7.7	7.5	7.6	7.5	7.8	6.3	5.9	6.3	6.0	-
Turbidity +												
Surface	6.5	5.5	5.7	19.0	12.0	28.0	8.9	3.2	21.0	7.2	5.8	4.6
Bottom	5.3	7.6	8.8	25.5	47.5	38.0	8.3	3.9	41.0	7.1	7.6	5.6
Secchi disk (m)	0.8	1.1	0.8	0.4	0.8	0.4	0.8	0.8	0.3	1.0	1.0	0.6
<u>Solids</u>												
Total Solids *												
Surface	10.4	7.6	7.2	46.4	37.8	73.4	36.6	17.0	-	57.6	-	47.6
Bottom	10.4	13.4	12.8	57.0	120.8	89.4	88.0	51.2	86.4	124.0	54.0	40.0
Settleable Solids*												
Surface	5.2	-	3.2	14.0	5.0	18.6	12.4	14.2	-	8.8	-	6.8
Bottom	7.2	12.6	4.8	29.0	66.8	22.6	44.0	3.1	48.8	76.8	9.6	0.4
<u>Nutrient</u> **												
Nitrate												
Surface	-	18.9	21.6	4.5	-	-	45.7	-	-	-	-	5.6
Bottom	-	18.6	30.2	8.8	-	-	58.8	-	21.0	-	-	2.6
Nitrite **												
Surface	-	0.7	4.0	1.1	-	-	1.5	-	-	-	-	2.1
Bottom	-	0.6	3.0	1.7	-	-	0.7	-	21.0	-	-	0.2
Silicates **												
Surface	864.1	779.8	899.2	400.4	625.2	667.4	709.5	821.9	934.3	618.2	850.0	1053.8
Bottom	871.1	782.6	906.2	562.0	702.5	611.8	1271.5	653.3	955.4	646.3	990.5	906.2
Phosphate **												
Surface	2.3	16.2	20.7	12.6	22.2	25.2	9.0	0.6	24.0	17.4	-	16.2
Bottom	1.5	17.4	22.2	16.2	42.6	28.2	10.2	94.8	82.8	29.4	10.8	27.6

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2b. Physical and chemical characteristics of water samples collected monthly at Station E002, Toogoodoo Creek, North Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameters	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	11.6	18.5	18.8	24.0	29.5	28.2	29.8	30.4	29.0	20.2	16.5	14.5
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Salinity (‰)												
Surface	15.02	11.94	14.02	15.81	23.66	13.52	20.66	23.16	23.44	27.73	28.42	24.78
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen*												
Surface	11.2	6.9	6.7	7.2	6.2	4.8	4.8	4.9	7.7	6.9	7.5	7.5
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
pH												
Surface	7.8	7.4	7.5	7.4	7.6	7.5	7.5	7.7	6.8	6.7	6.3	5.7
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity +												
Surface	4.8	7.5	5.1	14.0	7.4	16.0	4.1	4.9	4.5	3.7	3.3	8.0
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Secchi disk (m)	1.2	0.7	1.0	0.5	1.1	0.5	0.9	1.0	0.9	1.1	1.6	0.4
<u>Solids</u>												
Total Solids *												
Surface	8.6	10.2	6.0	26.4	20.4	41.0	31.0	-	28.4	-	-	-
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Settleable Solids*												
Surface	8.4	3.8	3.2	15.2	1.6	5.0	9.8	-	15.6	-	-	-
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
<u>Nutrients</u> **												
Nitrate												
Surface	7.1	37.0	51.3	1.0	-	-	67.6	-	-	-	-	8.5
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite **												
Surface	1.3	0.4	2.2	0.4	-	-	0.0	-	-	-	-	2.7
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Silicate **												
Surface	934.3	1081.9	892.2	590.1	709.5	871.1	1208.3	1194.3	976.5	878.1	1074.8	1222.4
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate **												
Surface	4.8	27.6	8.4	17.4	22.2	24.6	17.4	125.3	30.0	30.6	16.2	19.2
Bottom	-	-	-	-	-	-	-	-	-	-	-	-

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

During first annual cycle samples were taken surface only at this station due to shallow depth.

Appendix Table 2b. (Continued).

Parameters	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	19.3	15.8	18.5	23.7	25.7	28.6	29.7	28.5	23.0	21.8	9.5	12.6
Bottom	-	-	-	-	25.8	29.3	29.7	28.6	23.1	21.2	9.5	12.6
Salinity (‰)												
Surface	23.30	17.58	20.95	23.14	24.89	23.79	25.81	20.22	24.67	27.88	27.00	22.08
Bottom	-	-	-	-	24.99	23.77	25.83	20.21	24.72	28.02	26.97	22.27
Dissolved Oxygen*												
Surface	7.3	8.3	7.2	6.5	5.5	5.3	5.6	5.2	5.6	6.5	8.9	8.9
Bottom	-	-	-	-	5.6	5.2	5.5	5.4	6.0	6.8	8.7	8.4
pH												
Surface	6.8	7.6	7.8	7.9	6.6	6.8	6.8	7.6	7.5	7.4	7.9	7.3
Bottom	-	-	-	-	6.6	6.8	6.8	7.6	7.3	7.6	7.8	7.5
Turbidity +												
Surface	3.0	6.0	4.2	5.0	5.6	15.0	11.0	14.0	7.0	6.0	9.0	4.8
Bottom	-	-	-	-	6.6	16.0	12.0	18.0	11.0	5.5	11.0	4.5
Secchi disk (m)	1.3	0.7	1.0	1.3	1.0	0.7	0.5	0.5	1.0	1.5	0.8	1.5
<u>Solids</u>												
Total Solids *												
Surface	-	55.4	-	52.4	42.4	-	63.2	57.6	84.4	69.6	-	22.0
Bottom	-	-	-	-	-	-	57.6	64.0	73.6	79.2	-	-
Settleable Solids*												
Surface	-	24.6	-	2.4	18.8	-	22.8	16.4	42.4	10.0	-	5.2
Bottom	-	-	-	-	-	-	7.2	9.2	18.0	12.0	-	-
<u>Nutrients</u> **												
Nitrate												
Surface	-	-	0.7	-	-	19.7	3.0	-	11.9	19.0	14.0	-
Bottom	-	-	-	-	-	21.9	2.2	-	12.3	15.4	15.5	-
Nitrite **												
Surface	3.4	-	0.7	-	-	4.8	1.2	-	1.4	1.7	4.2	-
Bottom	-	-	-	-	-	4.0	2.0	-	1.7	1.4	3.4	-
Silicate **												
Surface	744.7	786.8	1166.2	-	1117.0	2838.1	955.4	1067.8	1018.6	934.3	1053.8	-
Bottom	-	-	-	-	1236.4	3470.4	1067.8	1180.2	1011.6	442.6	1292.6	-
Phosphate **												
Surface	24.6	20.4	37.2	-	42.0	-	-	-	45.0	73.0	82.0	38.4
Bottom	-	-	-	-	51.6	-	-	-	72.0	73.0	60.0	49.2

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2c. Physical and chemical characteristics of water samples collected monthly at Station E003, Bear's Bluff, North Edisto estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	9.0	17.0	17.5	22.0	28.2	28.6	29.2	29.9	28.6	19.7	16.6	13.8
Bottom	9.4	17.5	17.6	21.9	26.5	28.8	29.3	29.8	27.8	19.3	17.1	13.7
Salinity (‰)												
Surface	16.97	16.19	16.79	17.89	24.05	21.39	23.62	27.17	27.18	27.47	29.14	24.78
Bottom	18.04	16.39	18.95	17.94	24.34	22.11	23.79	27.14	28.11	27.48	28.92	30.76
Dissolved Oxygen*												
Surface	10.7	7.1	7.7	6.7	5.4	5.1	5.0	4.4	6.3	6.9	8.0	8.4
Bottom	10.2	7.1	7.6	6.6	5.5	4.8	5.5	5.5	7.5	6.8	8.0	8.0
pH												
Surface	7.8	7.5	7.6	7.5	7.6	7.4	7.8	7.7	6.7	6.5	6.2	6.3
Bottom	8.0	7.5	7.7	7.5	7.8	6.8	7.5	7.7	6.8	6.6	6.3	6.3
Turbidity †												
Surface	5.8	7.1	4.4	8.0	8.7	33.5	9.2	16.0	6.7	2.2	4.8	2.0
Bottom	16.0	2.1	23.0	25.0	10.0	32.0	33.0	45.0	18.0	1.6	8.6	19.0
Secchi disk (m)	1.3	0.9	1.2	0.8	0.9	0.6	0.8	0.6	0.9	1.3	1.8	0.3
<u>Solids</u>												
Total Solids *												
Surface	8.8	9.6	3.6	12.6	29.8	46.2	31.4	-	32.0	36.8	52.1	66.8
Bottom	27.6	28.8	27.2	58.0	32.2	96.4	111.0	102.6	37.6	59.2	-	99.2
Settleable Solids*												
Surface	-	4.8	0.8	3.4	4.6	7.8	4.0	-	12.4	0.8	6.5	16.0
Bottom	27.0	21.6	14.8	26.0	1.8	46.0	54.0	17.8	6.4	2.8	-	39.2
<u>Nutrients</u> **												
Nitrate												
Surface	41.1	13.9	46.9	7.5	1.6	-	52.9	35.9	-	-	-	-
Bottom	26.5	10.2	31.5	7.0	2.2	-	46.4	-	-	-	-	-
Nitrite **												
Surface	2.0	0.5	2.1	0.6	1.5	-	7.0	11.3	-	-	-	-
Bottom	2.5	0.7	2.1	0.0	2.0	-	5.0	-	-	-	-	-
Silicate **												
Surface	274.0	562.0	821.9	400.4	562.0	899.2	1271.5	765.7	1102.9	702.5	913.3	576.1
Bottom	800.9	491.8	530.4	330.2	569.0	892.0	1271.5	-	646.3	779.8	1032.7	442.6
Phosphate **												
Surface	1.8	15.0	8.4	10.8	18.6	25.8	19.2	92.9	18.0	19.8	4.8	18.0
Bottom	1.2	15.0	6.0	15.6	19.8	43.8	20.4	-	30.0	27.6	10.8	21.0

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2c. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	18.9	15.0	22.3	27.0	25.0	26.4	28.8	28.7	21.9	21.4	13.0	13.1
Bottom	18.4	15.0	18.3	23.4	25.4	28.2	28.9	28.4	21.8	21.5	11.0	13.1
Salinity (‰)												
Surface	23.74	21.60	21.60	23.34	25.38	25.26	27.18	25.38	26.96	28.90	27.82	26.62
Bottom	24.85	21.57	21.57	23.36	25.36	25.25	27.20	25.33	26.92	28.84	27.86	26.62
Dissolved Oxygen*												
Surface	8.3	8.6	7.7	6.9	6.0	5.4	6.0	4.5	6.4	6.5	8.8	8.2
Bottom	7.8	8.5	7.5	6.3	6.2	5.6	5.8	5.4	6.4	6.7	9.0	8.6
pH												
Surface	6.6	7.9	6.7	7.8	6.2	6.9	6.8	7.7	7.3	7.7	7.9	7.5
Bottom	6.6	7.9	6.9	7.8	6.3	6.9	6.7	7.7	7.4	7.6	7.7	7.4
Turbidity +												
Surface	6.0	11.0	11.0	9.0	12.0	13.0	21.0	25.0	12.0	18.0	34.0	11.0
Bottom	9.0	6.0	15.0	15.0	11.0	17.0	36.0	29.0	16.0	23.0	40.0	18.0
Secchi disk (m)	1.2	0.7	0.6	0.9	0.8	0.8	0.5	0.4	0.6	0.6	0.4	0.8
<u>Solids</u>												
Total Solids *												
Surface	54.4	82.4	-	-	51.6	61.6	84.0	90.8	91.6	-	154.0	42.8
Bottom	111.2	35.6	-	73.2	-	48.4	133.6	100.8	73.6	108.0	95.2	51.2
Settleable Solids*												
Surface	12.0	38.8	-	-	10.0	9.6	23.8	32.8	16.4	-	60.8	7.6
Bottom	58.0	1.2	-	40.8	-	2.0	37.2	38.0	4.8	9.2	44.6	4.8
<u>Nutrient</u> **												
Nitrate												
Surface	-	11.5	-	-	-	53.9	15.9	70.4	10.9	7.3	19.6	-
Bottom	-	15.2	15.4	-	-	47.7	19.0	-	12.3	10.7	19.0	-
Nitrite **												
Surface	-	1.1	-	-	-	7.0	5.1	46.5	2.4	1.2	3.5	-
Bottom	-	1.3	0.4	-	-	4.8	6.2	-	2.4	1.2	4.8	-
Silicate **												
Surface	576.1	519.5	850.0	-	1180.2	3224.5	1194.3	1166.4	779.7	456.7	1180.2	-
Bottom	498.8	674.4	526.8	-	1201.3	2627.4	871.1	1194.2	800.8	569.1	1180.2	-
Phosphate **												
Surface	22.2	13.2	120.0	-	37.2	-	-	-	46.0	80.0	105.0	37.2
Bottom	22.2	99.6	61.2	-	42.0	-	-	-	65.0	110.0	135.0	25.2

\* mg/liter

\*\* ug/liter

+ FTU - Formazin Turbidity Units



Appendix Table 2d. Physical and chemical characteristics of water samples collected monthly at Station E004, Dawho River, North Edisto estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameters	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	9.4	19.4	18.5	21.5	28.2	28.6	29.6	30.5	28.2	20.1	17.8	14.2
Bottom	-	18.6	17.5	21.5	26.7	28.9	29.8	30.1	27.7	19.7	17.6	14.2
Salinity (‰)												
Surface	12.62	12.91	15.04	18.42	25.36	16.99	19.68		24.50	27.06	25.74	26.05
Bottom	-	14.24	17.32	19.23	25.66	17.68	20.44	25.35	25.82	27.02	27.29	28.17
Dissolved Oxygen*												
Surface	10.6	7.1	7.1	6.3	5.7	5.1	4.5	6.0	6.1	6.2	8.2	7.7
Bottom	-	6.9	6.7	6.3	5.8	5.0	4.9	5.1	5.9	6.3	7.8	7.5
pH												
Surface	7.6	7.5	7.6	7.5	7.7	6.7	7.9	7.4	6.7	6.7	6.6	6.4
Bottom	-	7.4	7.5	7.5	7.8	7.0	7.8	7.6	6.7	6.8	6.5	6.2
Turbidity +												
Surface	8.5	5.3	5.2	24.0	11.0	10.5	12.5	4.8	5.5	5.6	5.8	7.0
Bottom	-	5.5	15.0	43.0	14.0	24.0	20.0	7.5	27.0	7.9	35.0	18.0
Secchi disk (m)	1.4	0.8	1.1	0.4	0.9	0.8	0.7	1.3	0.9	1.1	1.0	0.4
<u>Solids</u>												
Total Solids *												
Surface	8.6	9.0	7.4	37.0	33.6	31.6	37.0	-	14.1	-	-	-
Bottom	-	7.4	24.0	107.2	39.0	70.2	50.4	-	29.8	-	144.4	92.4
Settleable Solids*												
Surface	-	-	5.4	14.6	9.2	1.2	20.2	-	6.1	-	-	-
Bottom	-	-	13.6	74.4	9.8	24.2	28.6	-	4.6	-	85.2	43.6
<u>Nutrients</u> **												
Nitrate												
Surface	157.4	20.2	32.1	7.2	1.8	-	143.6	-	17.2	4.6	-	7.3
Bottom	-	15.4	25.9	-	2.9	-	25.5	-	-	-	-	5.6
Nitrite **												
Surface	4.3	1.0	1.5	0.8	1.7	-	11.8	-	11.9	4.5	-	3.2
Bottom	-	0.7	1.4	-	2.0	-	13.0	-	-	-	-	2.5
Silicate **												
Surface	147.5	829.0	611.2	421.5	737.6	1222.4	1299.6	1264.5	871.1	688.5	843.0	1025.7
Bottom	-	758.7	505.8	716.6	793.8	758.7	990.5	892.2	646.3	836.0	976.5	695.5
Phosphate **												
Surface	14.4	18.0	7.2	16.1	23.4	30.6	16.2	33.6	12.0	31.8	24.6	21.0
Bottom	-	16.5	7.8	-	21.0	29.4	16.8	40.2	18.0	21.6	31.8	22.8

\* mg/liter

\*\* ug/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2d. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	16.0	16.1	23.6	26.1	25.6	28.6	27.9	28.4	21.5	15.7	9.8	12.2
Bottom	16.1	16.0	19.8	23.4	25.5	28.3	28.0	28.0	21.8	15.8	9.4	12.4
Salinity (‰)												
Surface	26.46	19.70	9.36	11.17	25.87	25.67	26.79	23.16	26.76	26.23	28.33	23.41
Bottom	26.09	20.24	13.14	14.95	25.79	26.58	27.80	24.35	27.02	27.63	28.87	24.40
Dissolved Oxygen*												
Surface	7.5	8.4	7.3	7.0	5.6	5.9	5.4	5.0	6.1	7.8	9.0	8.8
Bottom	7.5	8.3	7.3	7.0	5.8	5.9	5.5	5.4	6.6	7.8	8.9	8.7
pH												
Surface	6.9	7.5	7.9	7.9	6.4	5.9	6.2	7.5	7.5	7.5	8.0	7.7
Bottom	7.1	7.8	8.0	7.9	6.5	5.9	6.4	7.5	7.4	7.6	7.9	7.8
Turbidity +												
Surface	7.0	10.0	10.0	11.0	7.6	6.0	10.0	16.0	10.0	15.0	9.1	6.0
Bottom	7.0	21.0	40.0	33.0	7.7	14.0	18.0	33.0	10.0	10.0	19.0	8.7
Secchi disk (m)	0.8	0.8	0.5	0.7	0.4	1.0	0.8	0.4	0.7	0.6	1.0	1.0
<u>Solids</u>												
Total Solids *												
Surface	58.8	69.2	52.4	-	62.0	-	-	66.0	59.6	79.2	-	52.8
Bottom	56.0	100.4	143.2	128.0	74.4	-	95.2	124.8	65.6	154.4	79.6	43.2
Settleable Solids*												
Surface	16.0	26.4	30.8	-	28.4	-	-	18.0	11.6	4.0	-	13.6
Bottom	5.8	45.0	93.2	53.6	20.2	-	34.0	54.4	12.8	40.0	16.4	8.0
<u>Nutrients</u> **												
Nitrate												
Surface	-	10.4	3.2	-	-	44.3	-	-	9.6	5.4	18.2	7.7
Bottom	-	13.2	22.3	-	-	39.6	50.2	65.3	14.4	13.5	13.1	6.0
Nitrite **												
Surface	-	3.2	0.3	-	-	6.1	-	-	2.3	3.7	3.5	2.1
Bottom	-	0.8	2.2	-	-	7.0	5.1	8.2	2.4	3.0	3.7	1.7
Silicate **												
Surface	484.7	899.2	1369.9	-	1201.3	2908.4	906.2	-	758.7	295.1	1110.0	983.5
Bottom	639.3	646.3	1053.8	-	1201.3	3154.2	920.3	1194.3	814.9	435.6	786.8	814.7
Phosphate **												
Surface	6.6	20.4	17.4	-	40.8	-	-	-	47.0	77.0	70.0	19.2
Bottom	60.0	108.0	30.0	-	35.4	-	-	-	25.0	137.0	97.0	48.6

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2e. Physical and chemical characteristics of water samples collected monthly at Station E005, Steamboat Creek, North Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	9.2	17.0	17.3	21.1	28.5	28.5	29.8	30.0	27.7	19.7	17.3	14.6
Bottom	9.4	17.4	17.4	21.1	26.3	27.8	29.7	29.9	27.5	19.5	17.4	14.4
Salinity (‰)												
Surface	15.12	15.02	16.62	23.43	24.91	19.45	26.62	25.34	25.40	27.67	30.72	26.20
Bottom	15.96	15.63	17.14	24.06	25.00	20.58	26.78	26.39	26.41	31.32	30.78	26.50
Dissolved Oxygen*												
Surface	10.4	7.1	7.5	6.3	5.8	4.9	5.0	5.2	6.3	7.0	7.7	7.8
Bottom	10.4	4.9	7.2	6.1	5.1	4.8	5.7	4.5	5.6	6.9	7.8	8.1
pH												
Surface	8.0	7.5	7.7	7.6	-	7.3	7.7	7.8	6.8	6.8	6.4	6.7
Bottom	8.1	7.5	7.6	7.7	7.6	7.2	7.9	7.7	6.7	6.9	6.5	5.7
Turbidity +												
Surface	6.0	8.0	14.0	21.0	9.5	34.0	6.2	4.8	15.0	11.0	4.7	7.0
Bottom	6.2	2.0	17.0	43.0	17.5	28.0	65.0	19.0	23.0	11.0	6.1	12.0
Secchi disk (m)	0.9	0.9	0.8	0.5	0.9	0.7	1.0	1.3	0.7	1.0	1.0	0.2
<u>Solids</u>												
Total Solids *												
Surface	8.4	11.4	23.8	39.2	26.4	-	26.6	-	27.6	76.0	51.2	-
Bottom	9.8	19.6	24.4	94.8	64.2	-	194.8	56.6	-	64.0	-	72.4
Settleable Solids*												
Surface	6.4	9.4	13.8	29.6	2.0	-	4.0	-	10.8	20.0	12.4	-
Bottom	6.2	14.8	16.0	39.6	29.4	-	130.2	3.0	-	17.6	-	21.0
<u>Nutrients</u> **												
Nitrate	29.3	11.4	29.5	6.2	2.0	4.8	59.6	-	-	-	-	8.7
Surface	33.7	15.1	18.1	8.2	8.5	4.8	51.7	-	20.2	-	-	9.9
Bottom												
Nitrite **												
Surface	2.2	0.8	2.4	1.5	1.1	3.2	7.6	-	-	-	-	2.9
Bottom	2.0	0.6	1.8	1.3	1.3	3.6	11.6	-	10.6	-	-	2.4
Silicate **												
Surface	821.9	555.0	765.7	435.6	892.2	1110.0	1405.0	0.0	913.3	709.5	611.2	1067.8
Bottom	709.5	618.2	477.7	400.4	590.1	962.4	1405.0	969.5	899.2	597.1	-	1025.7
Phosphate **												
Surface	0.0	16.0	7.8	10.8	21.0	29.4	30.0	26.4	42.0	23.4	4.2	16.8
Bottom	1.0	13.8	8.4	14.4	21.6	31.8	120.0	143.4	30.0	18.6	-	115.8

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2e. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	18.6	14.9	22.7	27.0	26.2	26.6	28.6	29.2	23.5	21.5	10.5	13.1
Bottom	18.3	15.0	19.0	22.8	26.6	28.4	28.7	29.4	21.7	21.7	10.3	13.1
Salinity (‰)												
Surface	24.57	19.43	21.37	24.15	27.20	24.64	29.13	23.24	25.21	27.91	28.90	28.01
Bottom	24.58	20.18	22.64	24.51	26.42	25.16	29.42	23.30	25.15	28.19	28.89	28.07
Dissolved Oxygen*												
Surface	7.5	8.6	7.2	7.2	5.5	5.2	5.7	6.0	6.1	6.3	8.1	10.8
Bottom	7.5	8.6	7.1	6.8	5.4	5.5	5.7	5.6	6.6	6.6	8.2	8.4
pH												
Surface	7.3	7.8	7.1	7.6	7.2	6.7	7.0	7.5	7.5	7.6	8.1	8.1
Bottom	7.3	7.8	7.4	7.6	7.3	6.7	7.0	7.6	7.4	7.7	-	8.1
Turbidity +												
Surface	5.0	12.0	11.0	8.0	27.0	6.8	22.0	11.0	22.0	14.0	32.0	19.0
Bottom	5.0	18.0	17.0	42.0	29.0	21.0	42.0	14.0	24.0	15.0	33.0	18.0
Secchi disk (m)	1.1	1.0	0.8	1.1	0.3	0.8	0.6	0.5	0.4	1.0	0.3	0.7
<u>Solids</u>												
Total Solids *												
Surface	-	68.8	-	41.6	101.2	70.0	93.2	-	99.2	-	-	60.0
Bottom	94.8	82.8	57.6	148.4	114.4	-	-	78.0	120.0	-	144.8	34.8
Settleable Solids*												
Surface	-	16.4	-	2.0	38.0	25.6	19.6	-	27.2	-	-	14.8
Bottom	49.6	19.2	13.2	109.6	51.2	-	-	9.6	40.0	-	47.6	0.0
<u>Nutrients</u> **												
Nitrate												
Surface	-	211.5	0.4	-	16.1	30.8	3.5	47.6	11.4	15.1	20.1	-
Bottom	-	2.5	25.5	-	9.5	41.4	21.7	50.0	12.1	14.2	20.8	-
Nitrite **												
Surface	3.2	1.3	0.0	-	7.0	2.8	1.4	20.7	2.6	1.7	2.3	-
Bottom	1.7	1.4	1.1	-	1.7	4.8	8.4	15.1	2.6	1.2	3.7	-
Silicate **												
Surface	414.5	562.0	878.1	-	1145.1	2662.5	407.5	470.7	983.5	807.9	1053.8	-
Bottom	786.8	660.4	878.1	-	1060.8	3224.5	892.2	1362.8	983.5	737.6	1756.3	-
Phosphate **												
Surface	35.4	28.7	252.0	-	74.4	-	-	-	85.0	95.0	115.0	19.8
Bottom	29.4	18.0	31.8	-	61.8	-	-	-	100.0	105.0	125.0	31.8

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2f. Physical and chemical characteristics of water samples collected monthly at Station E006, Wadmalaw Island, North Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	8.8	17.2	17.5	21.0	27.2	28.2	29.8	29.5	27.6	19.6	17.5	14.4
Bottom	9.2	16.6	17.3	21.7	27.7	28.6	29.9	29.4	27.4	19.4	17.4	14.4
Salinity (‰)												
Surface	15.45	17.48	18.38	20.25	25.79	21.75	24.46	27.18	28.73	29.70	29.95	27.20
Bottom	17.68	18.54	19.51	21.39	28.01	23.44	25.91	28.00	27.61	30.31	30.37	27.74
Dissolved Oxygen*												
Surface	10.4	7.3	7.3	6.4	5.7	5.1	4.7	5.5	5.3	6.8	8.0	7.7
Bottom	10.3	7.3	7.4	6.6	5.4	5.1	4.6	4.3	5.7	6.3	7.8	7.7
pH												
Surface	7.8	7.5	7.7	7.6	7.7	7.3	8.0	7.7	6.6	6.5	6.4	7.0
Bottom	8.0	7.7	7.7	7.6	7.8	7.4	7.9	7.7	6.7	6.5	6.5	6.6
Turbidity +												
Surface	3.9	7.9	4.1	8.0	5.4	11.0	3.5	3.2	17.0	4.7	4.8	6.0
Bottom	12.0	2.6	15.0	23.0	21.0	19.0	34.0	14.0	47.0	7.8	29.0	12.0
Secchi disk (m)	0.9	1.3	1.1	0.7	1.0	0.6	1.5	1.3	0.4	1.4	1.2	0.5
<u>Solids</u>												
Total Solids *												
Surface	8.4	11.6	4.8	17.6	18.0	-	10.6	-	34.6	-	51.2	-
Bottom	23.2	38.0	20.6	38.4	73.4	40.6	103.8	54.2	48.8	-	94.0	-
Settleable Solids*												
Surface	5.6	8.0	1.2	9.2	2.8	-	1.2	-	11.8	-	17.2	-
Bottom	18.4	28.0	13.0	12.4	35.4	2.6	68.8	12.6	6.0	-	47.6	-
<u>Nutrients</u> **												
Nitrate												
Surface	59.6	12.0	21.7	12.0	10.0	4.6	-	-	17.4	-	-	6.7
Bottom	36.1	10.2	39.2	11.6	-	4.6	50.3	-	-	5.5	-	4.5
Nitrite **												
Surface	3.4	0.6	2.1	0.6	1.5	3.9	-	-	11.6	-	+	2.1
Bottom	2.4	0.8	2.1	1.4	-	3.5	9.5	-	-	3.6	-	3.2
Silicate **												
Surface	562.0	540.9	540.9	744.7	477.7	976.5	821.9	730.6	821.9	555.0	646.3	871.1
Bottom	744.7	512.8	709.5	723.6	618.2	793.8	533.9	1306.7	632.3	681.4	428.5	688.5
Phosphate **												
Surface	8.0	16.2	8.4	16.8	10.8	21.6	24.6	25.2	36.0	21.6	16.8	74.4
Bottom	0.4	20.4	8.4	21.0	23.4	35.4	20.4	45.0	44.4	28.8	24.6	12.0

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2f. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	18.4	17.5	18.6	26.2	26.4	27.7	27.9	28.2	23.5	21.3	10.4	12.7
Bottom	18.2	15.0	18.4	22.4	26.2	27.6	28.0	28.4	23.6	21.4	9.4	12.5
Salinity (‰)												
Surface	25.34	22.21	23.89	24.59	27.20	25.50	30.45	26.12	26.97	28.64	29.82	26.75
Bottom	26.42	22.51	24.66	26.07	27.83	26.29	30.44	27.06	27.15	29.63	29.93	27.98
Dissolved Oxygen*												
Surface	7.5	8.5	7.8	7.0	6.2	5.9	5.4	5.6	6.4	6.5	7.9	8.9
Bottom	7.3	8.5	7.7	6.7	5.9	5.8	5.5	5.3	6.1	6.7	8.0	8.6
pH												
Surface	6.6	7.9	7.6	7.3	7.1	6.7	7.4	7.4	7.4	7.7	8.0	7.8
Bottom	6.9	7.9	7.8	7.3	7.2	6.7	7.4	7.4	7.2	7.6	8.1	8.0
Turbidity +												
Surface	4.0	11.0	10.0	6.0	6.0	5.2	11.0	50.0	12.0	6.0	15.0	3.3
Bottom	10.0	22.0	25.0	39.0	19.0	23.0	17.0	9.0	17.0	86.0	38.0	18.0
Secchi disk (m)	1.2	0.9	0.5	1.3	1.2	1.0	0.7	1.0	0.7	1.1	0.4	2.4
<u>Solids</u>												
Total Solids *												
Surface	58.8	103.6	49.6	28.8	48.4	41.2	102.8	209.2	89.6	-	-	-
Bottom	86.4	146.0	-	117.6	80.0	76.4	96.2	96.0	86.4	347.2	134.8	71.2
Settleable Solids*												
Surface	20.4	8.0	4.4	5.6	5.6	-	54.4	96.8	15.6	-	-	-
Bottom	0.0	92.0	-	8.0	15.6	16.4	17.8	38.0	23.2	112.0	12.0	21.2
<u>Nutrients</u> **												
Nitrate												
Surface	-	-	5.3	-	-	35.9	8.4	60.3	11.7	15.1	14.4	5.8
Bottom	-	9.9	-	-	-	38.9	21.1	53.4	11.4	335.5	18.2	5.1
Nitrite **												
Surface	-	-	0.3	-	-	5.4	5.6	7.6	2.3	1.7	4.2	3.3
Bottom	-	1.0	-	-	-	3.1	4.5	9.6	2.3	1.7	4.9	3.0
Silicate **												
Surface	871.1	730.6	674.4	-	800.8	3076.9	892.2	1109.9	885.4	639.3	885.2	709.5
Bottom	674.4	421.5	625.2	-	969.5	2550.1	828.9	323.2	814.9	807.9	927.3	597.1
Phosphate **												
Surface	43.8	19.2	12.0	-	-	-	-	-	65.0	65.0	75.0	25.2
Bottom	23.0	21.6	7.2	-	-	-	-	-	70.0	163.0	145.0	23.4

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2g. Physical and chemical characteristics of water samples collected monthly at Station E007, Point of Pines, North Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	8.3	17.4	17.4	21.6	27.7	28.2	29.6	29.4	27.2	19.6	17.5	14.3
Bottom	8.1	16.6	17.1	21.4	27.3	27.6	29.5	29.3	27.2	19.5	17.5	14.3
Salinity (‰)												
Surface	17.30	17.15	18.54	23.86	27.11	23.91	25.63	27.54	27.58	30.58	31.18	28.40
Bottom	17.85	18.65	21.81	24.68	28.17	24.56	26.74	27.73	27.65	30.84	31.20	28.57
Dissolved Oxygen*												
Surface	10.3	7.3	7.4	5.7	6.0	5.3	5.1	5.5	5.2	7.0	8.0	7.8
Bottom	10.4	7.2	7.4	6.4	5.7	5.3	5.2	5.1	5.6	6.4	7.8	7.8
pH												
Surface	8.1	7.5	7.7	7.7	7.6	7.4	7.7	7.7	6.5	6.5	6.3	6.5
Bottom	8.1	7.6	7.8	7.7	7.8	7.4	7.6	7.8	6.5	6.5	6.3	6.0
Turbidity +												
Surface	5.0	4.5	4.6	8.0	8.4	39.0	5.2	2.6	7.4	3.3	3.1	7.0
Bottom	7.5	2.6	22.0	-	15.0	45.5	17.5	7.6	19.0	7.8	6.1	11.0
Secchi disk (m)	0.7	0.9	1.0	1.1	0.8	0.5	1.2	1.5	1.2	1.4	1.5	0.5
<u>Solids</u>												
Total Solids *												
Surface	9.2	4.0	6.2	14.6	23.8	92.0	19.8	50.0	-	-	50.0	-
Bottom	10.6	28.2	31.0	34.4	59.6	79.4	44.2	-	31.4	62.0	-	56.4
Settleable Solids*												
Surface	6.0	3.2	3.0	7.0	5.0	43.6	4.0	38.0	-	-	15.6	-
Bottom	10.0	19.0	17.4	22.0	23.6	12.6	28.4	-	0.2	6.8	-	1.2
<u>Nutrients</u> **												
Nitrate												
Surface	39.7	11.9	31.4	13.7	12.0	8.3	10.3	-	36.5	6.1	-	4.9
Bottom	44.3	10.8	37.7	-	12.0	-	342.6	-	16.3	-	-	-
Nitrite **												
Surface	1.3	0.7	1.5	2.1	1.3	3.9	6.9	-	17.1	2.7	-	2.5
Bottom	1.5	1.1	0.8	-	1.7	-	8.8	-	9.2	-	-	-
Silicate **												
Surface	772.8	533.9	744.7	734.1	512.8	814.9	688.5	519.9	976.5	751.7	477.7	772.8
Bottom	692.5	526.9	611.2	604.2	484.7	702.5	1138.1	632.3	843.0	597.1	548.0	758.7
Phosphate **												
Surface	0.0	15.0	8.4	18.0	10.8	39.6	20.4	-	24.0	21.0	22.8	13.2
Bottom	0.4	15.6	5.4	25.8	11.4	49.8	13.8	6.6	18.0	20.4	16.2	16.8

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2g. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	17.4	15.5	18.4	26.4	26.4	28.2	27.8	29.3	23.7	17.4	10.2	12.4
Bottom	17.0	15.0	18.3	22.4	26.8	28.0	27.5	29.5	23.8	17.5	10.0	12.4
Salinity (‰)												
Surface	32.12	22.20	28.56	27.12	27.85	27.95	30.38	26.35	27.33	31.12	29.65	27.91
Bottom	32.14	23.02	28.45	27.51	27.87	28.63	31.03	26.41	27.37	32.00	29.79	28.05
Dissolved Oxygen*												
Surface	7.7	8.6	8.0	7.2	6.3	5.8	5.6	5.8	6.5	7.5	7.2	8.8
Bottom	7.4	8.2	7.2	6.5	6.4	4.6	5.9	5.5	6.8	8.2	8.3	8.7
pH												
Surface	7.3	7.9	7.9	7.4	7.0	6.4	7.2	7.7	7.8	7.6	-	7.8
Bottom	7.1	7.9	8.0	7.5	7.0	6.5	7.3	7.7	7.3	7.7	8.1	7.9
Turbidity +												
Surface	16.0	6.0	11.0	6.0	8.0	8.0	15.0	7.0	7.0	7.0	16.0	7.0
Bottom	16.0	10.0	14.0	15.0	11.0	28.0	19.0	10.0	15.0	19.0	42.0	10.0
Secchi disk (m)	0.6	0.9	0.7	1.6	1.4	1.0	0.6	1.1	1.1	0.9	0.4	1.6
<u>Solids</u>												
Total Solids *												
Surface	-	61.2	-	38.0	-	43.2	58.4	61.2	68.8	81.2	69.2	28.0
Bottom	96.0	116.0	80.4	101.2	150.4	85.2	106.4	-	76.0	96.0	-	32.0
Settleable Solids*												
Surface	-	15.6	-	0.8	-	12.8	16.0	7.2	32.4	33.6	5.2	2.8
Bottom	17.2	2.8	16.0	42.8	40.8	38.8	55.2	-	23.2	32.0	-	-
<u>Nutrients</u> **												
Nitrate												
Surface	-	43.1	8.8	-	6.7	42.5	-	29.1	13.3	7.1	15.5	7.3
Bottom	-	-	-	-	10.7	25.2	14.4	45.4	10.9	-	14.0	5.1
Nitrite **												
Surface	-	0.0	0.0	-	4.5	6.5	-	19.9	2.1	2.0	4.8	1.8
Bottom	-	-	-	-	2.6	6.8	1.7	19.6	2.1	-	5.6	3.0
Silicate **												
Surface	158.8	540.9	407.4	-	660.4	1398.1	618.2	899.2	786.8	421.5	871.1	674.4
Bottom	140.5	421.5	-	-	583.1	1398.1	477.7	1081.8	786.8	210.8	871.1	604.4
Phosphate **												
Surface	17.4	25.2	7.8	-	24.0	-	-	-	31.0	36.0	77.0	103.8
Bottom	7.2	19.8	-	-	51.6	-	-	-	70.0	80.0	135.0	24.6

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units



Appendix Table 2h. Physical and chemical characteristics of water samples collected monthly at Station E008, Deveaux Bank, North Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	9.2	16.2	17.0	20.5	30.2	27.8	29.3	29.1	26.7	19.3	17.2	14.0
Bottom	8.7	16.2	16.9	20.5	27.0	27.6	29.1	28.9	26.1	19.3	17.2	14.0
Salinity (‰)												
Surface	20.89	20.40	22.91	28.45	29.38	24.38	28.11	29.41	31.66	32.51	31.99	30.02
Bottom	-	22.12	25.03	29.82	34.35	29.28	29.89	30.29	32.31	32.98	32.19	30.23
Dissolved Oxygen*												
Surface	10.4	7.8	7.7	7.2	6.6	5.7	5.3	5.5	6.6	7.1	7.9	7.9
Bottom	10.2	6.9	6.7	7.4	6.6	5.9	5.4	5.6	6.2	7.2	7.8	7.9
pH												
Surface	8.1	7.7	7.8	7.9	7.9	7.3	8.1	6.3	6.1	6.5	-	6.2
Bottom	-	7.8	7.9	7.9	8.0	7.5	-	7.7	6.3	6.4	6.0	6.6
Turbidity +												
Surface	8.0	8.3	7.9	19.0	5.5	6.0	4.6	4.4	15.0	3.7	4.5	12.0
Bottom	10.0	8.8	35.0	20.0	8.1	27.5	18.0	8.2	18.0	16.0	7.3	13.0
Secchi disk (m)	0.9	0.9	0.8	0.7	1.0	1.1	1.5	1.0	0.8	1.4	1.4	0.3
<u>Solids</u>												
Total Solids *												
Surface	11.8	9.8	14.8	40.0	22.0	18.6	20.8	67.8	30.0	-	-	-
Bottom	18.2	11.0	40.0	43.0	11.8	71.4	56.0	-	30.4	82.0	-	76.0
Settleable Solids*												
Surface	8.6	9.0	6.8	26.0	5.2	1.8	5.6	17.8	1.2	-	-	-
Bottom	15.0	6.2	26.0	23.8	3.4	21.8	37.6	-	18.4	25.2	-	25.6
<u>Nutrients</u> **												
Nitrate												
Surface	9.1	8.4	29.3	6.9	7.6	-	-	-	19.5	14.4	-	2.2
Bottom	10.6	9.5	26.7	-	11.5	-	9.8	-	8.7	-	-	1.7
Nitrite **												
Surface	1.4	0.7	1.0	0.8	1.5	-	-	-	6.4	2.8	-	1.7
Bottom	1.7	1.0	2.7	-	1.1	-	9.8	-	5.6	-	-	1.5
Silicate **												
Surface	702.5	449.6	548.0	330.2	386.4	414.5	491.8	653.3	386.4	505.8	-	484.7
Bottom	414.5	435.6	386.4	189.7	400.4	259.9	548.0	653.3	274.0	555.0	428.5	555.0
Phosphate **												
Surface	0.0	12.6	1.2	9.6	13.8	13.2	10.8	120.8	24.0	13.2	3.6	27.6
Bottom	6.5	10.8	6.0	7.8	9.6	15.6	11.4	125.7	30.0	9.6	18.6	25.8

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2h. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	17.0	15.0	19.0	21.2	26.0	28.0	28.2	29.2	23.6	21.4	10.8	11.8
Bottom	17.4	14.6	18.4	21.9	25.6	28.3	27.6	28.8	23.9	21.2	9.4	12.0
Salinity (‰)												
Surface	28.98	25.12	27.45	27.86	29.78	29.35	30.92	28.78	29.20	30.87	30.54	30.71
Bottom	30.11	26.99	28.81	29.13	30.40	30.58	31.35	30.05	29.89	31.62	30.61	30.77
Dissolved Oxygen*												
Surface	7.9	8.6	7.3	7.2	6.2	6.1	5.9	5.3	6.4	6.6	9.1	8.7
Bottom	7.1	8.4	7.0	6.8	6.1	6.4	6.2	5.7	7.1	6.3	9.2	8.7
pH												
Surface	6.5	7.6	7.9	7.0	6.7	6.2	6.3	7.6	7.7	7.8	7.4	-
Bottom	7.0	7.9	8.0	7.2	6.8	6.3	7.0	7.5	7.8	7.9	7.7	-
Turbidity <sup>+</sup>												
Surface	4.9	7.5	18.0	5.0	7.3	5.6	8.0	8.0	10.0	6.0	16.0	12.0
Bottom	17.0	10.5	19.0	27.0	27.0	16.0	12.0	15.0	12.0	15.0	21.0	24.0
Secchi disk (m)	1.3	0.7	1.0	1.6	0.9	1.1	0.7	0.9	1.1	1.0	0.4	0.9
<u>Solids</u>												
Total Solids *												
Surface	57.2	105.6	126.4	55.6	56.8	107.6	43.2	-	110.0	121.2	90.4	34.4
Bottom	77.2	-	-	96.4	138.0	-	69.2	83.2	78.8	-	120.8	-
Settleable Solids*												
Surface	21.6	3.6	25.6	21.2	2.4	57.2	0.0	-	61.2	57.6	25.2	5.6
Bottom	13.6	-	-	50.0	45.2	-	20.8	15.2	22.0	-	104.0	-
<u>Nutrients</u> **												
Nitrate												
Surface	-	6.3	3.5	-	20.1	34.3	4.0	-	9.3	15.9	12.1	-
Bottom	-	49.7	4.5	-	-	24.7	4.4	-	4.6	10.7	13.5	2.6
Nitrite **												
Surface	-	0.7	0.7	-	2.3	5.6	3.7	-	0.9	0.9	4.0	-
Bottom	-	0.0	0.1	-	-	3.7	4.0	-	1.0	1.2	4.0	1.6
Silicate **												
Surface	442.6	323.2	491.8	-	695.5	2311.2	435.6	800.8	477.7	737.6	772.8	407.5
Bottom	323.2	238.9	358.3	-	526.9	807.9	533.9	491.8	505.8	442.6	758.7	498.8
Phosphate **												
Surface	21.6	22.8	6.0	-	43.2	-	-	-	25.0	37.0	60.0	19.2
Bottom	25.2	33.6	12.6	-	16.2	-	-	-	10.0	80.0	105.0	25.2

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2i. Physical and chemical characteristics of water samples collected monthly at Station D001, Snuggedy Swamp, South Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	7.2	19.8	16.0	20.5	27.8	25.0	27.4	28.3	26.9	18.4	16.2	15.1
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Salinity (‰)												
Surface	0.04	0.04	0.05	0.05	0.16	0.04	0.08	-	0.30	0.11	0.13	0.11
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen*												
Surface	10.3	5.8	7.0	6.5	6.5	4.9	4.9	5.7	6.3	7.7	9.0	7.6
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
pH												
Surface	6.4	6.5	6.9	7.3	7.1	7.6	7.3	-	-	-	7.6	6.9
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity +												
Surface	4.4	2.7	3.5	5.6	15.5	4.3	6.9	6.4	4.6	7.4	37.0	7.0
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Secchi disk (m)	1.1	0.7	0.7	0.8	4.5	0.7	0.7	1.0	0.7	0.9	0.2	0.3
<u>Solids</u>												
Total Solids *												
Surface	1.4	3.0	2.4	3.4	30.6	3.2	9.2	12.8	3.4	-	104.0	58.8
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Settleable Solids*												
Surface	-	-	1.6	2.6	14.6	0.0	6.2	6.4	0.2	-	73.2	54.4
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
<u>Nutrients</u> **												
Nitrate												
Surface	399.4	12.6	38.6	62.2	55.0	13.4	51.7	111.8	50.2	68.6	17.5	15.1
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite **												
Surface	1.0	0.0	0.3	2.2	1.7	3.8	9.2	7.6	9.0	1.4	0.7	1.7
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Silicate **												
Surface	21.1	10.5	42.2	73.8	98.4	210.8	252.9	2451.7	428.5	400.4	435.6	231.8
Bottom	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate **												
Surface	13.2	15.6	7.2	32.4	30.0	34.8	19.8	50.4	27.6	21.0	37.8	34.8
Bottom	-	-	-	-	-	-	-	-	-	-	-	-

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

During first annual cycle samples were taken surface only at this station due to shallow depth.

Appendix Table 21. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	14.6	17.4	23.1	22.7	25.4	28.5	27.4	28.1	19.9	14.3	8.6	11.2
Bottom	-	-	-	-	25.3	28.7	27.4	27.2	20.0	14.1	8.3	-
Salinity (‰)												
Surface	0.24	0.16	0.07	0.25	0.14	0.49	0.40	0.08	0.36	1.45	0.47	0.30
Bottom	-	-	-	-	0.11	0.27	0.17	0.04	0.30	1.44	0.39	-
Dissolved Oxygen*												
Surface	7.9	8.1	6.6	7.1	6.4	6.9	5.8	5.7	6.5	9.1	10.5	9.1
Bottom	-	-	-	-	6.6	7.0	5.6	5.9	7.0	9.0	10.4	-
pH												
Surface	6.1	7.7	-	7.2	-	-	7.4	7.0	-	7.3	7.5	6.7
Bottom	-	-	-	-	-	-	7.4	7.0	-	7.4	7.4	-
Turbidity +												
Surface	10.0	6.0	5.5	36.0	24.0	17.0	12.0	16.0	6.0	16.0	64.0	11.0
Bottom	-	-	-	-	11.0	25.0	8.0	24.0	6.0	38.0	85.0	-
Secchi disk (m)	0.6	1.0	0.7	0.4	0.8	0.5	0.6	0.4	0.7	0.6	0.2	0.9
<u>Solids</u>												
Total Solids *												
Surface	63.6	8.0	5.2	82.8	14.0	17.6	31.6	26.8	8.0	24.0	152.4	22.8
Bottom	-	-	-	-	126.8	36.4	16.4	51.6	-	90.4	220.0	-
Settleable Solids*												
Surface	25.6	5.6	0.4	42.8	4.4	14.0	26.0	20.4	1.6	0.8	75.6	15.6
Bottom	-	-	-	-	70.4	24.4	14.8	35.2	-	42.0	172.4	-
<u>Nutrients</u>												
Nitrate **												
Surface	1.4	9.2	11.6	171.4	9.6	28.9	56.0	83.4	43.4	73.5	52.4	1.8
Bottom	-	-	-	-	12.6	-	9.8	84.7	42.1	63.8	57.6	-
Nitrite **												
Surface	0.7	1.3	0.0	10.5	0.0	5.4	0.0	6.2	1.0	1.4	2.6	1.4
Bottom	-	-	-	-	0.0	-	0.0	4.2	1.6	2.0	2.6	-
Silicate **												
Surface	316.1	161.6	105.4	133.5	98.4	70.3	274.0	323.2	541.0	449.6	3231.5	224.8
Bottom	-	-	-	-	217.8	-	217.8	224.0	604.2	126.5	2669.5	-
Phosphate **												
Surface	10.8	33.6	14.4	98.0	32.4	-	-	-	30.0	65.0	95.0	31.2
Bottom	-	-	-	-	30.0	-	-	-	0.0	107.0	95.0	-

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2j. Physical and chemical characteristics of water samples collected monthly at Station D002, Sampson Island, South Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	7.6	19.0	16.5	21.5	27.7	25.5	29.0	28.0	27.5	18.8	20.3	14.8
Bottom	7.2	18.4	16.5	21.5	27.2	25.5	29.0	28.3	26.9	18.3	16.6	14.6
Salinity (‰)												
Surface	0.04	0.06	0.07	0.18	3.80	0.07	2.65	0.40	1.21	7.15	2.90	2.38
Bottom	-	0.06	0.06	0.16	4.16	0.10	2.79	0.43	2.00	10.83	3.87	2.66
Dissolved Oxygen*												
Surface	10.6	5.5	7.0	7.4	5.2	4.8	5.6	6.0	7.6	8.9	9.1	7.9
Bottom	10.6	6.0	7.0	7.3	5.3	4.5	5.5	6.3	7.5	8.1	9.2	7.9
pH												
Surface	6.6	6.6	7.0	7.1	7.1	-	7.1	-	7.7	7.1	7.3	6.2
Bottom	6.5	6.5	7.0	7.0	7.0	7.8	7.1	-	7.5	6.9	7.1	6.2
Turbidity +												
Surface	5.7	4.4	5.4	20.0	30.0	11.0	9.0	15.0	6.0	7.0	39.0	67.0
Bottom	4.9	4.2	7.0	33.0	59.0	16.0	12.0	32.0	54.0	82.0	84.0	84.0
Secchi disk (m)	0.6	0.6	0.6	0.5	0.4	0.6	0.8	0.7	0.6	0.8	0.2	0.2
<u>Solids</u>												
Total Solids *												
Surface	3.0	3.0	5.2	19.4	70.2	20.8	17.0	30.0	12.2	36.4	91.6	192.0
Bottom	3.6	4.6	19.2	38.4	244.2	25.2	24.2	70.6	81.8	275.6	274.8	231.2
Settleable Solids*												
Surface	-	-	2.8	3.4	30.6	6.4	9.6	13.6	3.4	4.4	44.0	143.2
Bottom	-	1.4	9.6	22.0	175.8	8.8	15.8	49.0	55.8	120.0	184.4	159.6
<u>Nutrients</u> **												
Nitrate												
Surface	386.9	13.4	40.5	53.3	45.4	21.6	124.7	17.5	15.3	4.4	-	25.9
Bottom	409.2	14.0	31.6	52.6	23.7	13.9	335.4	15.2	32.8	-	-	27.3
Nitrite **												
Surface	0.6	0.2	1.8	3.1	2.9	3.6	10.1	17.5	9.5	0.8	-	2.1
Bottom	2.4	0.0	2.0	3.1	2.2	3.6	10.1	7.6	11.6	-	-	2.8
Silicate **												
Surface	28.1	28.1	49.2	130.0	1046.7	133.5	1243.4	1341.8	126.5	1517.4	814.9	611.2
Bottom	84.3	42.2	49.2	73.8	821.9	379.4	1039.7	779.8	182.7	660.4	323.2	1208.3
Phosphate **												
Surface	7.2	14.4	7.2	26.4	24.0	38.4	44.4	17.0	26.4	15.6	28.8	44.4
Bottom	8.4	17.4	7.8	28.2	34.8	30.0	24.0	23.0	30.0	27.0	30.6	8.4

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2j. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	15.5	16.5	21.0	26.2	25.7	29.0	28.4	28.1	20.8	14.9	9.2	11.1
Bottom	15.0	16.5	19.7	22.6	25.8	29.1	28.4	27.0	20.7	15.1	9.0	12.0
Salinity (‰)												
Surface	0.58	0.14	0.12	2.63	6.67	6.58	1.76	0.25	0.41	14.13	4.02	2.48
Bottom	1.43	0.12	0.15	2.77	7.13	7.62	1.85	0.36	0.59	14.91	3.96	3.87
Dissolved Oxygen*												
Surface	7.8	8.6	7.9	6.5	7.2	7.3	6.7	5.4	6.5	8.1	9.4	9.2
Bottom	8.0	8.6	7.9	7.2	5.6	7.3	7.7	5.6	6.6	8.6	10.3	9.0
pH												
Surface	6.2	7.9	-	6.5	7.9	7.2	6.9	7.1	-	7.5	7.5	6.9
Bottom	6.2	7.9	-	6.5	7.8	7.2	6.9	7.0	5.8	7.5	7.6	7.0
Turbidity +												
Surface	21.0	11.0	33.0	25.0	20.0	15.0	48.0	27.0	19.0	33.0	42.0	11.0
Bottom	43.0	25.0	42.0	140.0	130.0	28.0	66.0	39.0	29.0	89.0	150.0	12.0
Secchi disk (m)	0.4	0.6	0.2	0.5	0.4	0.6	0.2	0.3	0.3	0.4	0.2	0.6
<u>Solids</u>												
Total Solids *												
Surface	5.2	14.8	60.4	51.2	43.6	32.8	80.4	47.2	34.0	98.4	84.0	18.8
Bottom	43.2	43.2	81.2	-	328.8	38.8	279.2	86.8	61.2	282.4	796.0	30.4
Settleable Solids*												
Surface	1.6	7.2	28.8	11.6	6.4	1.2	44.8	27.2	8.8	28.0	12.0	0.0
Bottom	25.2	29.6	49.2	-	224.4	1.6	216.4	63.2	23.6	204.4	685.8	6.0
<u>Nutrients</u> **												
Nitrate												
Surface	11.4	12.0	22.0	18.2	50.2	13.1	10.2	191.9	-	31.2	65.1	2.9
Bottom	-	70.0	39.3	22.5	-	18.9	66.0	187.2	24.0	41.9	61.6	5.0
Nitrite **												
Surface	1.5	1.7	0.1	4.9	2.3	1.9	1.4	7.6	-	1.7	1.4	2.0
Bottom	-	2.8	0.3	5.5	-	4.2	4.0	6.7	1.9	6.7	5.6	2.0
Silicate **												
Surface	723.6	365.3	161.6	295.1	836.0	681.4	695.5	379.4	540.1	927.3	-	330.2
Bottom	1046.7	168.6	203.7	372.4	885.4	892.2	393.4	463.7	238.9	1180.2	-	519.9
Phosphate **												
Surface	28.8	34.8	19.2	23.1	38.4	-	-	-	45.0	120.0	107.0	58.2
Bottom	16.8	27.6	19.8	-	-	-	-	-	25.0	150.0	160.0	36.0

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2k. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	16.8	15.1	23.0	27.1	25.7	29.1	27.9	27.0	20.4	15.5	9.3	11.6
Bottom	-	-	-	-	25.7	28.6	27.9	26.8	20.2	15.4	9.5	11.6
Salinity (‰)												
Surface	3.38	0.74	16.94	13.62	19.59	13.92	14.10	12.87	10.31	30.15	13.61	4.80
Bottom	-	-	-	-	20.39	15.36	16.40	14.94	12.60	30.40	16.89	5.49
Dissolved Oxygen*												
Surface	7.8	8.9	7.9	7.1	6.6	7.4	6.3	5.8	6.9	7.2	9.6	9.0
Bottom	-	-	-	-	6.6	7.6	6.5	6.0	7.4	7.4	9.5	9.2
pH												
Surface	6.2	7.9	7.6	7.2	7.6	7.2	6.5	7.3	7.3	7.4	7.7	7.0
Bottom	-	-	-	-	7.6	7.2	6.7	7.6	7.2	7.5	7.8	7.1
Turbidity +												
Surface	21.0	22.0	7.1	18.0	26.0	19.0	19.0	11.0	12.0	15.0	11.0	14.0
Bottom	-	-	-	-	59.0	38.0	20.0	53.0	32.0	26.0	31.0	39.5
Secchi disk (m)	0.5	0.3	0.5	0.5	0.5	0.6	0.7	0.5	0.4	0.6	0.3	0.6
<u>Solids</u>												
Total Solids *												
Surface	52.0	41.2	54.4	77.2	66.4	69.6	70.4	36.8	-	-	50.8	27.2
Bottom	-	-	-	-	198.0	59.2	134.4	178.8	100.8	-	118.0	63.6
Settleable Solids*												
Surface	23.6	15.6	14.8	4.4	7.2	22.4	38.8	13.2	-	-	16.0	6.0
Bottom	-	-	-	-	81.6	16.4	48.4	112.8	32.4	-	41.6	26.0
<u>Nutrients</u> **												
Nitrate												
Surface	13.6	-	34.4	10.6	17.7	23.9	-	-	40.3	9.7	42.5	6.4
Bottom	-	-	-	-	10.7	8.1	-	54.6	42.4	2.3	39.4	7.6
Nitrite **												
Surface	1.1	-	0.6	2.7	5.4	2.0	-	-	4.5	2.6	0.9	1.7
Bottom	-	-	-	-	9.6	1.7	-	14.0	4.5	4.0	1.2	1.9
Silicate **												
Surface	913.3	337.2	723.6	477.7	871.1	1131.0	1152.1	1777.3	3751.3	351.3	2880.3	962.4
Bottom	-	-	-	-	836.0	639.3	899.2	913.3	3364.9	140.5	3091.0	1102.9
Phosphate **												
Surface	22.2	22.2	13.8	72.0	84.0	172.0	-	-	60.0	72.0	60.0	25.8
Bottom	-	-	-	-	44.4	-	-	-	87.0	105.0	125.0	32.4

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 21. Physical and chemical characteristics of water samples collected monthly at Station D004, Bay Point, South Edisto River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	8.1	17.4	16.7	22.5	27.8	28.8	29.0	28.9	27.3	18.6	15.9	13.7
Bottom	8.6	16.9	16.9	22.5	28.1	28.7	28.8	29.0	27.4	18.6	16.9	13.7
Salinity (‰)												
Surface	9.27	11.64	13.42	29.51	27.83	26.39	32.07	22.62	28.13	34.12	29.33	32.17
Bottom	14.19	15.63	16.90	29.58	27.90	26.69	32.09	22.60	28.07	33.99	29.21	32.16
Dissolved Oxygen*												
Surface	10.6	7.3	7.5	7.4	5.8	6.0	5.1	5.9	7.9	6.6	8.1	8.2
Bottom	10.4	7.3	7.1	7.4	5.7	5.8	6.6	5.9	7.6	6.7	8.0	8.1
pH												
Surface	7.7	7.4	7.7	8.0	7.8	7.1	-	7.8	6.8	6.8	6.6	5.9
Bottom	7.9	7.5	7.2	8.0	7.7	7.5	-	7.8	6.9	7.0	6.6	6.3
Turbidity +												
Surface	13.0	5.4	8.4	14.0	19.5	17.5	1.8	4.0	6.6	8.1	16.0	31.0
Bottom	12.0	7.2	16.0	22.5	14.5	32.0	2.1	4.7	4.8	8.8	14.0	16.0
Secchi disk (m)	1.0	0.9	0.8	0.7	1.0	0.6	2.0	1.5	1.0	1.0	0.8	0.2
<u>Solids</u>												
Total Solids *												
Surface	17.4	8.4	17.4	50.4	78.8	74.6	19.0	-	-	-	51.2	75.6
Bottom	1.8	15.8	24.0	20.8	65.0	104.2	21.4	-	-	69.6	50.0	87.6
Settleable Solids*												
Surface	8.2	4.8	6.2	26.0	32.4	23.0	1.0	-	-	-	8.8	24.4
Bottom	1.0	10.6	8.8	8.8	21.0	54.6	1.0	-	-	12.8	2.4	16.0
<u>Nutrients</u> **												
Nitrate												
Surface	240.2	9.3	31.3	-	7.2	-	-	16.1	-	1.0	-	-
Bottom	131.5	7.6	38.0	-	-	35.1	-	12.6	-	-	-	2.1
Nitrite **												
Surface	3.1	0.1	1.3	-	0.8	-	-	7.0	-	0.4	-	-
Bottom	3.2	0.4	2.2	-	-	2.4	-	0.7	-	-	-	1.4
Silicate **												
Surface	210.8	569.0	674.4	28.1	519.9	590.1	400.4	913.3	386.4	548.0	758.7	126.5
Bottom	133.5	414.5	730.6	49.2	498.8	765.7	295.1	526.9	414.5	189.7	512.8	274.0
Phosphate **												
Surface	7.8	12.0	8.4	18.6	16.2	24.0	7.2	36.6	36.0	14.4	25.8	4.8
Bottom	7.2	10.8	10.2	15.0	22.8	61.8	8.4	43.2	54.0	18.0	22.2	10.8

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units



Appendix Table 21. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water Temp. (°C)												
Surface	15.8	16.1	23.6	26.5	25.0	29.6	27.5	26.8	20.4	16.5	9.5	11.4
Bottom	15.9	16.1	22.1	23.0	25.0	29.3	27.4	27.0	20.4	16.1	8.8	11.4
Salinity (‰)												
Surface	25.02	19.46	22.44	26.86	31.64	27.34	31.89	27.45	32.77	33.47	28.53	24.13
Bottom	26.83	21.21	23.80	28.17	31.94	28.96	31.89	31.24	32.79	33.45	29.47	27.09
Dissolved Oxygen*												
Surface	6.7	8.4	7.4	6.5	5.9	7.4	6.2	5.8	7.6	8.0	9.1	8.9
Bottom	7.8	8.4	7.1	6.3	6.7	7.0	6.6	6.2	7.4	8.3	9.3	9.0
pH												
Surface	6.9	7.8	7.7	6.6	7.3	6.9	6.9	7.8	7.7	8.1	8.0	7.9
Bottom	6.9	7.9	7.9	6.9	7.4	6.9	7.2	8.0	7.3	8.1	8.1	-
Turbidity +												
Surface	19.0	17.0	26.0	15.0	27.0	6.3	5.0	8.0	10.0	3.0	10.0	13.0
Bottom	21.0	18.0	23.0	32.0	29.0	8.4	14.0	31.0	9.0	3.0	28.0	27.0
Secchi disk (m)	0.4	0.5	0.4	0.7	0.5	0.8	0.6	0.9	0.9	2.6	0.4	0.9
<u>Solids</u>												
Total Solids *												
Surface	141.6	101.6	71.2	105.2	93.2	85.6	-	-	-	-	82.0	32.0
Bottom	86.0	93.6	79.6	139.2	109.2	-	92.8	134.8	64.0	-	146.0	81.6
Settleable Solids*												
Surface	84.0	46.8	8.8	11.6	37.6	34.0	-	-	-	-	43.6	3.2
Bottom	12.8	35.6	14.4	51.2	41.2	-	34.8	53.2	6.0	-	60.0	27.2
<u>Nutrients</u> **												
Nitrate												
Surface	-	52.6	6.0	-	11.4	10.2	-	11.0	-	5.8	18.3	-
Bottom	-	-	4.6	7.7	12.7	21.1	0.7	6.8	-	26.3	13.4	2.8
Nitrite												
Surface	-	1.3	0.0	-	5.4	1.7	-	7.9	-	0.5	3.4	-
Bottom	-	-	0.0	5.6	2.0	2.0	0.7	2.3	-	0.3	2.0	1.4
Silicate												
Surface	632.3	576.1	576.1	-	252.9	681.4	189.7	533.9	119.5	84.3	1405.0	871.1
Bottom	618.2	491.8	519.9	-	245.9	611.2	203.8	337.2	133.5	660.4	1405.0	723.6
Phosphate												
Surface	26.4	61.2	19.8	16.0	40.8	68.0	-	-	18.0	10.0	35.0	26.4
Bottom	62.4	20.4	16.8	13.2	39.4	147.0	-	-	35.0	15.0	115.0	22.2

\* mg/liter

\*\* µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2m. Physical and chemical characteristics of water samples collected monthly at Station C001, The Tee, Cooper River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	8.7	14.4	14.9	23.6	26.2	28.6	29.0	28.4	27.2	18.9	15.5	11.4
Bottom	8.7	14.2	16.0	22.8	26.0	28.5	28.8	28.8	27.0	19.1	15.6	11.4
Salinity (‰)												
Surface	0.05	0.05	0.06	0.04	0.06	0.05	0.05	-	-	0.16	0.10	0.00
Bottom	0.05	0.05	0.06	0.04	0.06	0.05	0.08	-	0.25	0.11	0.07	-
Dissolved Oxygen *												
Surface	11.2	9.6	9.2	8.3	7.0	6.1	5.8	6.2	7.3	8.7	9.7	10.5
Bottom	11.2	9.7	9.0	8.1	7.0	5.9	6.0	5.8	7.5	8.6	9.6	10.9
pH												
Surface	6.9	6.9	7.0	7.3	7.3	7.3	6.9	7.2	7.4	-	7.5	7.2
Bottom	6.9	7.0	6.8	7.4	7.3	7.3	6.8	7.2	7.5	-	7.6	7.2
Turbidity +												
Surface	32.0	31.0	17.0	11.0	6.0	4.8	4.3	1.8	5.0	3.9	3.6	2.9
Bottom	32.0	32.0	17.0	12.0	6.5	5.2	4.3	1.9	5.5	4.5	2.4	4.2
Secchi disc (m)	0.4	0.5	0.6	1.2	1.4	1.6	1.3	1.6	1.4	1.4	2.0	0.6
<u>Solids</u>												
Total Solids *												
Surface	6.0	2.0	-	4.8	2.4	4.4	8.2	4.2	2.6	3.2	2.4	-
Bottom	8.2	2.2	4.6	6.2	5.0	6.0	8.2	4.6	1.4	0.4	9.2	6.0
Settleable Solids*												
Surface	-	1.2	-	1.6	2.0	3.2	2.8	0.2	2.2	3.2	1.2	-
Bottom	-	-	2.2	2.6	4.2	2.0	2.4	0.2	1.0	0.4	6.0	1.2
<u>Nutrients</u>												
Nitrates **												
Surface	245.9	217.3	206.8	56.0	28.0	52.6	83.7	21.4	31.5	9.0	24.6	8.1
Bottom	239.1	211.1	210.7	58.9	21.4	112.7	72.2	41.7	26.8	14.9	10.2	4.6
Nitrites **												
Surface	2.2	1.8	2.4	0.0	2.1	2.0	3.5	11.1	0.7	8.1	3.1	1.0
Bottom	2.1	2.4	2.1	2.0	2.1	2.2	4.1	10.8	0.1	8.5	3.1	0.3
Silicates **												
Surface	1376.9	35.1	526.9	182.7	84.3	56.2	-	491.8	667.4	140.5	379.4	730.6
Bottom	323.2	35.1	56.2	302.1	77.3	133.5	-	576.1	288.0	168.6	976.5	597.1
Phosphates **												
Surface	16.8	3.6	6.6	10.8	6.0	15.0	12.6	18.0	16.8	4.2	5.4	9.0
Bottom	39.0	5.4	28.2	6.0	10.8	37.8	11.4	21.0	14.4	15.6	0.0	0.0

\*mg/liter

\*\*µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2m. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	14.0	14.0	20.4	22.8	25.4	26.8	28.1	28.8	23.5	19.2	11.1	12.1
Bottom	13.4	13.6	15.2	23.0	25.4	26.7	28.1	28.7	23.8	19.4	11.4	11.5
Salinity (‰)												
Surface	0.05	0.05	0.10	0.26	0.08	0.02	0.07	0.09	0.31	0.35	0.22	0.33
Bottom	0.05	0.02	0.11	0.36	0.08	0.00	0.07	0.10	0.28	0.49	0.45	0.28
Dissolved Oxygen *												
Surface	9.7	11.6	9.2	8.2	6.5	6.7	6.7	6.1	7.6	9.0	10.4	10.5
Bottom	9.4	11.0	9.1	8.1	6.2	6.9	6.6	5.9	7.5	8.8	10.5	10.8
pH												
Surface	7.9	8.0	-	7.7	6.5	6.8	7.0	7.8	7.6	6.8	7.7	7.6
Bottom	7.8	7.9	8.0	7.7	6.6	6.7	6.9	7.7	7.2	6.9	7.6	7.3
Turbidity +												
Surface	5.0	8.9	5.5	6.0	4.1	3.8	6.0	2.9	3.8	3.7	4.0	4.0
Bottom	7.0	9.5	5.1	6.0	5.5	7.5	5.0	3.6	3.9	4.1	6.0	4.0
Secchi disc (m)	1.3	0.7	1.3	1.7	1.8	1.6	1.5	2.0	1.9	1.8	2.2	1.8
<u>Solids</u>												
Total Solids *												
Surface	3.2	2.0	6.8	-	-	-	2.8	-	0.0	4.8	6.4	-
Bottom	-	-	-	6.0	2.0	9.2	4.4	5.2	0.0	8.4	6.4	4.8
Settleable Solids*												
Surface	2.4	0.4	0.8	-	-	-	2.0	-	0.0	2.0	4.4	-
Bottom	-	-	-	3.6	2.0	5.6	4.0	4.0	0.0	4.4	0.8	0.0
<u>Nutrients</u>												
Nitrates **												
Surface	44.7	2.6	125.0	19.1	14.5	56.7	41.1	24.7	60.5	42.2	33.8	-
Bottom	14.1	309.9	123.6	18.0	19.5	42.1	37.9	27.0	67.4	42.5	30.3	-
Nitrites **												
Surface	2.9	0.6	3.1	2.6	3.4	2.3	2.3	2.0	2.1	1.2	1.2	-
Bottom	3.5	1.3	3.1	2.3	2.6	2.7	6.2	2.4	2.2	0.9	1.2	-
Silicates **												
Surface	625.2	1405.0	245.9	836.0	337.2	1032.7	112.4	-	442.6	260.0	-	1440.0
Bottom	1398.0	421.5	709.5	271.8	238.9	913.2	562.0	512.9	1018.6	189.7	-	1159.0
Phosphates **												
Surface	2.4	16.2	0.0	4.2	10.2	-	-	-	0.0	30.0	8.0	5.5
Bottom	-	26.4	8.4	4.2	31.8	-	-	15.0	15.0	30.0	20.0	7.5

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units

Appendix Table 2n. Physical and chemical characteristics of water samples collected monthly at Station C002, Big Island, Cooper River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	8.8	15.2	15.0	23.4	27.1	29.0	29.4	28.8	27.0	19.9	16.9	11.5
Bottom	9.1	15.2	16.2	23.2	27.0	27.2	29.3	28.6	27.3	19.4	17.0	11.5
Salinity (‰)												
Surface	0.13	0.05	0.06	0.05	0.06	0.05	0.06	5.01	0.87	5.26	0.69	0.16
Bottom	0.13	0.05	0.06	0.04	0.06	0.05	0.08	-	2.49	12.63	9.48	0.19
Dissolved Oxygen *												
Surface	11.0	8.7	9.3	7.6	7.3	6.6	5.7	6.4	7.5	8.3	9.9	11.0
Bottom	10.9	8.6	9.2	7.7	8.1	6.6	6.2	6.7	7.5	6.1	8.1	11.6
pH												
Surface	7.3	7.0	6.9	7.3	7.1	7.4	7.1	7.4	7.4	7.1	7.1	7.3
Bottom	7.1	6.9	6.9	7.2	7.5	7.3	7.0	7.4	7.1	6.5	6.0	7.2
Turbidity +												
Surface	31.0	30.5	15.0	13.5	5.0	5.6	5.8	2.1	6.5	2.9	2.9	3.5
Bottom	31.0	30.0	17.0	12.5	7.5	6.8	6.9	2.3	5.4	9.6	7.3	4.4
Secchi disc (m)	0.4	0.5	0.8	1.0	1.2	1.2	1.2	1.6	1.7	1.4	2.0	0.7
<u>Solids</u>												
Total Solids *												
Surface	3.0	3.8	5.6	8.2	2.4	6.2	11.0	-	1.2	-	6.8	10.4
Bottom	4.2	2.2	5.4	7.4	6.6	9.0	13.8	5.4	0.8	88.4	24.8	6.8
Settleable Solids*												
Surface	-	2.2	2.0	3.8	0.8	2.2	4.0	-	0.8	-	3.6	6.0
Bottom	-	1.0	1.0	3.8	5.4	4.6	4.6	1.8	0.4	55.2	2.8	2.0
<u>Nutrients</u>												
Nitrates **												
Surface	236.0	-	193.8	40.5	57.6	58.4	66.9	-	29.6	-	12.0	6.3
Bottom	225.1	197.0	196.2	48.4	31.8	57.5	104.9	28.4	45.4	-	55.3	4.8
Nitrites **												
Surface	1.7	-	2.9	0.1	2.2	1.8	2.8	-	1.5	-	1.7	0.4
Bottom	2.0	1.8	2.2	1.3	2.5	2.0	3.2	10.7	1.1	-	2.8	0.8
Silicates **												
Surface	723.6	217.8	309.1	281.0	112.4	168.6	-	1264.5	709.5	302.1	730.6	1299.6
Bottom	302.1	63.2	305.6	105.4	70.3	63.2	-	2381.5	1110.0	660.4	625.2	1018.6
Phosphates **												
Surface	30.6	2.4	9.0	7.8	13.8	14.4	10.2	120.0	22.2	4.8	4.2	-
Bottom	16.8	3.0	8.1	8.4	6.6	11.4	9.0	44.4	21.6	20.4	3.0	2.4

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units

Appendix Table 2n. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	13.3	14.2	20.8	23.4	26.2	26.4	28.5	28.6	24.2	19.5	12.0	12.1
Bottom	13.3	14.0	16.8	23.1	26.2	26.4	28.6	28.7	23.9	19.0	11.9	11.6
Salinity (‰)												
Surface	0.05	0.30	0.18	0.38	0.05	0.18	0.75	0.10	3.61	4.63	0.30	0.35
Bottom	0.07	0.20	0.17	0.24	0.06	0.15	0.27	0.09	4.59	5.39	0.47	0.32
Dissolved Oxygen *												
Surface	9.9	10.9	9.5	8.1	6.8	6.7	7.1	6.2	6.9	7.3	10.5	10.7
Bottom	9.7	10.4	9.3	8.1	6.8	7.0	7.3	6.1	6.6	7.6	10.6	10.9
pH												
Surface	-	8.1	-	7.6	6.8	6.7	6.8	7.8	7.2	6.8	7.8	7.3
Bottom	7.9	7.9	8.1	7.5	6.5	6.6	6.5	7.9	7.1	7.0	7.6	7.3
Turbidity +												
Surface	7.0	8.8	6.8	7.0	4.6	5.3	5.0	4.3	3.4	3.7	5.0	6.3
Bottom	6.0	9.5	6.9	6.0	5.9	5.6	5.0	4.3	4.7	5.4	5.0	6.0
Secchi disc (m)	1.0	0.9	1.1	1.8	1.8	1.3	1.5	1.2	1.4	1.5	1.3	1.3
<u>Solids</u>												
Total Solids *												
Surface	2.8	-	12.0	5.6	-	6.8	-	7.6	6.4	6.8	8.6	-
Bottom	4.0	-	7.2	-	-	12.0	7.2	8.8	14.0	56.8	8.4	10.0
Settleable Solids*												
Surface	2.8	-	4.8	0.0	-	1.2	-	4.0	0.4	0.0	5.0	-
Bottom	3.6	-	0.4	-	-	8.2	4.4	4.0	5.2	46.4	2.8	2.0
<u>Nutrients</u>												
Nitrates **												
Surface	43.5	26.40	150.2	-	14.8	39.7	44.6	34.4	58.5	37.8	29.4	-
Bottom	41.9	-	164.2	37.9	23.6	37.2	46.0	33.4	56.3	42.2	30.1	-
Nitrites **												
Surface	2.7	1.3	3.1	-	3.4	2.3	2.3	2.6	2.8	1.2	1.4	-
Bottom	2.9	-	3.1	3.7	3.7	3.1	2.0	2.3	3.2	1.2	1.4	-
Silicates **												
Surface	836.0	491.8	892.2	878.1	203.8	555.0	49.2	-	576.1	267.0	-	2230.0
Bottom	850.0	948.4	934.3	836.0	168.6	555.0	49.2	548.0	-	526.9	-	1071.0
Phosphates **												
Surface	-	19.8	0.0	6.0	33.6	-	6.0	-	4.0	20.0	5.0	15.5
Bottom	-	20.4	0.0	9.6	12.0	-	0.0	25.0	25.0	15.0	6.0	9.0

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units

Appendix Table 2o. Physical and chemical characteristics of water samples collected monthly at Station C003, North Charleston, Cooper River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	10.2	15.6	14.8	23.3	26.6	28.8	29.4	28.8	26.8	21.8	16.9	11.9
Bottom	11.2	14.4	16.7	23.8	26.7	28.4	29.1	28.8	26.9	19.5	16.9	12.0
Salinity (‰)												
Surface	4.26	0.81	0.06	1.50	0.53	0.06	0.67	-	2.97	9.76	7.97	3.34
Bottom	4.86	1.11	0.06	0.69	1.05	0.06	0.86	-	4.83	13.70	11.75	4.95
Dissolved Oxygen *												
Surface	10.4	8.4	9.0	7.4	7.4	6.8	5.1	5.7	6.4	5.3	8.6	10.0
Bottom	10.2	8.4	8.9	7.6	6.5	6.3	6.0	5.8	5.8	6.8	7.9	9.7
pH												
Surface	7.7	6.9	7.2	7.4	7.1	7.6	7.1	6.4	6.7	7.1	6.2	6.9
Bottom	7.3	6.8	7.3	7.4	6.9	7.5	7.0	6.6	6.5	6.9	6.0	6.7
Turbidity +												
Surface	26.0	28.0	18.0	15.0	6.5	6.4	9.6	2.7	5.2	34.0	2.6	2.7
Bottom	23.0	28.5	18.0	10.0	6.8	6.7	19.0	2.1	6.5	4.9	1.2	4.4
Secchi disc (m)	0.8	0.5	0.5	1.1	1.0	1.3	0.7	0.4	1.2	0.4	2.2	1.0
<u>Solids</u>												
Total Solids *												
Surface	7.4	5.4	10.0	11.0	5.6	7.4	17.2	-	2.6	23.2	-	-
Bottom	9.6	5.4	9.2	6.8	9.6	7.4	33.6	-	3.6	53.6	-	-
Settleable Solids*												
Surface	-	4.2	1.6	4.2	3.2	3.4	5.0	-	0.2	4.0	-	-
Bottom	-	3.8	4.0	2.0	5.2	1.8	14.0	-	1.2	32.0	-	-
<u>Nutrients</u>												
Nitrates **												
Surface	196.9	182.4	198.2	37.7	32.1	55.9	58.4	40.1	-	-	8.7	4.1
Bottom	199.6	177.2	187.1	39.9	39.9	55.4	4.3	-	20.5	-	-	-
Nitrites **												
Surface	2.2	1.7	4.1	0.1	2.2	1.8	2.5	12.0	-	-	3.9	1.5
Bottom	3.0	3.1	2.9	0.0	2.8	1.3	2.0	-	8.5	-	-	-
Silicates **												
Surface	-	252.4	221.3	295.1	245.9	140.5	-	569.0	1391.0	365.3	800.9	-
Bottom	337.2	196.7	344.2	281.0	337.2	154.6	-	927.3	1046.7	245.9	-	-
Phosphates **												
Surface	18.9	13.2	11.1	7.8	10.2	13.8	16.8	17.3	6.6	22.8	3.0	10.8
Bottom	21.6	7.8	10.8	7.8	20.4	3.6	10.8	-	15.6	1.2	-	-

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units

Appendix Table 2o. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	13.2	13.8	21.0	23.8	26.5	26.3	28.4	28.4	24.4	19.2	12.3	12.1
Bottom	13.0	13.5	16.9	23.6	26.2	26.2	28.4	28.6	24.1	19.2	12.2	11.8
Salinity (‰)												
Surface	0.22	1.72	3.58	3.65	1.85	4.29	3.30	2.37	8.62	10.44	2.07	1.63
Bottom	0.20	2.84	4.88	5.55	0.35	6.02	4.93	3.81	13.68	13.41	2.71	2.34
Dissolved Oxygen *												
Surface	9.4	10.2	8.2	7.2	4.2	5.9	6.3	6.0	5.7	5.9	9.8	10.0
Bottom	9.5	10.2	8.4	6.8	6.3	5.6	5.9	5.4	5.4	6.3	9.7	9.9
pH												
Surface	-	7.9	8.1	7.7	6.0	6.0	6.1	7.1	7.2	6.7	7.1	7.3
Bottom	-	7.7	7.9	7.6	5.8	6.0	6.1	7.0	7.5	6.0	7.3	7.2
Turbidity +												
Surface	8.0	6.7	6.6	6.0	46.0	4.3	5.0	4.0	3.7	3.2	10.0	14.0
Bottom	11.0	6.6	4.9	6.0	9.0	6.9	6.0	4.8	-	9.6	4.0	21.0
Secchi disc (m)	0.9	1.0	1.3	1.5	0.4	1.4	1.4	1.3	1.4	1.7	0.9	0.7
<u>Solids</u>												
Total Solids *												
Surface	8.4	8.8	-	8.0	14.4	-	19.2	-	-	20.0	25.6	18.8
Bottom	8.4	10.8	-	14.8	-	14.0	32.8	-	-	43.2	20.0	26.0
Settleable Solids*												
Surface	1.6	4.4	-	0.0	9.2	-	11.6	-	-	0.0	30.8	6.4
Bottom	4.4	-	-	1.2	-	5.4	24.8	-	-	14.8	3.2	5.6
<u>Nutrients</u>												
Nitrates **												
Surface	38.8	-	163.4	28.8	9.6	50.8	28.5	50.4	33.5	29.8	27.8	-
Bottom	37.2	111.1	114.9	16.6	-	42.9	41.0	43.8	28.5	19.6	24.2	-
Nitrites **												
Surface	3.2	-	3.9	3.4	5.1	3.1	7.6	4.9	3.9	1.7	2.3	-
Bottom	4.1	0.6	3.4	3.7	-	2.3	7.3	6.9	4.4	1.4	1.7	-
Silicates **												
Surface	1398.0	1405.0	1138.1	3364.9	309.1	2556.1	3533.6	864.1	-	786.8	-	2293.0
Bottom	1398.0	850.0	1362.8	765.7	323.2	2732.6	1327.7	751.7	1208.3	786.8	-	2230.0
Phosphates **												
Surface	-	38.4	13.2	12.6	13.8	-	-	-	0.0	22.0	39.0	13.0
Bottom	-	39.0	18.6	11.4	20.4	-	-	-	35.0	50.0	37.0	24.0

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units

Appendix Table 2p. Physical and chemical characteristics of water samples collected monthly at Station C004, Mouth of the Cooper River, Cooper River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	10.6	14.4	14.8	22.7	25.2	28.6	29.2	28.9	26.7	19.3	16.7	12.0
Bottom	11.6	14.6	16.2	22.4	26.2	28.7	29.2	28.8	26.5	18.6	17.4	12.7
Salinity (‰)												
Surface	3.84	2.54	0.72	2.94	1.51	0.72	3.13	4.12	5.66	13.54	10.20	4.81
Bottom	25.13	3.36	4.35	14.42	18.71	2.01	5.97	22.68	18.84	26.09	26.16	22.52
Dissolved Oxygen *												
Surface	10.3	8.1	8.4	7.6	6.8	6.1	4.4	5.6	6.1	6.6	8.9	10.6
Bottom	8.6	8.0	7.7	6.1	4.6	5.5	4.8	4.3	5.5	6.8	7.3	9.1
pH												
Surface	6.8	7.0	7.1	7.5	7.7	7.5	6.6	6.8	6.5	6.9	6.9	7.0
Bottom	7.9	6.9	7.4	7.7	7.9	6.8	6.8	6.3	6.2	6.7	5.7	6.8
Turbidity +												
Surface	28.0	28.0	18.0	7.5	6.3	7.8	6.6	2.0	5.7	3.4	1.3	4.0
Bottom	20.0	26.0	28.0	7.7	33.0	23.0	8.8	3.8	28.0	21.0	2.1	8.1
Secchi disc (m)	0.4	0.5	0.5	1.0	1.2	1.0	1.0	1.4	1.0	1.2	1.8	0.8
<u>Solids</u>												
Total Solids *												
Surface	8.8	12.2	12.0	8.4	4.4	10.6	12.0	-	6.2	21.6	-	8.8
Bottom	22.2	14.0	37.6	23.0	88.6	44.4	22.4	23.4	28.6	144.4	-	-
Settleable Solids*												
Surface	-	-	3.6	4.0	2.4	3.0	0.4	-	1.4	0.4	-	2.0
Bottom	-	10.4	15.6	2.2	42.2	26.8	7.2	19.4	2.6	104.8	-	-
<u>Nutrients</u>												
Nitrates **												
Surface	198.0	167.4	183.5	39.8	37.2	51.1	52.6	10.9	11.1	-	-	8.8
Bottom	41.0	168.7	158.4	34.1	34.1	37.1	43.4	-	-	-	7.1	3.1
Nitrites **												
Surface	1.8	2.7	4.5	0.4	2.4	1.4	2.4	7.3	4.3	-	-	1.4
Bottom	0.3	2.8	5.0	1.3	3.4	2.1	4.2	-	-	-	2.0	1.5
Silicates **												
Surface	1018.6	295.1	555.0	555.0	512.8	337.2	-	477.7	842.5	1131.0	737.6	751.7
Bottom	709.5	425.0	1117.0	821.9	695.5	583.1	-	871.1	948.4	576.1	386.4	723.6
Phosphates **												
Surface	14.4	5.4	13.8	10.8	166.8	14.4	13.2	36.0	12.0	52.8	0.0	202.8
Bottom	16.2	4.8	111.0	21.0	19.8	20.4	18.0	69.6	6.0	55.2	-	21.0

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units



Appendix Table 2p. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	13.0	14.0	20.6	23.2	26.0	28.6	28.3	28.8	24.2	20.2	11.6	12.5
Bottom	13.3	13.3	17.0	23.3	26.2	27.8	28.5	28.9	24.4	20.2	12.2	12.4
Salinity (‰)												
Surface	2.47	3.77	4.35	4.21	3.54	4.51	5.50	4.07	10.89	13.46	3.50	2.93
Bottom	3.94	8.18	7.99	19.69	4.69	4.44	14.67	10.16	12.39	15.01	12.42	16.13
Dissolved Oxygen *												
Surface	9.0	10.1	7.8	7.4	6.0	6.8	6.3	6.0	6.0	6.0	9.7	10.4
Bottom	8.7	9.5	8.1	5.7	6.2	7.0	4.7	4.5	5.7	6.2	8.7	8.9
pH												
Surface	8.0	8.1	-	6.6	6.1	7.3	6.3	7.5	6.7	7.2	6.7	7.4
Bottom	8.0	7.7	8.0	6.5	6.1	7.4	6.2	7.3	7.2	7.5	7.1	7.9
Turbidity +												
Surface	9.0	6.6	6.7	8.0	14.0	4.8	6.0	4.7	4.9	7.2	6.0	8.4
Bottom	14.0	9.5	9.1	16.0	18.0	6.1	7.0	9.8	8.4	9.7	11.0	85.0
Secchi disc (m)	0.9	1.0	1.2	0.8	0.6	1.0	1.4	1.2	1.2	1.2	0.9	0.8
<u>Solids</u>												
Total Solids												
Surface	12.8	-	15.6	-	20.4	18.0	-	16.0	23.6	40.8	14.8	-
Bottom	37.2	42.4	35.2	61.6	26.8	19.2	-	44.8	-	48.0	62.0	220.0
Settleable Solids*												
Surface	2.4	-	4.8	-	7.6	1.6	-	1.2	6.0	4.0	4.4	-
Bottom	16.0	15.2	27.6	20.0	14.4	0.4	-	9.6	-	10.0	10.0	121.6
<u>Nutrients</u>												
Nitrates **												
Surface	16.4	222.5	164.5	30.1	8.2	11.4	48.3	42.2	36.7	29.8	49.8	29.7
Bottom	8.1	37.0	156.4	15.1	-	27.4	36.2	43.2	30.7	27.1	25.2	21.5
Nitrites **												
Surface	5.3	0.8	3.5	2.8	3.4	1.4	10.5	8.2	3.5	0.3	6.2	0.0
Bottom	5.5	1.1	3.9	3.1	-	2.0	7.9	12.1	5.0	2.3	2.8	0.5
Silicates **												
Surface	1398.0	997.6	1257.4	836.0	1222.3	1397.9	224.8	3891.7	1159.1	3006.7	-	2069.0
Bottom	1573.6	1405.0	2248.0	976.5	569.1	1116.9	976.4	1004.5	1187.2	2936.5	3020.8	1363.0
Phosphates **												
Surface	-	24.0	14.4	19.8	28.8	-	38.0	-	15.0	40.0	20.0	10.5
Bottom	12.0	16.2	2.4	31.2	53.4	16.0	-	25.0	30.0	40.0	35.0	44.0

\*mg/liter

\*\*µg/liter

+FTU - Formazin Turbidity Units

Appendix Table 2q. Physical and chemical characteristics of water samples collected monthly at Station J003, Cummings Point, Cooper River estuary, South Carolina, during the two annual cycles from February, 1973 through January, 1975.

Parameter	1973											1974
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	-	-	-	23.0	28.7	28.3	29.8	28.3	26.4	18.4	16.6	12.3
Bottom	-	-	-	22.0	25.5	27.5	29.4	28.4	26.4	18.4	16.9	12.4
Salinity (‰)												
Surface	-	-	-	13.96	10.98	9.38	17.30	11.82	18.31	22.83	21.79	17.52
Bottom	-	-	-	26.68	29.36	24.81	21.42	30.38	27.02	28.32	31.47	30.85
Dissolved Oxygen *												
Surface	-	-	-	6.9	5.8	5.2	5.7	5.4	6.4	7.3	7.7	9.0
Bottom	-	-	-	6.7	6.3	5.2	5.9	5.7	6.3	7.3	8.0	8.0
pH												
Surface	-	-	-	7.5	7.3	7.3	7.3	6.7	6.2	6.6	6.4	6.5
Bottom	-	-	-	7.9	8.0	6.9	7.4	6.3	6.2	6.7	6.5	7.1
Turbidity +												
Surface	-	-	-	7.6	4.6	6.6	8.2	1.9	6.0	33.0	2.7	4.2
Bottom	-	-	-	20.0	45.0	15.0	32.0	1.3	54.0	9.4	4.4	20.4
Secchi disc (m)	-	-	-	0.9	1.1	1.0	0.7	1.4	0.9	1.3	1.8	0.8
<u>Solids</u>												
Total Solids *												
Surface	-	-	-	12.0	-	-	24.0	0.6	-	-	-	18.0
Bottom	-	-	-	34.6	139.6	41.6	80.8	2.4	62.6	-	-	74.8
Settleable Solids*												
Surface	-	-	-	6.8	-	-	0.2	0.2	-	-	-	-
Bottom	-	-	-	23.0	115.2	6.0	39.2	1.4	2.2	-	-	40.0
<u>Nutrients</u>												
Nitrates **												
Surface	-	-	-	33.7	31.6	22.3	38.2	42.6	-	-	-	6.0
Bottom	-	-	-	-	22.3	30.5	41.3	-	-	-	11.8	3.2
Nitrites **												
Surface	-	-	-	1.0	4.1	1.8	10.5	0.4	-	-	-	1.7
Bottom	-	-	-	-	3.9	2.1	9.1	-	-	-	2.5	1.7
Silicates **												
Surface	-	-	-	829.0	1018.6	1081.9	-	2725.7	1018.6	948.4	288.0	-
Bottom	-	-	-	491.8	379.4	843.0	1208.3	372.3	843.0	477.7	519.9	428.5
Phosphates **												
Surface	-	-	-	12.6	47.4	21.0	28.2	13.8	48.0	17.4	6.0	9.6
Bottom	-	-	-	7.8	36.6	16.2	33.6	34.3	48.0	19.8	-	37.2

\*mg/liter

\*\*µg/liter

+ FTU - Formazin Turbidity Units

Appendix Table 2q. (Continued).

Parameter	1974											1975
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Water temp. (°C)												
Surface	13.2	14.0	20.5	24.6	25.8	27.4	28.3	29.2	24.2	25.0	11.8	12.4
Bottom	13.8	13.9	17.0	23.2	25.8	26.7	28.1	29.0	24.4	25.0	12.2	12.8
Salinity (‰)												
Surface	12.65	16.08	19.29	15.47	18.88	16.70	21.91	17.59	24.32	25.97	17.66	15.53
Bottom	25.10	26.95	28.03	29.61	19.41	25.96	32.83	25.70	28.33	30.16	26.85	28.74
Dissolved Oxygen *												
Surface	8.2	9.3	7.7	6.5	6.5	7.1	7.1	6.4	7.2	6.6	9.2	9.4
Bottom	8.5	8.7	7.9	5.3	6.7	6.4	6.5	5.9	7.4	7.1	9.0	8.6
pH												
Surface	-	7.8	7.8	6.4	6.0	6.3	6.3	7.9	7.4	7.8	7.8	7.9
Bottom	8.0	7.9	7.9	6.6	6.1	6.4	6.4	7.4	8.1	8.1	8.0	7.9
Turbidity +												
Surface	6.0	6.6	5.5	3.0	5.4	5.0	5.0	4.8	4.6	6.0	11.0	5.3
Bottom	20.0	3.2	28.0	21.0	6.1	43.0	92.0	38.0	66.0	99.0	21.0	57.0
Secchi disc (m)	1.2	1.1	1.2	1.3	1.1	1.0	1.5	0.9	1.5	1.0	0.3	1.2
<u>Solids</u>												
Total Solids *												
Surface	24.4	40.4	35.2	0.0	-	32.0	30.4	-	59.6	72.0	56.0	-
Bottom	86.8	108.0	90.0	90.4	-	157.6	-	134.0	287.2	382.8	490.4	110.8
Settleable Solids*												
Surface	0.8	0.0	5.6	0.0	-	15.6	0.8	-	20.8	15.6	15.2	-
Bottom	21.6	0.4	36.0	26.0	-	94.0	149.2	34.0	107.6	244.8	297.6	54.8
<u>Nutrients</u>												
Nitrates **												
Surface	-	-	71.7	-	3.7	21.5	31.2	28.9	19.9	21.0	33.2	-
Bottom	-	-	-	4.4	6.5	9.6	15.6	13.3	7.3	8.6	20.0	6.1
Nitrites **												
Surface	-	-	3.9	-	-	3.0	3.1	11.7	3.9	2.8	2.8	-
Bottom	-	-	-	2.6	5.1	2.4	2.6	7.0	3.9	8.2	4.5	2.3
Silicates **												
Surface	2030.3	927.3	1376.9	1187.2	751.7	590.1	695.5	737.6	590.1	702.5	3442.3	1426.0
Bottom	604.2	555.0	400.4	428.6	1011.6	323.2	210.8	540.1	449.6	407.5	1138.1	723.6
Phosphates **												
Surface	22.8	19.8	38.4	20.4	47.4	16.0	-	-	19.0	45.0	135.0	0.0
Bottom	25.2	40.2	174.0	27.6	48.0	-	-	95.0	125.0	163.0	185.0	31.5

\*mg/liter

\*\*µg/liter

+ FTU - Formazin Turbidity Units