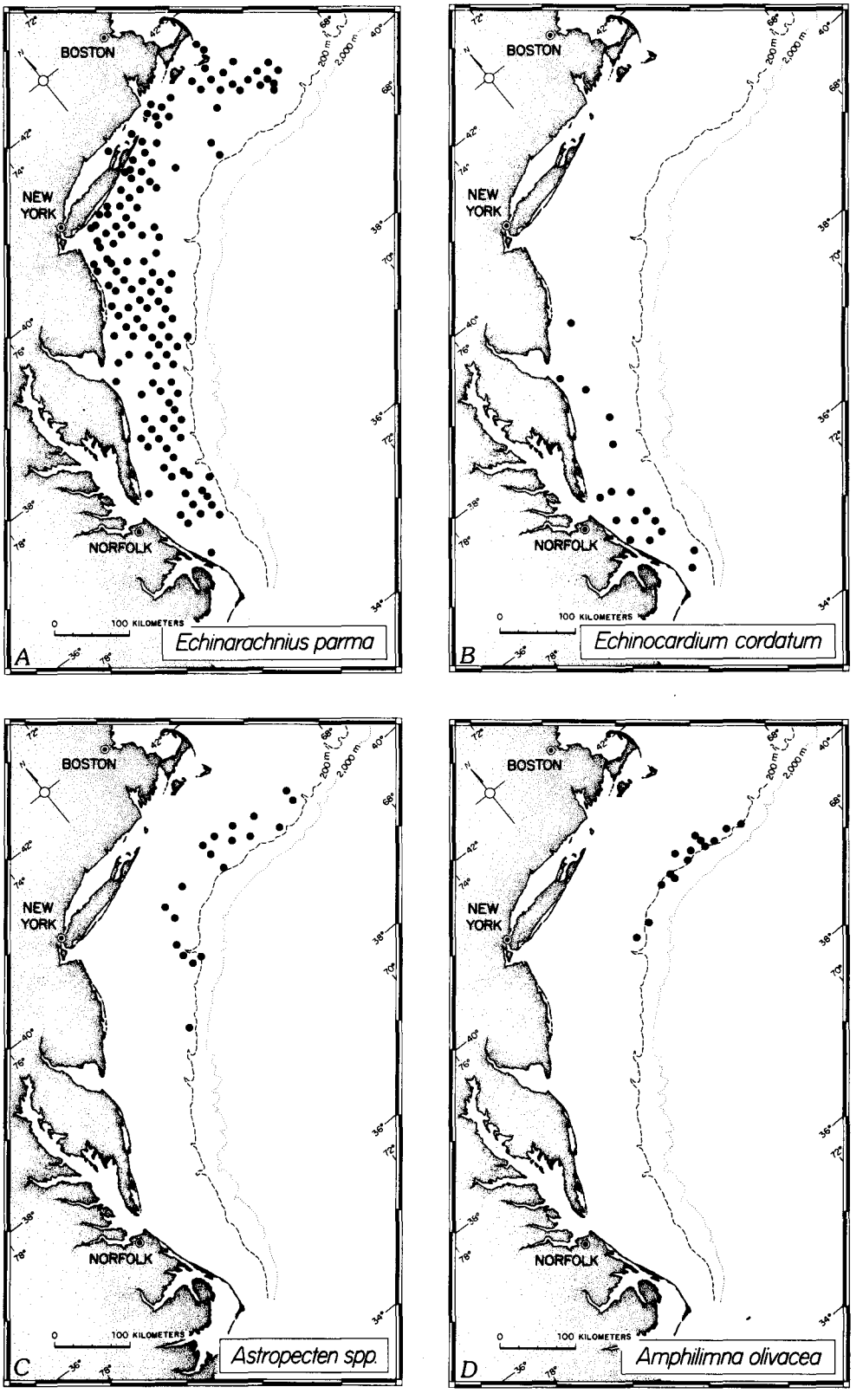

FIGURE 79.—Geographic distribution (indicated by dots) of selected echinoids (*A*, *B*), asteroids (*C*), and ophiuroids (*D*), phylum Echinodermata.

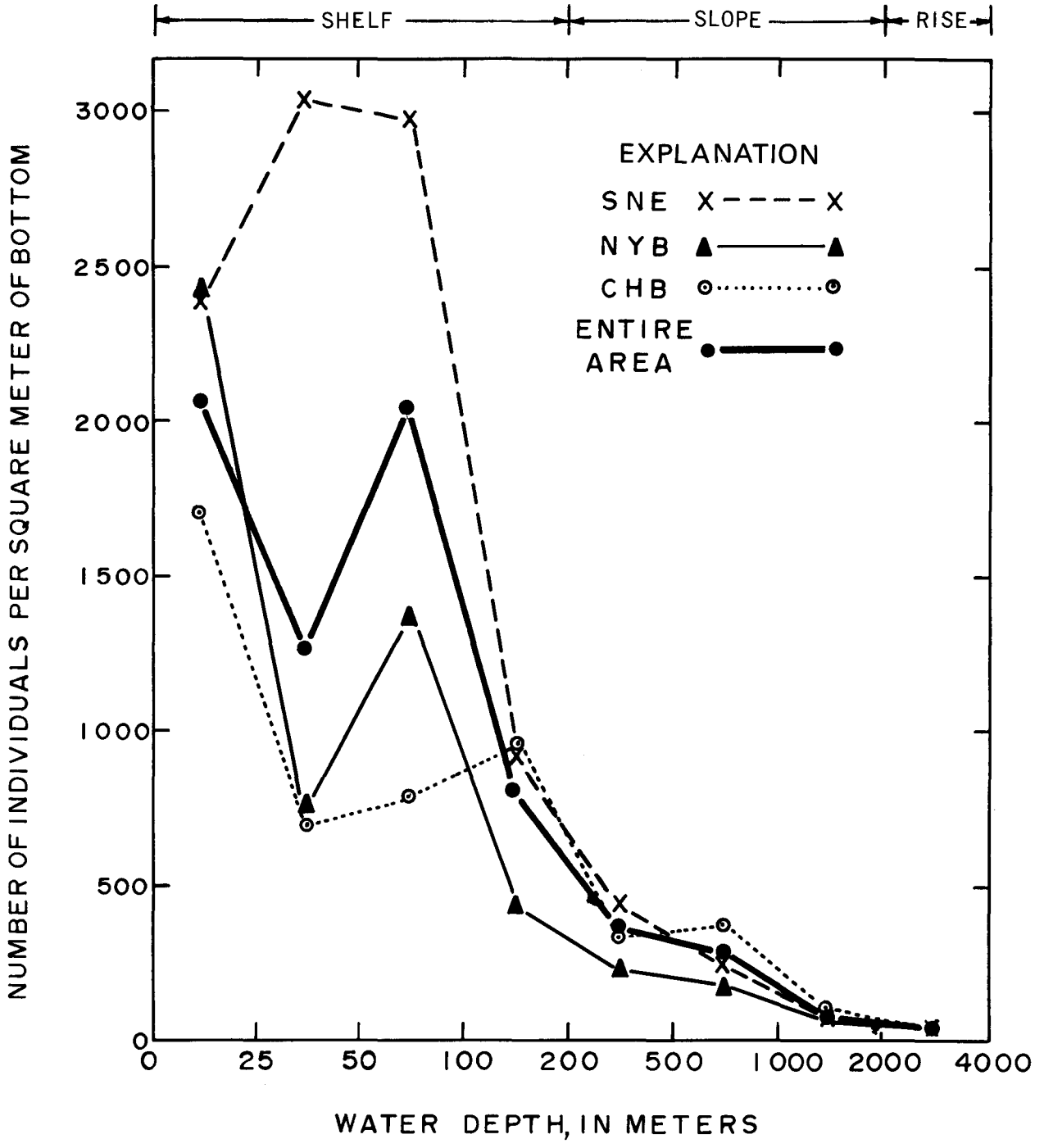

FIGURE 80.—Relationship between number of individuals and water depth. Values represent all taxonomic groups combined for each subarea and for the entire Middle Atlantic Bight region. Abbreviations: SNE, Southern New England; NYB, New York Bight; CHB, Chesapeake Bight.

of eight water-depth classes for the entire Middle Atlantic Bight region (columns 5 and 9), and for each subarea. Density decreased substantially, although somewhat irregularly, as the depth increased on the Continental Shelf. At midshelf, the average density ranged from 1,254/m² to 2,073/m², and along the outer shelf it dropped to 810/m². Density of organisms declined further on the Continental Slope. Along the upper slope, the faunal density averaged 382/m², at midslope 293/m², and on the lower slope 72/m². The decline continued onto the Continental Rise, where macrobenthic organisms

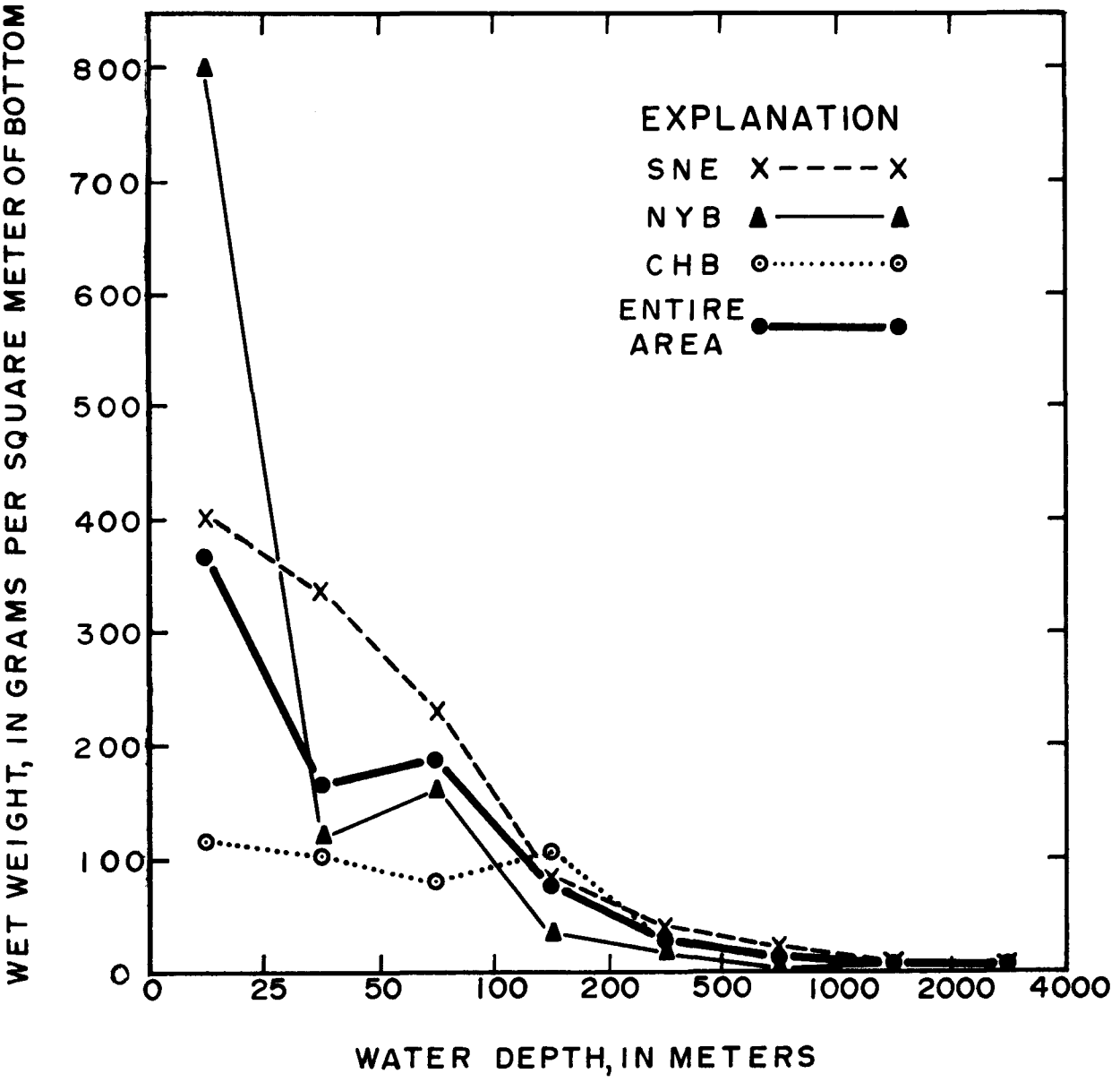

FIGURE 81.—Relationship between biomass (wet weight) and water depth. Values represent all taxonomic groups combined for each subarea and for the entire Middle Atlantic Bight region. Abbreviations: SNE, Southern New England; NYB, New York Bight; CHB, Chesapeake Bight.

averaged only 46/m². Although there were regional variations in density, which are described below, the trend in density with respect to water depth was clear. Density was highest in the most shallow water and varied inversely with water depth.

The rate of change in density as related to bathymetric changes is not readily perceived from the values listed in table 9. Therefore, another tabulation (table 10) was constructed in which the rate of change in density—expressed as the increase or decrease in number of individuals per square meter of bottom, per meter increase in water depth—was calculated and listed. The rate changes in density per unit change in water depth were greatest on the Continental Shelf. A decrease of 33 individuals per meter increase in water depth occurred in inner-shelf waters, from 0–24 m to 24–49 m. At midshelf depths, the rate of change was spurious, and reversed to an increase of 22 individuals per meter. Modest rate changes (about −17 individuals per meter) in density were found in the Outer Continental Shelf region. Only small changes from (−0.2 to −0.3

TABLE 10.—*Change and rate of change in density of invertebrates in relation to water depth*

Water depth			Number of individuals	Change in number of individuals	Rate change in number of individuals
Range	Mean	Change			
m	m	m	No./m^2	No./m^2	No./m^2/m
0-24	12.5	-	2,078.66	-	-
25-49	37.5	25	1,253.64	-825.02	-33.00
50-99	75	37.5	2,072.87	+819.23	+21.85
100-199	150	75	809.68	-1263.19	-16.84
200-499	350	200	381.68	- 428.00	- 2.14
500-999	750	400	292.76	- 88.92	- 0.22
1,000-1,999	1,500	750	72.38	- 220.38	- 0.29
2,000-3,999	2,540	1,040	45.75	- 26.63	- 0.026

TABLE 11.—*Change and rate of change in biomass of invertebrates in relation to water depth*

Water depth			Biomass	Change in biomass	Rate change in biomass per meter depth
Range	Mean	Change			
m	m	m	g/m^2	g/m^2	g/m^2/m
0-24	12.5	-	368	-	-
25-49	37.5	25	163	-205	-8.20
50-99	75	37.5	189	+ 26	+0.69
100-199	150	75	79	-110	-1.47
200-499	350	200	28	- 51	-0.26
500-999	750	400	12	- 16	-0.04
1,000-1,999	1,500	750	7	- 5	-0.007
2,000-3,999	2,540	1,040	8	+ 1	+0.001

individual per meter increase in depth) were evident on the Continental Slope. Very small changes (−0.026 specimen per 1-meter) were detected on the Continental Rise.

Biomass.—The relationship between invertebrate macrobenthic biomass and water depth (table 9, last column) parallels the pattern described above for density. Biomass was greatest (averaged 368 g/m²) in the shallowest depth class. It decreased irregularly across the shelf, where average values ranged from 163 g/m² to 189 g/m² at midshelf, and averaged 79 g/m² along the Outer Continental Shelf. Biomass on the Continental Slope ranged from 7 g/m² on the lower slope to 28 g/m² on the upper slope. On the Continental Rise, the biomass averaged 8 g/m².

The rate of change in biomass per 1-m increase in water depth was greatest in shallow water and least in deepwater. This is evident, in the rate-change column of table 11. The average biomass diminished 8.2 g/m² for each meter of water depth, from the shallowest depth class (0–24 m) to the next deeper depth class (25–49 m). At midshelf, the biomass showed an increase, which was probably caused by regional differences in biomass (described below) and which, to some extent, reflects the larger standing crop of several taxonomic groups (Gastropoda, Ophiuroidea, Alcyonacea, and others) along the Outer Continental Shelf. The rate of biomass change on the Outer Continental Shelf averaged −1.5 g/m² per 1-m increase in depth. The rate of change diminished progressively down the slope: −0.26, −0.04, and −0.007 g/m². On the Continental Rise, there was a slight increase in biomass rate-change (+0.001 g/m²); but this, again, was probably due to the regional differences in biomass and to the few samples that were collected.

The trend of decreasing biomass as water depth increases was clearly evident. Despite a few irregularities, the reduction in biomass, from an average of 368 g/m² in shallow water to 8 g/m² in deep water, amounts to a 98 percent change. This is precisely the same change described for the density of organisms.

SUBAREAS

SOUTHERN NEW ENGLAND

The number of individuals was, on the average, substantially higher in Southern New England than in the other subareas. This is evident from the density values given in table 9, column 2, and plotted in figure 80. On the Continental Shelf, the average density for each bathymetric class in the subarea ranged from 934/m² to 3,090/m², and the overall average was 2,360/m², whereas shelf densities for the entire Middle Atlantic Bight region ranged from 810/m² to 2,079/m² and averaged only 1,554/m². The comparative average values for New York Bight and Chesapeake Bight were 1,254/m² and 1,057/m². On the Continental Slope, the faunal density, also, was moderately high compared with that of other subareas. The density of the Continental Slope fauna in Southern New England averaged 265/m², compared with 249/m² for the entire Middle Atlantic Bight region, 171/m² for New York Bight, and 271/m² for the Chesapeake Bight. The density of organisms on the Southern New England Continental Rise averaged 48/m², a quantity only slightly higher than densities in the other subareas (40/m² to 47/m²) and for the entire Middle Atlantic Bight region (46/m²).

The standing-crop biomass on the Continental Shelf and Upper Continental Slope in the Southern New England subarea was considerably greater than the Middle Atlantic Bight region averages (table 9 and fig. 81). Biomass averages for four depth classes on the Continental Shelf ranged from 89 to 404 g/m², and the overall average was 268 g/m². That quantity was only slightly less than the 282 g/m² found in New York Bight, but much greater than the 101 g/m² found in Chesapeake Bight. For midshelf depths between 25 and 99 m, the quantities of biomass in Southern New England (which averaged 237 and 343 g/m²) surpassed the amounts found in the other subareas. Biomass on the Continental Slope was greater (average 19 g/m²) in Southern New England than in either New York Bight (10 g/m²) or Chesapeake Bight (17 g/m²). The mean biomass of 8 g/m² on the Continental Rise in this subarea was average for the entire region. It was slightly higher than that for New York Bight (7 g/m²) and slightly lower than that for Chesapeake Bight (10 g/m²).

NEW YORK BIGHT

The number of individuals in the New York Bight subarea fell between that in Southern New England and in Chesapeake Bight (table 9 and fig. 80) on the Continental Shelf. Densities averaged between 442/m² and 2,430/m²; overall average was 1,254/m². This density compares with 1,554/m² for the entire Middle Atlantic Bight region, 2,360/m² for Southern New England, and 1,057/m² for Chesapeake Bight. Highest densities, as expected, were in the shallowest

depth class (0–24 m). Unusually low densities, compared with those from adjacent bathymetric classes and adjacent subareas, of 752/m² and 442/m², were found on the Continental Shelf at water depths between 25 and 49 m and 100 to 199 m (table 9, column 3). Faunal densities in these two depth classes were roughly one-half the density expected. The cause of these unusually low densities was the sparsity of representatives in several taxonomic groups. (See discussion under "Taxonomic Groups.")

Fauna on the Continental Slope of the New York Bight subarea, also was relatively sparse, compared to other subareas. Densities ranged from 66/m² to 255/m², and averaged 176/m². This overall average is about 35 percent below the average slope density for both Southern New England and Chesapeake Bight.

The faunal density of 47/m² on the Continental Rise was nearly equal to that in the other two subareas.

Biomass in New York Bight fell between those in the Southern New England and Chesapeake Bight subareas. Unusually large and small quantities were found in the various bathymetric classes. On the Continental Shelf, the biomass ranged from the uncommonly small quantity of 36 g/m² on the outer shelf to the unexpectedly large 804 g/m² in the inshore region. Although the overall quantity of biomass for the Continental Shelf, which averaged 282 g/m², was highest in the region, this was due largely to the influence of shallow-water components. A biomass of 123 g/m² near midshelf was substantially lower—about 50 percent—than was anticipated. Also, the outer shelf biomass (36 g/m²) was smaller than expected by at least 100 percent. These small biomass values correspond to the low densities of the fauna in the New York Bight subarea described above.

Biomass on the Continental Slope ranged from 5 to 17 g/m², and averaged only 10 g/m². This is substantially less than the quantities found in adjacent subareas, which averaged 19 g/m² in Southern New England and 17 g/m² in Chesapeake Bight.

On the Continental Rise, the average biomass of 7 g/m² was smaller than that found in adjacent subareas, which averaged 8 and 10 g/m² respectively in Southern New England and Chesapeake Bight. New York Bight biomass was 13 percent and 30 percent smaller than counterpart values in the adjacent subareas.

A discussion of the taxonomic components that were in short supply or unusually plentiful is included in "Taxonomic groups."

CHESAPEAKE BIGHT

The number of individuals was slightly lower in this subarea than in New York Bight and much lower than in Southern New England. The average density in the various bathymetric classes on the Continental Shelf ranged from 722/m² to 1,742/m², which was generally lower than in other subareas, and overall averaged only 1,057/m². Comparative quantities in Southern New England and New York Bight were 2,360/m² and 1,254/m², respectively. Unusually low densities of 722/m² and 795/m² were found at midshelf depths; conversely, an unexpectedly high density (969/m²) was found on the outer shelf.

On the Continental Slope, the faunal density was relatively high, averaging 271/m², and ranging from 75/m² to 387/m². These densities were slightly higher than those at comparative depths in Southern New England and much higher than those in New York Bight.

On the Continental Rise, the faunal density averaged 40/m², which was slightly less than densities at this bathymetric level in the other subareas.

The biomass of the benthic fauna in Chesapeake Bight was substantially less than that in other parts of the Middle Atlantic Bight region. Average values for the various depth classes on the Continental Shelf ranged from 80 to 114 g/m². This subarea, with its rather narrow Continental Shelf, did not have the marked difference in biomass between inshore shallow water regions and the outer shelf margin that was so pronounced in both Southern New England and New York Bight. Thus, Chesapeake Bight is somewhat different from the other subareas in two aspects; it is characterized by: (1) a small biomass on the Continental Shelf and a rather large biomass on the slope and rise; and (2) little difference in biomass from shallow to deepwater on the Continental Shelf.

Biomass on the Continental Slope was moderately high, ranging from 28 g/m² on the upper slope to 11 g/m² on the lower part. The average for the entire slope was 17 g/m². This value was slightly lower than that for Southern New England (19 g/m²), but much higher than that for New York Bight, which averaged only 10 g/m².

Biomass on the Continental Rise averaged 10 g/m². This was the highest for this depth class in any subarea in the entire Middle Atlantic Bight region.

TABLE 12.—*Mean number of individuals listed by major taxonomic groups for each bathymetric class, representing the entire Middle Atlantic Bight region*

[In number per square meter]

Taxonomic group	Bathymetric class (meters)							
	0-24	25-49	50-99	100-199	200-499	500-999	1,000-1,999	2,000-3,999
	no./m^2	no./m^2	no./m^2	no./m^2	no./m^2	no./m^2	no./m^2	no./m^2
PORIFERA	1.25	0.52	0.07	0.74	0.21	0.08	0.12	0.06
COELENTERATA	34.93	8.96	9.03	40.76	13.90	4.52	3.88	1.11
Hydrozoa	19.58	6.90	2.13	27.71	3.96	0.08	-	-
Anthozoa	15.35	2.06	6.90	13.05	9.94	4.44	3.88	1.11
Alcyonacea	0.01	-	0.52	2.76	1.61	1.20	0.97	0.61
Zoantharia	5.01	1.13	5.63	9.44	5.04	1.76	0.06	0.17
Unidentified	10.33	0.93	0.75	0.85	3.29	1.48	2.85	0.33
PLATYHELMINTHES								
Turbellaria	1.70	0.21	0.43	-	-	-	-	-
NEMERTEA	5.30	5.87	6.27	2.74	1.64	0.72	1.21	0.11
ASCHELMINTHES								
Nematoda	5.01	0.94	3.21	0.47	0.82	2.52	0.50	0.64
ANNELIDA	472.07	265.75	352.66	238.26	178.00	61.84	17.26	6.44
POGONOPHORA	-	0.55	0.05	-	7.21	21.32	5.21	2.53
SIPUNCULIDA	0.96	4.63	5.54	9.85	11.89	2.00	2.06	1.31
ECHIURA	0.27	0.02	-	-	-	-	0.35	0.72
PRIAPULIDA	-	-	-	-	-	-	0.24	-
MOLLUSCA	911.14	61.79	183.62	192.97	87.03	187.52	34.03	26.63
Polyplacophora	0.52	0.05	0.95	-	0.07	0.60	0.71	0.28
Gastropoda	95.52	13.95	11.54	13.47	9.21	18.40	2.59	1.25
Bivalvia	815.01	47.03	169.37	171.74	70.18	161.40	29.79	12.69
Scaphopoda		0.76	0.86	2.50	7.39	7.12	0.94	-
Cephalopoda	-	-	-	5.26	0.18	-	-	-
Unidentified	-	-	0.90	-	-	-	-	-
ARTHROPODA	552.99	803.12	1414.19	62.64	45.13	6.68	1.27	2.77
Pycnogonida	1.33	0.46	0.22	0.06	-	-	-	-
Arachnida	0.16	-	-	-	-	-	-	-
Crustacea	551.50	802.66	1413.97	62.58	45.13	6.68	1.27	2.77
Ostracoda	0.57	0.02	0.18	-	-	-	-	0.17
Cirripedia	101.98	0.60	0.03	-	-	-	-	-
Copepoda	-	-	0.08	-	0.21	0.20	-	-
Nebaliacea	-	-	0.05	-	-	-	-	0.06
Cumacea	1.99	31.43	36.36	8.82	4.68	0.48	0.35	0.69
Tanaidacea	-	-	-	-	0.18	-	0.06	0.72
Isopoda	17.57	20.96	11.25	1.76	1.14	0.96	0.18	0.19
Amphipoda	407.47	742.20	1361.25	49.35	38.46	4.96	0.62	0.94
Mysidacea	6.90	0.11	0.02	-	0.07	-	-	-
Decapoda	15.02	7.34	4.75	2.65	0.39	0.08	0.06	-
BRYOZOA	25.34	33.99	3.47	0.15	-	-	-	-
BRACHIOPODA	-	-	0.02	-	-	-	-	-
ECHINODERMATA	42.88	41.82	78.33	235.59	28.21	2.88	2.65	6.48
Holothuroidea	0.70	0.14	5.90	2.06	9.46	0.52	0.62	0.39
Echinoidea	41.14	40.24	10.20	1.03	0.46	-	0.06	0.17
Ophiuroidea	0.73	0.38	61.03	231.03	17.86	2.20	1.62	5.86
Asteroidea	0.31	1.02	2.10	1.47	0.43	0.16	0.35	0.06
HEMICHORDATA	0.15	-	0.35	0.15	-	0.20	-	-
CHORDATA								
Ascidiacea	11.79	35.28	9.91	19.50	1.29	-	0.76	2.58
UNIDENTIFIED	12.88	5.66	4.81	5.85	6.32	2.48	2.85	6.78

TAXONOMIC GROUPS

ENTIRE MIDDLE ATLANTIC BIGHT REGION

The quantitative distribution of each phylum and 28 major subcomponents (classes and orders) as they were related to eight bathymetric classes are listed in tables 12 and 13 and are shown graphically in figures 82–87. The data pertain to the entire Middle Atlantic Bight region; later sections deal with similar relationships within each subarea. They were relatively sparse in New York Bight, and were present in intermediate quantity in Chesapeake Bight.

Hydrozoa were common on the Continental Shelf in all subareas, but were rare below 500 m. The

TABLE 13.—*Mean biomass listed by major taxonomic groups for each bathymetric class, representing the entire Middle Atlantic Bight region*

[In grams per square meter]

Taxonomic group	Bathymetric class (meters)							
	0-24	25-49	50-99	100-199	200-499	500-999	1,000-1,999	2,000-3,999
	g/m^2	g/m^2	g/m^2	g/m^2	g/m^2	g/m^2	g/m^2	g/m^2
PORIFERA	0.036	0.190	<0.001	0.033	0.018	<0.001	0.019	0.035
COELENTERATA	4.653	1.419	1.297	14.986	1.020	0.303	0.464	0.513
Hydrozoa	0.860	0.130	0.055	0.025	0.048	0.001	-	-
Anthozoa	3.793	1.289	1.242	14.962	0.972	0.302	0.464	0.513
Alcyonacea	0.012	-	0.172	0.428	0.083	0.107	0.221	0.048
Zoantharia	3.588	1.175	0.892	14.431	0.721	0.164	0.048	0.198
Unidentified	0.192	0.114	0.179	0.103	0.169	0.031	0.196	0.266
PLATYHELMINTHES	0.011	0.006	0.012	-	-	-	-	-
Turbellaria	0.011	0.006	0.012	-	-	-	-	-
NEMERTEA	0.878	0.884	0.637	0.297	0.106	0.012	0.193	0.001
ASCHELMINTHES	0.006	0.003	0.005	0.003	0.004	0.011	0.004	0.004
Nematoda	0.006	0.003	0.005	0.003	0.004	0.011	0.004	0.004
ANNELIDA	19.339	12.830	20.002	7.452	7.907	5.280	0.786	0.404
POGONOPHORA	-	0.003	<0.001	-	0.056	0.145	0.020	0.010
SIPUNCULIDA	0.125	0.293	1.033	0.218	1.003	3.488	2.082	0.451
ECHIURA	0.175	0.015	-	-	-	-	0.664	2.414
PRIAPULIDA	-	-	-	-	-	-	0.147	-
MOLLUSCA	301.965	94.611	122.904	16.566	2.140	1.187	0.450	0.233
Polyplacophora	0.474	0.006	0.013	-	<0.001	0.004	0.008	0.005
Gastropoda	6.789	0.876	4.202	0.055	0.135	0.171	0.031	0.009
Bivalvia	294.703	93.709	118.671	16.404	1.863	0.914	0.400	0.218
Scaphopoda		0.022	0.014	0.034	0.140	0.098	0.011	-
Cephalopoda	-	-	-	0.072	0.002	-	-	-
Unidentified	-	-	0.004	-	-	-	-	-
ARTHROPODA	19.213	7.963	7.551	0.674	0.226	0.080	0.042	0.031
Pycnogonida	0.009	0.001	0.001	0.001	-	-	-	-
Arachnida	0.001	-	-	-	-	-	-	-
Crustacea	19.203	7.962	7.549	0.674	0.226	0.080	0.042	0.031
Ostracoda	0.005	<0.001	0.001	-	-	-	-	0.001
Cirripedia	12.774	0.015	<0.001	-	-	-	-	-
Copepoda	-	-	<0.001	-	0.001	0.002	-	-
Nebaliacea	-	-	<0.001	-	-	-	-	0.001
Cumacea	0.014	0.095	0.192	0.055	0.027	0.005	0.004	0.014
Tanaidacea	-	-	-	-	0.002	-	0.001	0.005
Isopoda	0.138	0.761	0.347	0.130	0.046	0.008	0.005	0.002
Amphipoda	3.526	5.583	6.659	0.276	0.141	0.048	0.004	0.008
Mysidacea	0.030	0.002	<0.001	-	0.001	-	-	-
Decapoda	2.716	1.506	0.350	0.213	0.008	0.017	0.029	-
BRYOZOA	0.555	0.684	0.079	0.002	-	-	-	-
BRACHIOPODA	-	-	0.001	-	-	-	-	-
ECHINODERMATA	13.757	38.227	33.734	35.478	15.516	1.026	2.353	3.433
Holothuroidea	0.076	0.504	20.831	6.260	5.334	0.027	1.132	2.739
Echinoidea	11.578	37.411	4.352	13.498	6.560	-	0.107	0.233
Ophiuroidea	0.255	0.031	2.601	14.212	3.611	0.995	0.998	0.461
Asteroidea	1.848	0.282	5.950	1.509	0.005	0.004	0.116	0.001
HEMICHORDATA	0.041	-	0.066	0.044	-	0.002	-	-
CHORDATA	7.077	5.801	0.924	2.608	0.054	-	0.004	0.399
Ascidiacea	7.077	5.801	0.924	2.608	0.054	-	0.004	0.399
UNIDENTIFIED	0.238	0.376	0.412	0.140	0.064	0.148	0.197	0.084

quantity of hydroids varied only modestly from one subarea to another, except for the irregular occurrence of very high or low densities, which may have resulted from the vagaries of sampling. Both density and biomass revealed the same intersubarea trends; slightly higher quantities in Southern New England, lower quantities in New York Bight, and intermediate quantities in Chesapeake Bight.

Anthozoa, as a group, were distributed much the same, in relation to the bathymetric level, in all three subareas. However, one of the main subgroups, the Alcyonacea, presented a different pattern. They were common at middepths and in deep water (50 to 3,999 m) in Southern New England and New York Bight, but in Chesapeake Bight they were found only in very shallow (0–24 m) and very deep (1,000–3,999 m) waters.

Platyhelminthes occupied the same bathymetric classes in all three subareas. The largest quantities, in terms of both density and biomass, were found

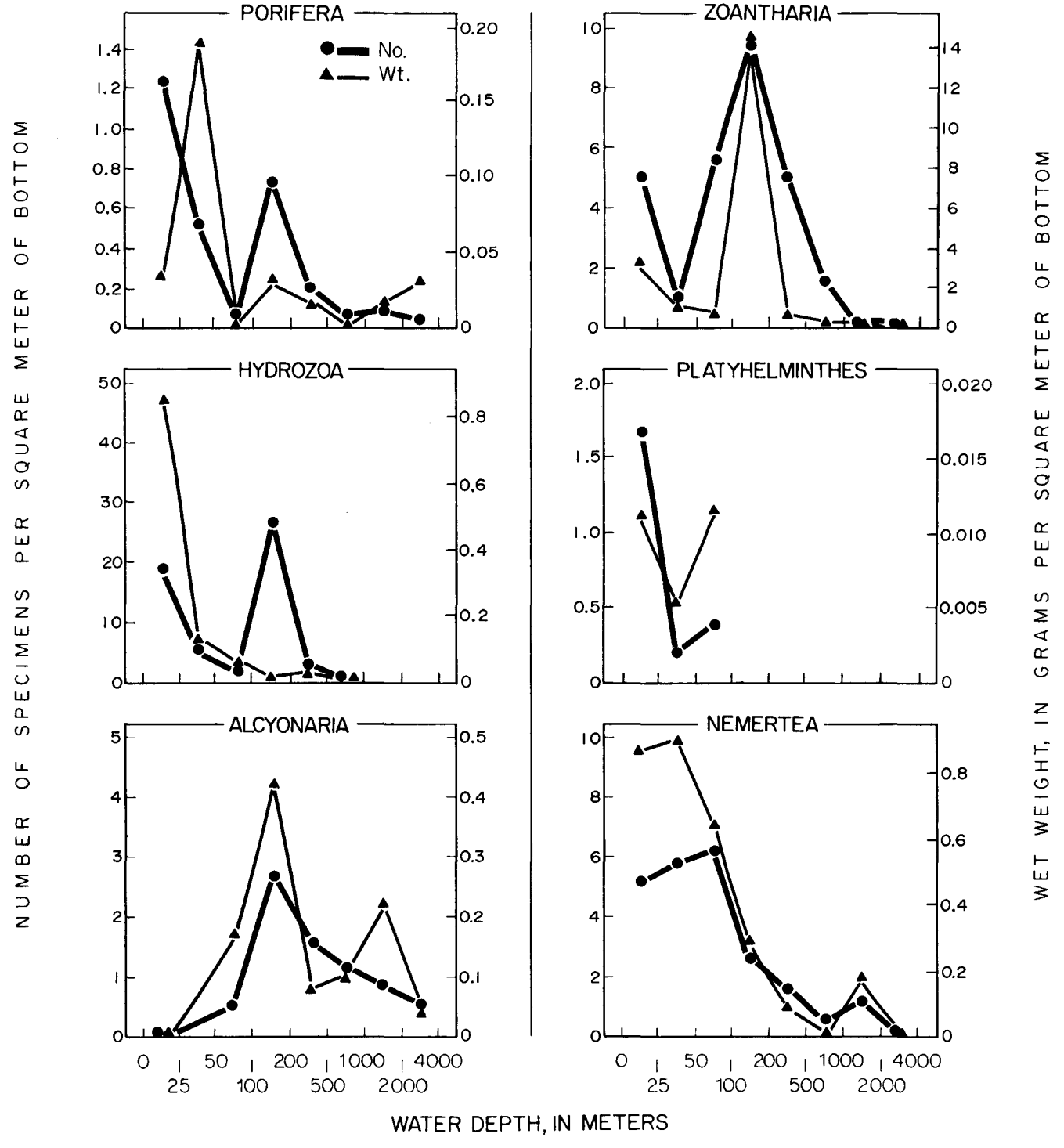

FIGURE 82.—Density (No.) and biomass (wt.) in relation to water depth in the entire Middle Atlantic Bight region for Porifera, Hydrozoa, Alcycnaria, Zoantharia, Platyhelminthes, and Nemertea.

in Southern New England, lowest amounts in New York Bight, and intermediate quantities in Chesapeake Bight.

Nemertea were distributed similarly (as described in the preceding section) in regard to the bathymetric level in all subareas. In terms of density, Nemertea ranked first in Southern New England with an average of 6/m², ranked second in New York Bight with 2.6/m², and were least abundant in Chesapeake Bight with 0.4/m². Biomass values

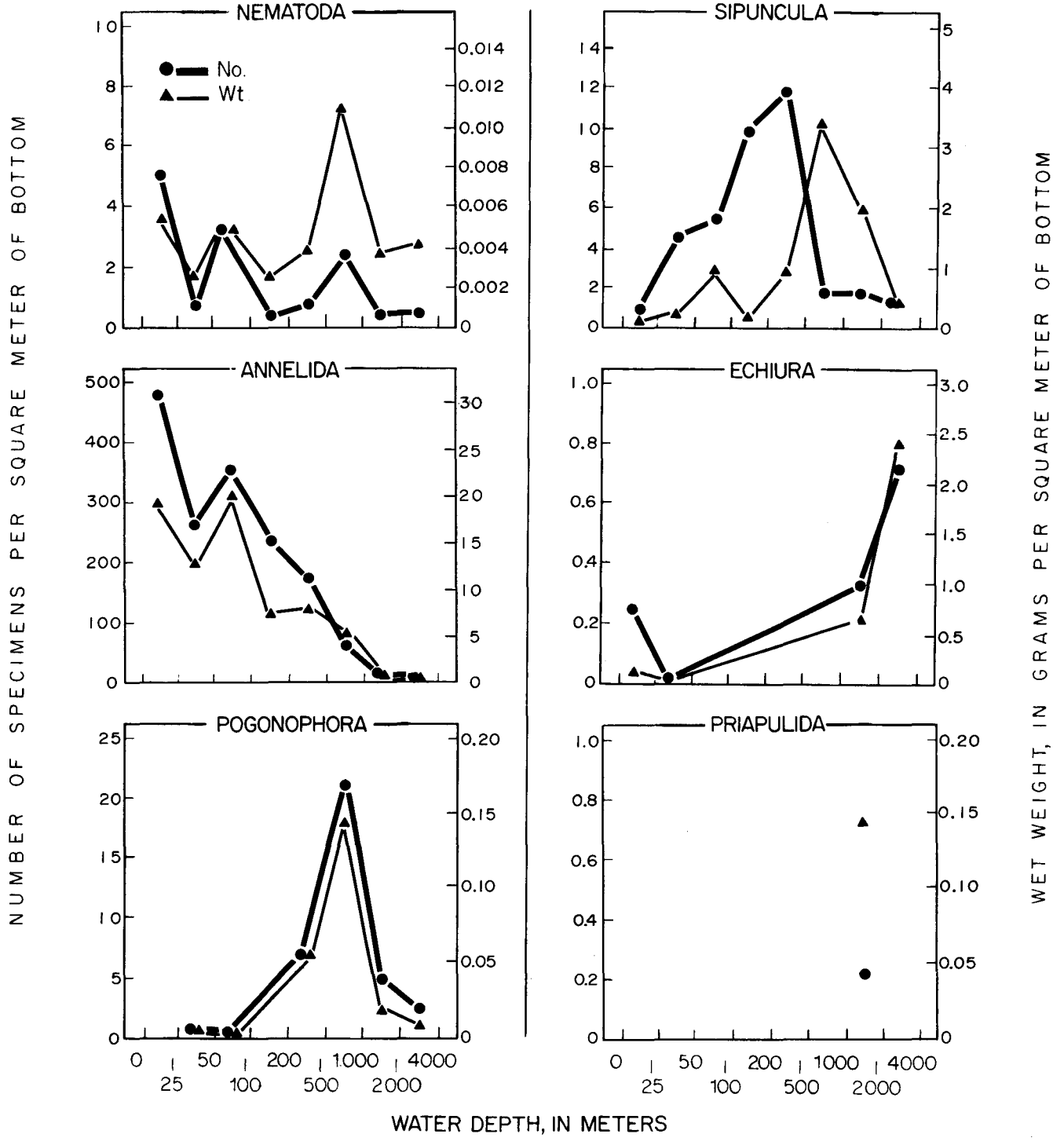

FIGURE 83.—Density (No.) and biomass (wt.) in relation to water depth in the entire Middle Atlantic Bight region for Nematoda, Annelida, Pogonophora, Sipuncula, Echiura, and Priapulida.

reflected the same sequential order, with average values of 0.8 g/m², 0.7 g/m², and 0.3 g/m².

Nematoda were more widely distributed bathymetrically and were found in larger quantities in Southern New England (average density 6/m² and biomass 0.007 g/m²) than in the other two subareas. In New York Bight, their distribution was irregular, and they were present in relatively small quantities (average density of 0.1/m² and biomass less than 0.001 g/m²). In Chesapeake Bight, nematodes were

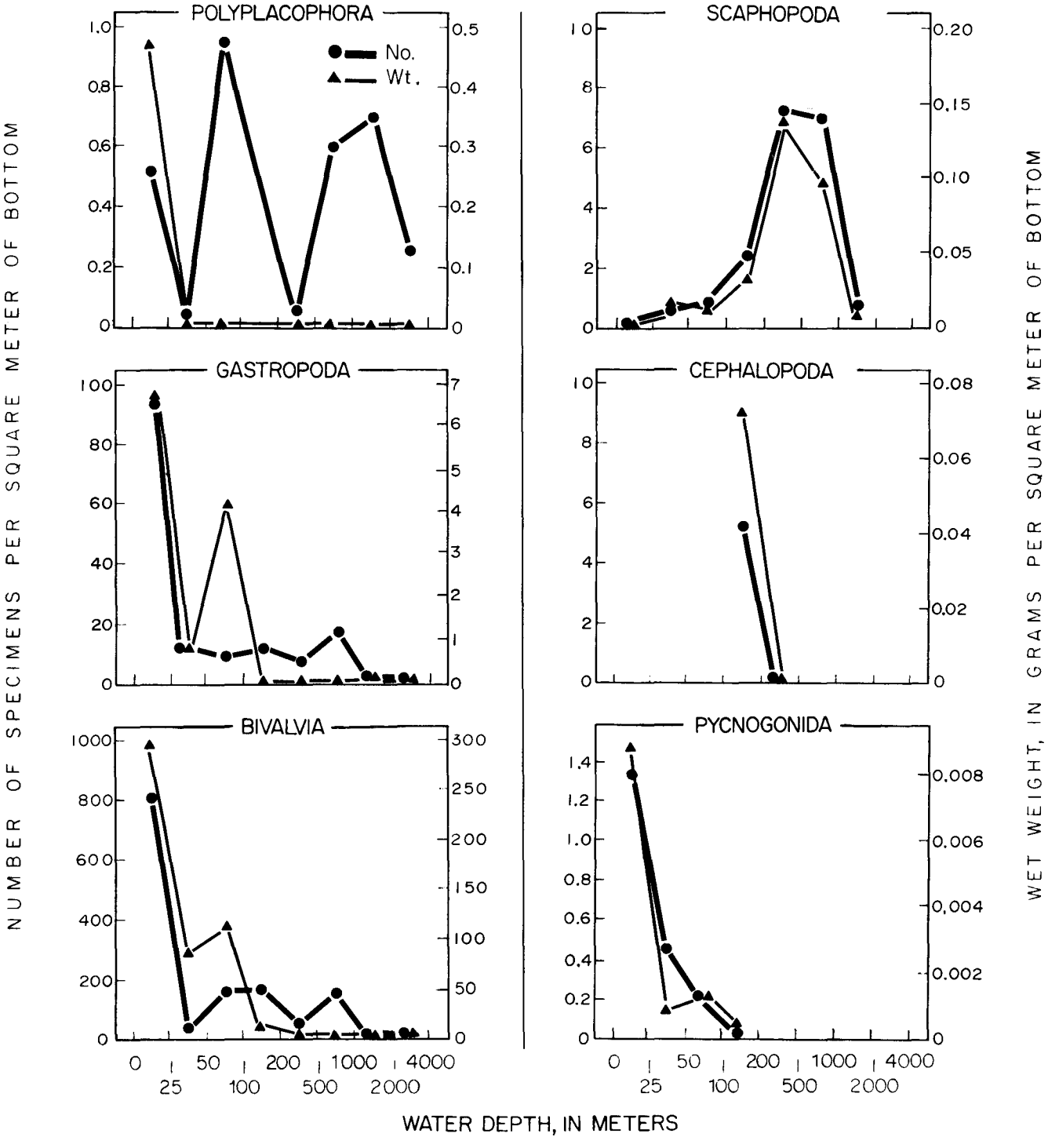

FIGURE 84.—Density (No.) and biomass (wt.) in relation to water depth in the entire Middle Atlantic Bight region for Polyplacophora, Gastropoda, Bivalvia, Scaphopoda, Cephalopoda, and Pycnogonida.

slightly irregular in distribution, and the quantity fell between those in Southern New England and those in New York Bight (density averaged 2/m² and biomass 0.006 g/m²).

Annelida were widely distributed in all subareas. They were most abundant in Southern New England, intermediate in New York Bight, and relatively sparse in Chesapeake Bight. An exceptionally high

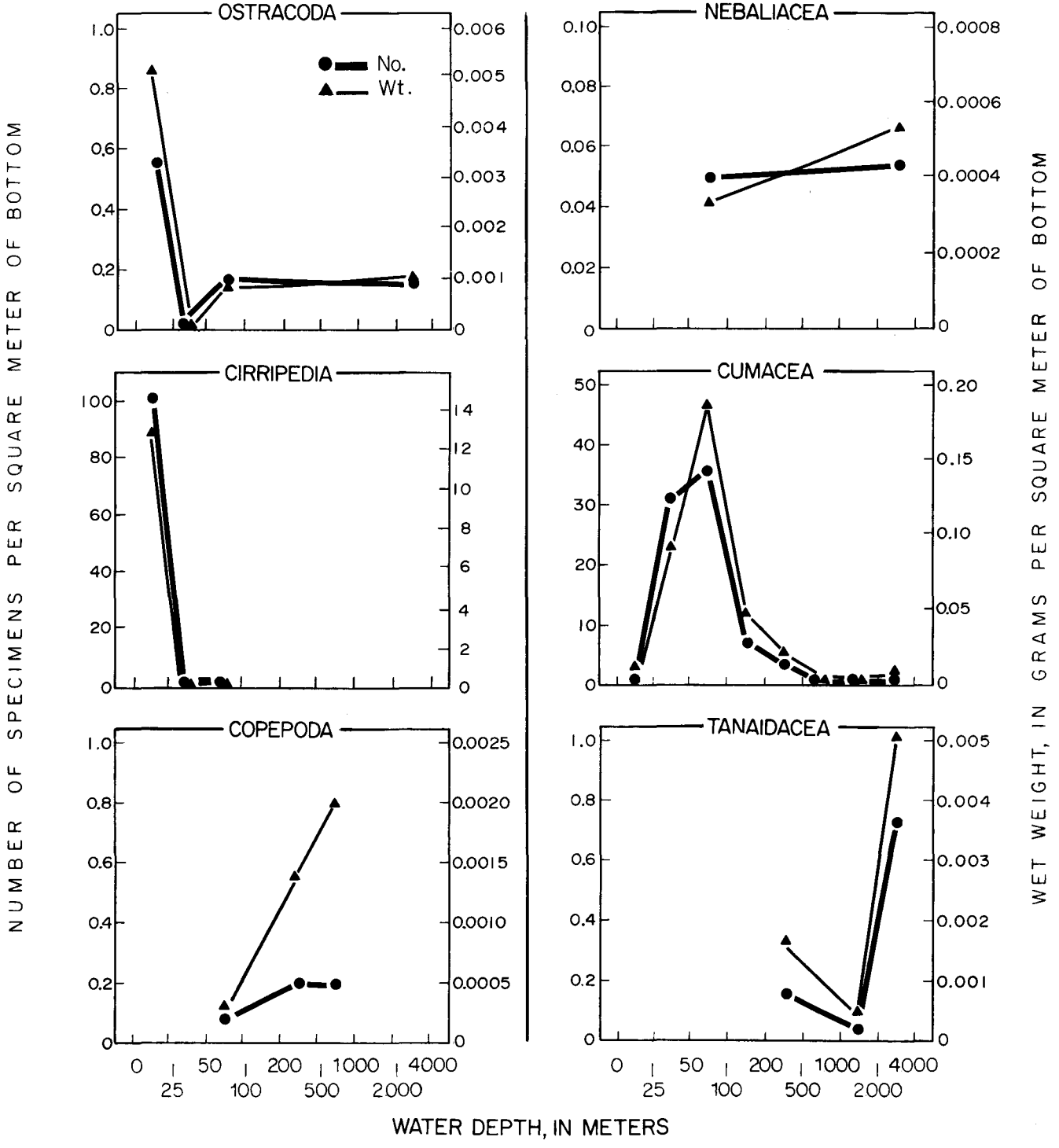

FIGURE 85.—Density (No.) and biomass (wt.) in relation to water depth in the entire Middle Atlantic Bight region for Ostracoda, Cirripedia, Copepoda, Nebaliacea, Cumacea, and Tanaidacea.

density of annelids (1,120/m²) occurred in the shallow waters (0–24 m) of New York Bight, as compared with the other subareas where the density at this depth averaged 316/m² and 183/m². Biomass trends were similar to those of density; Southern New England averaged 19 g/m², New York Bight 13 g/m², and Chesapeake Bight 9 g/m².

Pogonophora were found primarily in deepwater (200 to 3,999 m) in all three subareas. Density and biomass were approximately equal in Southern New

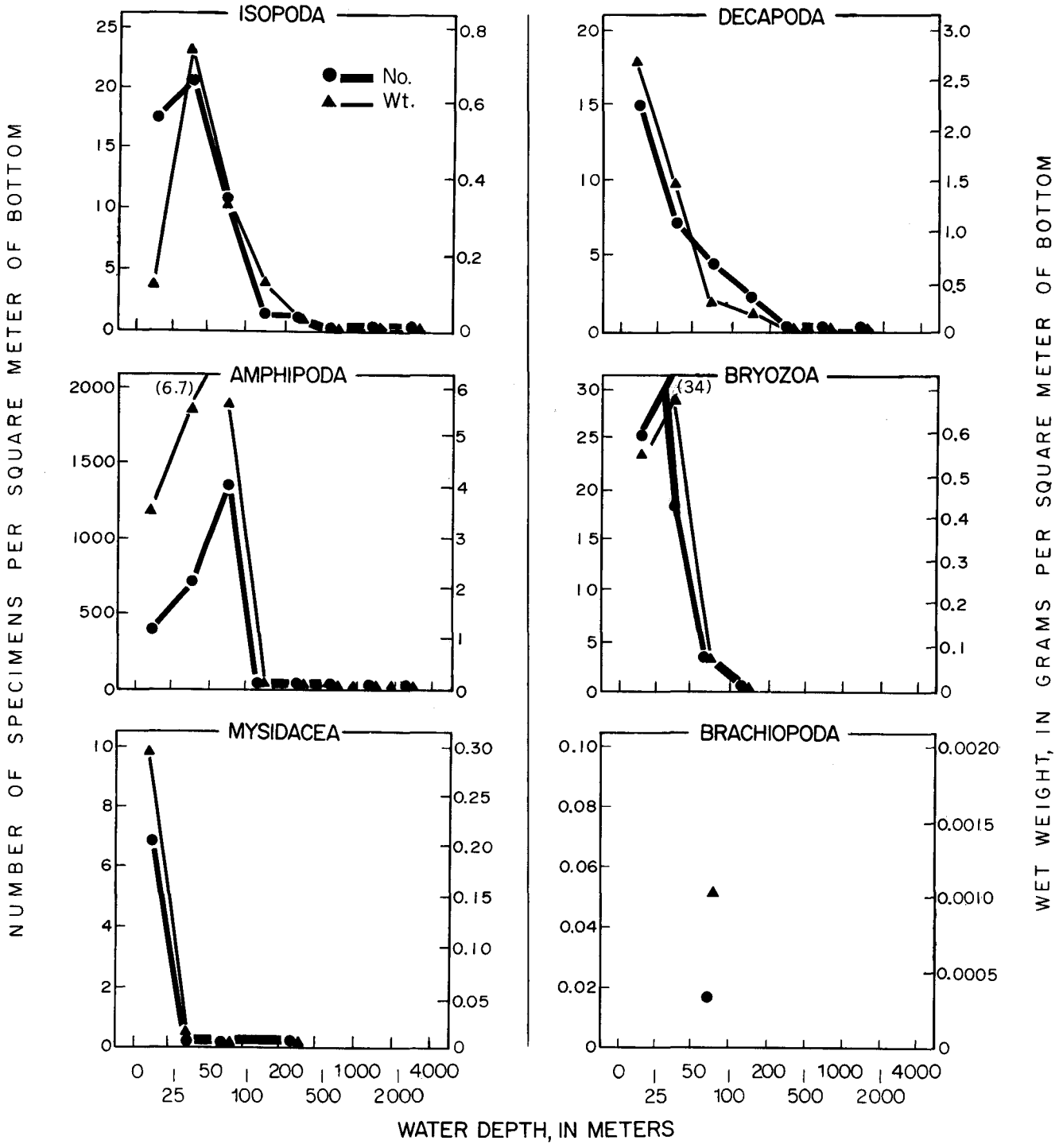

FIGURE 86.—Density (No.) and biomass (wt.) in relation to water depth in the entire Middle Atlantic Bight region for Isopoda, Amphipoda, Mysidacea, Decapoda, Bryozoa, and Brachiopoda.

England and New York Bight, but were three to four times more abundant in Chesapeake Bight. In the two northern subareas, the density of pogonophorans averaged approximately 5/m² in the deep water, whereas in Chesapeake Bight their average density was 16/m². On the Continental Shelf in Chesapeake Bight, pogonophorans were found in unusually shallow water. Live specimens and tubes were taken from water as shallow as 66 m, and tubes only were present at 43 m.

Sipunculida were widely distributed bathymetrically in all three subareas, but there was a marked

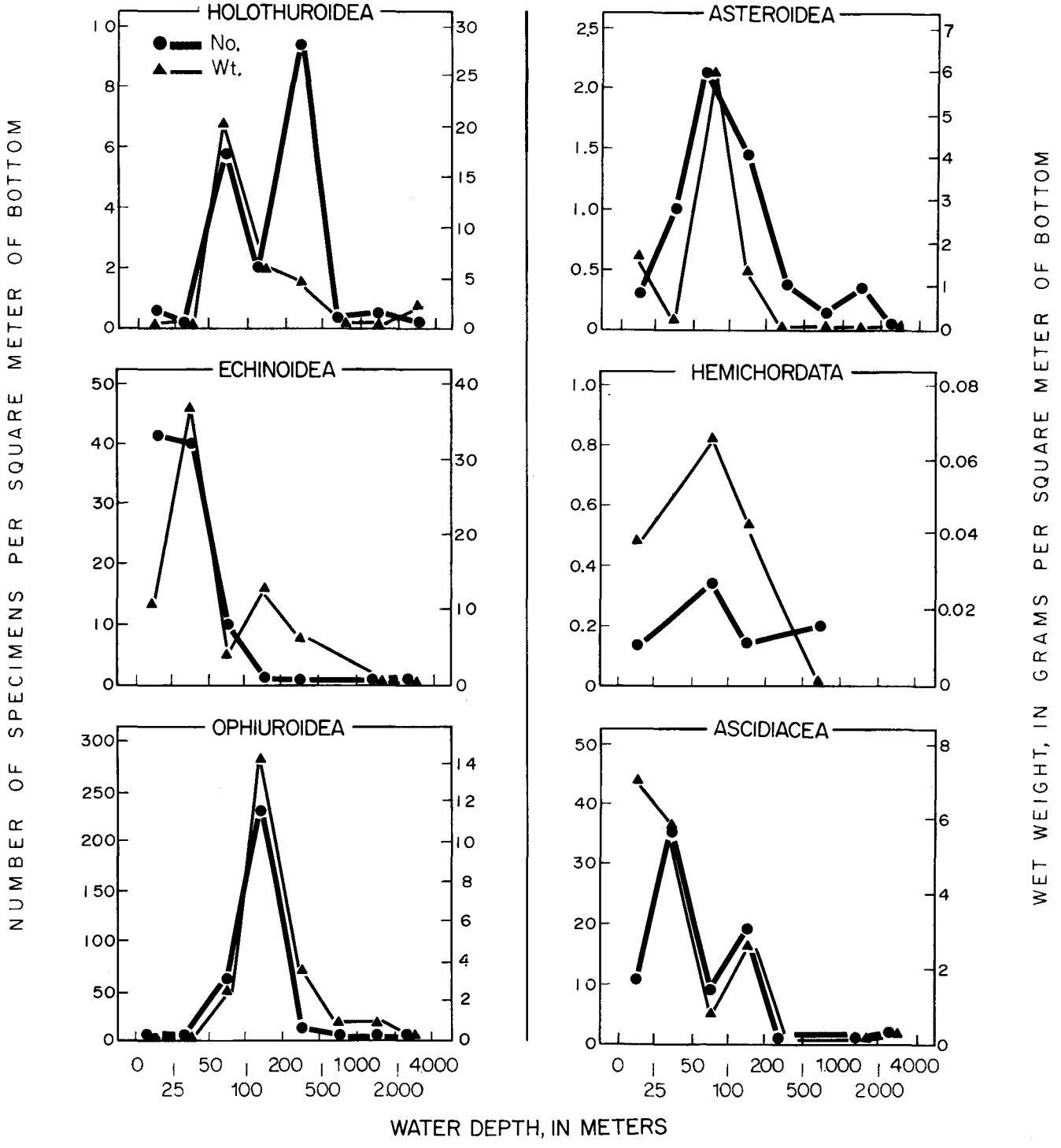

FIGURE 87.—Density (No.) and biomass (wt.) in relation to water depth in the entire Middle Atlantic Bight region for Holothuroidea, Echinoidea, Ophiuroidea, Asteroidea, Hemichordata, and Ascidiacea.

difference in density and biomass. Density was highest (average about 9/m²) in Southern New England, intermediate (3/m²) in New York Bight, and lowest (1.5/m²) in Chesapeake Bight. Trends in biomass were nearly the same; largest (1.4 g/m²) in Southern New England and substantially lower (0.4 and 0.8 g/m²) in New York Bight and Chesapeake Bight.

Echiura were found in both very shallow (less than 50 m) and very deep (greater than 1,000 m) water in two subareas, New York Bight and Chesa-

TABLE 14.—*Mean number of individuals listed by major taxonomic groups for each bathymetric class, representing the Southern New England subarea*

[In number per square meter]

Taxonomic group	Bathymetric class (meters)							
	0-24	25-49	50-99	100-199	200-499	500-999	1,000-1,999	2,000-3,999
	No./m²	No./m²	No./m²	No./m²	No./m²	No./m²	No./m²	No./m²
PORIFERA	2.60	3.37	-	1.32	0.43	0.25	0.18	0.13
COELENTERATA	113.40	4.75	12.23	19.68	15.64	3.00	3.18	0.51
Hydrozoa	73.20	2.19	0.82	-	2.36	-	-	-
Anthozoa	40.20	2.56	11.41	19.68	13.28	3.00	3.18	0.51
Alcyonacea	-	-	1.05	2.42	2.14	0.50	0.45	0.25
Zoantharia	3.40	2.04	9.79	16.47	9.64	-	0.18	0.13
Unidentified	36.80	0.52	0.57	0.79	1.50	2.50	2.55	0.13
PLATYHELMINTHES	6.77	0.22	0.50	-	-	-	-	-
Turbellaria	6.77	0.22	0.50	-	-	-	-	-
NEMERTEA	3.06	12.00	9.96	3.47	2.07	0.75	2.09	0.13
ASCHELMINTHES	17.97	1.56	6.66	0.84	0.86	5.13	0.18	0.75
Nematoda	17.97	1.56	6.66	0.84	0.86	5.13	0.18	0.75
ANNELIDA	315.54	547.37	484.36	333.63	254.93	106.00	13.73	7.19
POGONOPHORA	-	-	-	-	7.14	10.38	2.64	1.56
SIPUNCULIDA	4.49	20.15	7.70	15.32	18.79	2.50	0.18	1.50
ECHIURA	-	-	-	-	-	-	0.91	0.38
PRIAPULIDA	-	-	-	-	-	-	0.54	-
MOLLUSCA	478.97	91.36	209.01	134.01	72.43	106.13	44.18	12.07
Polyplacophora	2.14	0.22	1.89	-	-	0.25	0.64	0.13
Gastropoda	135.83	46.07	19.43	2.11	9.14	13.13	2.73	0.25
Bivalvia	340.57	45.07	185.80	120.74	55.50	91.25	40.45	11.69
Scaphopoda		-	-	1.74	7.43	1.50	0.36	-
Cephalopoda	-	-	-	9.42	0.36	-	-	-
Unidentified	-	-	1.89	-	-	-	-	-
ARTHROPODA	1370.57	2146.64	2080.46	61.59	45.14	10.13	1.45	3.63
Pycnogonida	1.23	1.37	0.21	-	-	-	-	-
Arachnida	-	-	-	-	-	-	-	-
Crustacea	1369.34	2145.27	2080.25	61.59	45.14	10.13	1.45	3.63
Ostracoda	1.11	-	1.37	-	-	-	-	-
Cirripedia	107.46	2.41	-	-	-	-	-	-
Copepoda	-	-	0.11	-	0.43	0.63	-	-
Nebaliacea	-	-	-	-	-	-	-	-
Cumacea	1.26	88.30	49.18	7.53	3.07	0.75	0.36	1.00
Tanaidacea	-	-	-	-	0.36	-	0.18	0.88
Isopoda	4.94	36.67	10.46	1.37	0.93	2.50	0.18	0.31
Amphipoda	1220.31	2008.67	2015.79	52.16	39.71	6.25	0.73	1.44
Mysidacea	7.03	0.11	-	-	-	-	-	-
Decapoda	27.23	9.11	3.34	0.53	0.64	-	-	-
BRYOZOA	83.29	73.63	0.29	0.26	-	-	-	-
BRACHIOPODA	-	-	-	-	-	-	-	-
ECHINODERMATA	4.12	39.49	154.71	321.11	40.51	3.00	3.18	8.63
Holothuroidea	1.83	-	11.71	2.11	8.86	-	1.00	0.25
Echinoidea	1.29	34.89	14.68	1.42	0.79	-	0.18	0.38
Ophiuroidea	0.89	0.89	125.14	315.47	30.29	3.00	1.64	8.00
Asteroidea	0.11	3.81	3.18	2.11	0.57	-	0.36	-
HEMICHORDATA	-	-	0.73	0.26	-	0.63	-	-
CHORDATA	20.69	73.63	15.30	34.58	2.43	-	1.36	2.31
Ascidiacea	20.69	73.63	15.30	34.58	2.43	-	1.36	2.31
UNIDENTIFIED	4.26	16.93	7.09	7.63	7.21	3.50	1.55	9.25

peake. Bight. In Southern New England they were present only in deep water, 1,000 to 1,999 m. Densities were low in all areas in both shallow and deep water. Biomass, however, was larger (1.3 to 6.7 g/m²) in deep water than in shallow water; also it was larger in New York Bight and Chesapeake Bight than in Southern New England, where the average quantities were less than 0.5 g/m².

Priapulida were rare; they were taken in only two subareas, Southern New England and Chesapeake Bight. All samples were from the same bathymetric class—1,000 to 1,999 m. Densities were less than

TABLE 15.—*Mean biomass listed by major taxonomic groups for each bathymetric class, representing the Southern New England subarea*
[In grams per square meter]

Taxonomic group	Bathymetric class (meters)							
	0-24	25-49	50-99	100-199	200-499	500-999	1,000-1,999	2,000-3,999
	g/m²	g/m²	g/m²	g/m²	g/m²	g/m²	g/m²	g/m²
PORIFERA	0.147	0.478	-	0.059	0.035	0.002	0.002	0.079
COELENTERATA	5.640	2.264	2.117	23.411	31.412	0.054	0.429	2.478
Hydrozoa	2.933	0.287	0.081	-	0.142	-	-	-
Anthozoa	2.708	1.977	2.036	23.411	31.270	0.054	0.429	2.478
Alcyonacea	-	-	0.361	0.435	0.081	0.005	0.116	0.004
Zoantharia	1.833	1.950	1.542	22.935	31.126	-	0.148	2.091
Unidentified	0.875	0.027	0.133	0.040	0.062	0.049	0.166	0.382
PLATYHELMINTHES	0.036	0.003	0.016	-	-	-	-	-
Turbellaria	0.036	0.003	0.016	-	-	-	-	-
NEMERTEA	0.752	2.010	1.013	0.232	0.164	0.011	0.103	0.001
ASCHELMINTHES	0.003	0.008	0.010	0.005	0.005	0.015	0.002	0.006
Nematoda	0.003	0.008	0.010	0.005	0.005	0.015	0.002	0.006
ANNELIDA	23.800	24.373	31.012	10.416	5.575	3.276	0.796	0.299
POGONOPHORA	-	-	-	-	0.089	0.032	0.011	0.369
SIPUNCULIDA	0.588	1.126	1.412	1.142	1.453	10.676	0.012	1.003
ECHIURA	-	-	-	-	-	-	0.472	0.267
PRIAPULIDA	-	-	-	-	-	-	0.361	-
MOLLUSCA	294.898	263.083	131.102	4.572	2.004	0.958	0.524	0.312
Polyplacophora	2.207	0.025	0.027	-	-	0.002	0.008	0.001
Gastropoda	4.088	2.238	7.914	0.013	0.054	0.076	0.049	0.004
Bivalvia	288.598	260.820	123.154	4.403	1.831	0.858	0.460	0.306
Scaphopoda		-	-	0.027	0.115	0.021	0.006	-
Cephalopoda	-	-	-	0.129	0.004	-	-	-
Unidentified	-	-	0.008	-	-	-	-	-
ARTHROPODA	53.305	16.668	10.685	0.533	0.224	0.058	0.024	-
Pycnogonida	0.006	0.002	0.002	-	-	-	-	-
Arachnida	-	-	-	-	-	-	-	-
Crustacea	53.299	16.665	10.682	0.533	0.224	0.058	0.024	0.049
Ostracoda	0.011	-	0.002	-	-	-	-	-
Cirripedia	38.960	0.056	-	-	-	-	-	-
Copepoda	-	-	<0.001	-	0.003	0.006	-	-
Nebaliacea	-	-	-	-	-	-	-	-
Cumacea	0.020	0.277	0.269	0.056	0.014	0.008	0.004	0.026
Tanaidacea	-	-	-	-	0.004	-	0.002	0.006
Isopoda	0.053	0.616	0.343	0.095	0.047	0.019	0.013	0.003
Amphipoda	10.558	13.957	9.827	0.377	0.144	0.025	0.006	0.014
Mysidacea	0.045	0.001	-	-	-	-	-	-
Decapoda	3.652	1.758	0.241	0.005	0.013	-	-	-
BRYOZOA	1.917	2.755	0.044	0.003	-	-	-	-
BRACHIOPODA	-	-	-	-	-	-	-	-
ECHINODERMATA	13.141	4.560	57.353	44.956	23.066	1.714	1.307	4.586
Holothuroidea	0.101	-	43.353	3.342	3.950	-	0.331	3.579
Echinoidea	12.277	4.229	2.261	17.123	12.991	-	0.332	0.525
Ophiuroidea	0.489	0.058	5.312	22.570	6.118	1.714	0.519	0.482
Asteroidea	0.274	0.274	6.427	1.922	0.006	-	0.126	-
HEMICHORDATA	-	-	0.139	0.080	-	0.006	-	-
CHORDATA	9.697	24.289	1.666	4.625	0.106	-	0.007	0.369
Ascidiacea	9.697	24.289	1.666	4.625	0.106	-	0.007	0.369
UNIDENTIFIED	0.095	1.138	0.066	0.195	0.100	0.035	0.466	0.142

0.6/m² and biomass less than 0.4 g/m²; occurrence records were too few to make comparisons.

Mollusca were abundant in terms of the number of individuals and were dominant in biomass in all three subareas. A comparison of each molluscan class, by subarea, is presented separately.

Densities of Polyplacophora were low in all subareas. Relatively, they were more numerous in Southern New England, where the average density was 1/m². In New York Bight, they were found in only two depth classes (50–99 m and 2,000–3,999 m), and their average density was low—0.1/m² to 0.5/m². In Chesapeake-Bight, they were present in five depth classes, and their average density ranged from 0.1/m² to 1.3/m². Biomass, also, was small in all areas; values ranged from 0.001 to 2.2 g/m² and were generally proportional to the densities.

Gastropoda were one of the more common components of the Mollusca. In each subarea, they showed a similar distribution in relation to water

TABLE 16.—*Mean number of individuals listed by major taxonomic groups for each bathymetric class, representing the New York Bight subarea*

[In number per square meter]

Taxonomic group	Bathymetric class (meters)							
	0-24	25-49	50-99	100-199	200-499	500-999	1,000-1,999	2,000-3,999
	No./m²	No./m²	No./m²	No./m²	No./m²	No./m²	No./m²	No./m²
PORIFERA	1.02	0.94	0.17	-	-	-	-	-
COELENTERATA	19.54	6.06	4.42	9.33	7.51	10.29	1.80	1.58
Hydrozoa	11.26	4.65	1.40	2.00	-	0.29	-	-
Anthozoa	8.28	1.41	3.02	7.33	7.51	10.00	1.80	1.58
Alcyonacea	-	-	0.04	5.33	1.88	3.71	1.60	0.75
Zoantharia	8.28	0.60	2.38	0.67	0.75	6.29	-	0.33
Unidentified	-	0.81	0.60	1.33	4.88	-	0.20	0.50
PLATYHELMINTHES	0.04	0.13	0.09	-	-	-	-	-
Turbellaria	0.04	0.13	0.09	-	-	-	-	-
NEMERTEA	3.30	4.17	2.55	1.78	0.50	0.29	-	0.17
ASCHELMINTHES	-	0.04	0.13	-	1.13	0.29	0.60	-
Nematoda	-	0.04	0.13	-	1.13	0.29	0.60	-
ANNELIDA	1119.52	136.60	265.94	127.22	113.88	43.43	24.10	7.33
POGONOPHORA	-	-	-	-	1.25	9.71	3.80	3.50
SIPUNCULIDA	-	0.50	4.32	4.89	7.50	1.29	2.80	0.50
ECHIURA	0.52	-	-	-	-	-	-	0.83
PRIAPULIDA	-	-	-	-	-	-	-	-
MOLLUSCA	652.31	54.94	109.88	117.87	86.00	129.43	23.60	20.66
Polyplacophora	-	-	0.13	-	-	-	-	0.50
Gastropoda	62.46	4.31	5.38	44.44	12.25	31.29	3.80	2.33
Bivalvia	589.85	50.63	102.61	68.99	64.25	86.00	18.40	17.83
Scaphopoda	-	-	1.76	4.44	9.50	12.14	1.40	-
Cephalopoda	-	-	-	-	-	-	-	-
Unidentified	-	-	-	-	-	-	-	-
ARTHROPODA	488.05	492.13	978.18	48.67	22.89	4.57	1.20	2.17
Pycnogonida	0.24	-	-	-	-	-	-	-
Arachnida	0.57	-	-	-	-	-	-	-
Crustacea	487.24	492.13	978.18	48.67	22.89	4.57	1.20	2.17
Ostracoda	1.15	-	-	-	-	-	-	-
Cirripedia	283.48	-	0.06	-	-	-	-	-
Copepoda	-	-	0.09	-	-	-	-	-
Nebaliacea	-	-	-	-	-	-	-	0.17
Cumacea	2.07	3.38	25.27	13.78	2.38	-	0.60	0.75
Tanaidacea	-	-	-	-	-	-	-	0.33
Isopoda	5.43	21.73	13.69	2.44	2.13	-	0.20	-
Amphipoda	171.09	459.10	932.10	23.78	18.13	4.57	0.20	0.92
Mysidacea	3.61	0.17	0.04	-	0.25	-	-	-
Decapoda	20.41	7.75	6.93	8.67	-	-	0.20	-
BRYOZOA	11.91	3.83	4.04	-	-	-	-	-
BRACHIOPODA	-	-	-	-	-	-	-	-
ECHINODERMATA	120.65	38.79	10.84	125.67	13.75	3.00	2.70	3.33
Holothuroidea	1.07	0.04	0.77	1.11	6.50	0.29	0.40	0.50
Echinoidea	118.04	38.44	5.08	0.89	0.25	-	-	-
Ophiuroidea	0.61	-	3.59	123.00	6.75	2.71	2.10	2.83
Asteroidea	0.93	0.31	1.40	0.67	0.25	-	0.20	-
HEMICHORDATA	0.28	-	-	-	-	-	-	-
CHORDATA	1.24	13.52	5.57	0.67	0.25	-	-	3.33
Ascidiacea	1.24	13.52	5.57	0.67	0.25	-	-	3.33
UNIDENTIFIED	11.89	0.77	0.79	5.56	0.50	3.29	5.00	3.08

depth. Densities generally were highest (29/m²) in Southern New England, intermediate (21/m²) in New York Bight, and lowest (16/m²) in Chesapeake Bight. Biomass reflected this same trend of decreasing abundance, 1.8 g/m² in the north to 1.0 g/m² in the south.

Bivalvia were different from many other major taxa in having the highest densities (averaging 300/m²) in the Chesapeake Bight subarea, intermediate densities (averaging 125/m²) in New York Bight, and lowest densities (averaging 111/m²) in Southern New England. Particularly high densities

TABLE 17.—*Mean biomass listed by major taxonomic groups for each bathymetric class, representing the New York Bight subarea*

[In grams per square meter]

Taxonomic group	Bathymetric class (meters)							
	0-24	25-49	50-99	100-199	200-499	500-999	1,000-1,999	2,000-3,999
	g/m²	g/m²	g/m²	g/m²	g/m²	g/m²	g/m²	g/m²
PORIFERA	0.010	0.092	0.002	-	-	-	-	-
COELENTERATA	2.956	0.380	0.439	7.119	0.551	0.966	0.164	0.625
Hydrozoa	0.179	0.050	0.024	0.027	-	0.003	-	-
Anthozoa	2.776	0.330	0.415	7.092	0.551	0.963	0.164	0.625
Alcyonacea	-	-	0.001	0.699	0.185	0.376	0.104	0.032
Zoantharia	2.776	0.202	0.362	6.092	0.122	0.587	-	0.307
Unidentified	-	0.128	0.052	0.301	0.244	-	0.060	0.286
PLATYHELMINTHES	0.002	0.004	0.004	-	-	-	-	-
Turbellaria	0.002	0.004	0.004	-	-	-	-	-
NEMERTEA	2.048	0.711	0.183	0.152	0.011	0.003	-	0.002
ASCHELMINTHES	-	<0.001	0.001	-	0.002	0.003	0.006	-
Nematoda	-	<0.001	0.001	-	0.002	0.003	0.006	-
ANNELIDA	31.180	7.980	11.257	3.956	10.350	3.149	0.894	0.723
POGONOPHORA	-	-	-	-	0.008	0.046	0.030	0.012
SIPUNCULIDA	-	0.116	0.858	0.522	0.934	0.083	0.194	0.007
ECHIURA	0.519	-	-	-	-	-	-	2.400
PRIAPULIDA	-	-	-	-	-	-	-	-
MOLLUSCA	710.785	41.072	131.048	2.738	2.264	1.011	0.515	0.226
Polyplacophora	-	-	0.001	-	-	-	-	0.012
Gastropoda	7.897	0.426	1.073	0.167	0.346	0.133	0.030	0.014
Bivalvia	702.888	40.646	129.944	2.507	1.708	0.687	0.469	0.199
Scaphopoda	-	-	0.030	0.064	0.210	0.191	0.016	-
Cephalopda	-	-	-	-	-	-	-	-
Unidentified	-	-	-	-	-	-	-	-
ARTHROPODA	23.438	5.669	5.667	1.162	0.163	0.113	0.110	0.018
Pycnogonida	0.005	-	-	-	-	-	-	-
Arachnida	0.003	-	-	-	-	-	-	-
Crustacea	23.430	5.669	5.667	1.162	0.163	0.113	0.110	0.018
Ostracoda	0.010	-	-	-	-	-	-	-
Cirripedia	16.175	-	0.001	-	-	-	-	-
Copepoda	-	-	<0.001	-	-	-	-	-
Nebaliacea	-	-	-	-	-	-	-	0.002
Cumacea	0.017	0.014	0.127	0.080	0.016	-	0.006	0.007
Tanaidacea	-	-	-	-	-	-	-	0.003
Isopoda	0.075	0.874	0.394	0.234	0.076	-	0.002	-
Amphipoda	2.678	2.831	4.579	0.059	0.068	0.113	0.002	0.007
Mysidacea	0.016	0.004	<0.001	-	0.002	-	-	-
Decapoda	4.458	1.947	0.565	0.789	-	-	0.100	-
BRYOZOA	0.206	0.153	0.052	-	-	-	-	-
BRACHIOPODA	-	-	-	-	-	-	-	-
ECHINODERMATA	32.851	66.242	8.434	19.354	2.590	1.154	3.459	2.472
Holothuroidae	0.132	0.145	0.629	0.098	0.571	0.013	2.487	1.906
Echinoidea	25.864	65.592	7.472	14.844	0.226	-	-	-
Ophiuroidea	0.435	-	0.184	4.246	1.790	1.141	0.724	0.567
Asteroidea	6.420	0.505	7.244	0.781	0.002	-	0.248	-
HEMICHORDATA	0.022	-	-	-	-	-	-	-
CHORDATA	0.094	0.791	0.294	0.100	0.002	-	-	-
Ascidiacea	0.094	0.791	0.294	0.100	0.002	-	-	0.544
UNIDENTIFIED	0.376	0.229	0.264	0.113	0.005	0.471	0.044	0.025

(1,136/m² and 590/m²) in Chesapeake Bight and New York Bight were found in shallow water, 0–24 m. Differences in density, associated with water depth, were the same in each subarea. Biomass averaged nearly the same in the three subareas; it was only slightly higher (average 109 g/m²) in New York Bight, and about equal (84 and 85 g/m²) in Chesapeake Bight and Southern New England. Decreases in biomass as the water depth increased were generally similar in all subareas.

Scaphopoda were present in moderately deep water in all subareas. They were present in highest density (5.8/m²) in New York Bight, and about equal densities (approximately 3/m²) in Southern New England and Chesapeake Bight. Biomass of scaphopods was small in all subareas and the relative

quantities were similar to their density. Largest biomass (average 0.1 g/m²) was in New York Bight, and substantially smaller quantities (about 0.04 g/m²) were present in Southern New England and Chesapeake Bight.

Cephalopoda, which were represented by benthic eggs, were present only in Southern New England. They were taken at water depths between 100 m and 499 m. Highest density (average 9.4/m²) was taken at 100 to 199 m, and lowest density (average 0.4/m²) was taken in deeper water. Biomass averaged 0.12 g/m² along the Outer Continental Shelf and 0.004 g/m² on the Continental Slope.

Arthropoda were represented principally by Crustacea; only minor quantities of Pycnogonida and Arachnida were present in the samples.

Pycnogonida occurred in shallow water only; from 0 m to 99 m in Southern New England, 0 m to 24 m in New York Bight, and 0 m to 199 m in Chesapeake Bight. Density was low (0.2/m²) in New York Bight, and Pycnogonida were taken only in Long Island Sound. Densities in Southern New England and Chesapeake Bight were roughly similar, and averages ranged from 2.0/m² to 0.2/m² in each subarea. Highest densities were in shallow water, and lowest densities were in deep water in each subarea. Biomass of pycnogonids was very small (equal to or less than 0.01 g/m²) in all subareas. Trends of biomass in relation to water depth were similar to those for density.

Arachnida were incompletely sampled because of their small size. They were present only in New York Bight where their average density was less than 0.6/m² and biomass less than 0.003 g/m².

Crustacea were the single most numerous taxonomic group in all three subareas. Average density in the various bathymetric classes ranged from 1/m² to 2,145/m² and tended to decrease as water depth increased. Density differences from one subarea to another were substantial; highest densities were found in Southern New England, intermediate densities in New York Bight, and lowest densities in Chesapeake Bight. Biomass was moderate, ranging from an average of 0.006 g/m² in deep water to 53 g/m² in shallow water. Differences in biomass from one subarea to another were similar to those of density. Biomass in Southern New England averaged 16 g/m²; in New York Bight, 9 g/m²; and in Chesapeake Bight, 3 g/m².

Ostracoda were incompletely sampled, but showed a similar pattern of occurrence in each subarea. They were present only in shallow water, 0 to 99 m, and always in low density (1.4/m² or less). Biomass was extremely small, averaging 0.01 g/m² or less.

Cirripedia were present only in shallow water (less than 99 m) in all subareas. Because of their spotty distribution and highly clustered occurrence, their density varied considerably from one subarea to another and between bathymetric classes. Highest average density (283/m²) was found in 0 to 24 m in New York Bight, intermediate density (107/m²) in 0 to 24 m in Southern New England, and low density (less than 1/m²) in Chesapeake Bight. In water deeper than 24 m, their density was low (maximum of 2.4/m²) in all subareas. Biomass of barnacles was largest (39 g/m²) at 0 to 24 m in Southern New England, intermediate (16 g/m²) in New York Bight, and very small (less than 0.003 g/m²) in Chesapeake Bight, and was small to very small in all subareas at water depths greater than 25 m.

Copepoda were incompletely sampled because of their small size. In Southern New England, they were taken at three depth classes (50–99 m, 200–499 m, and 500–999 m); in New York Bight, they were taken at one depth class (50–99 m), and none were taken in Chesapeake Bight. Average density and biomass in all localities were very small—maximum values 0.6/m² and 0.003 g/m², respectively.

Nebaliacea were incompletely sampled. None were taken in Southern New England. A few were taken in very deep water (2,000 to 3,999 m) in New York Bight, where their density averaged 0.17/m². A few specimens were taken at water depths of 50 to 99 m in Chesapeake Bight, where their density averaged 0.4/m². Biomass was very small, equal to or less than 0.003 g/m².

Cumacea were widely distributed bathymetrically and geographically. Their bathymetric distribution was similar in all subareas, but their density, and biomass to a limited extent, differed from one subarea to another. Cumaceans were most abundant in Southern New England, where their average density was 29/m² and their biomass was 0.13 g/m². Approximately equal densities (average 8/m² and 10/m², respectively) and biomass (average 0.045 and 0.035 g/m²) were present in New York Bight and Chesapeake Bight.

Tanaidacea were present only in deep water and at low densities (0.18/m² to 1.0/m²). In New York Bight and Chesapeake Bight, they were present only in very deep water (2,000–3,999 m), but in Southern New England they were found in both deep water