ANNUAL REPORT

LIFE HISTORY ASPECTS OF NEW YORK BIGHT FINFISHES

(June 1974 - June 1975)

By

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INTRODUCTION

This report summarizes preliminary findings of a 13 month study of the finfishes occurring in the New York Bight and associated estuaries. The study was designed and initiated to provide a comprehensive life history data base relevant to current and anticipated research needs. Upon completion of analysis and publication, these data will ultimately contribute a significant portion of the material essential for:

1. future comparison of man-induced environmental stress and the resulting effects on finfishes (e.g., offshore petroleum exploration and production, construction and operation of nuclear power plants and deep water ports, and increased ocean dumping of solid and liquid wastes);
2. detection, prediction, and understanding of natural changes which periodically occur in finfish populations (e.g., relative abundance, distribution, size composition, reproductive cycles, condition factor, etc.);
3. biological models used for assessment predictions and national and international management policies pertinent to recreational and commercial fishery stocks.

In general, this study will describe the importance of the New York Bight to the finfishes which inhabit it during some phase of their life cycle. In addition, it will establish a prototype study for other selected areas along the Atlantic continental shelf.

STUDY AREA

The New York Bight is here defined as that portion of the Atlantic continental shelf between eastern Long Island and Delaware Bay (Figure 1). This study was conducted in the northern section of the Bight where the Long Island and New Jersey coastlines are nearly perpendicular.

Two study areas have been designated to facilitate sampling and data handling. The ocean study area (Figure 2) is delineated by two sets of lines and the 15 and 200 fathom isobaths. The first set of lines extends seaward from points on Long Island and New Jersey to the 15 fathom isobath; the second set from the 15 fathom isobath offshore to the edge of the continental shelf (200 fathoms). The estuarine study area includes Sandy Hook, Lower, and Raritan Bays (Figure 3).

STATION SELECTION

The ocean survey area (Figure 2) was divided into depth strata (i.e., 0-5, > 5-10, > 10-15, > 15-30, > 30-60, > 60-100, > 100-200 fathoms). Station locations within strata were randomly selected with a minimum of two stations per stratum. The 0-15 fathom strata were sampled at a rate of approximately one station per 150 square nautical miles and the >15-200 fathom strata at approximately one station per 300 square nautical miles. Figure 4 through 14 illustrate station positions for each ocean cruise.

The estuarine (bay) area was divided into 95 blocks (Figure 3). Except where interrupted by land, each block measures 1' lat. x 1' long., i.e., 1.00 x 0.75 nautical mile. Trawl stations for each cruise were selected randomly from these blocks. Figures 15 through 25 show station locations for each bay cruise.

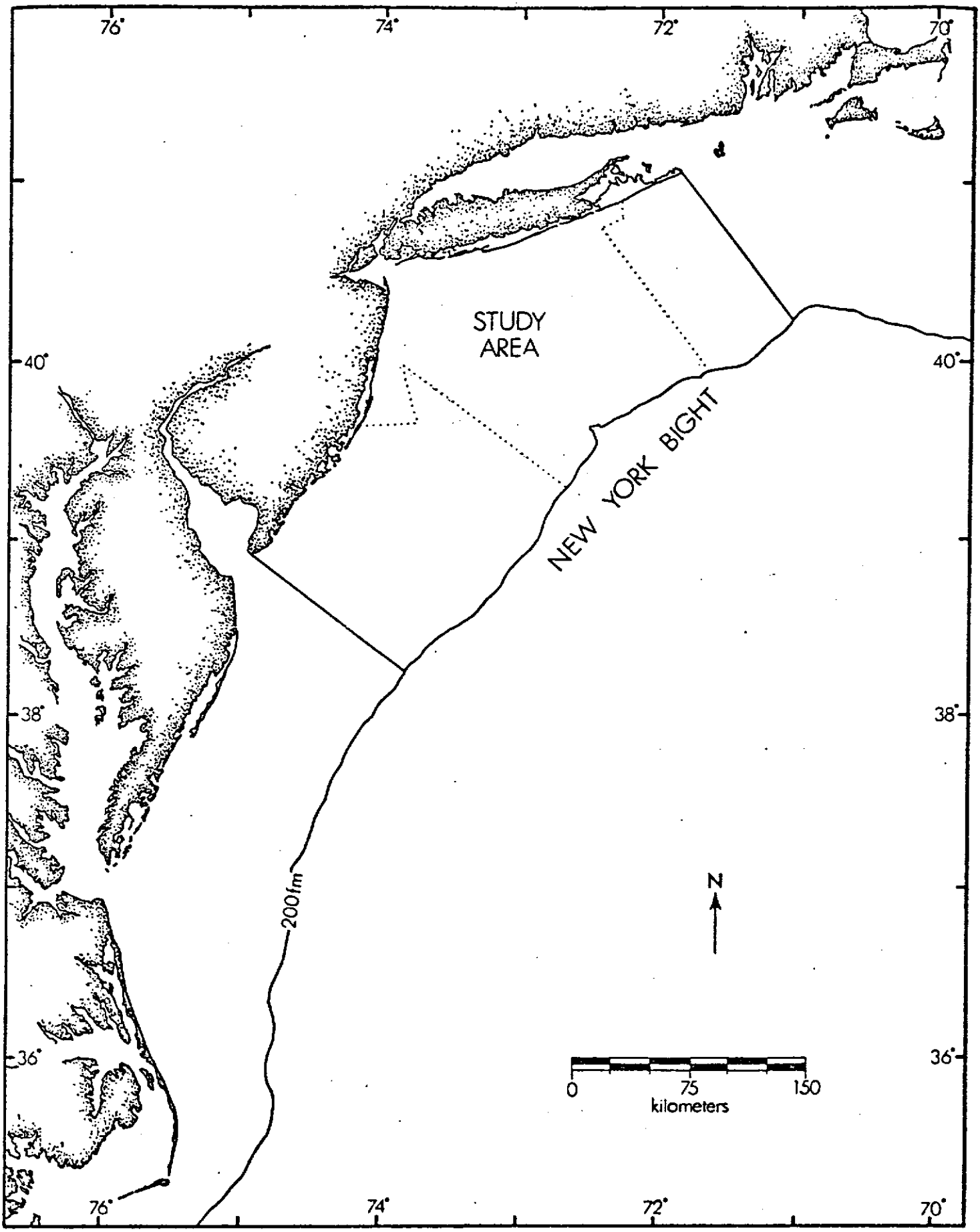

FIGURE 1.--Middle Atlantic continental shelf with outline of New York Bight.

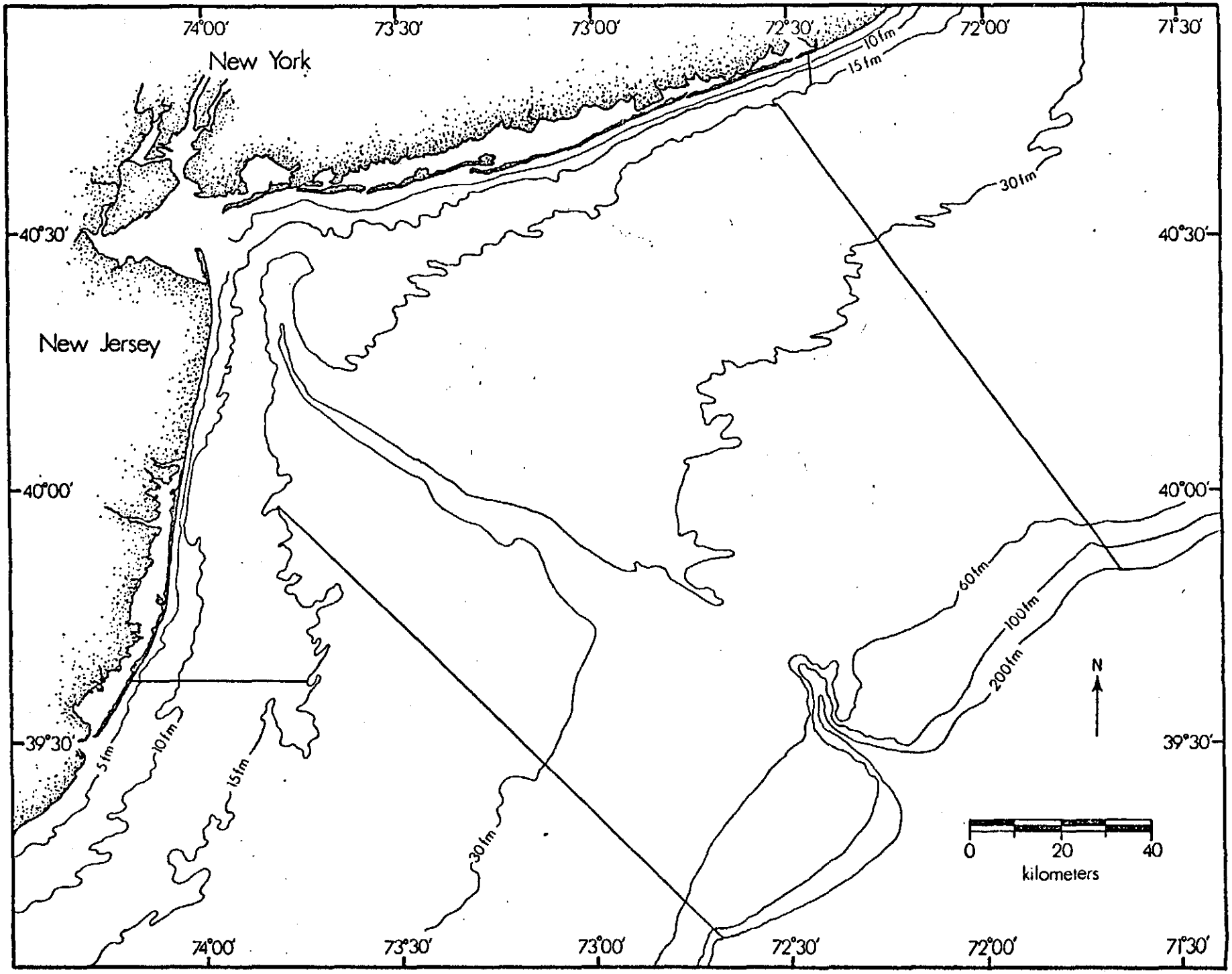

FIGURE 2.--Ocean survey area divided into depth strata where finfish were sampled during monthly cruises, June 1974 to June 1975.

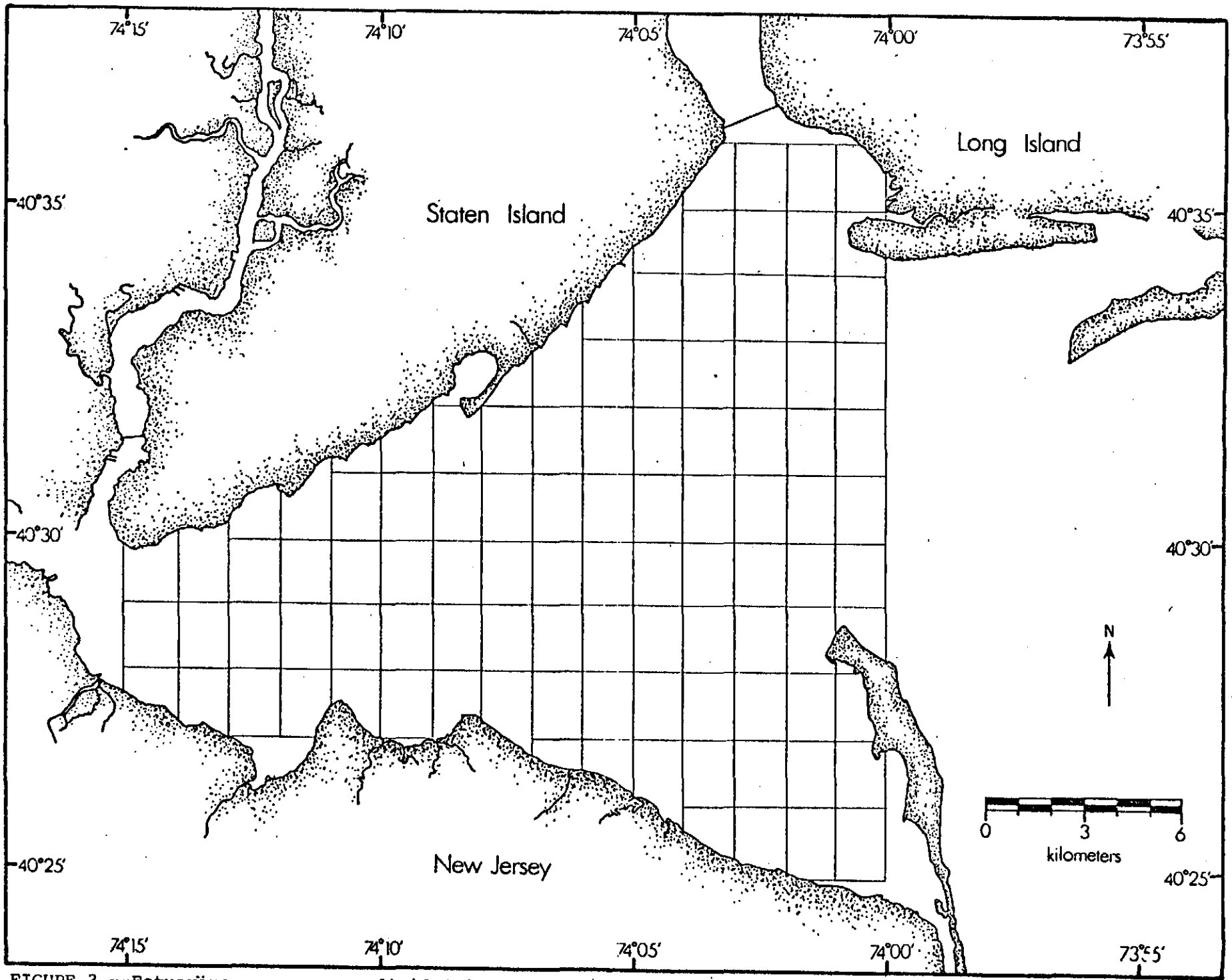

FIGURE 3.--Estuarine survey area divided into blocks where finfish were sampled during monthly cruises, June 1974 to June 1975.

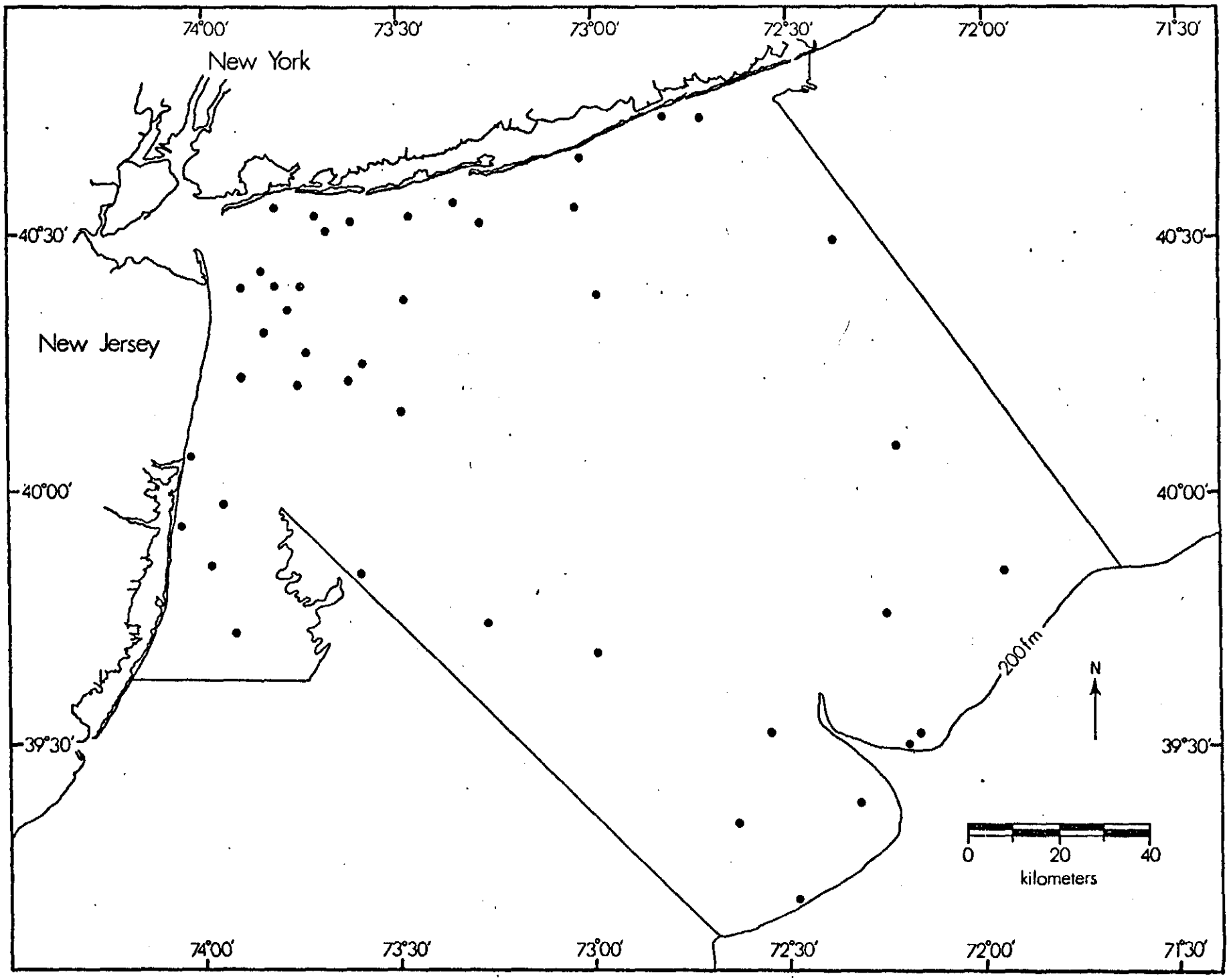

FIGURE 4.-- R. V. Delaware II Cruise 374, June 3-7, 1974. Location of collecting stations.

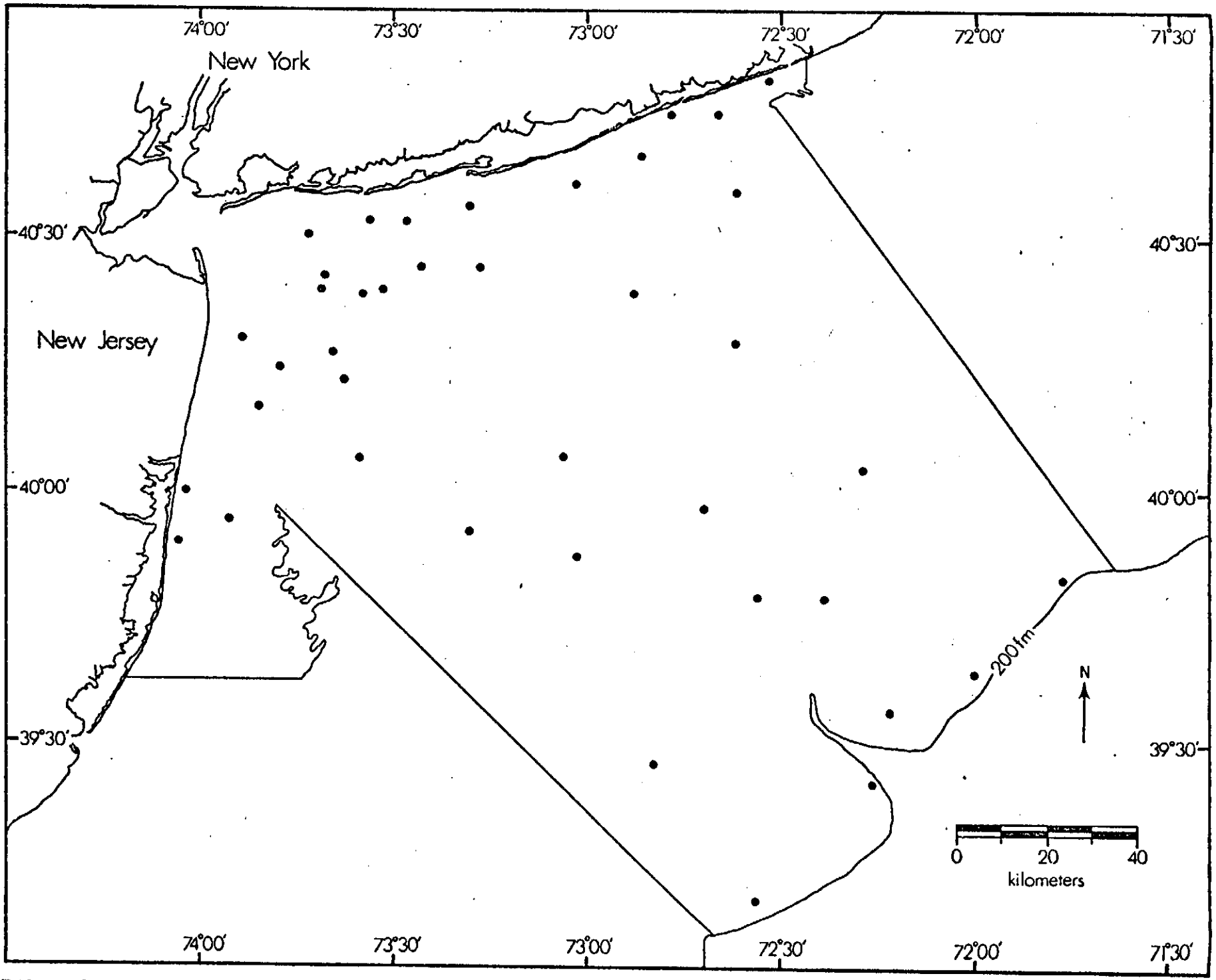

FIGURE 5.--R. V. Delaware II Cruise 774, July 24-29, 1974. Location of collecting stations.

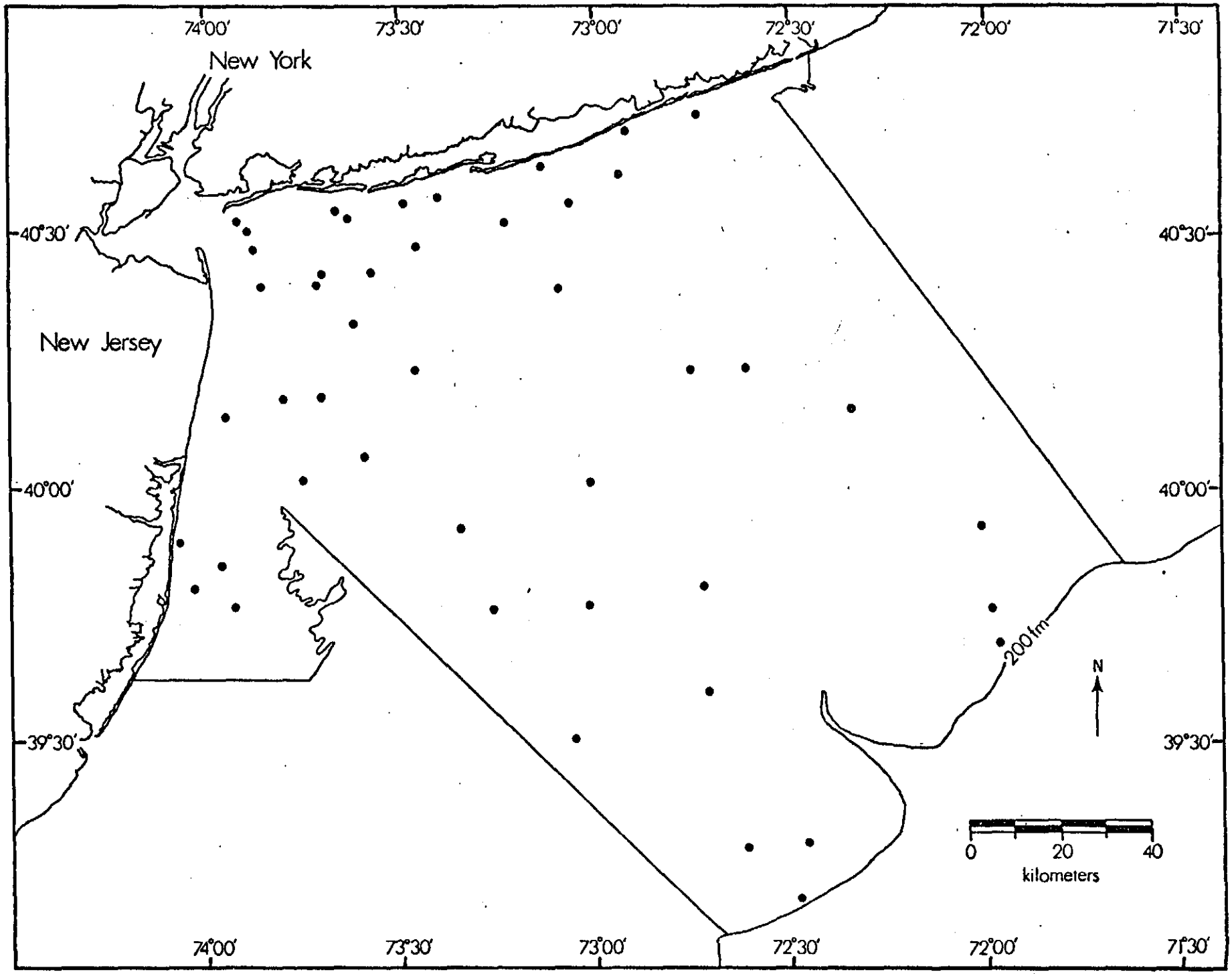

FIGURE 6.--R. V. Delaware II Cruise 874, August 16-21, 1974. Location of collecting stations.

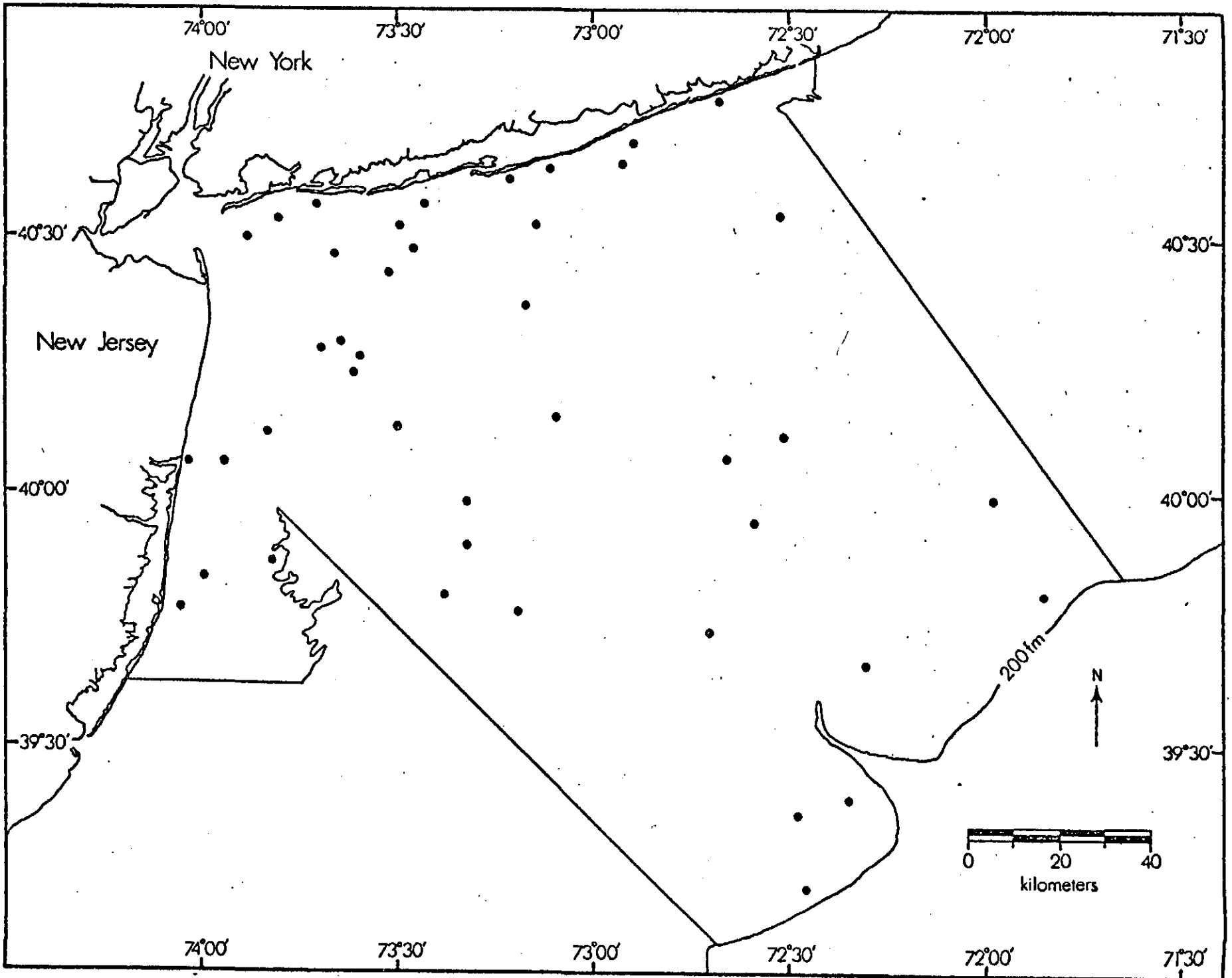

FIGURE 7.--R. V. Delaware II Cruise 974, September 23-29, 1974. Location of collecting stations.

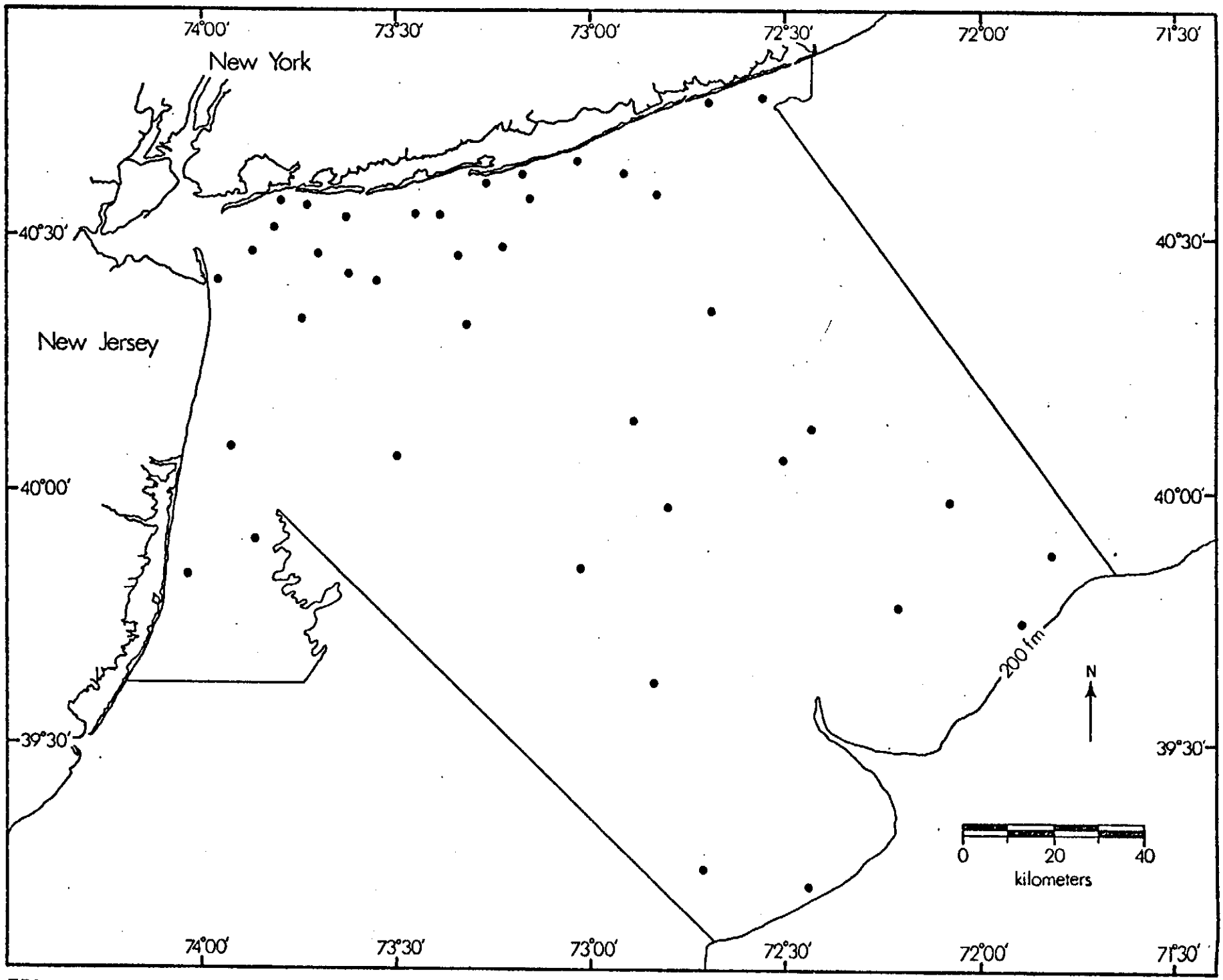

FIGURE 8.--R. V. Delaware II Cruise 463, October 22-28, 1974. Location of collecting stations.

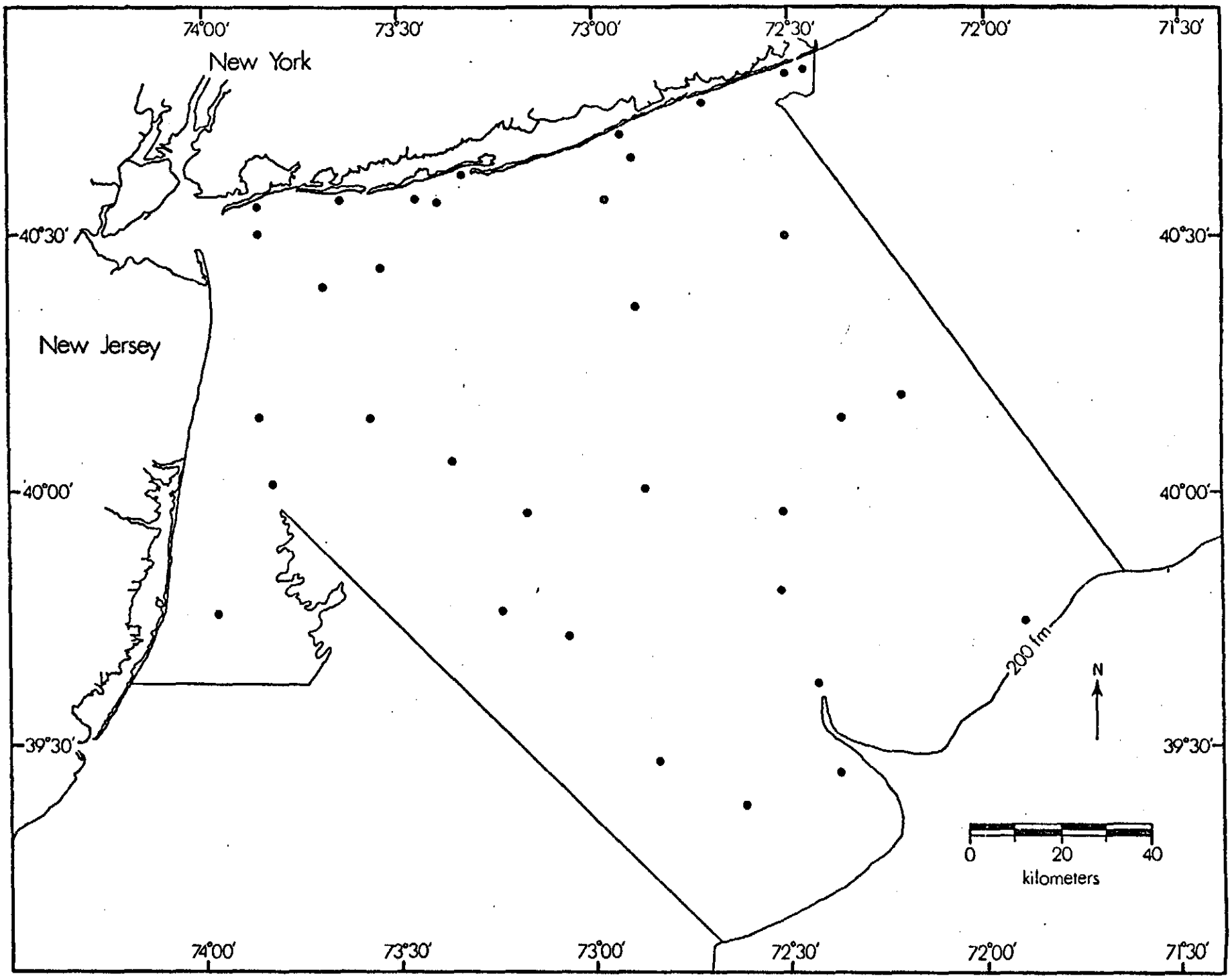

FIGURE 9.--R. V. Delaware II Cruise 464, November 18-25, 1974. Location of collecting stations.

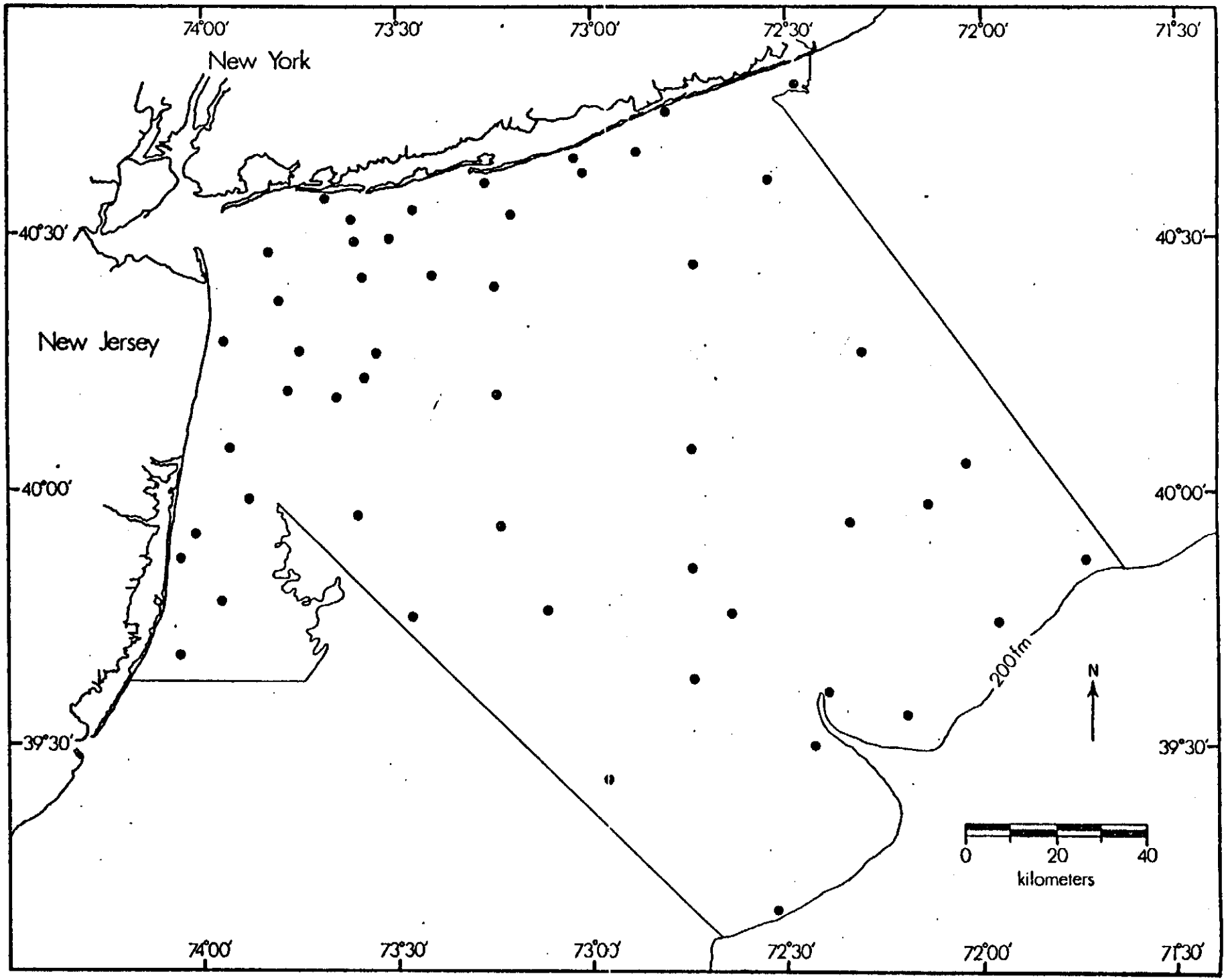

FIGURE 10.--R. V. Delaware II Cruise 185, January 31 - February 6, 1975. Location of collecting stations.

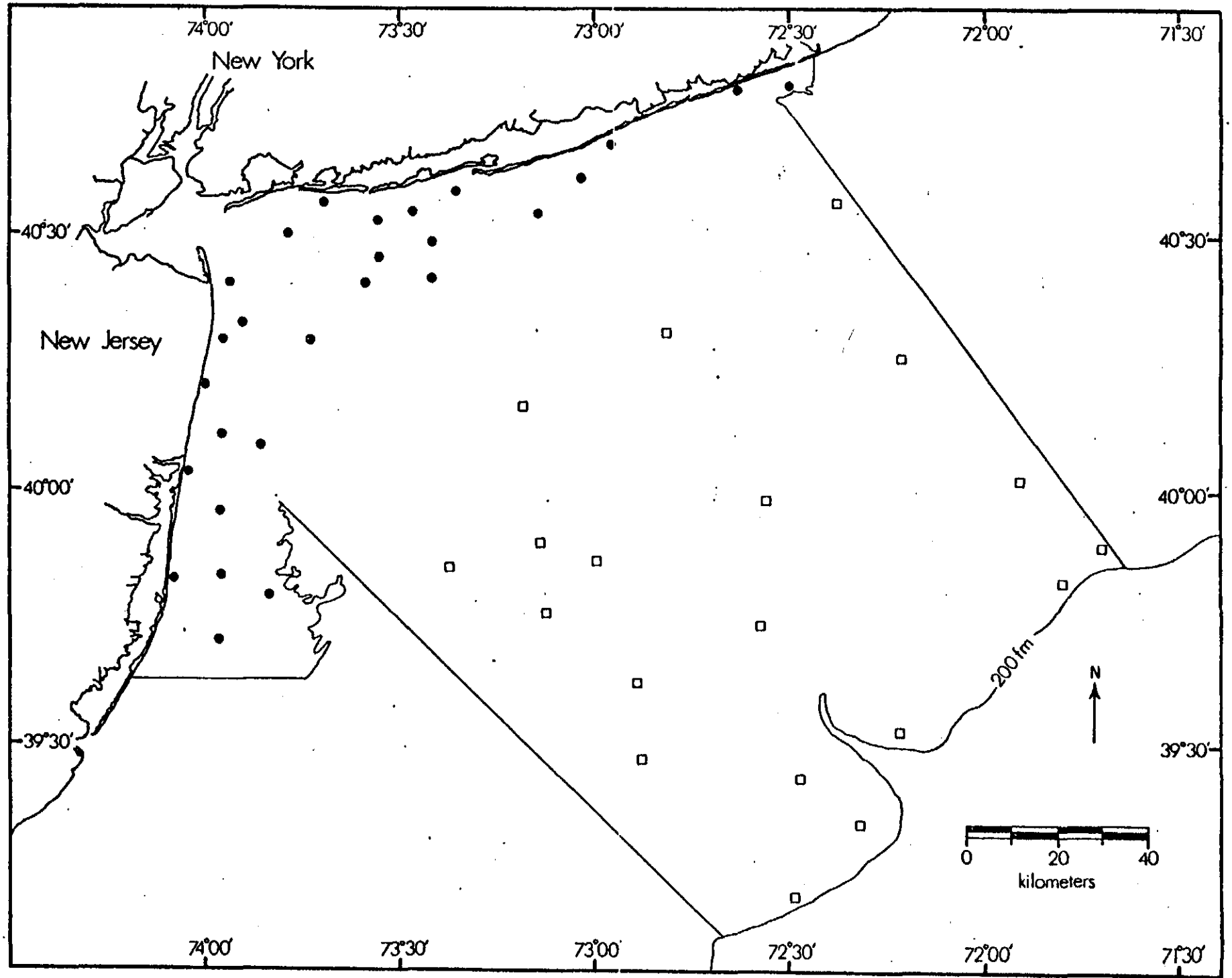

FIGURE 11.--R. V. Albatross IV Cruise 753, March 6-10, 1975 (□) and R. V. Atlantic Twin Cruise 275, March 18-24, 1975 (●). Location of collecting stations.

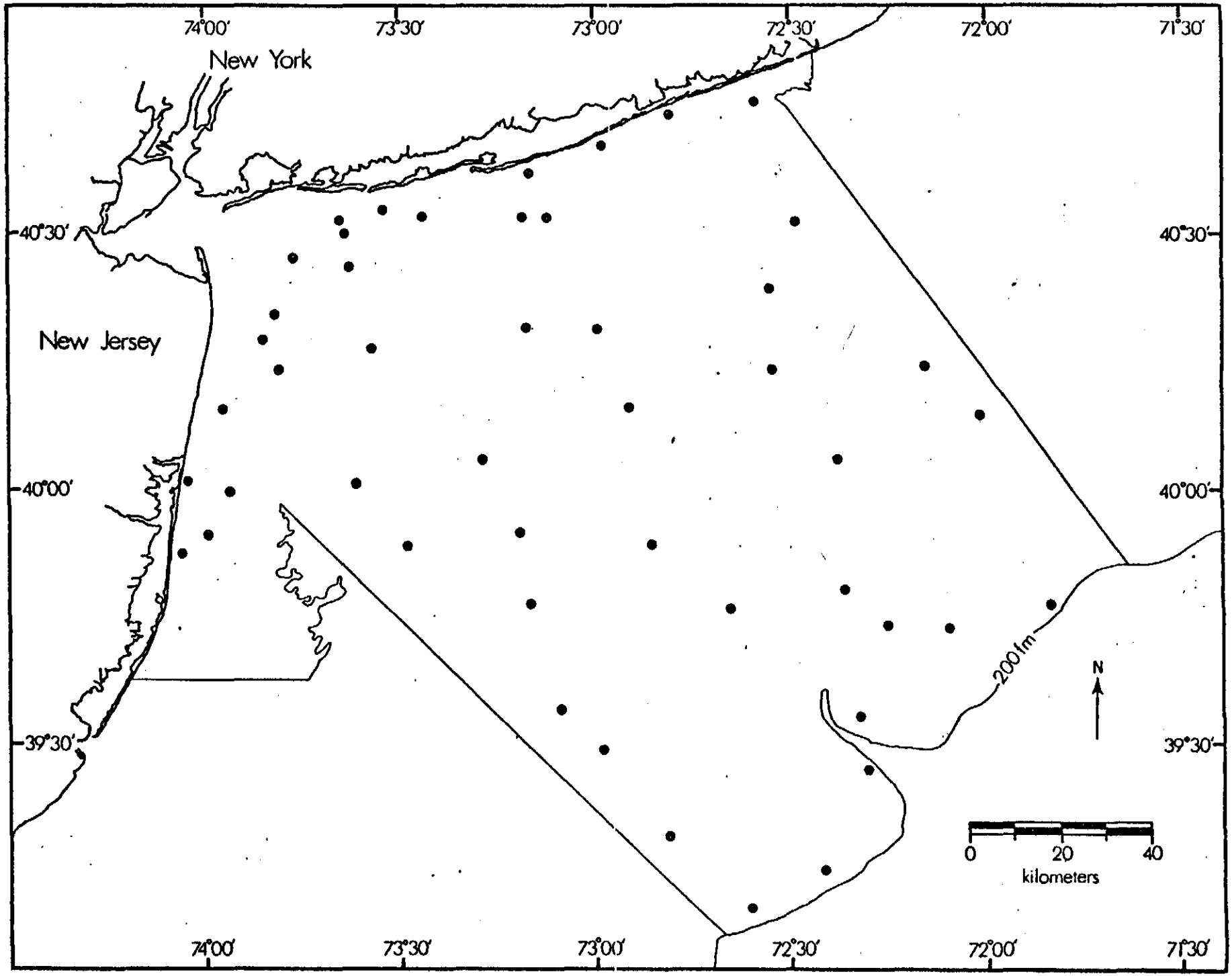

FIGURE 12.--R. V. Albatross IV Cruise 475, April 1-10, 1975. Location of collecting stations.

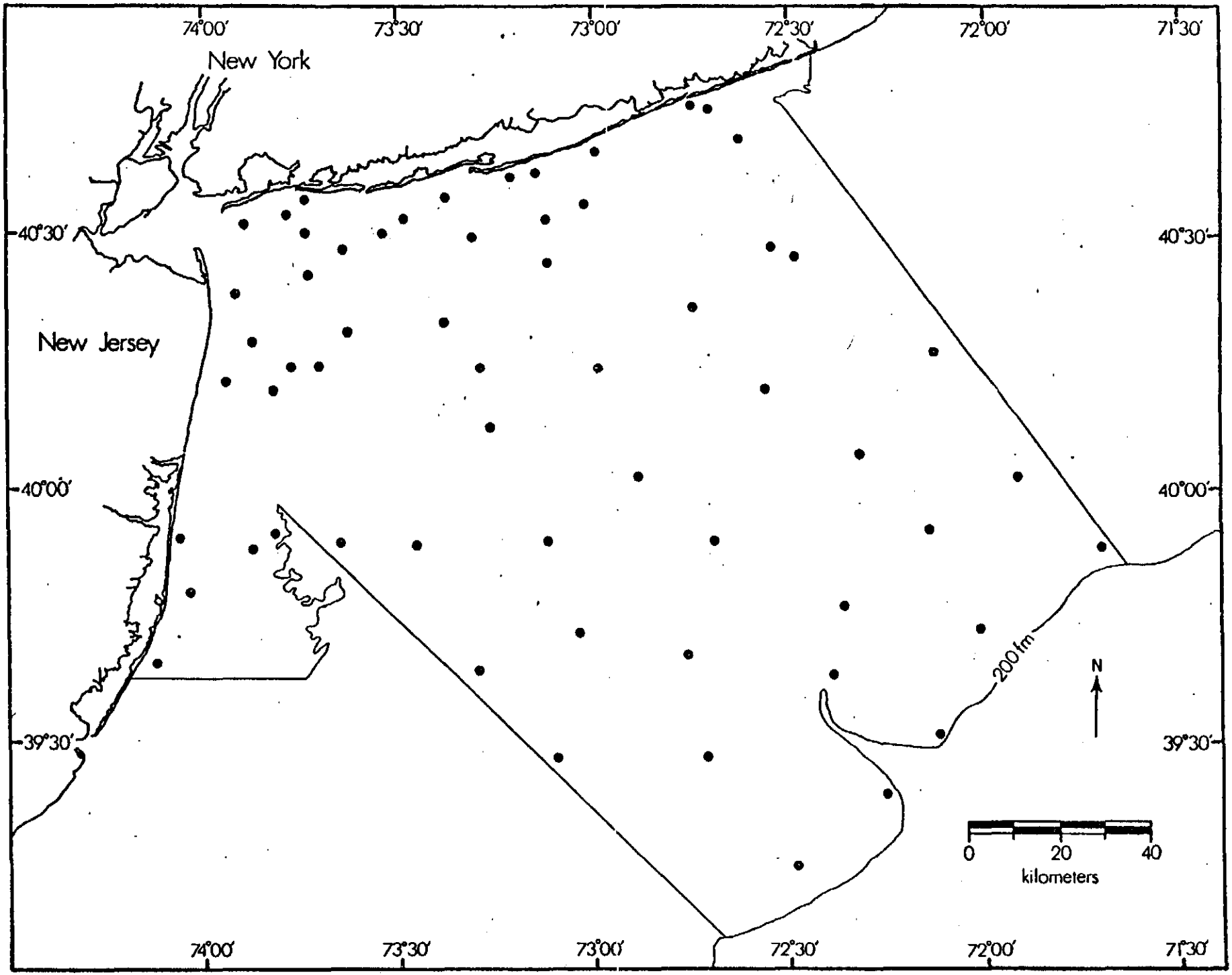

FIGURE 13.--R. V. Delaware II Cruise 575, May 5-13, 1975. Location of collecting stations.

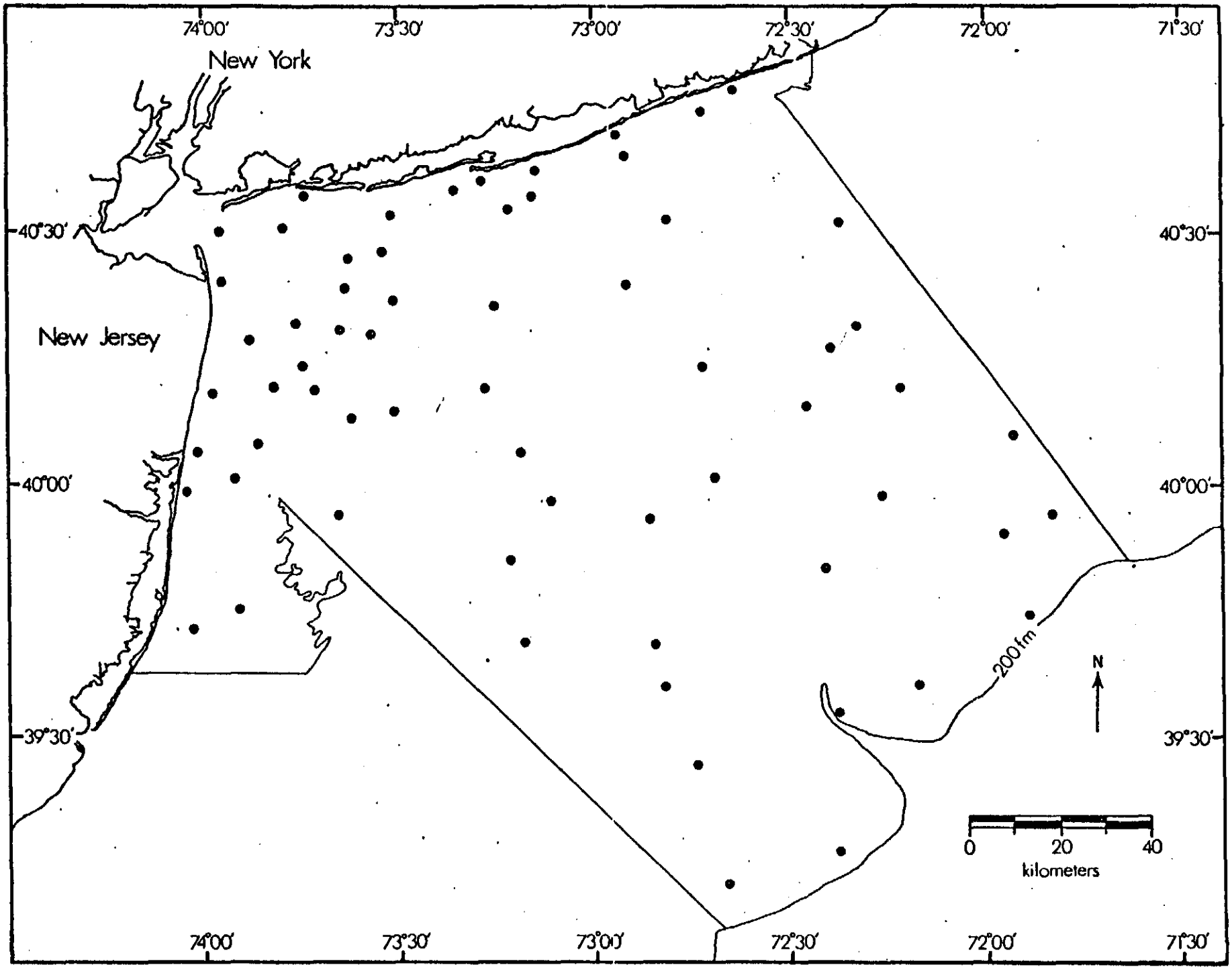

FIGURE 14.--R. V. Delaware II Cruise 435, June 2-9, 1975. Location of collecting stations.

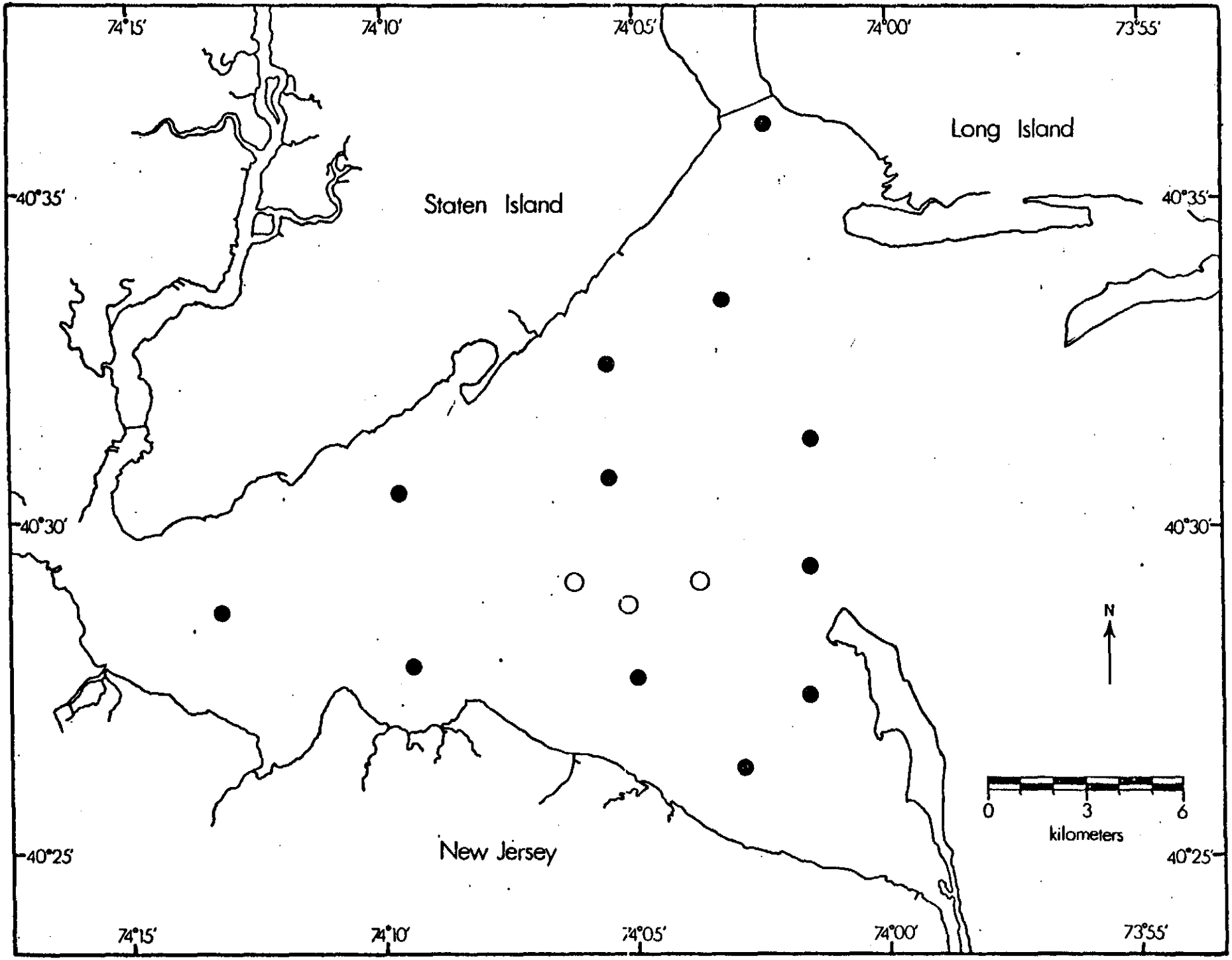

FIGURE 15.--R. V. Xiphias Cruise 416, June 3, 4, 6, 1974. Location of collecting stations; Xiphias (●), Delaware II and Xiphias gear comparison (O).

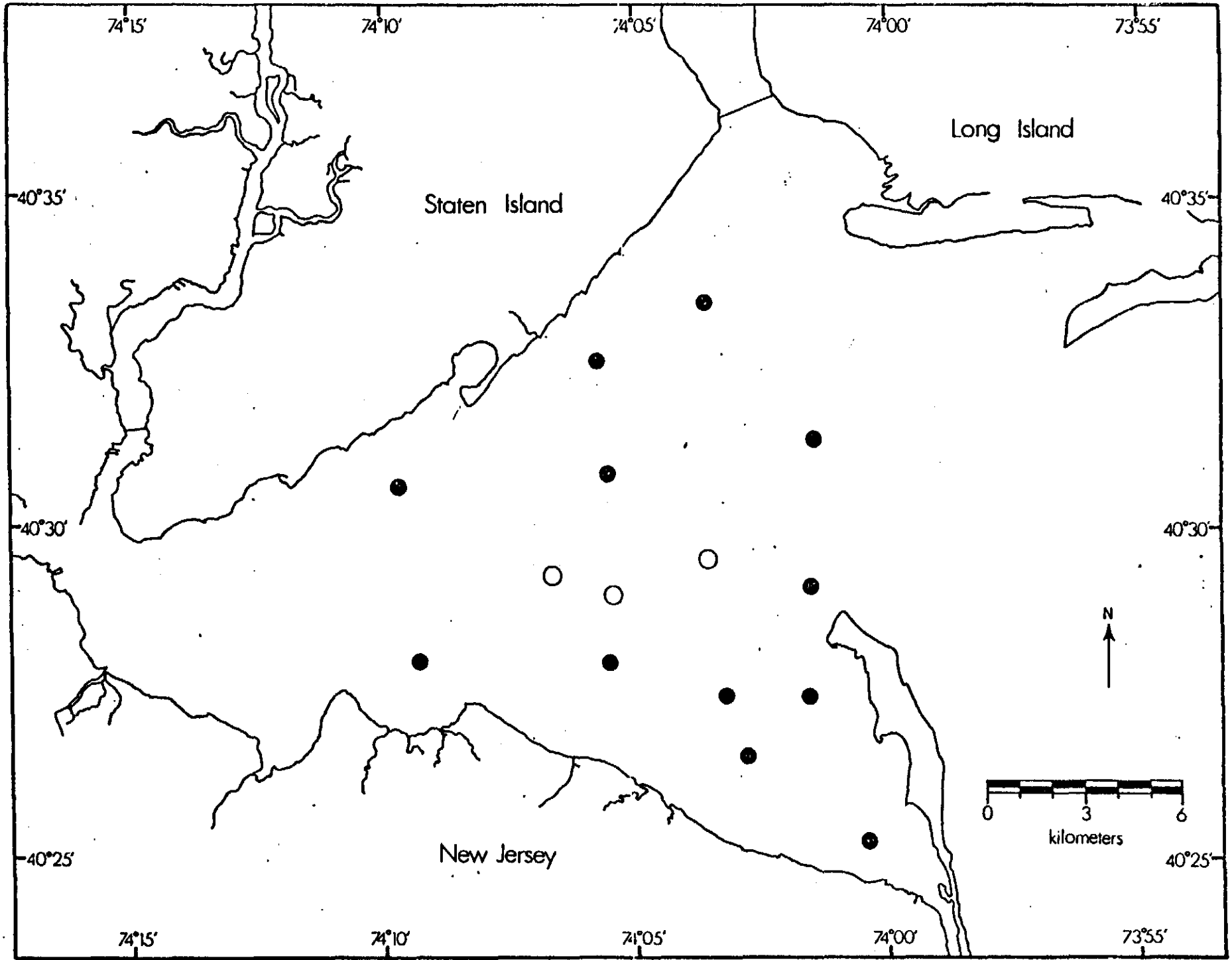

FIGURE 16.--R. V. Xiphias Cruise 417, July 23-25, 1974. Location of collecting stations; Xiphias (●), Delaware II and Xiphias gear comparison (O).

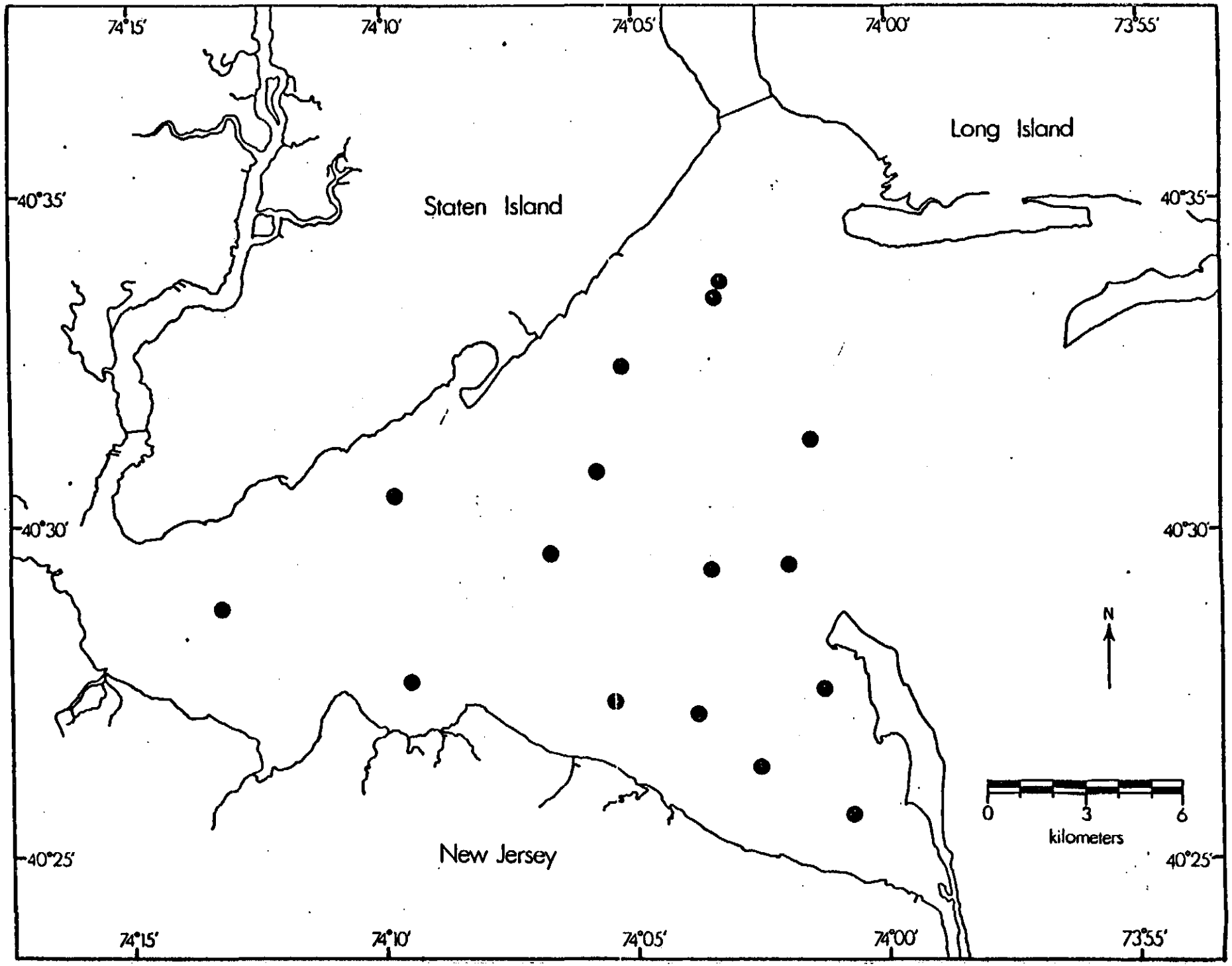

FIGURE 17.--R. V. Xiphias Cruise 418, August 14-15, 21-23, 1974. Location of collecting stations.

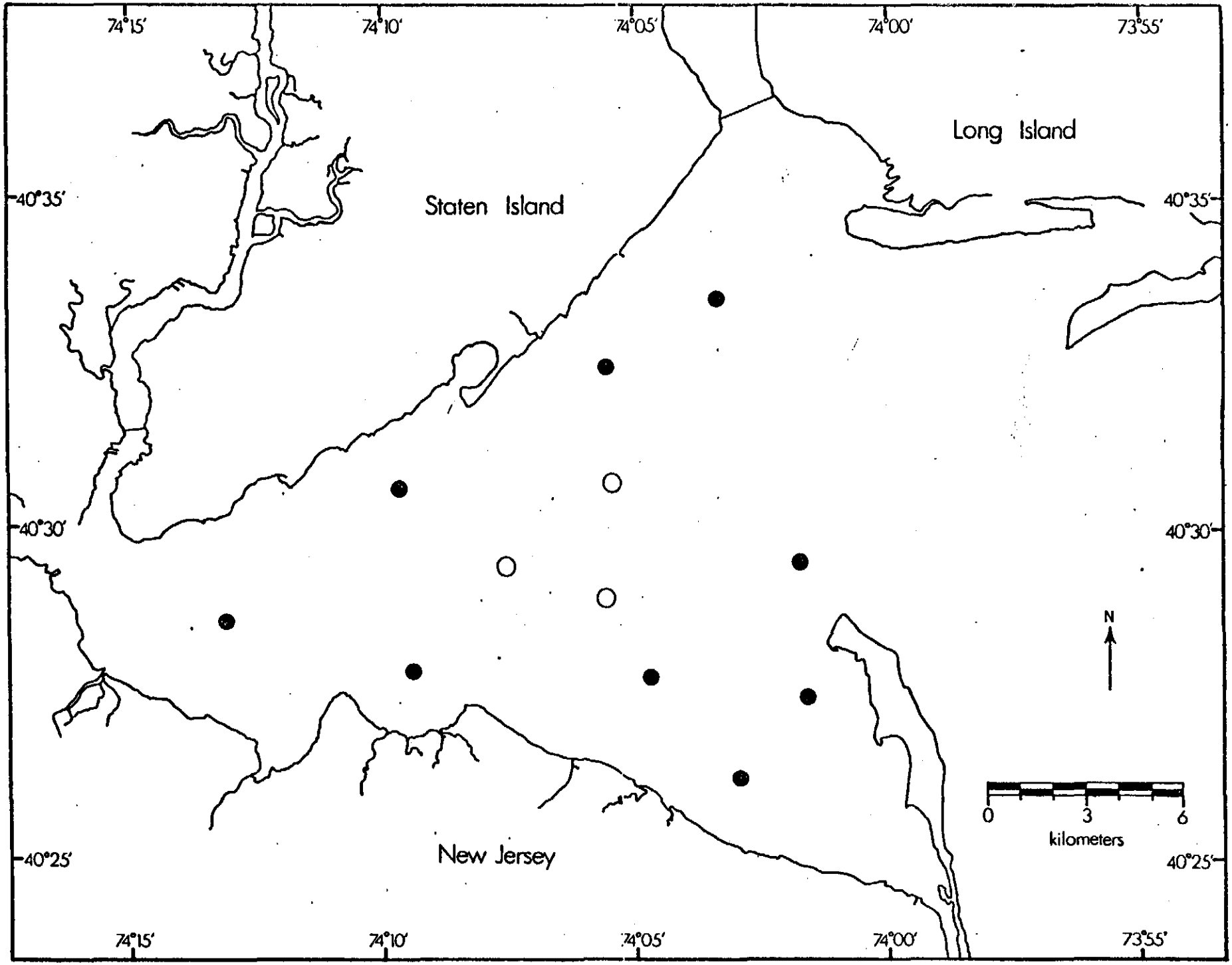

FIGURE 18.--R. V. Xiphias Cruise 419, September 23-26, 1974. Location of collecting stations, Xiphias (●), Delaware II and Xiphias gear comparison (O).

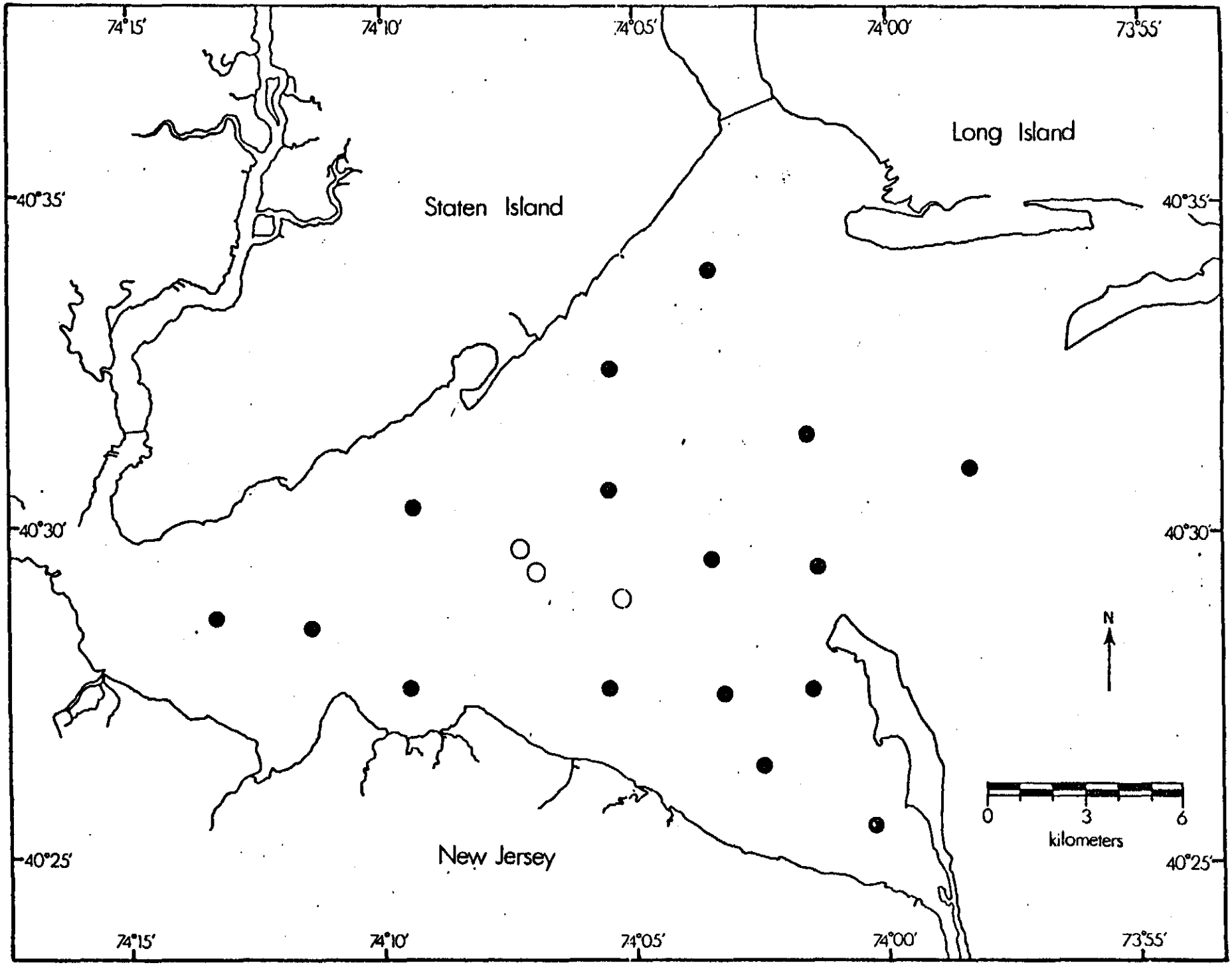

FIGURE 19.--R. V. Xiphias Cruise 421, October 22-24, 1974. Location of collecting stations; Xiphias (●), Delaware II and Xiphias gear comparison (O).

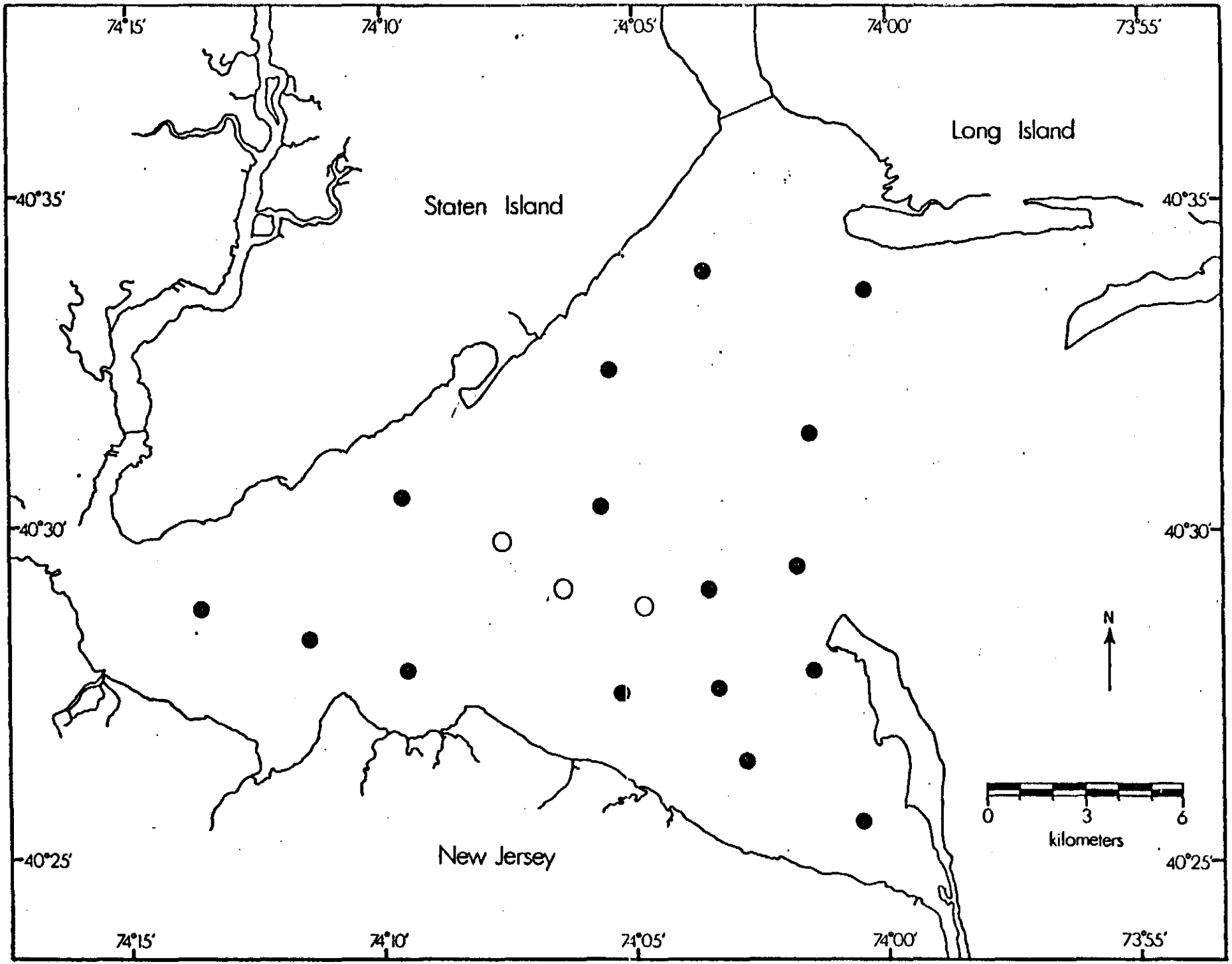

FIGURE 20.--R. V. Xiphias Cruise 423, November 18-20, 1974. Locations of collecting stations; Xiphias (●), Delaware II and Xiphias gear comparison (O).

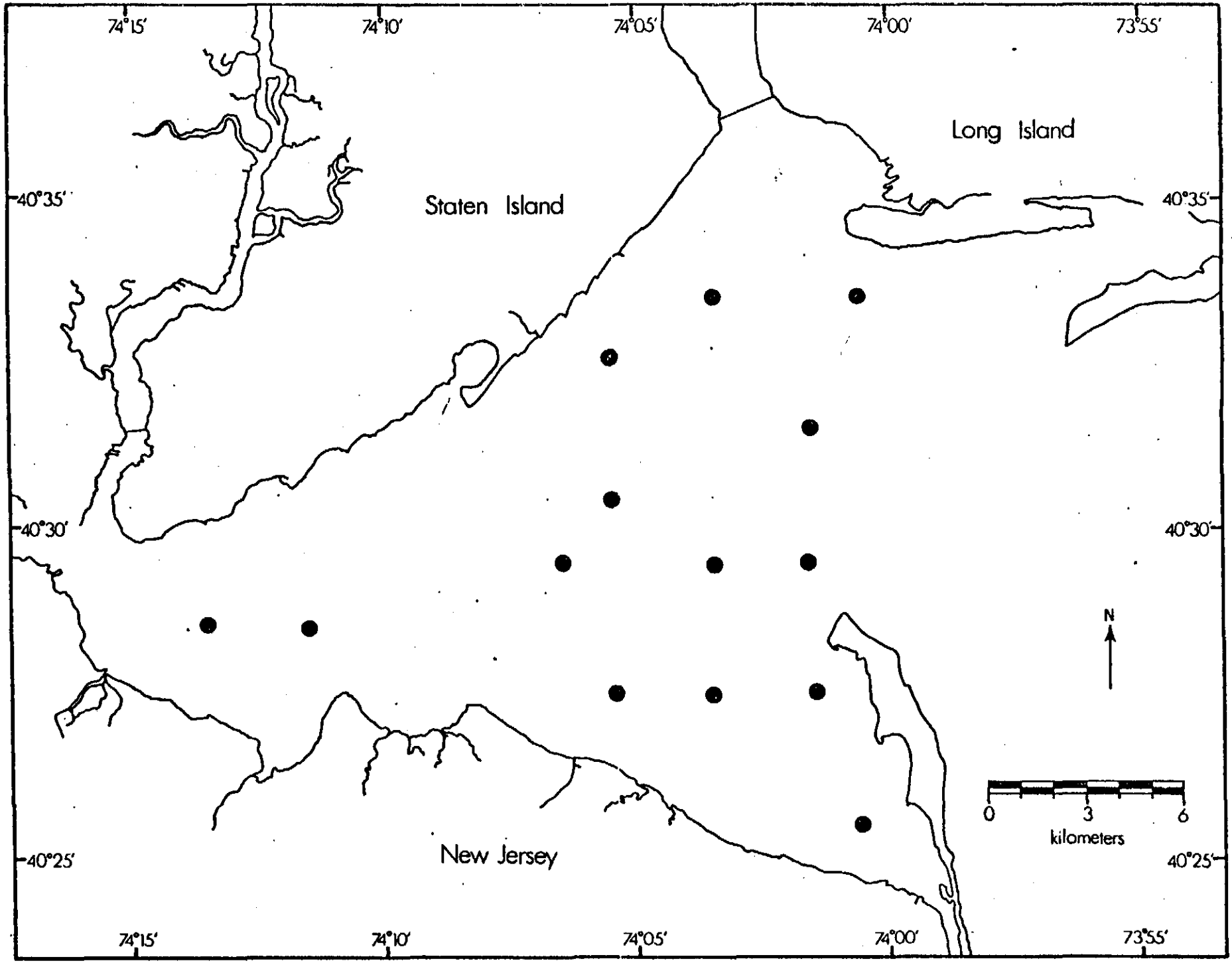

FIGURE 21.--R. V. Rorqual Cruise 425, January 3-9, 1975. Location of collecting stations.

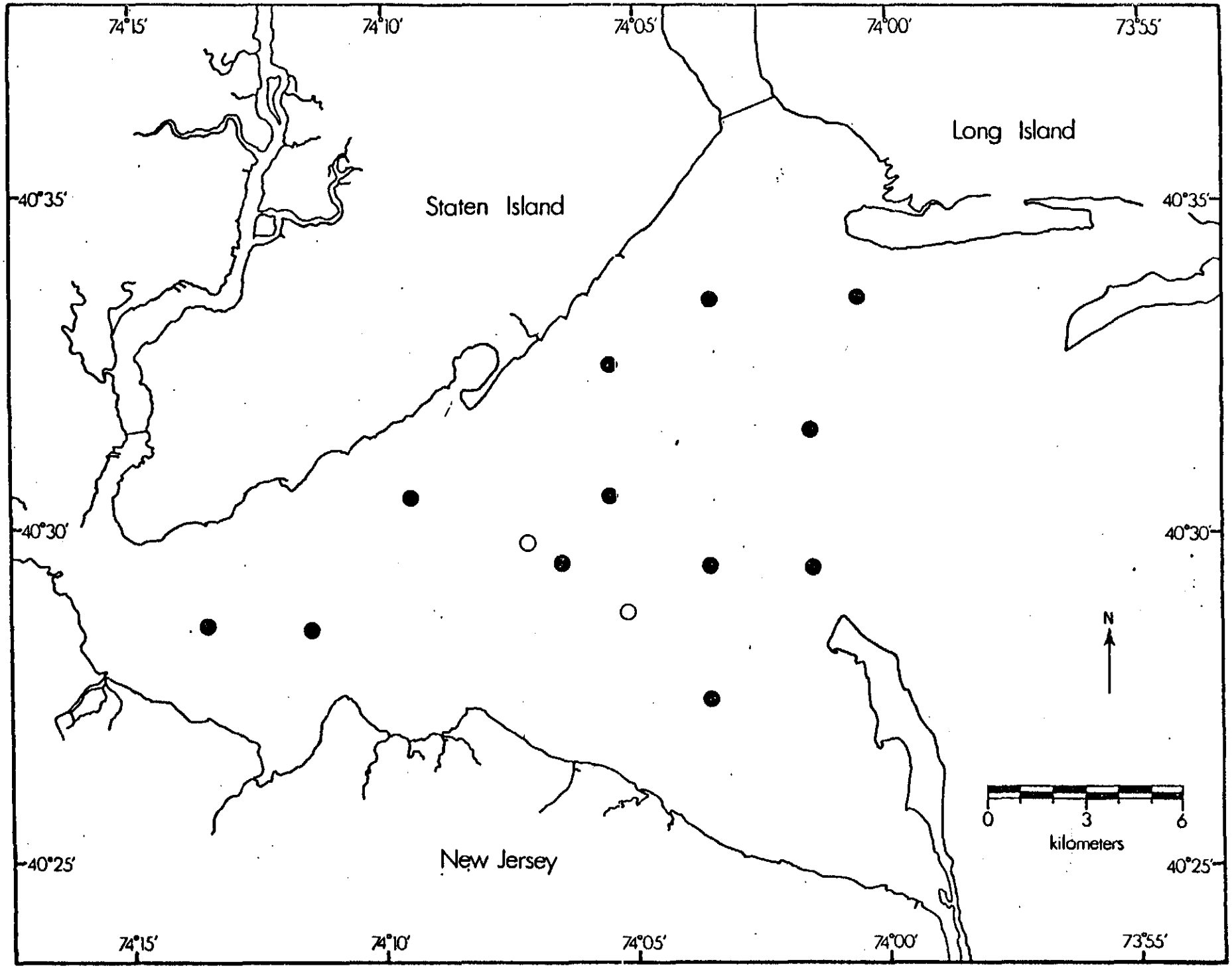

FIGURE 22.--R. V. Rorqual Cruise 427, January 31 - February 4, 1975. Location of collecting stations; Rorqual (●), Delaware II and Rorqual gear comparison (O).

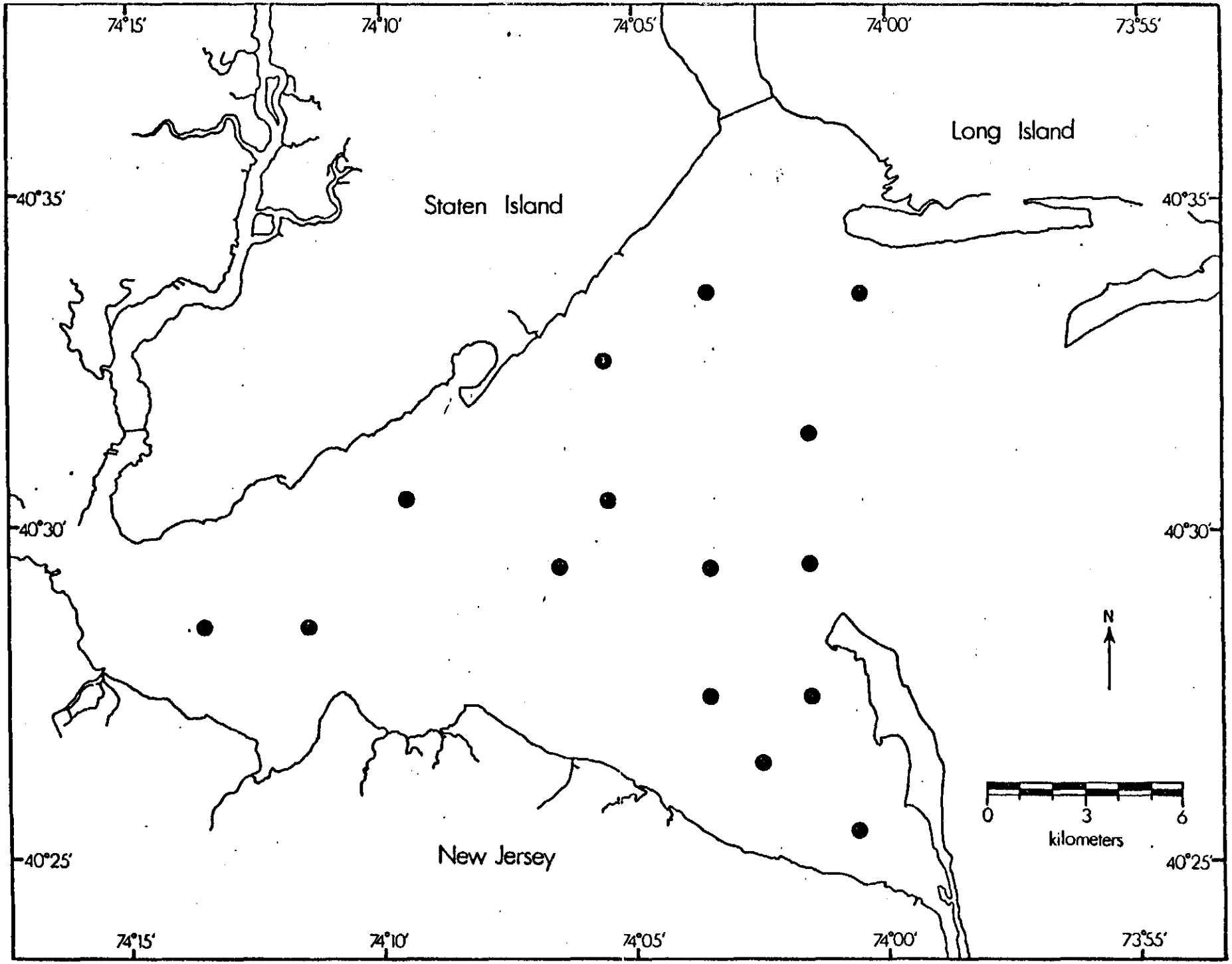

FIGURE 23.--R. V. Rorqual Cruise 429, April 1-7, 1975. Location of collecting stations.

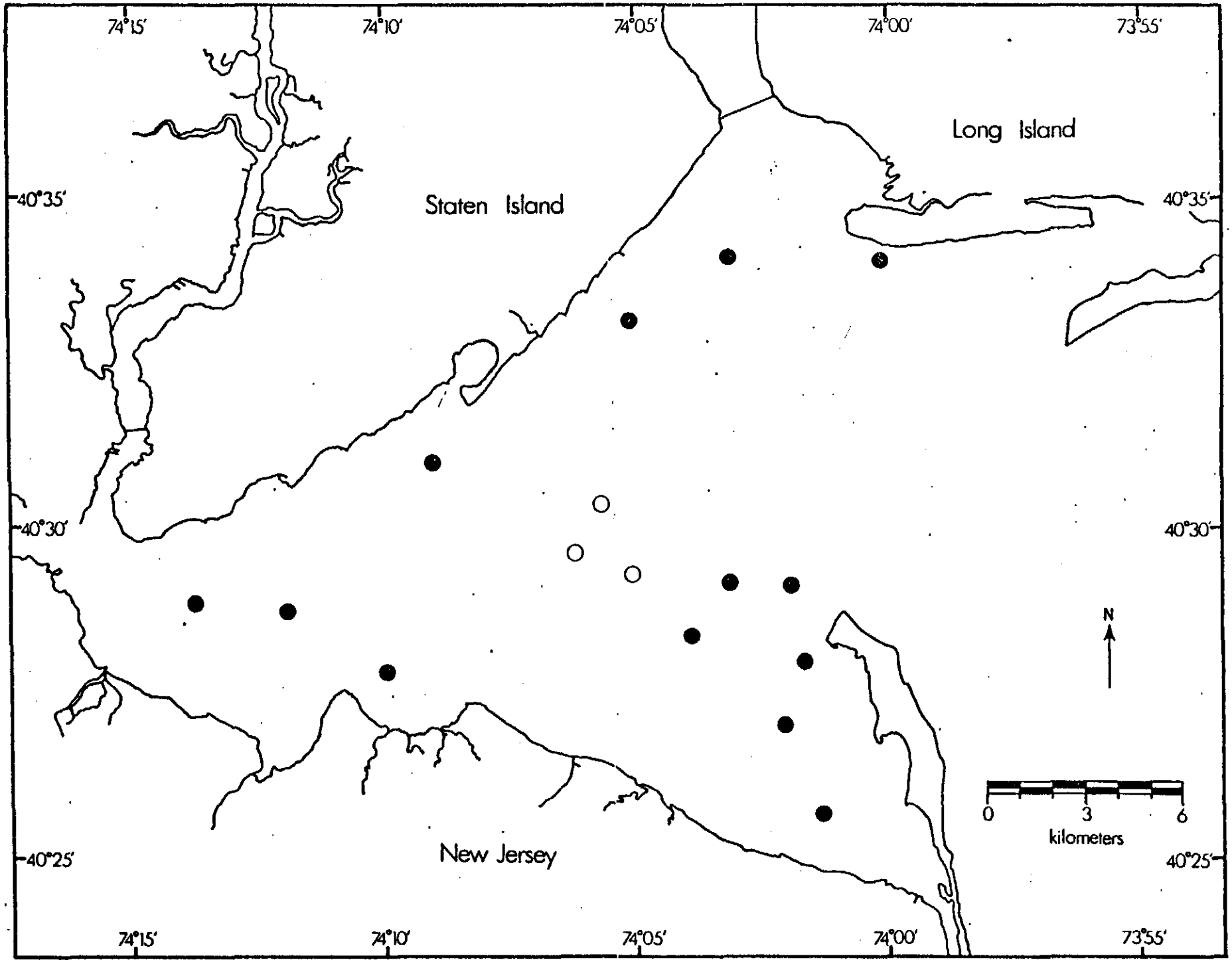

FIGURE 24.--R. V. Xiphias Cruise 431, May 5-8, 1975. Location of collecting stations; Xiphias (●), Delaware II and Xiphias gear comparison (O).

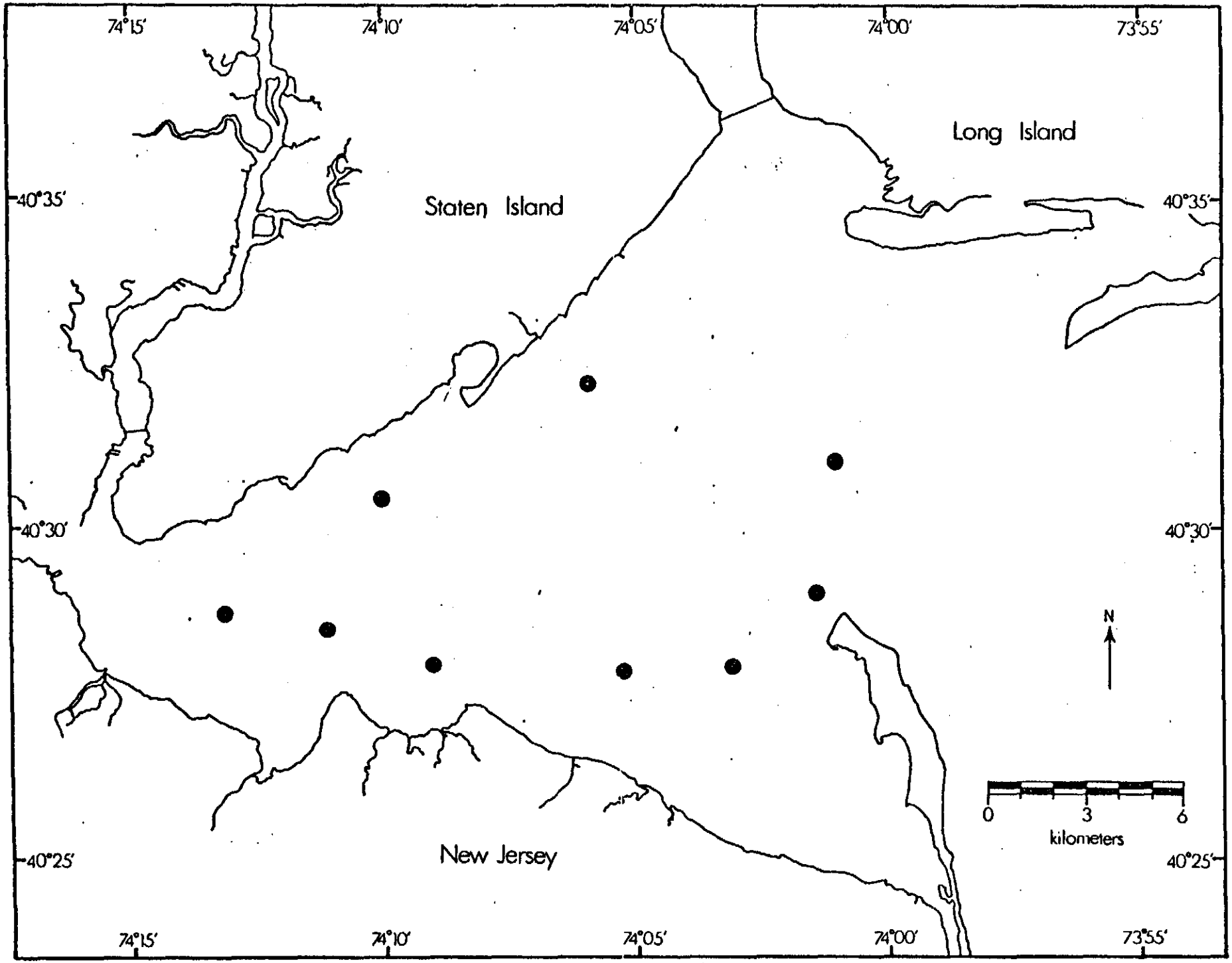

FIGURE 25.--R. V. Xiphias Cruise 433, June 2-9, 1975. Location of collecting stations.

MATERIALS AND METHODS

Research vessels used during this study were the Middle Atlantic Coastal Fisheries Center's 10.4-m (34-ft) Xiphias and 19.8-m (65-ft) Rorqual, the National Ocean Survey's 47.2-m (155-ft) Delaware II and 57.0-m (187-ft) Albatross IV, and the chartered 27.4-m (90-ft) Atlantic Twin. Xiphias and Rorqual were used in the bay area exclusively and Delaware II, Albatross IV, and Atlantic Twin principally in the ocean with the exception of gear comparison stations which were made in the bay area.

At each trawl station vertical temperature profiles were obtained with an expendable bathythermograph (XBT) during ocean cruises and with a portable temperature probe during bay cruises. Surface water temperature was measured with a stem thermometer accurate to $\pm$ 0.1°C. Surface and bottom water samples were taken for salinity determination.

An otter trawl was towed at approximately 6.5 km/h (3.5 knots) for 15 min at bay stations and 30 min at ocean stations. The trawl used aboard Xiphias and Rorqual has a 9.1-m (30-ft) footrope and a 7.6-m (25-ft) headrope. A Yankee #36 trawl was used on Delaware II; this gear has a 24.4-m (80-ft) footrope and an 18.3-m (60-ft) headrope. The Albatross IV used the aforementioned #36 trawl and a #41 trawl which has a 30.5-m (100-ft) footrope and a 24.4-m (80-ft) headrope. The Atlantic Twin used a 3/4 Yankee trawl which has a 16.5-m (54-ft) footrope and an 11.9-m (39 ft) headrope.

At the conclusion of each tow, the trawl was retrieved and emptied onto a sorting table where all finfish species were separated and identified. All specimens of each species were weighed and a random sample measured to the nearest centimeter (middle caudal ray). Usually, all specimens of each species were measured; but, when a species was very numerous, an estimate of the total number was made by measuring and weighing a subsample.

Samples of each species, up to 35 specimens, were frozen at each trawl station. If the total catch of a species exceeded 35 specimens, a size stratified sample of 25-35 specimens were frozen from that station.

At the laboratory each specimen was measured to the nearest millimeter (middle caudal ray) and weighed to the nearest gram. In addition, each mature specimen was sexed, development stage determined, and ovaries weighed to the nearest one-hundredth of a gram (0.01 g).

Collected data were recorded on appropriate data processing forms, transferred to punch cards, and incorporated into sorting, listing and statistical systems to simplify data recall and analysis.

PRELIMINARY RESULTS

During this 13 month study 692 trawl stations were occupied during 23 cruises. Table 1 gives dates, locations, and trawl used for each cruise. Appendix Table I and II are phylogenetic lists of the 96 species and 46 families of finfishes collected during these cruises, including monthly summaries of numbers of laboratory examined specimens and their size range.

The following sections summarize 13 months of collected materials for 14 of the more numerous and/or important species: silver hake (Merluccius bilinearis), red hake (Urophycis chuss), spotted hake (Urophycis regius), black sea bass (Centropristis striata), scup (Stenotomus chrysops), weakfish (Cynoscion regalis), butterfish (Peprilus triacanthus), northern searobin (Prionotus carolinus), striped searobin (Prionotus evolans), summer flounder (Paralichthys dentatus), fourspot flounder (Paralichthys oblongus), windowpane (Scophthalmus aquosus), yellowtail flounder (Limanda ferruginea), and winter flounder (Pseudopleuronectes americanus).

Preliminary results are given in the form of graphs, tables, and maps for each of the aforementioned species. Included are shipboard collected length-frequency distributions; laboratory determined weight-length relationship ($\log^{10}$), sex ratios, and mean gonad-somatic indices (ovarian weight ÷ fish weight x 100); and monthly distributions.

TABLE 1.--List of cruises made in New York Bight, June 1974 - June 1975.

DATES	VESSEL	CRUISE CODE	NO. OF TRAWL STATIONS	GEAR TYPE	STUDY AREA
1974					
June 3-7	Delaware II	374	46	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 4)
June 3,4,6	Xiphias	416	15	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 15)
July 23-25	Xiphias	417	15	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 16)
July 24-29	Delaware II	774	43	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 5)
Aug. 14,15, 21-23	Xiphias	418	16	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 17)
Aug. 16-21	Delaware II	874	44	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 6)
Sept. 23-29	Delaware II	974	43	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 7)
Sept. 23-26	Xiphias	419	15	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 18)
Oct. 22-28	Delaware II	463	43	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 8)
Oct. 22-24	Xiphias	421	19	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 19)
Nov. 18-25	Delaware II	464	38	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 9)
Nov. 18-20	Xiphias	423	19	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 20)
1975					
Jan. 3-9	Rorqual	425	14	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 21)
Jan. 31 - Feb. 6	Delaware II	175	54	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 10)
Jan. 31 - Feb. 4	Rorqual	427	14	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 22)
Mar. 6-10	Albatross IV	753	20	#41 Trawl-18" Roller Sweep	N. Y. Bight Ocean - 16-200 fm (Figure 11)

TABLE 1.--Continued

DATES	VESSEL	CRUISE CODE	NO. OF TRAWL STATIONS	GEAR TYPE	STUDY AREA
1975					
Mar. 18-24	Atlantic Twin	275	25	3/4 Yankee-Trawl	N. Y. Bight Ocean - 15 fm (Figure 11)
Apr. 1-10	Albatross IV	475	48	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 12)
Apr. 1-7	Rorqual	429	15	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 23)
May 5-13	Delaware II	575	59	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 13)
May 5-8	Xiphias	431	16	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 24)
June 2-9	Delaware II	435	62	#36 Trawl-Chain Sweep	N. Y. Bight Ocean (Figure 14)
June 2-9	Xiphias	433	9	30-ft Trawl	Sandy Hook-Lower-Raritan Bays (Figure 25)
TOTAL			692		

SILVER HAKE

(Merluccius bilinearis)

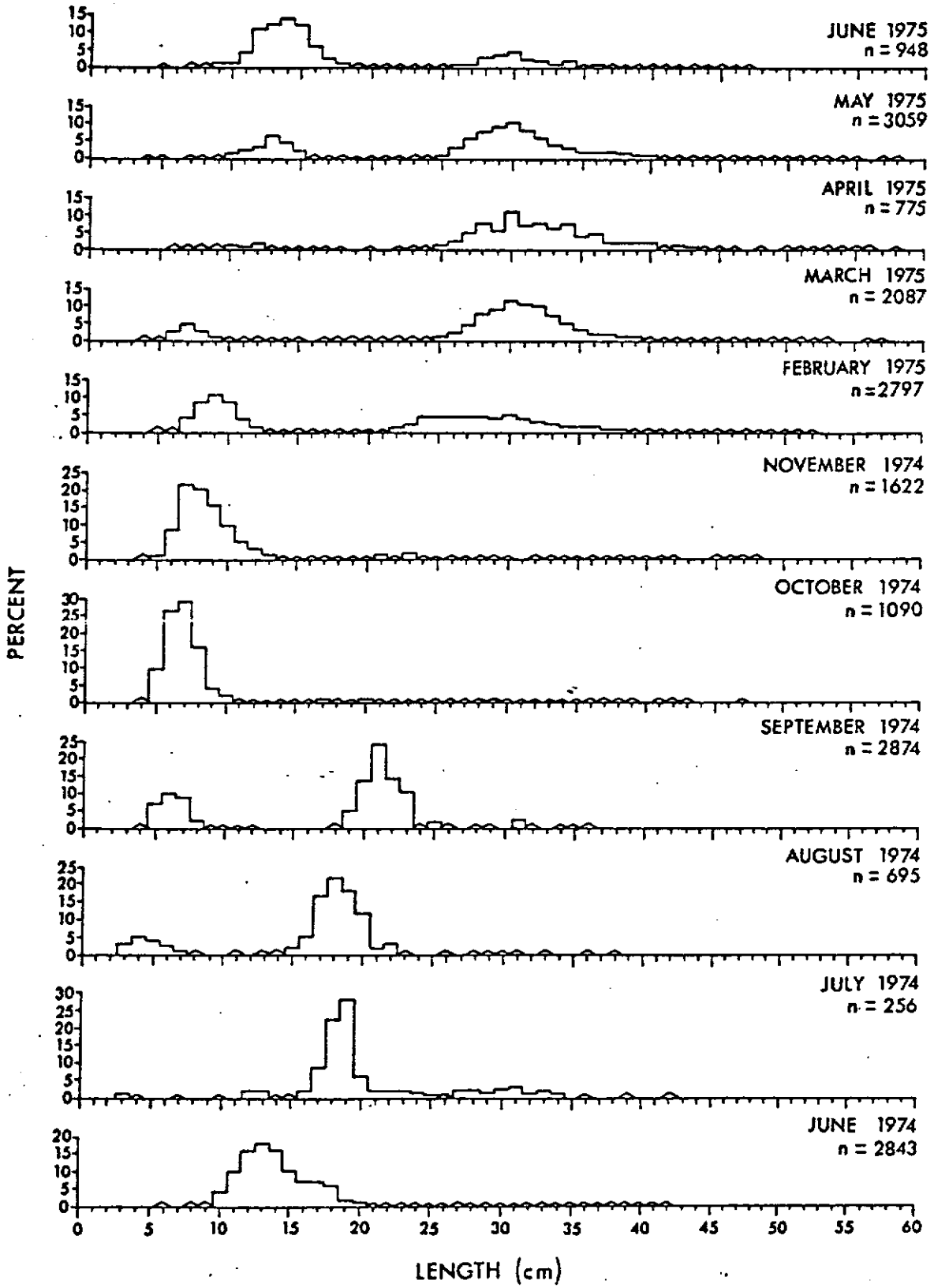

FIGURE 26.--Monthly length-frequency distributions of silver hake (Merluccius bilinearis) collected in New York Bight, June 1974 to June 1975. (Δ indicates $< 0.5\%$).

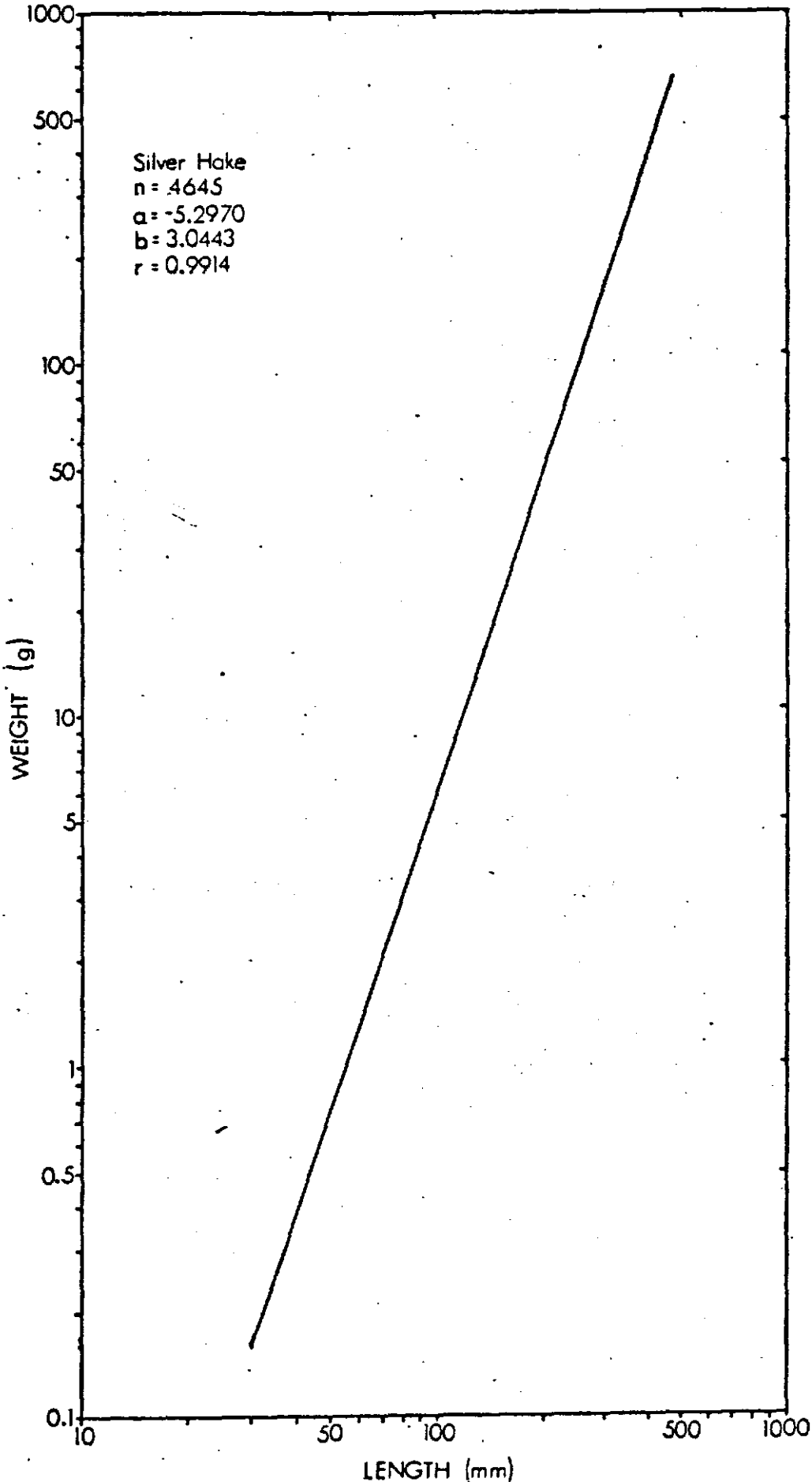

FIGURE 27.--Weight-length relationship of silver hake (Merluccius bilinearis) collected in New York Bight, June 1974 to June 1975.

TABLE 2.--Monthly sex ratios of silver hake (Merluccius bilinearis) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	204	16	7.8	33	16.2	155	76.0
July	140	10	7.1	18	12.9	112	80.0
August	211	12	5.7	20	9.5	179	84.8
September	134	4	3.0	6	4.5	124	92.5
October	190	18	9.5	22	11.6	150	78.9
November	451	15	3.3	77	17.1	359	79.6
January1/	13	1	7.7	-	-	12	92.3
February	941	187	19.9	374	39.7	380	40.4
March	665	277	41.7	287	43.2	101	15.2
April	423	149	35.2	208	49.7	66	15.6
May	858	226	26.3	377	43.9	255	29.7
June	485	76	15.7	103	21.2	306	63.1
TOTAL	4715	991	21.0	1525	32.3	2199	46.6

1/ Bay stations only.

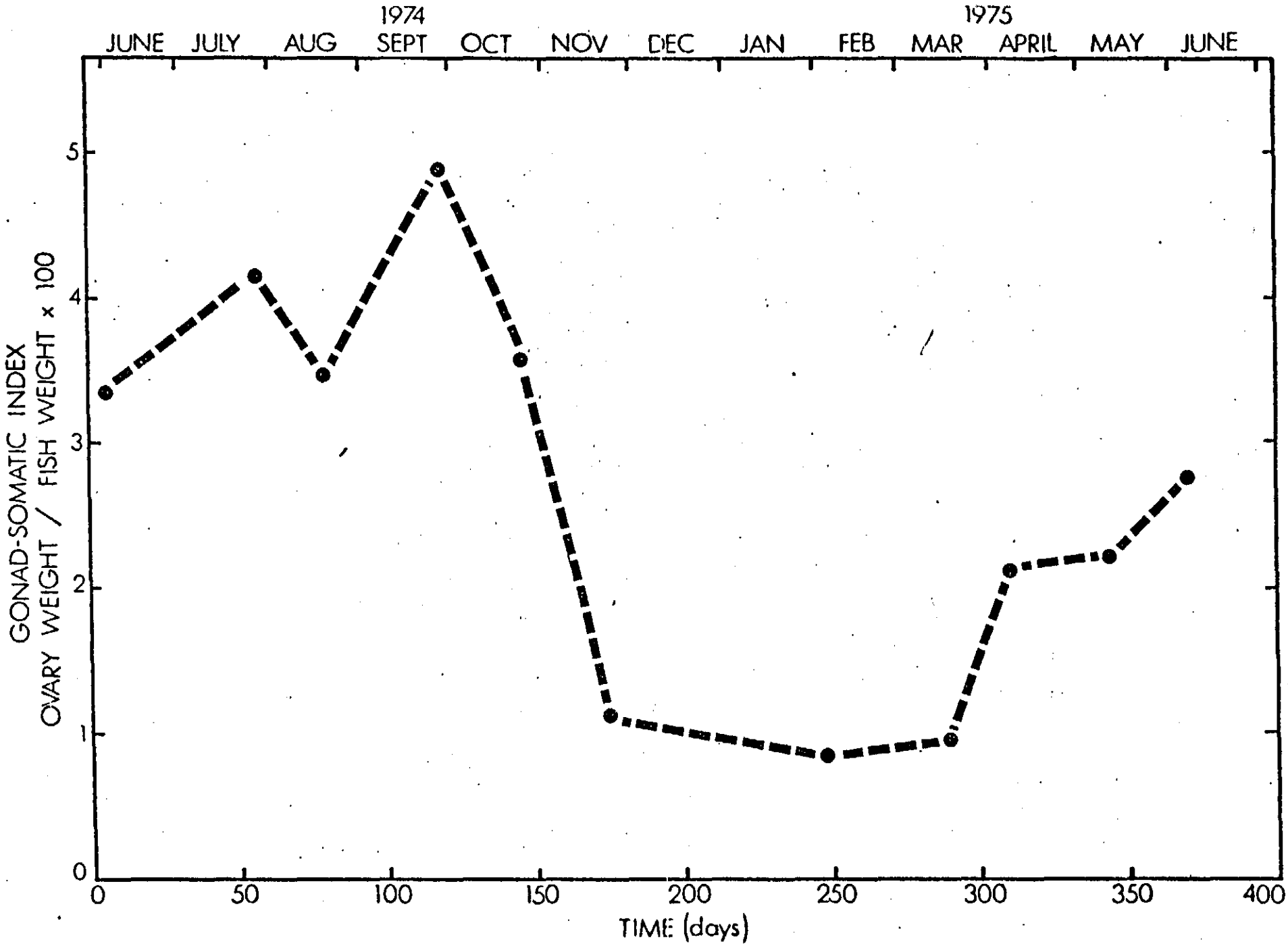

FIGURE 28.--Monthly gonad-somatic indices of silver hake (Merluccius bilinearis) collected in New York Bight, June 1974 to June 1975.

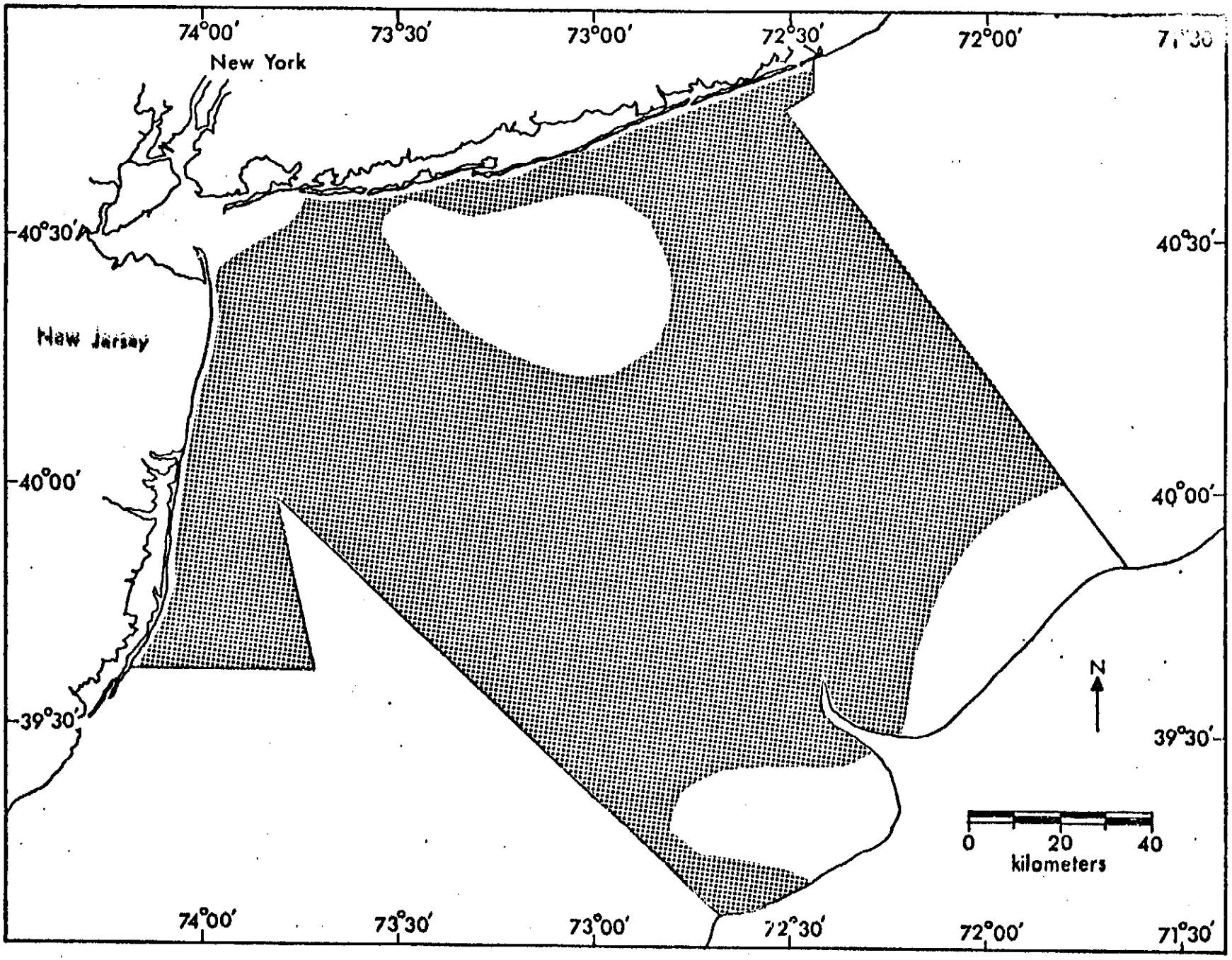

FIGURE 29.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, June 1974.

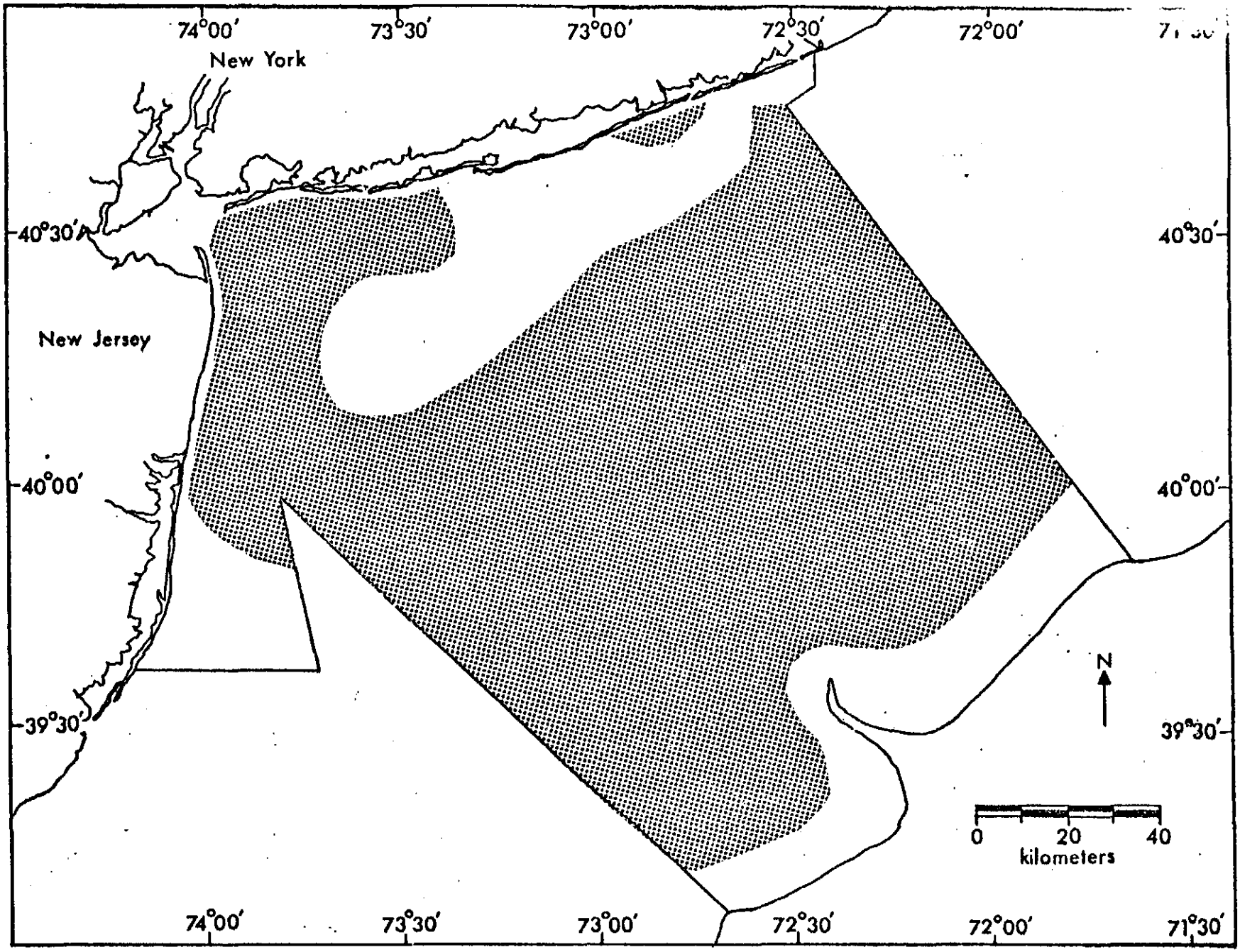

FIGURE 30.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, July 1974.

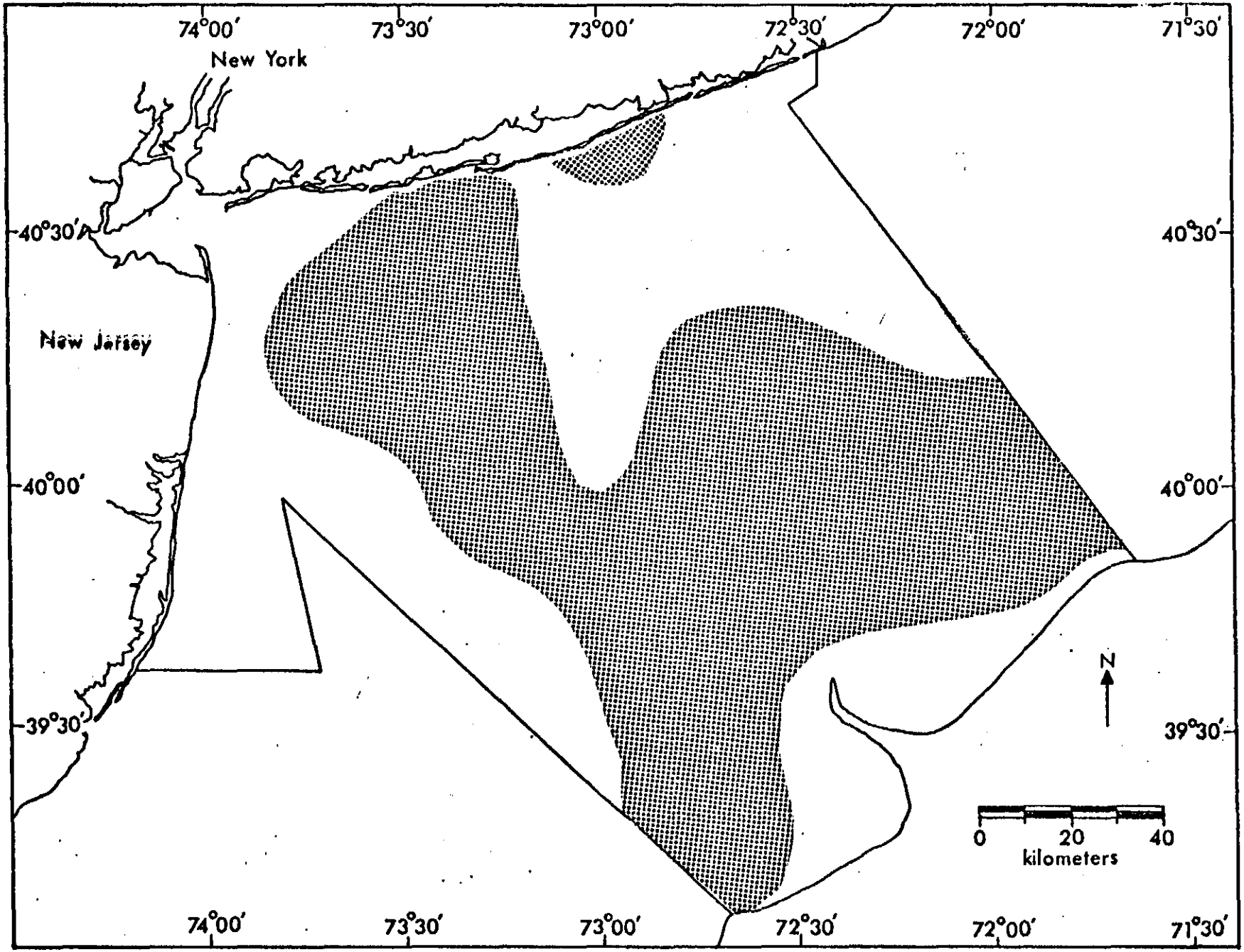

FIGURE 31.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, August 1974.

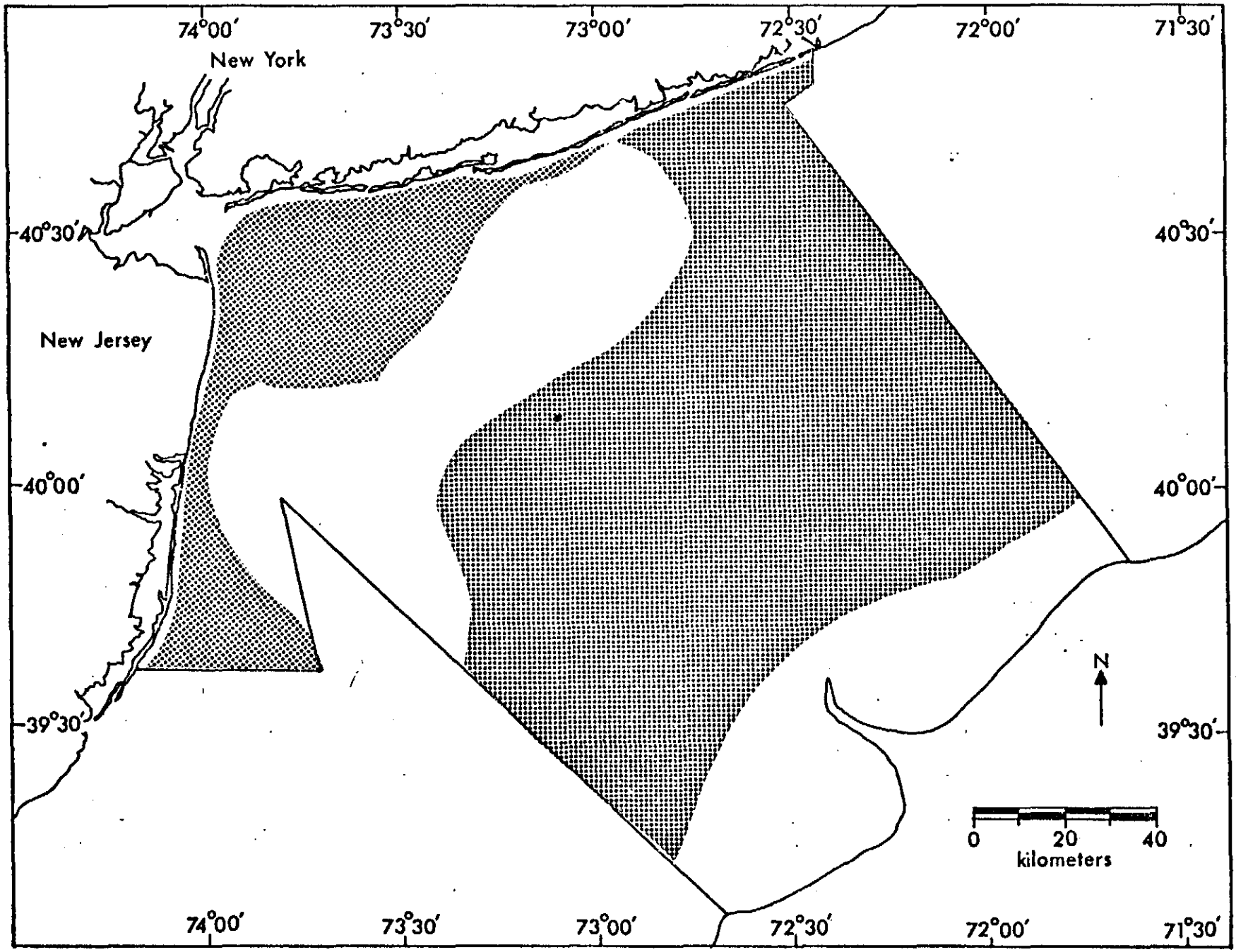

FIGURE 32.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, September 1974.

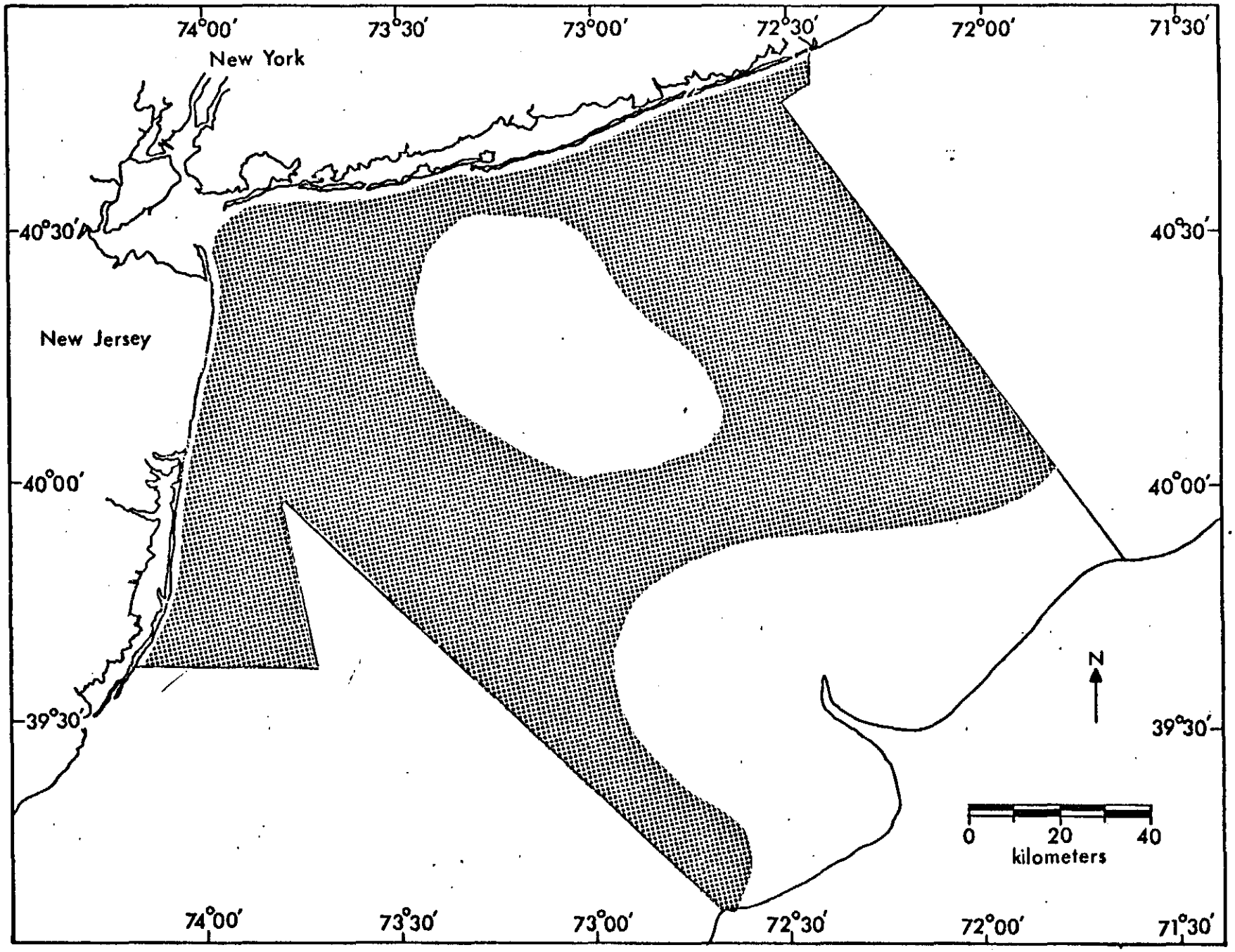

FIGURE 33.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, October 1974.

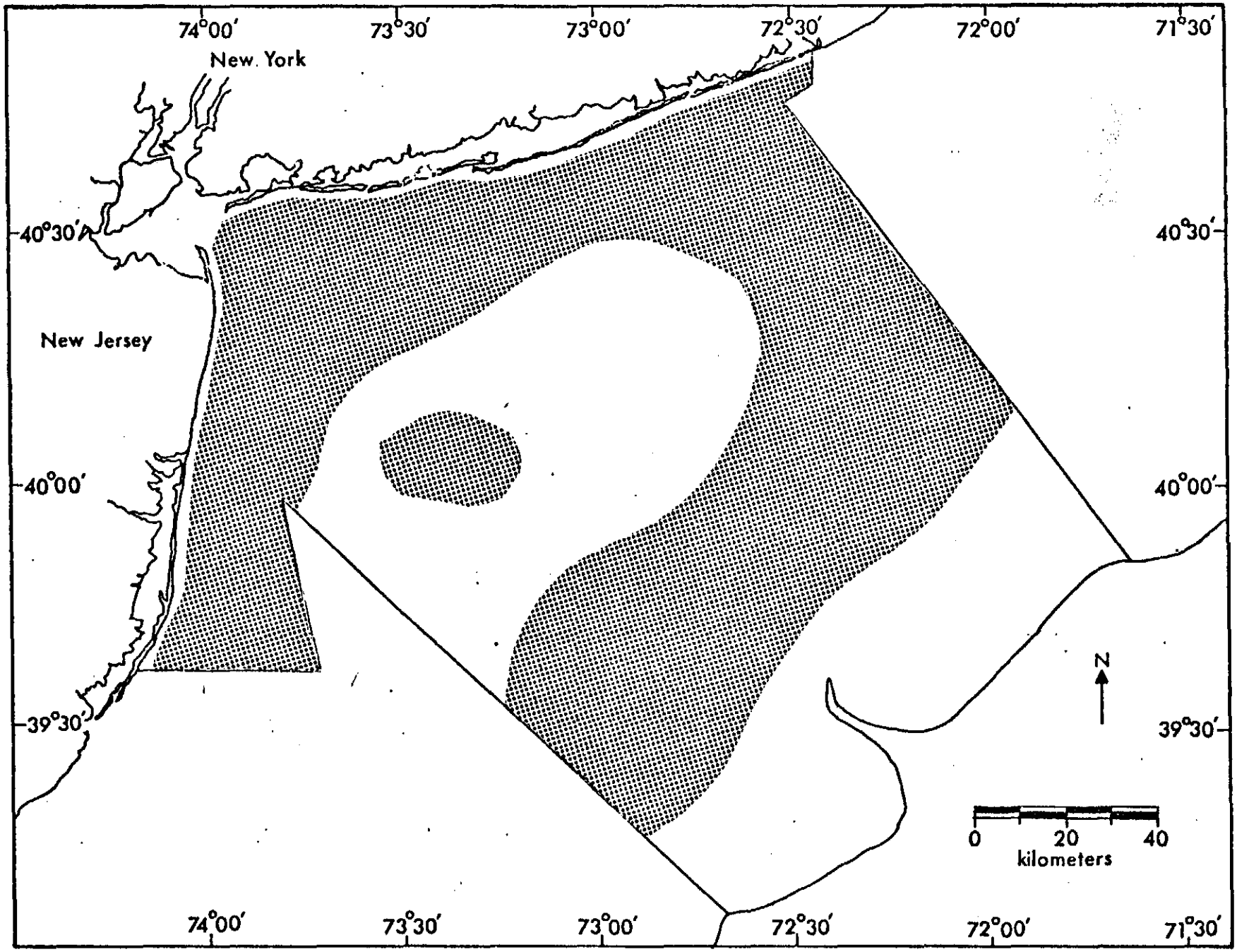

FIGURE 34.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, November 1974.

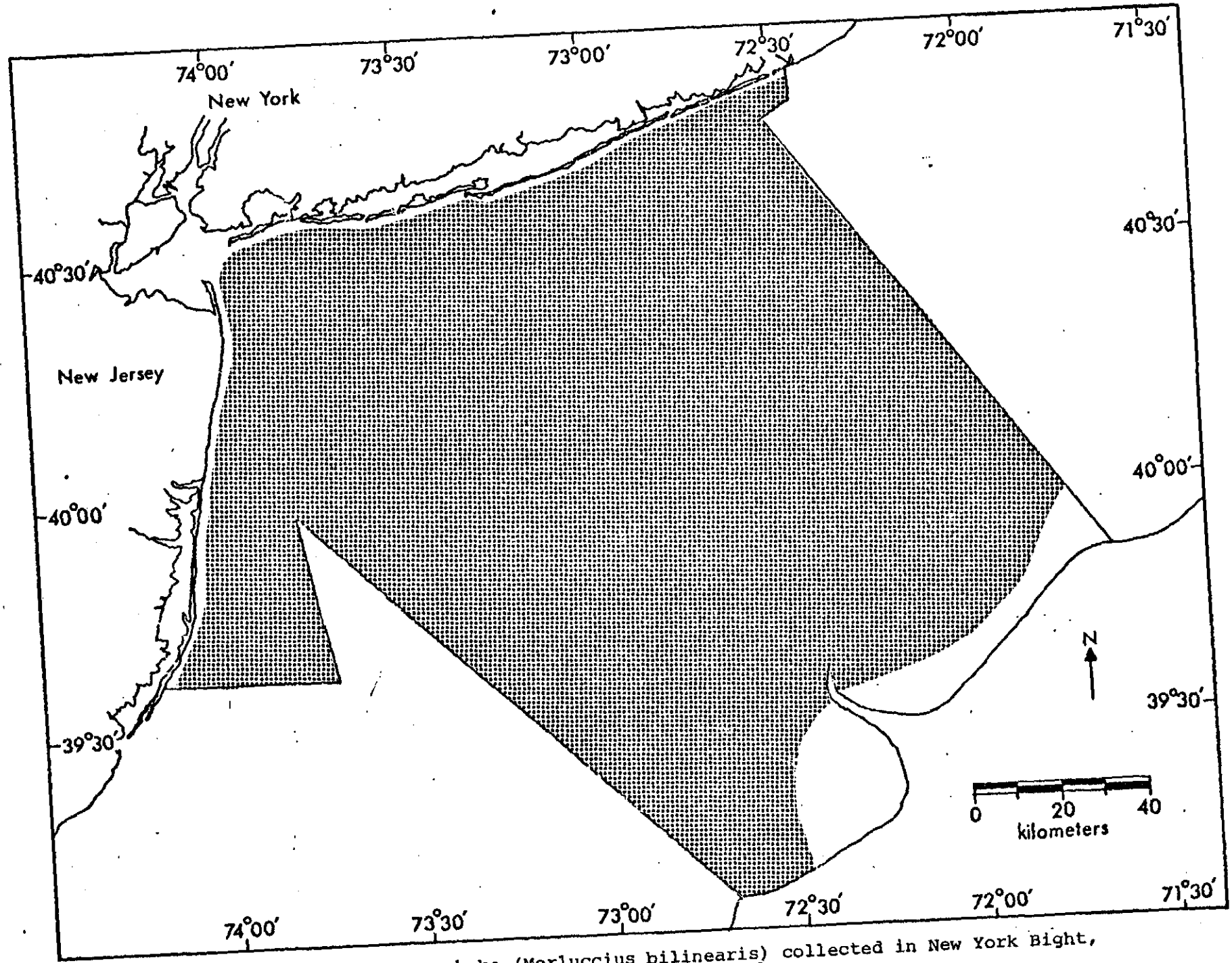

FIGURE 35.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, February 1975.

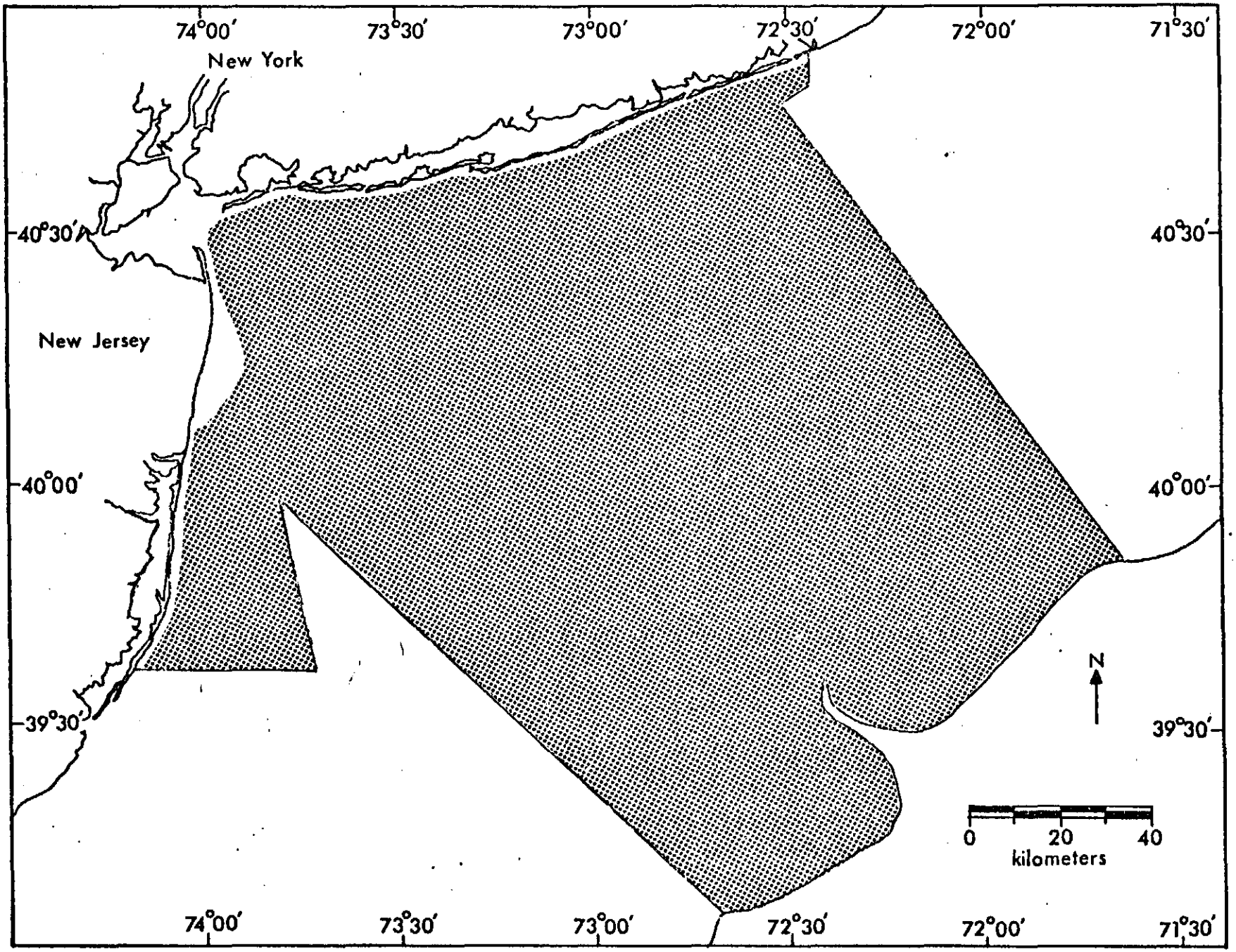

FIGURE 36.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, March 1975.

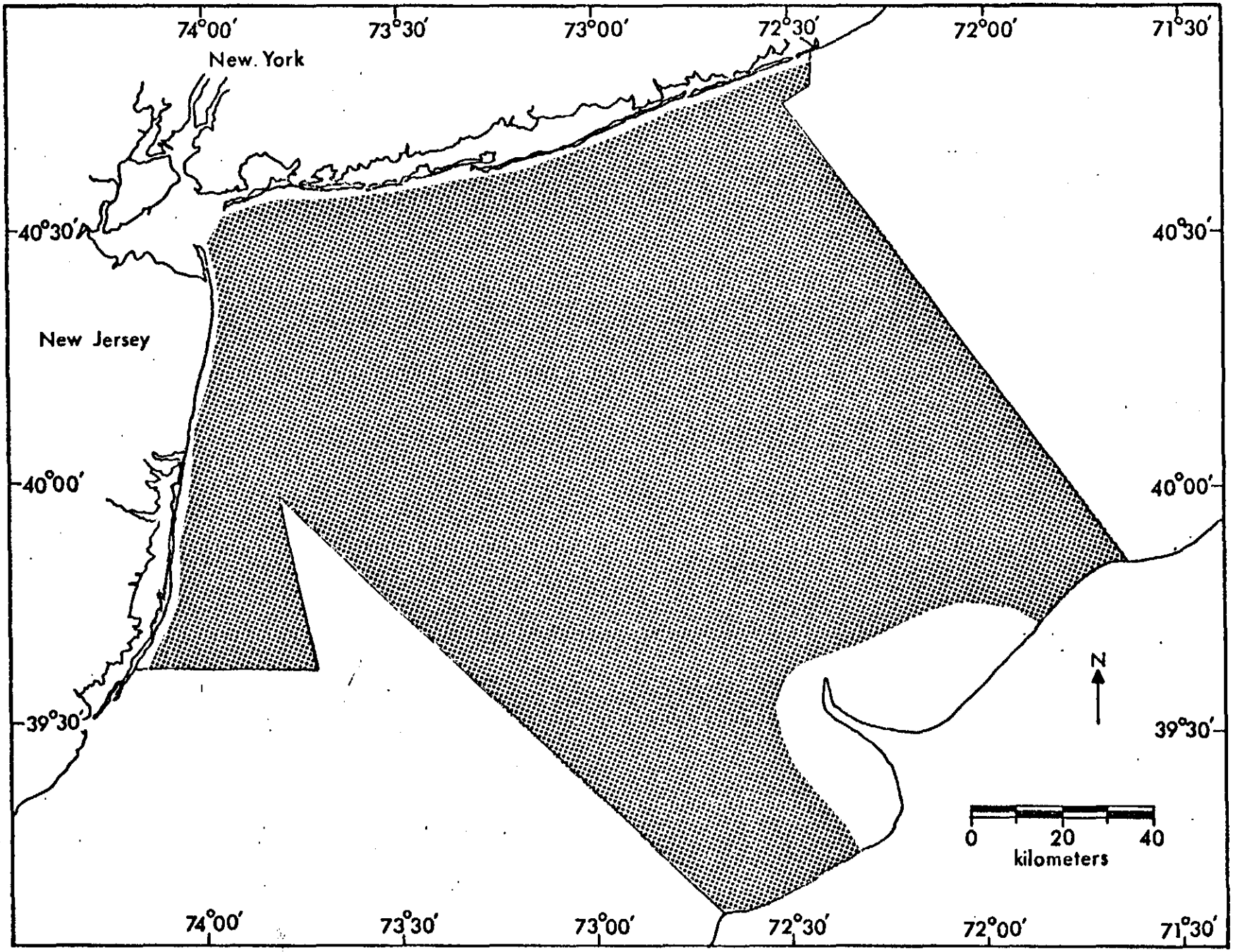

FIGURE 37.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, April 1975.

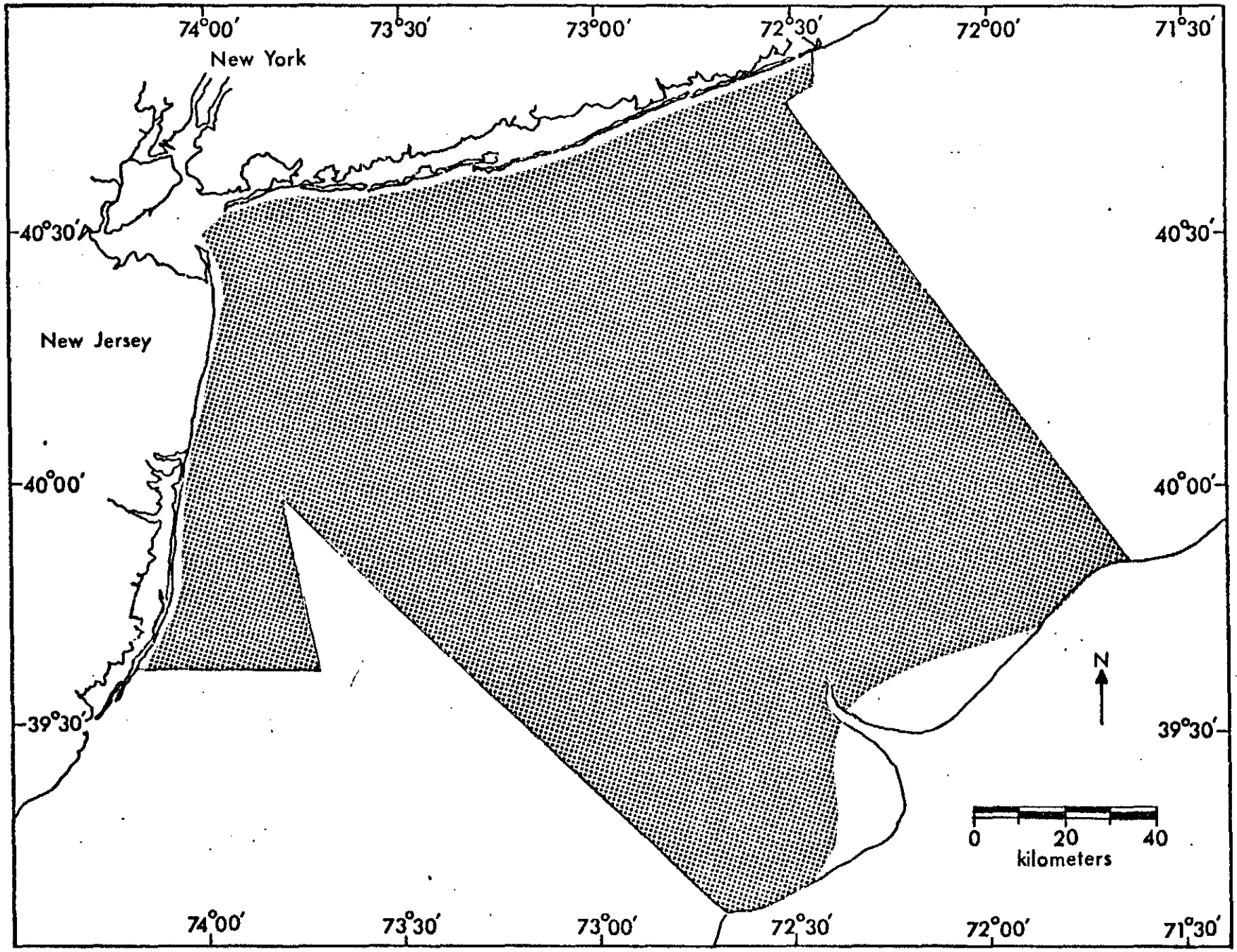

FIGURE 38.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, May 1975.

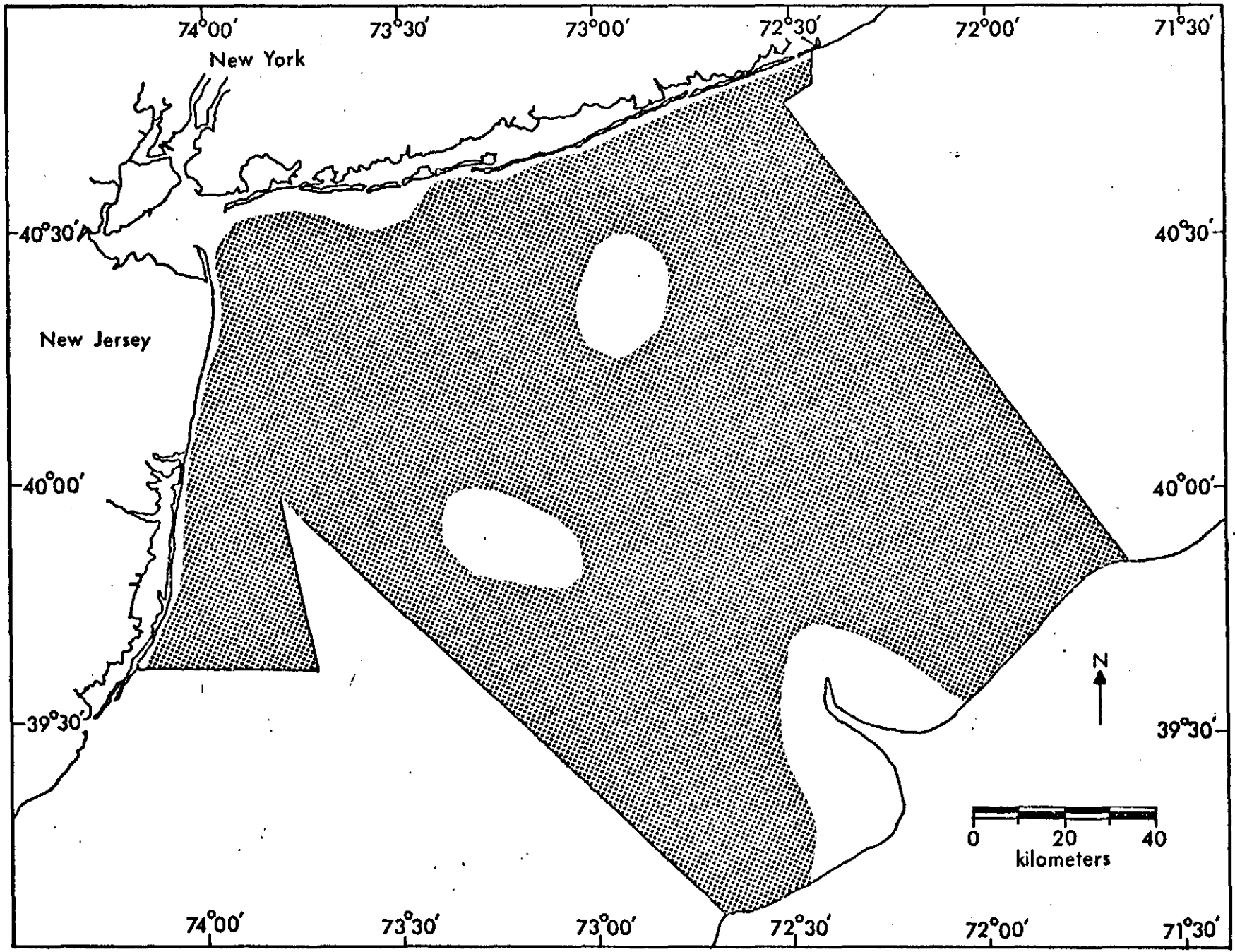

FIGURE 39.--Distribution of silver hake (Merluccius bilinearis) collected in New York Bight, June 1975.

RED HAKE

(Urophycis chuss)

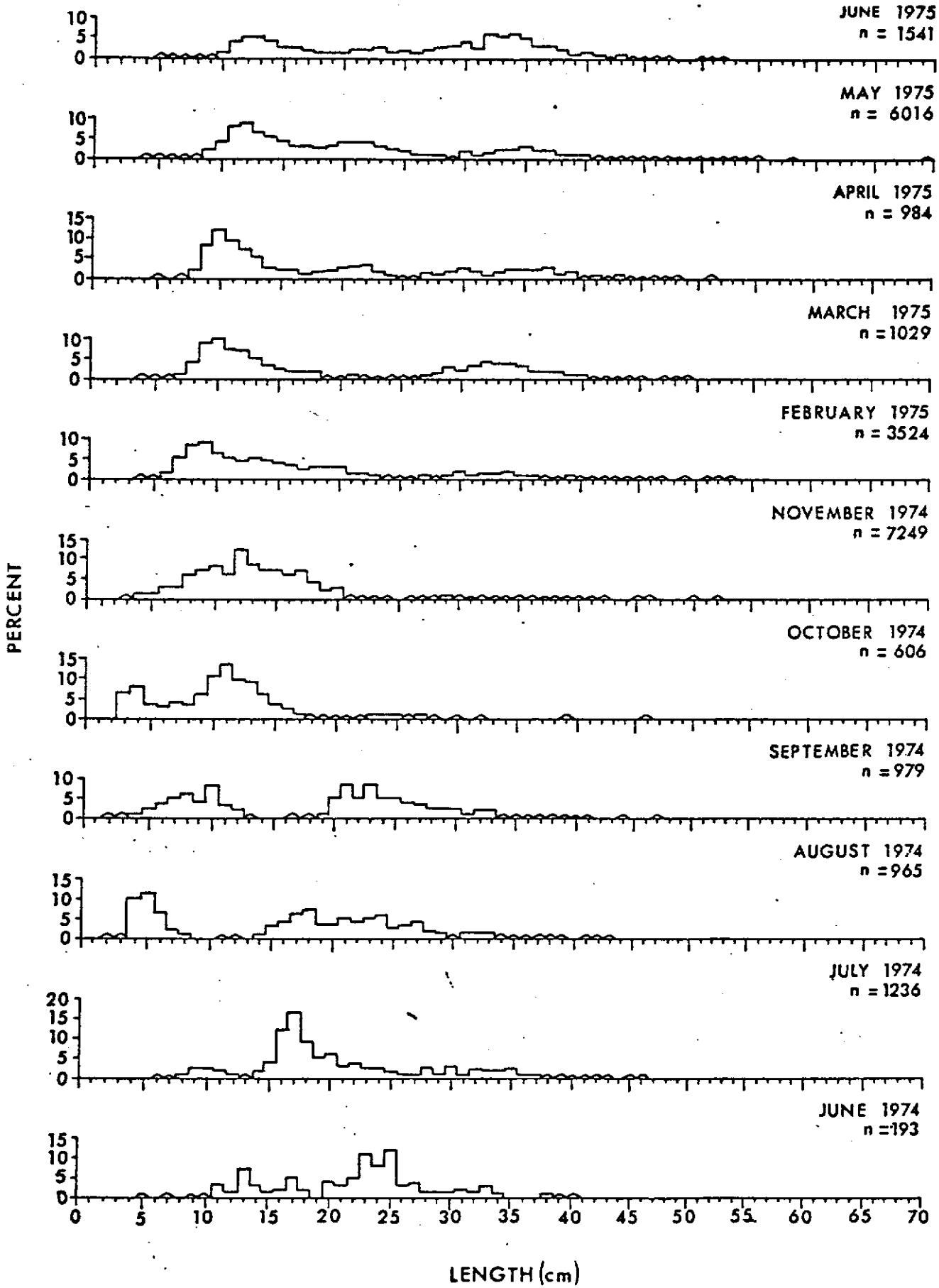

FIGURE 40.--Monthly length-frequency distributions of red hake (Urophycis chuss) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

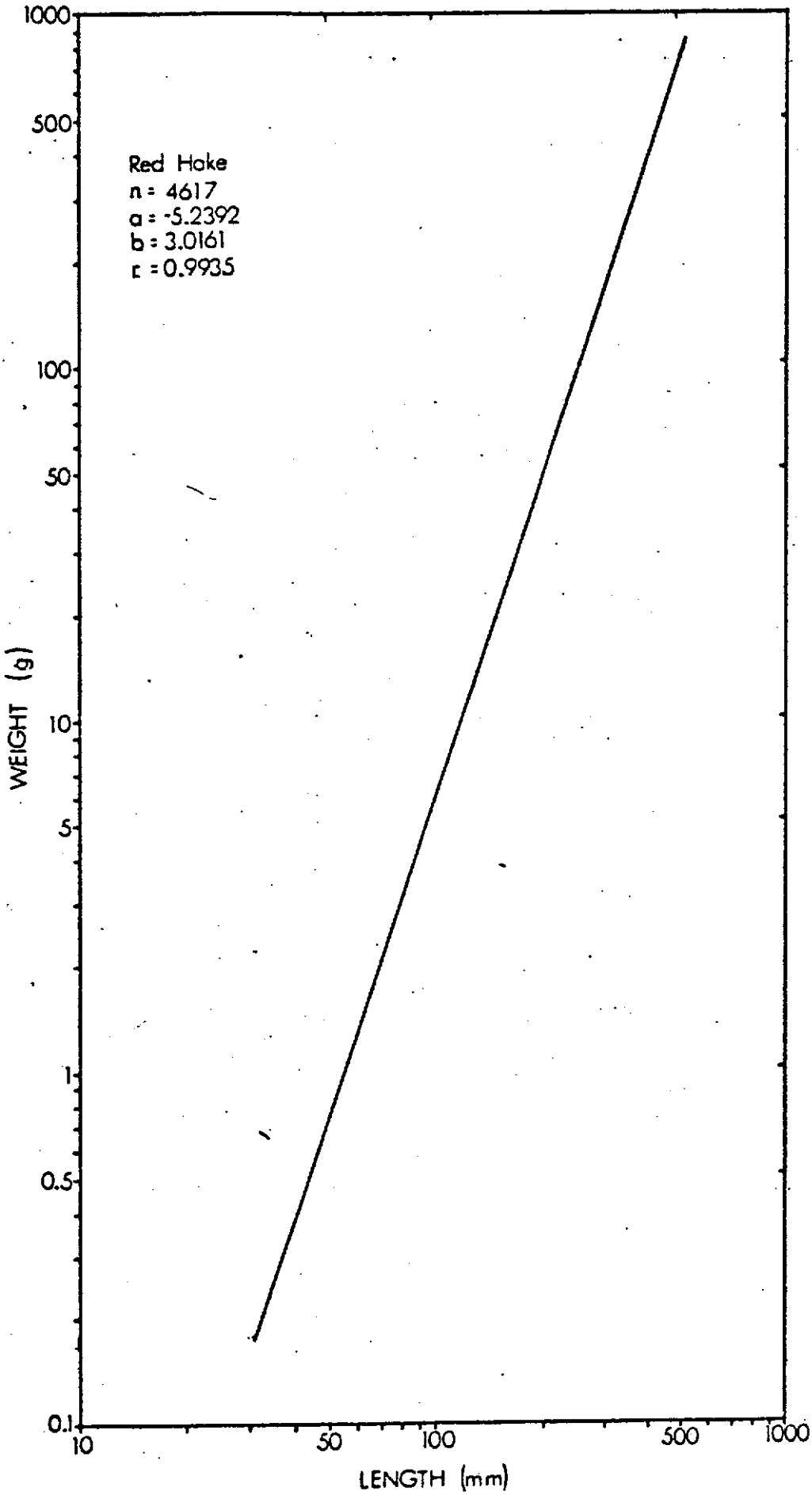

FIGURE 41.--Weight-length relationship of red hake (Urophycis chuss) collected in New York Bight, June 1974 to June 1975.

TABLE 3.--Monthly sex ratios of red hake (Urophycis chuss) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	114	20	17.5	26	22.8	68	59.7
July	150	40	26.7	42	28.0	68	45.3
August	266	47	17.7	56	21.0	163	61.3
September	247	47	19.0	25	10.1	175	70.9
October	268	10	3.7	16	6.0	242	90.3
November	377	28	7.4	60	15.9	289	76.7
January 1/	8	-	-	-	-	8	100.0
February	695	66	9.5	144	20.7	485	69.8
March	586	85	14.5	142	24.2	359	61.3
April	473	55	11.6	125	26.4	293	62.0
May	1068	202	18.9	355	33.2	511	47.8
June	453	93	20.5	90	19.9	270	59.6
TOTAL	4697	693	14.8	1081	23.0	2931	62.4

1/ Bay stations only.

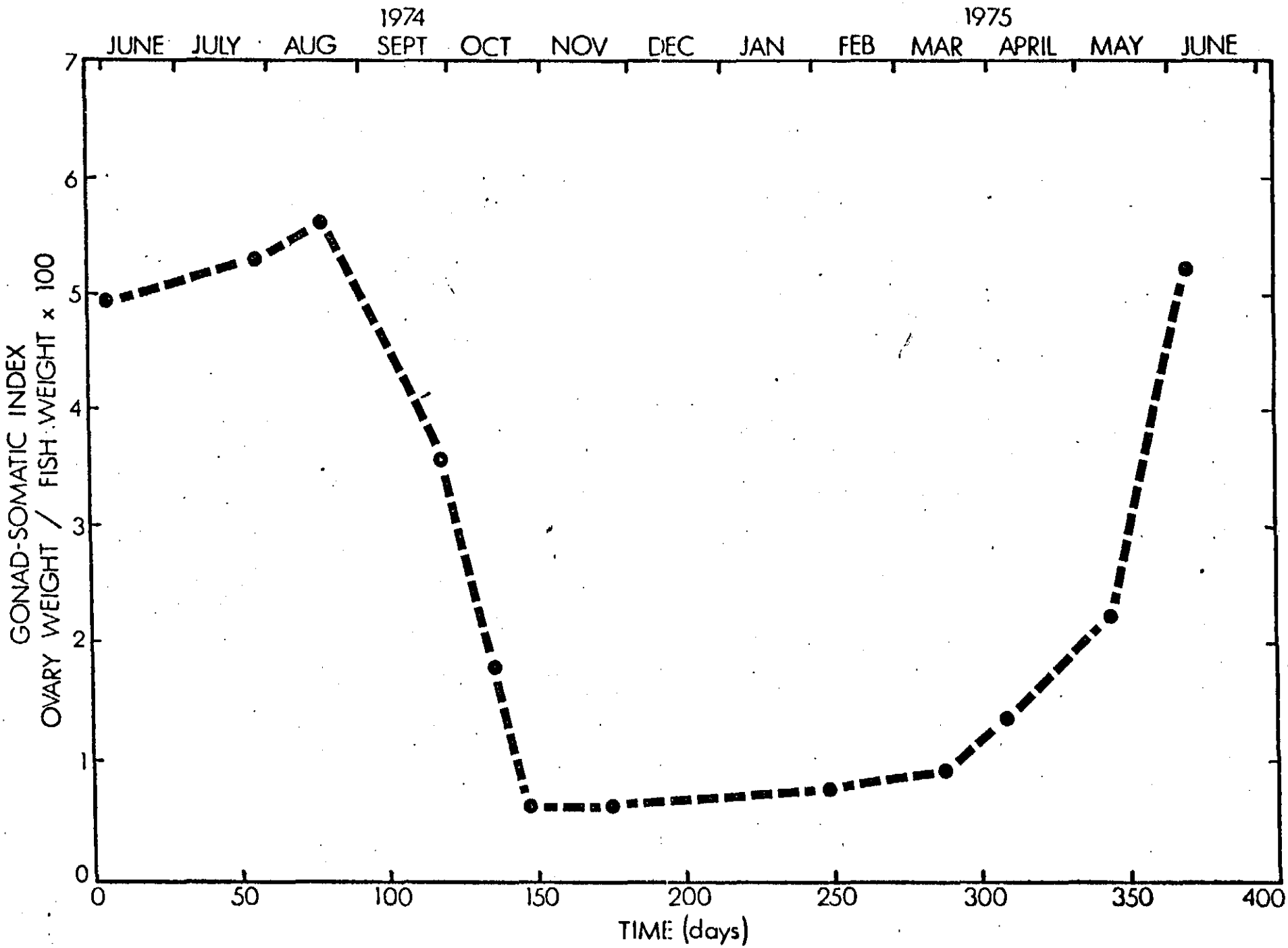

FIGURE 42.--Monthly gonad-somatic indices of red hake (Urophycis chuss) collected in New York Bight, June 1974 to June 1975.

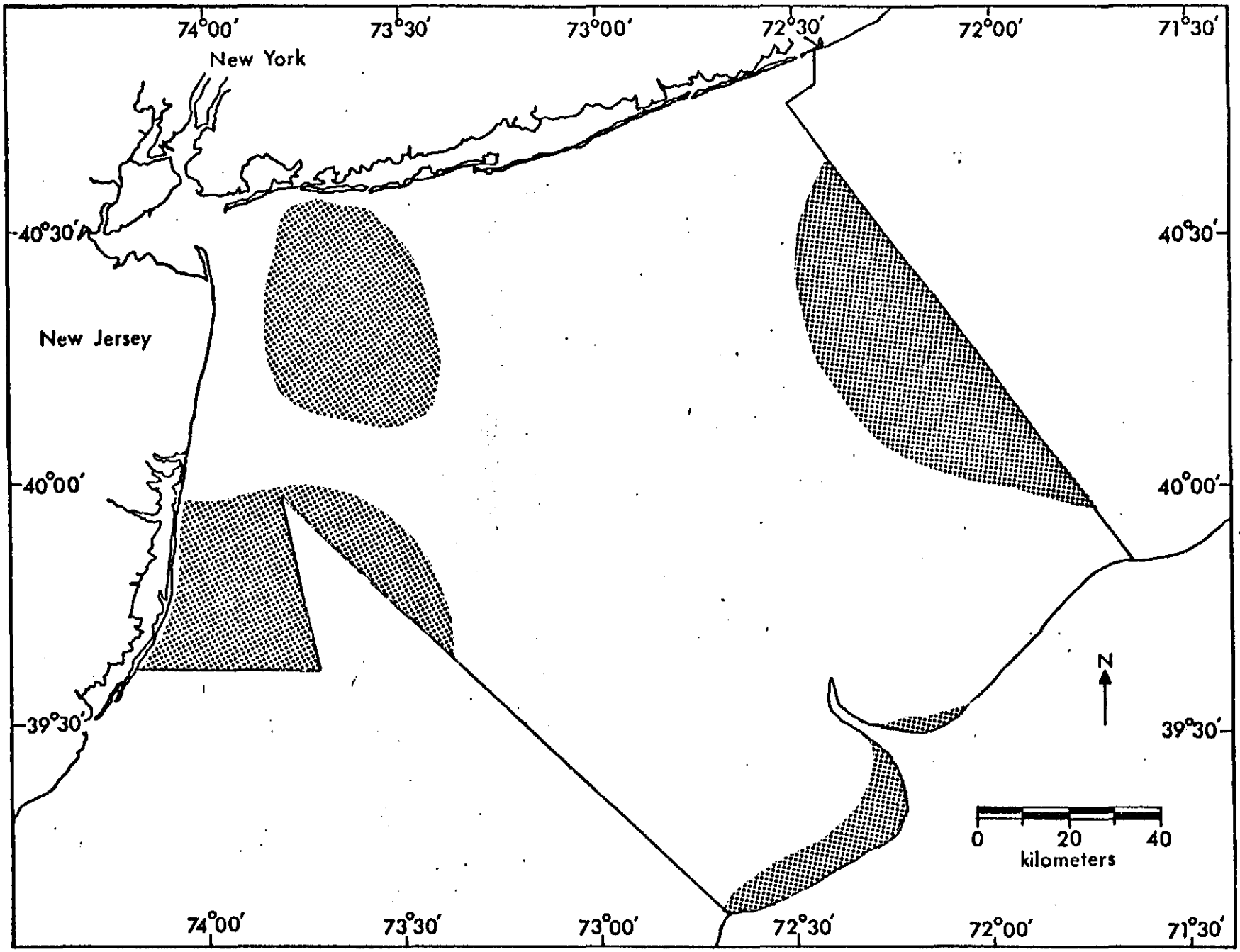

FIGURE 43.--Distribution of red hake (Urophycis chuss) collected in New York Bight, June 1974.

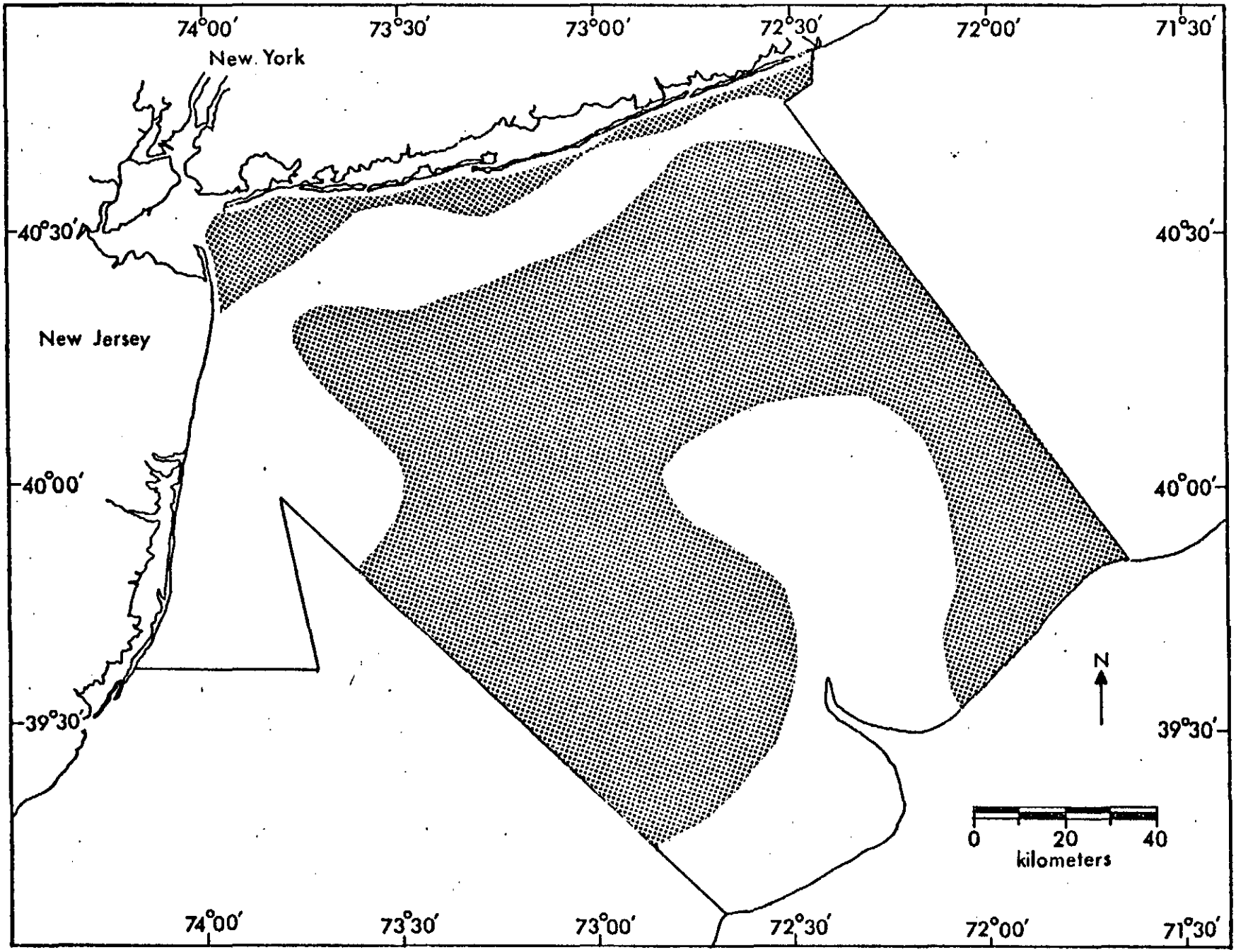

FIGURE 44.--Distribution of red hake (Urophycis chuss) collected in New York Bight, July 1974.

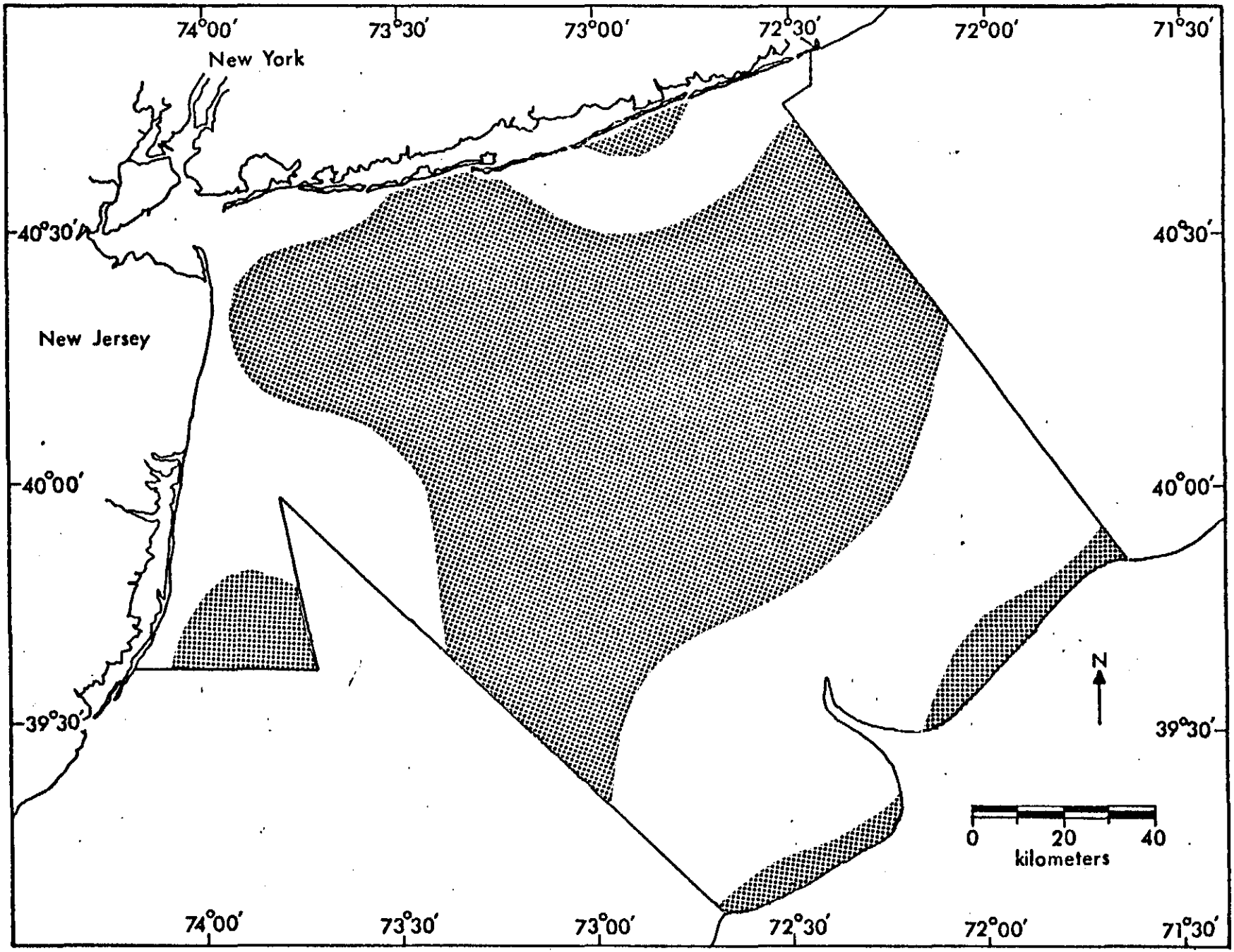

FIGURE 45.--Distribution of red hake (Urophycis chuss) collected in New York Bight, August 1974.

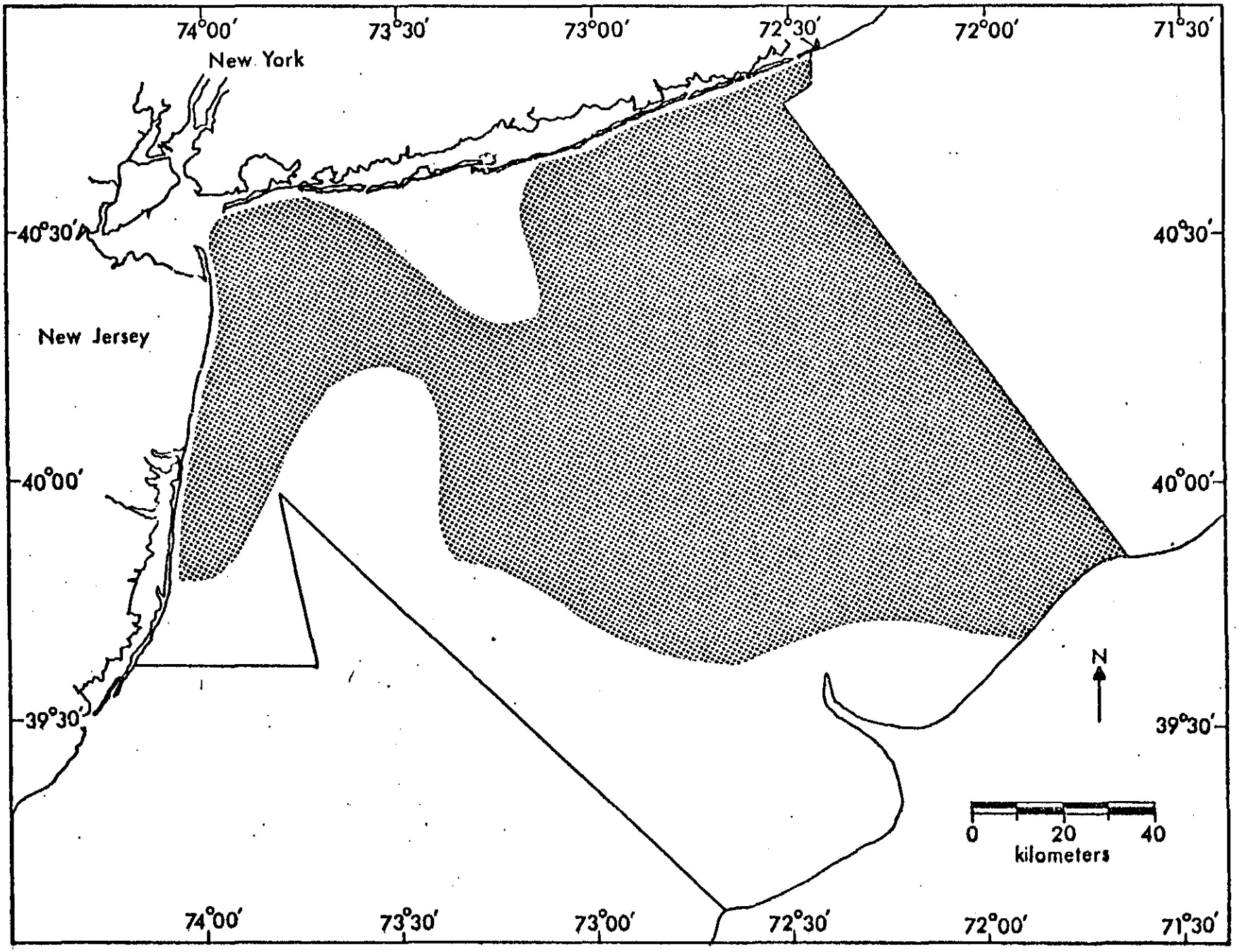

FIGURE 46.--Distribution of red hake (Urophycis chuss) collected in New York Bight, September 1974.

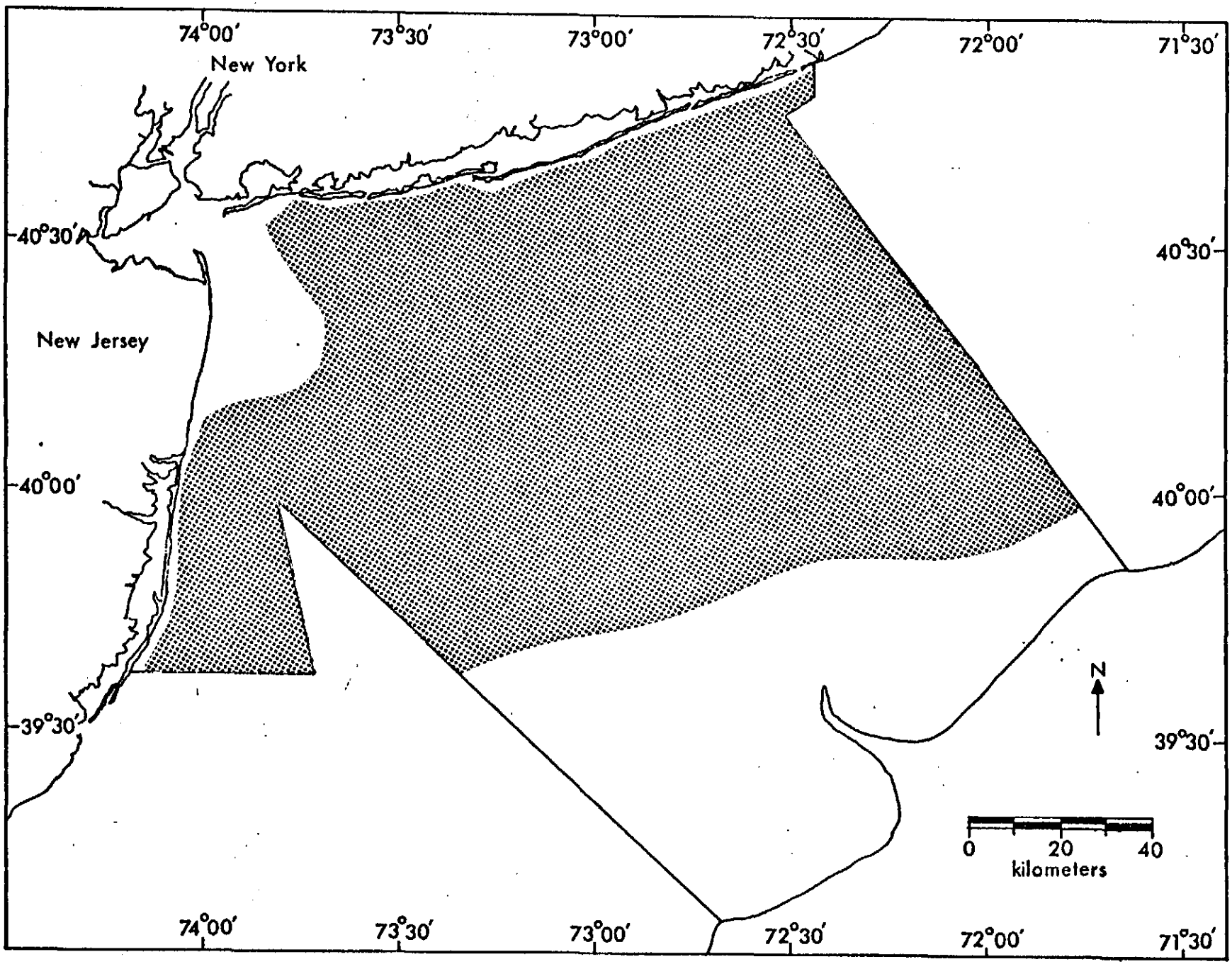

FIGURE 47.--Distribution of red hake (Urophycis chuss) collected in New York Bight, October 1974.

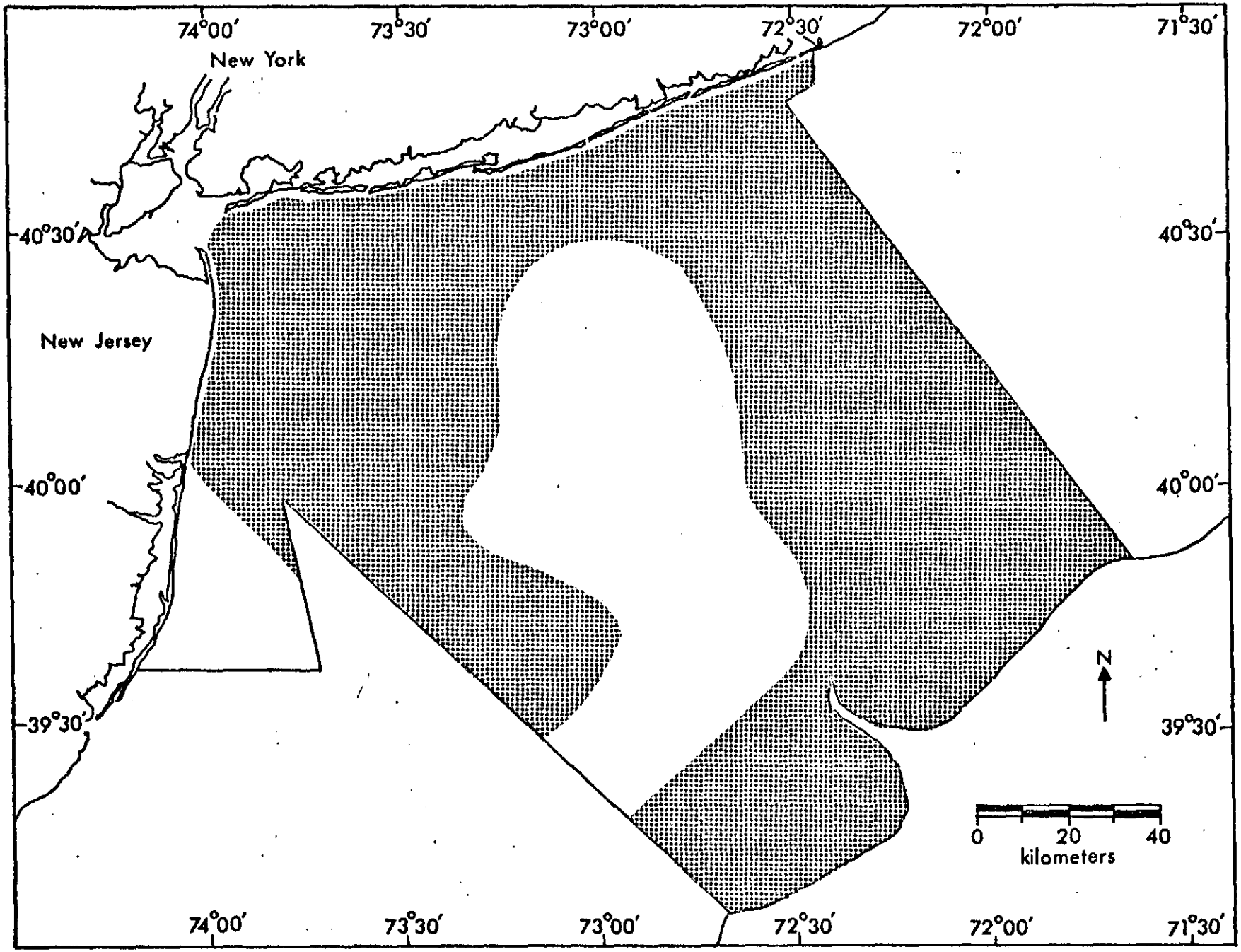

FIGURE 48.--Distribution of red hake (Urophycis chuss) collected in New York Bight, November 1974.

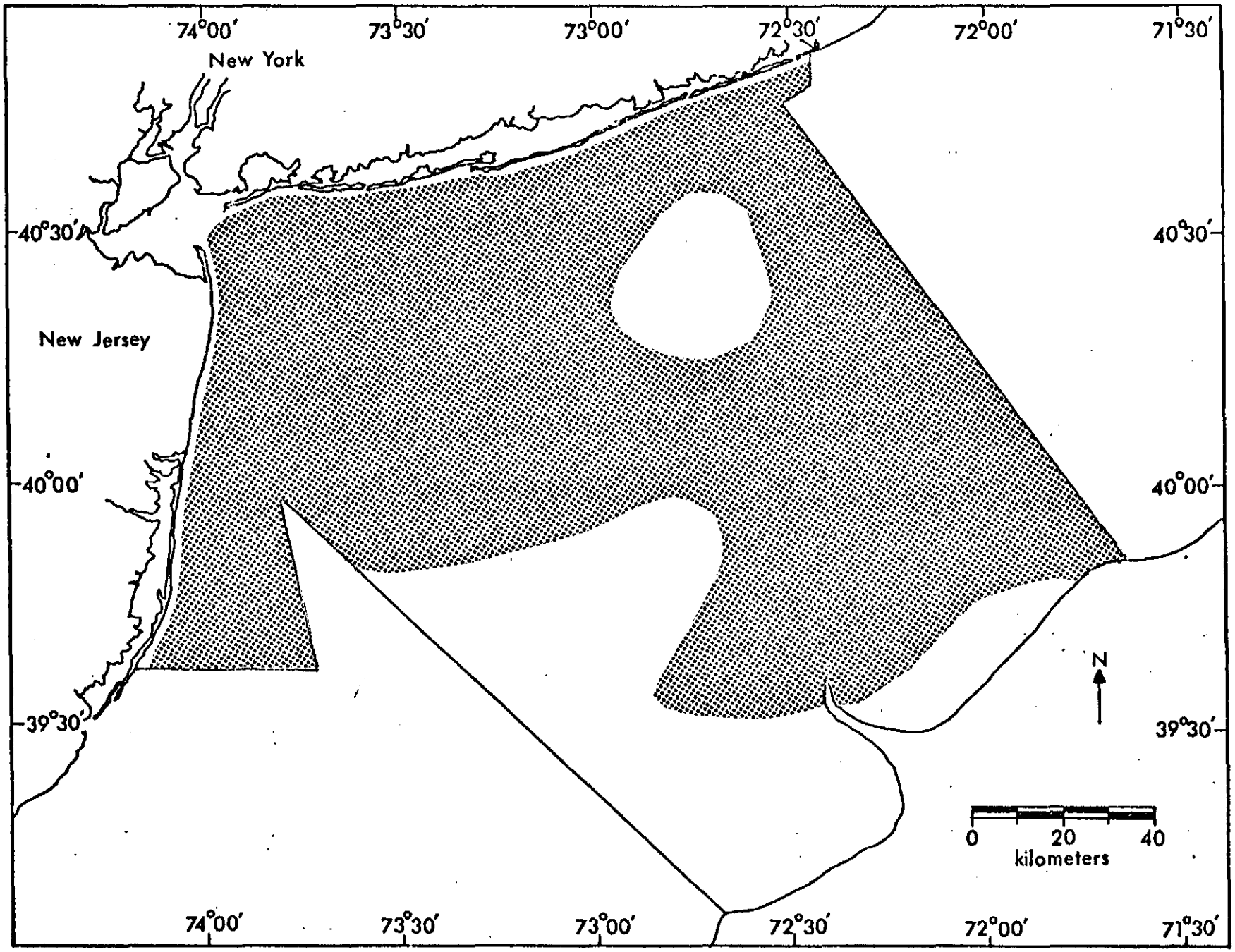

FIGURE 49.--Distribution of red hake (Urophycis chuss) collected in New York Bight, February 1975.

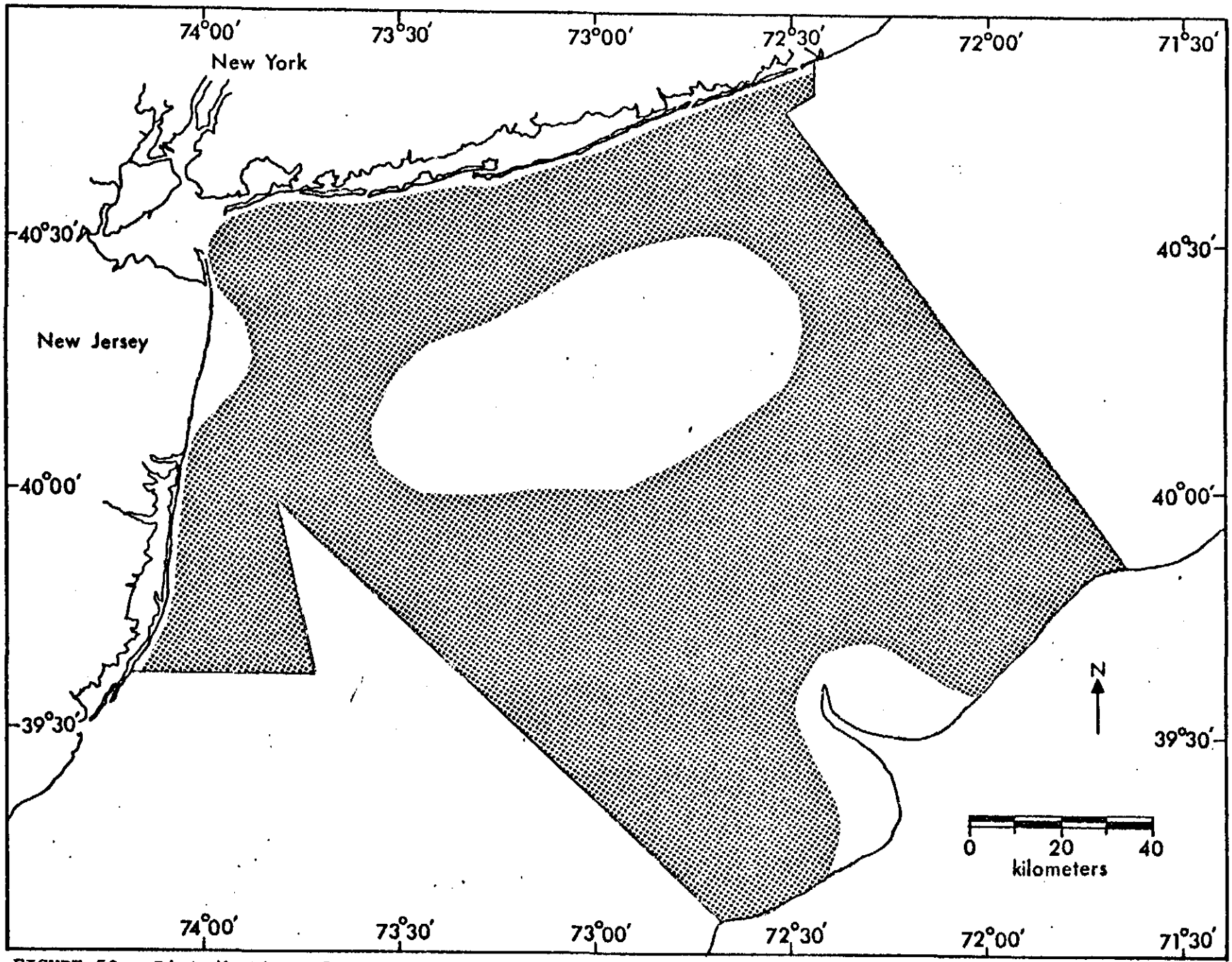

FIGURE 50.--Distribution of red hake (Urophycis chuss) collected in New York Bight, March 1975.

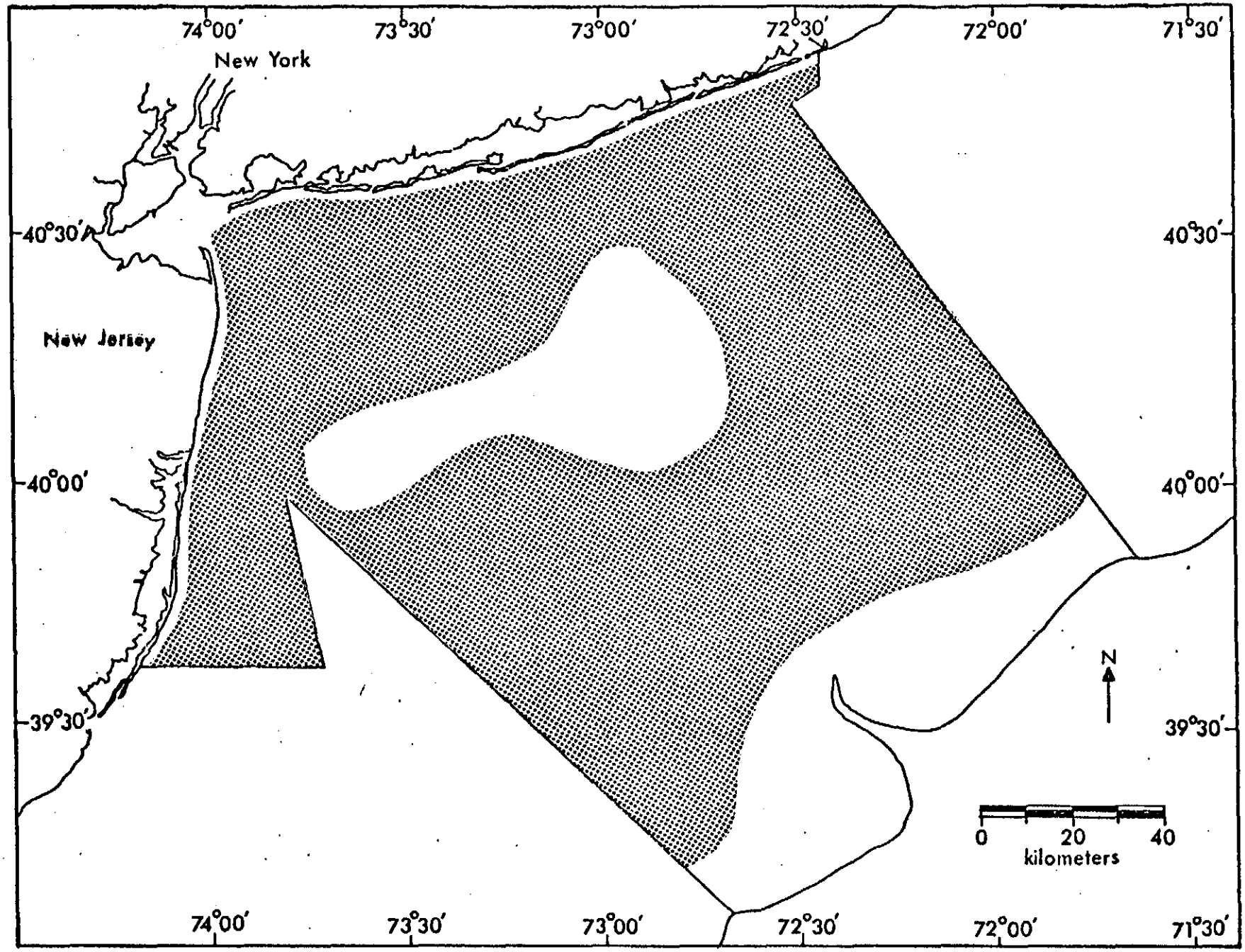

FIGURE 51.--Distribution of red hake (Urophycis chuss) collected in New York Bight, April 1975.

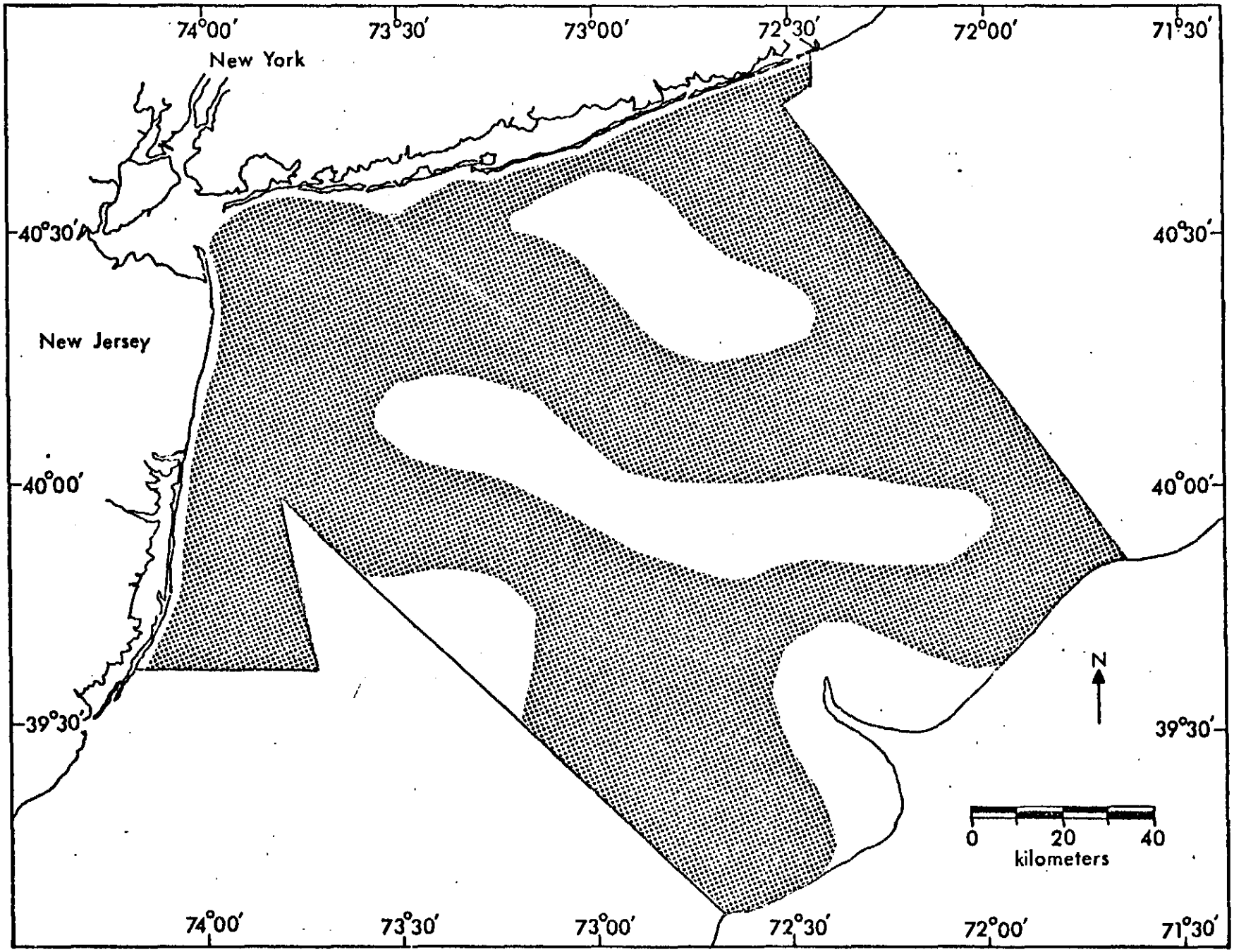

FIGURE 52.--Distribution of red hake (Urophycis chuss) collected in New York Bight, May 1975.

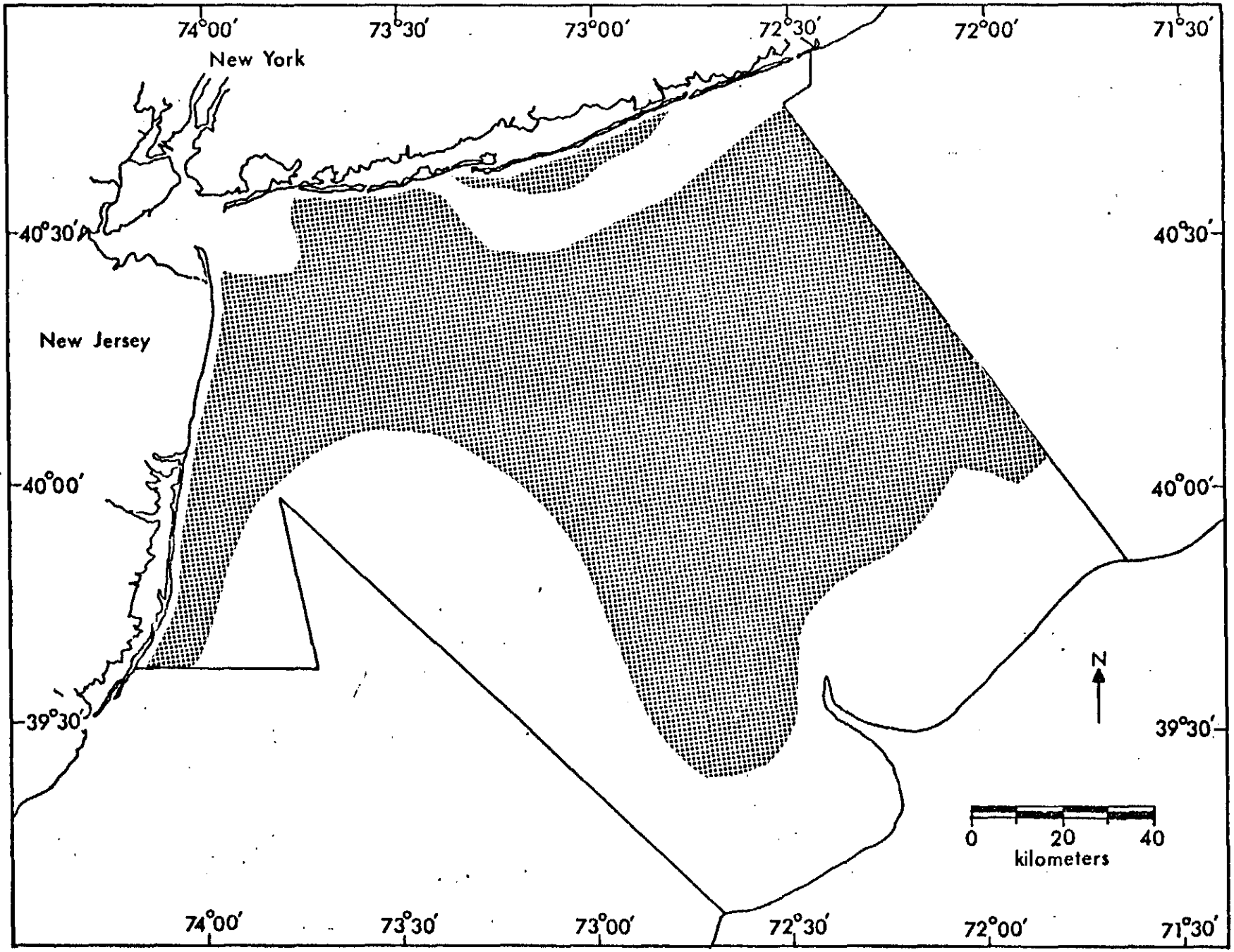

FIGURE 53.--Distribution of red hake (Urophycis chuss) collected in New York Bight, June 1975.

SPOTTED HAKE

(Urophycis regius)

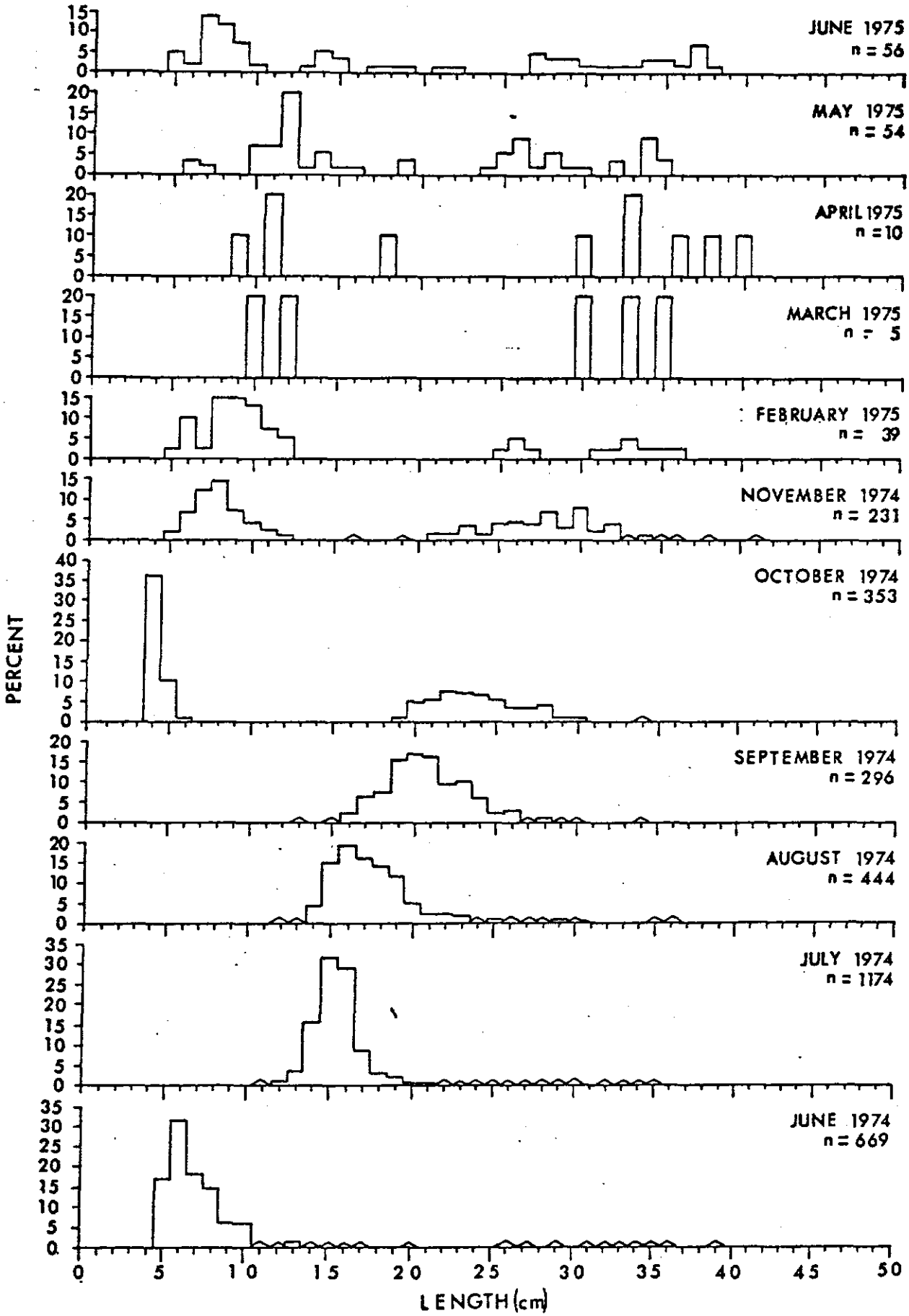

FIGURE 54.--Monthly length-frequency distributions of spotted hake (Urophycis regius) collected in New York Bight, June 1974 to June 1975. (Δ indicates $< 0.5\%$).

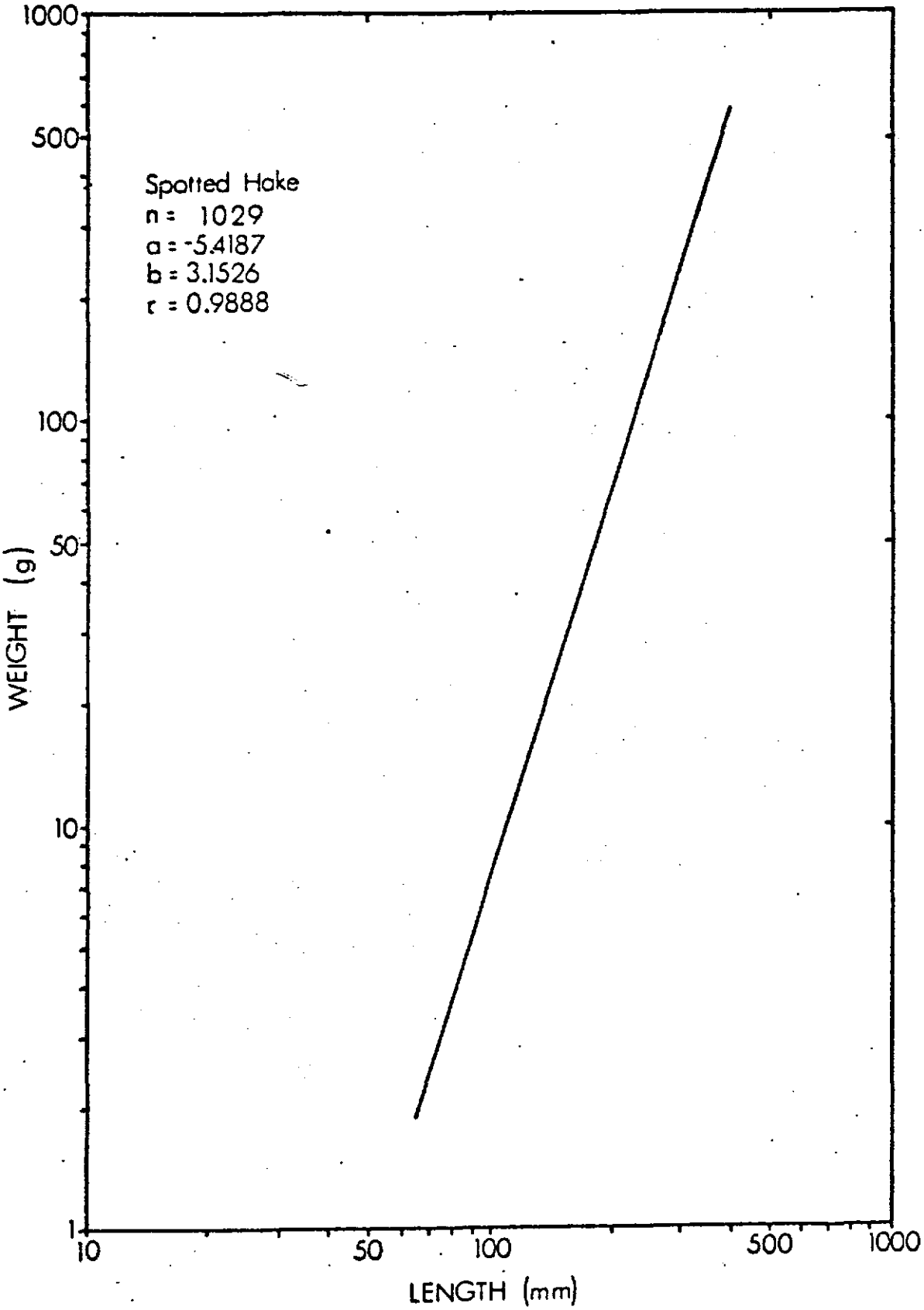

FIGURE 55.--Weight-length relationship of spotted hake (Urophycis regius) collected in New York Bight, June 1974 to June 1975.

TABLE 4.--Monthly sex ratios of spotted hake (Urophycis regius) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	34	3	8.8	12	35.3	19	55.9
July	186	18	9.7	21	11.3	147	79.0
August	233	38	16.3	46	19.7	149	64.0
September	137	57	41.6	41	29.9	39	28.5
October	148	49	33.1	82	55.4	17	11.5
November	189	14	7.4	80	42.3	95	50.3
January 1/	2	-	-	-	-	2	100.0
February	30	6	20.0	5	16.7	19	63.3
March	4	-	-	3	75.0	1	25.0
April	11	-	-	7	63.6	4	36.4
May	52	11	21.1	12	23.1	29	55.8
June	33	10	30.3	14	42.4	9	27.3
TOTAL	1058	206	19.5	323	30.5	530	50.0

1/ Bay stations only.

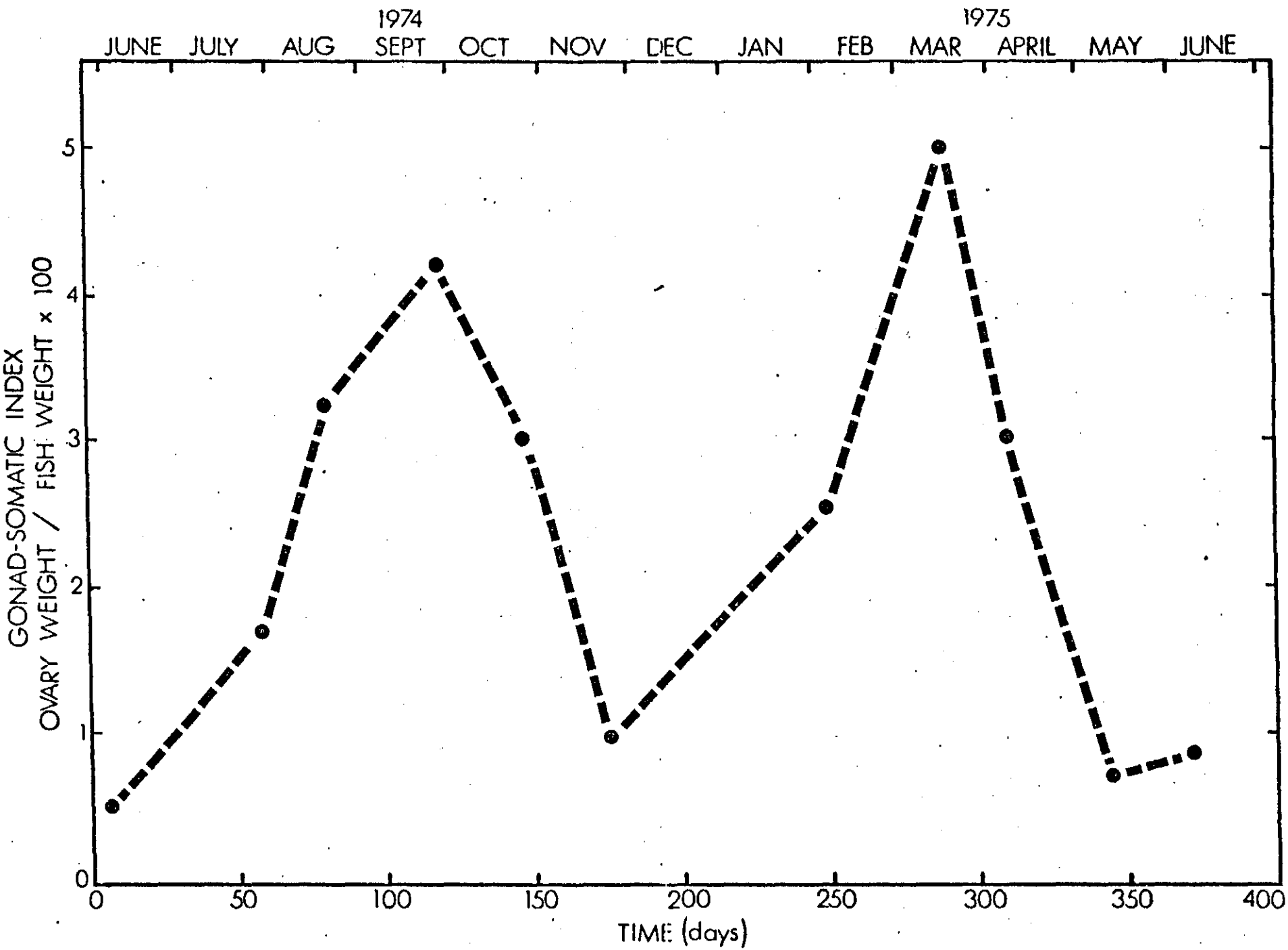

FIGURE 56.--Monthly gonad-somatic indices of spotted hake (Urophycis regius) collected in New York Bight, June 1974 to June 1975.

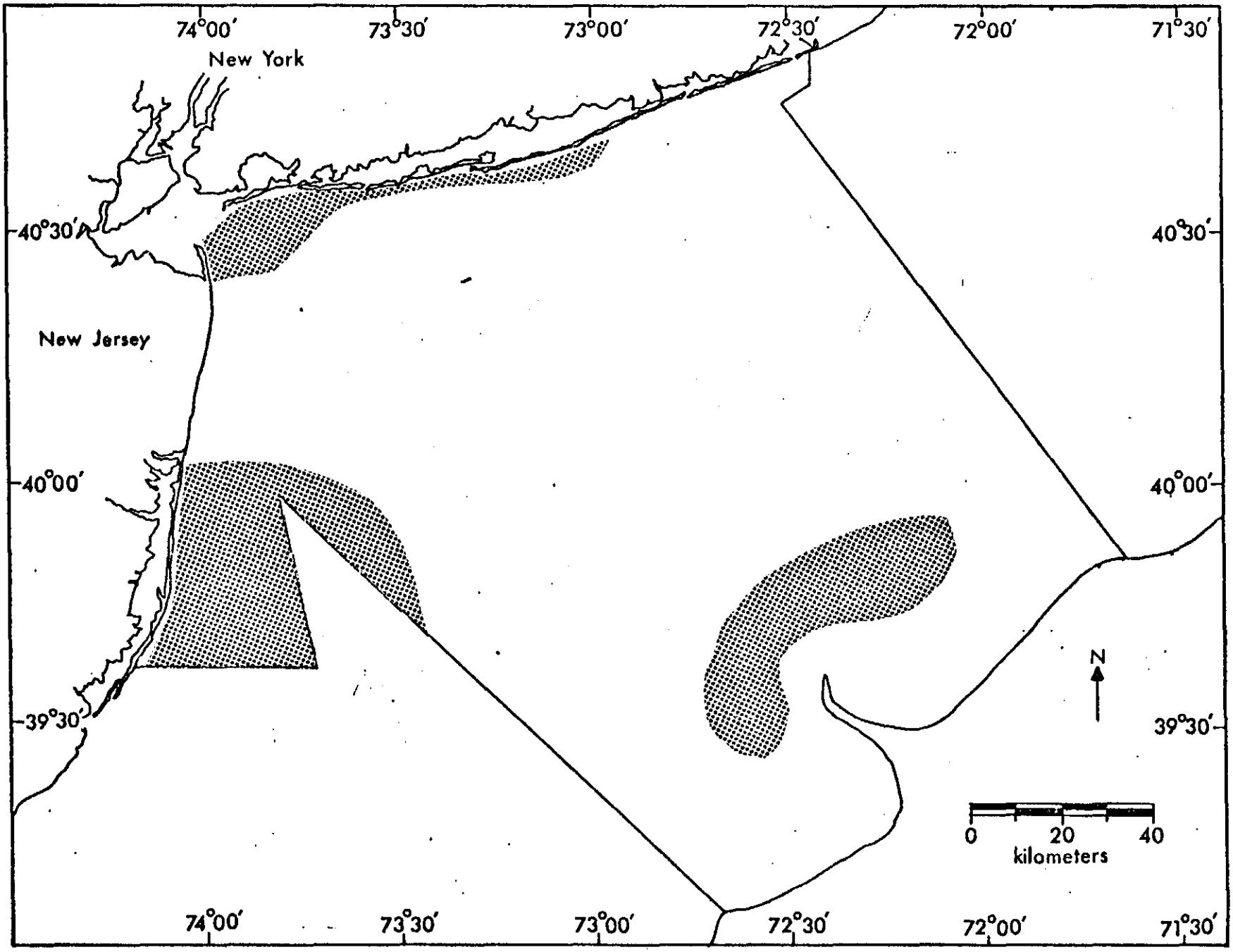

FIGURE 57.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, June 1974.

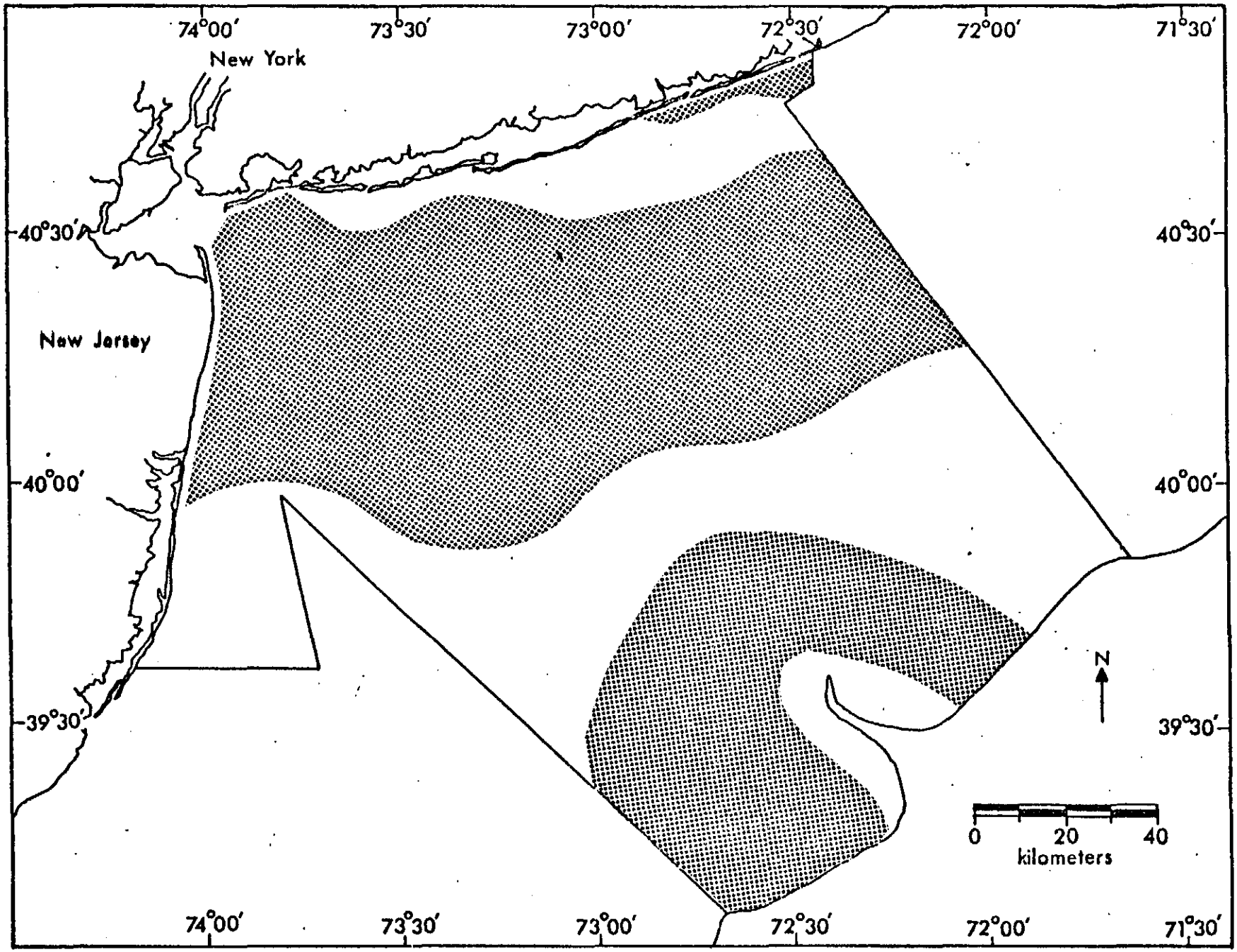

FIGURE 58.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, July 1974.

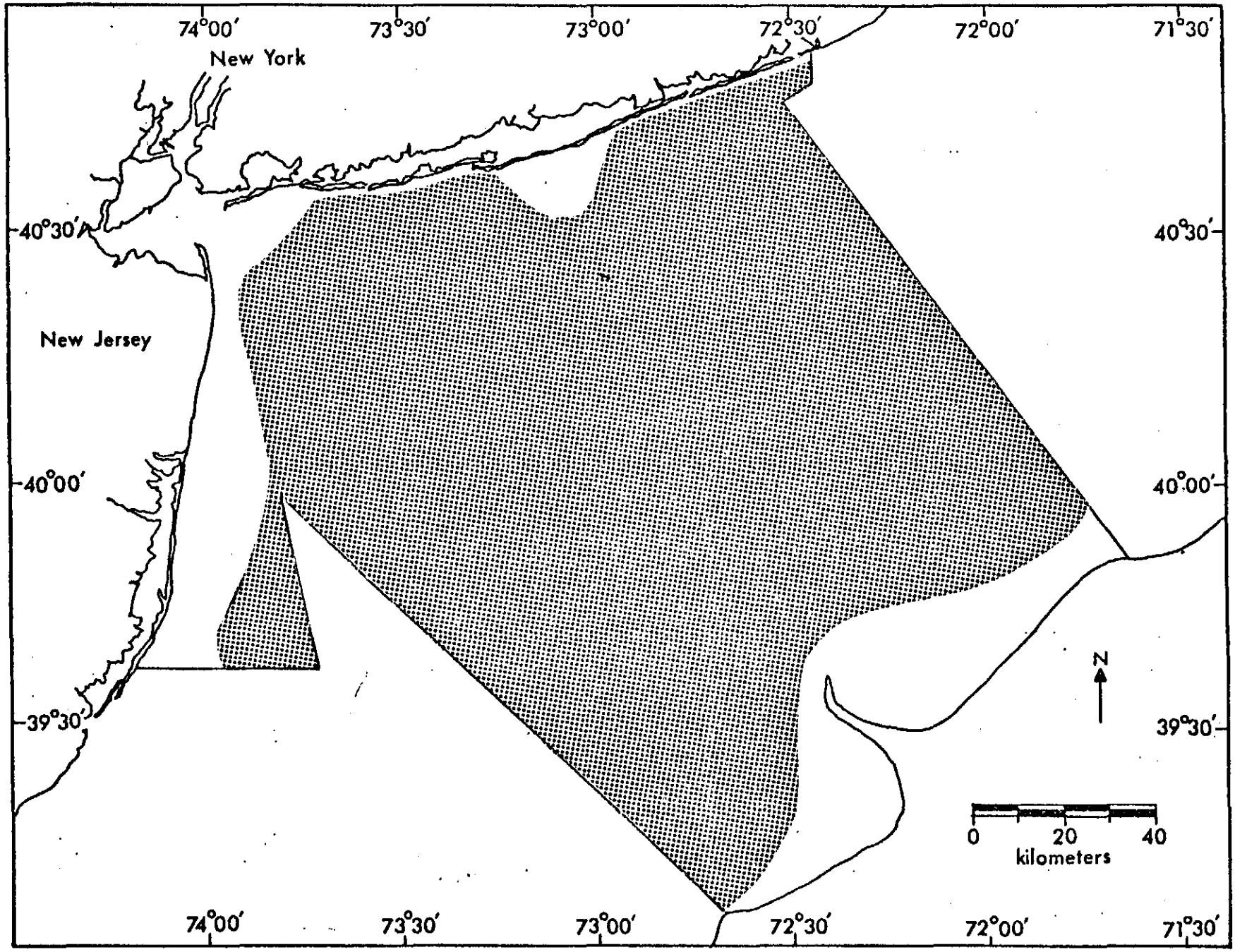

FIGURE 59.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, August 1974.

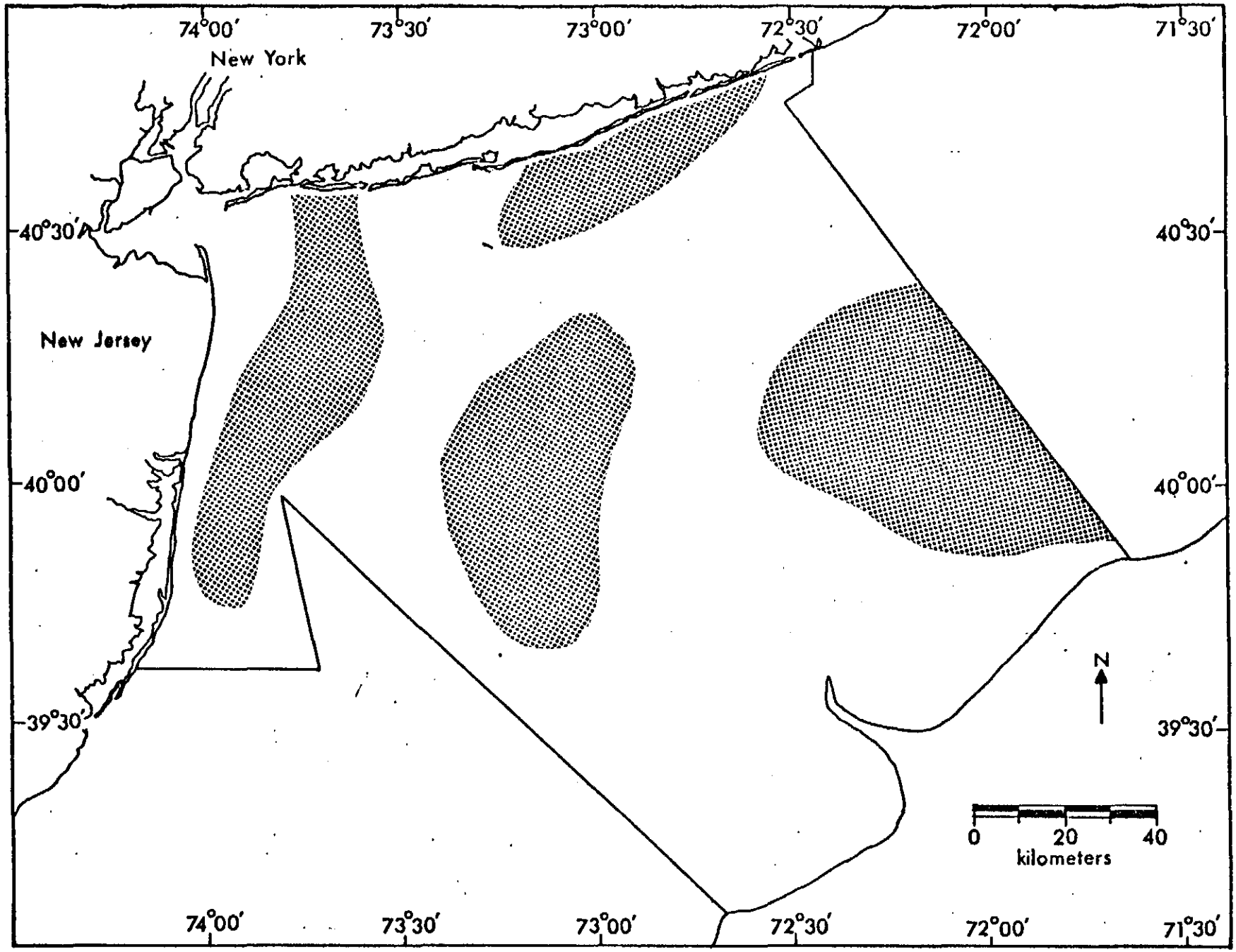

FIGURE 60.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, September 1974.

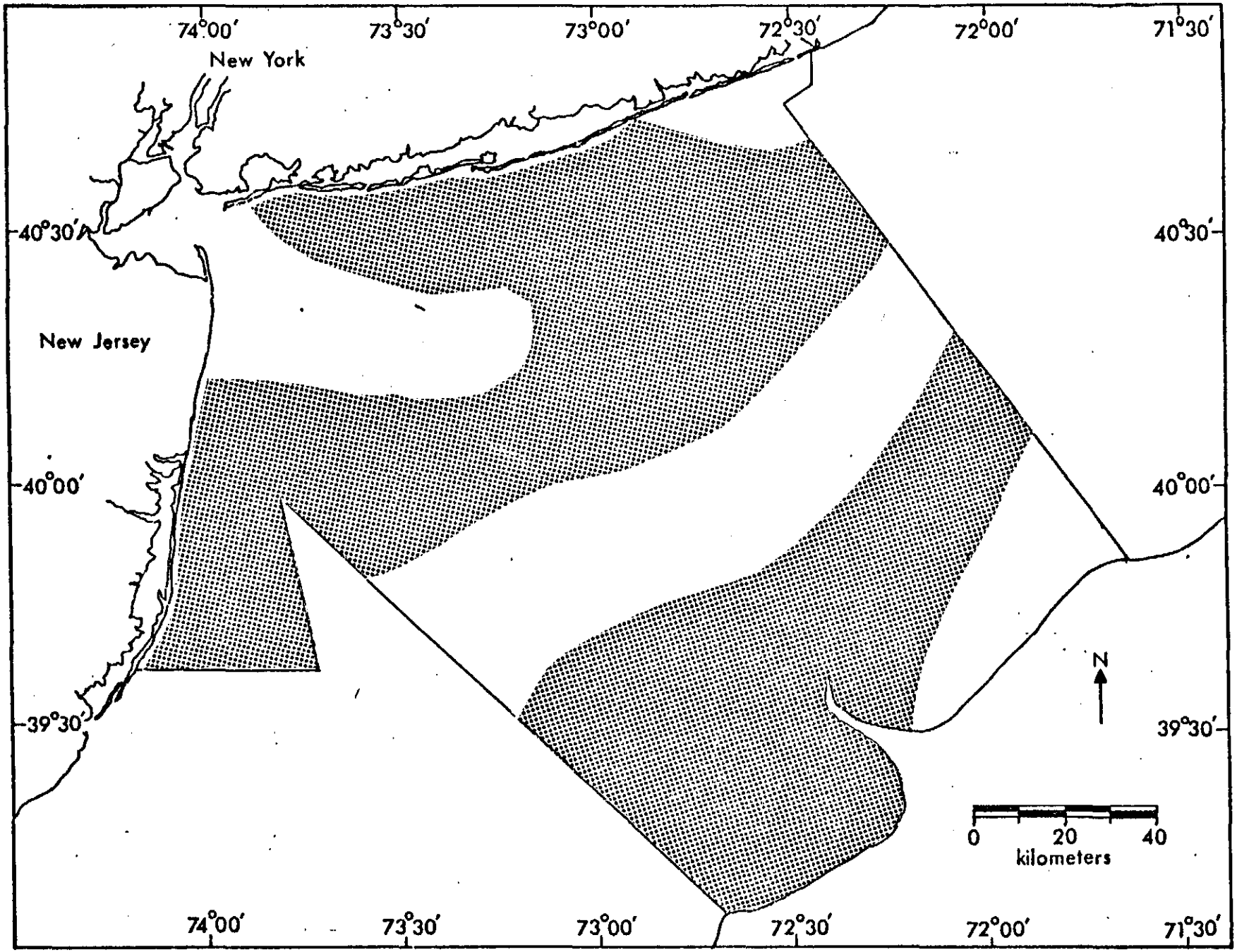

FIGURE 61.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, October 1974.

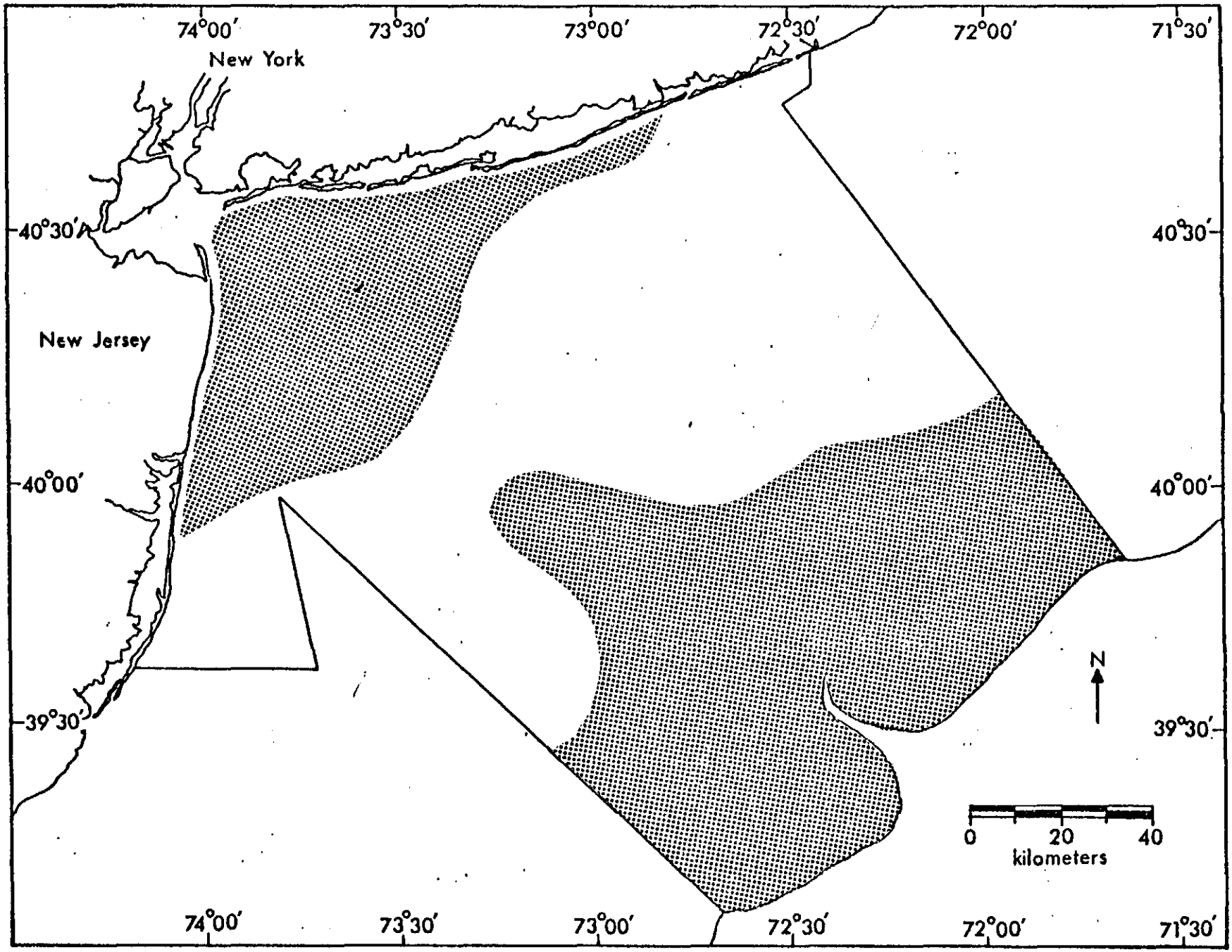

FIGURE 62.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, November 1974.

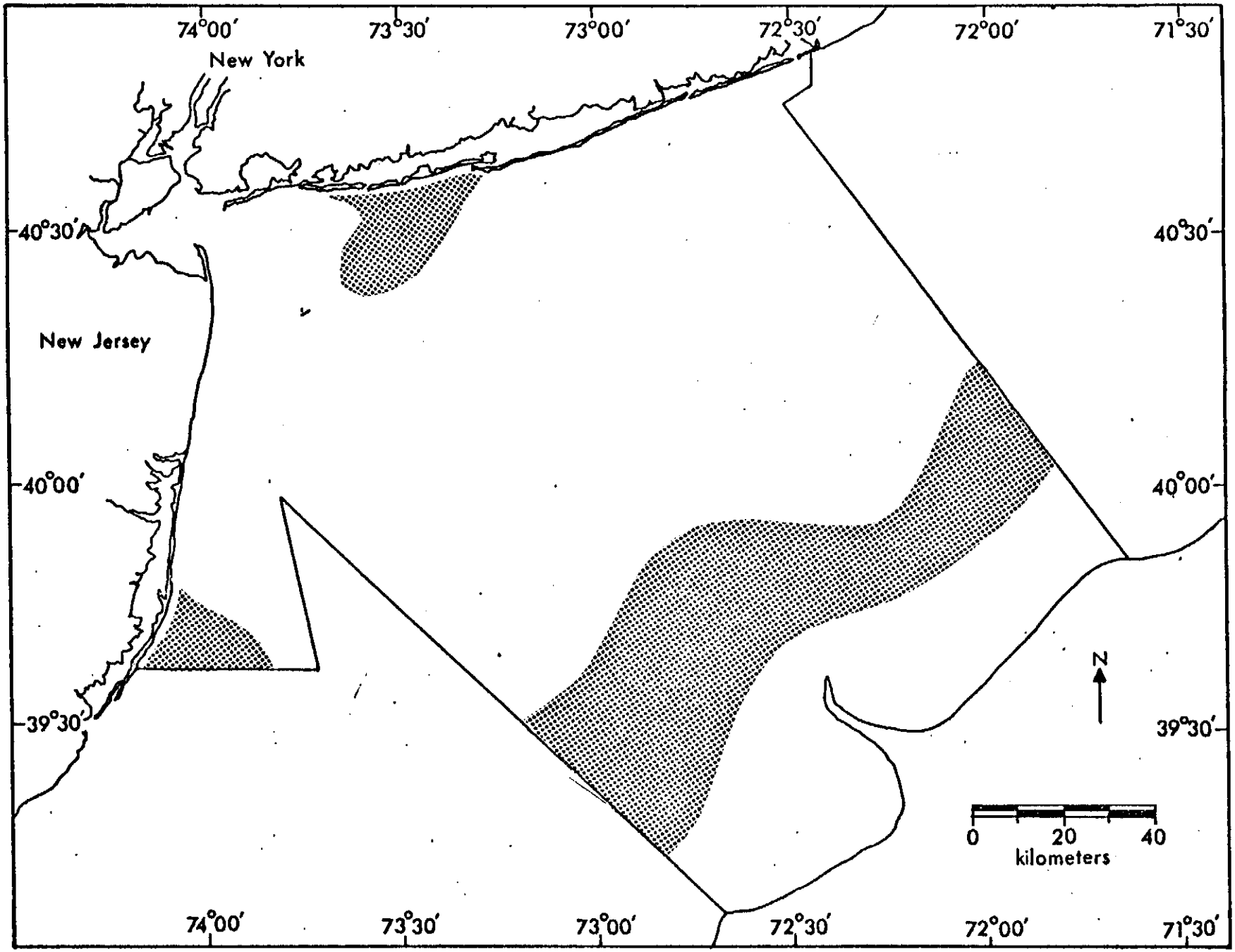

FIGURE 63.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, February 1975.

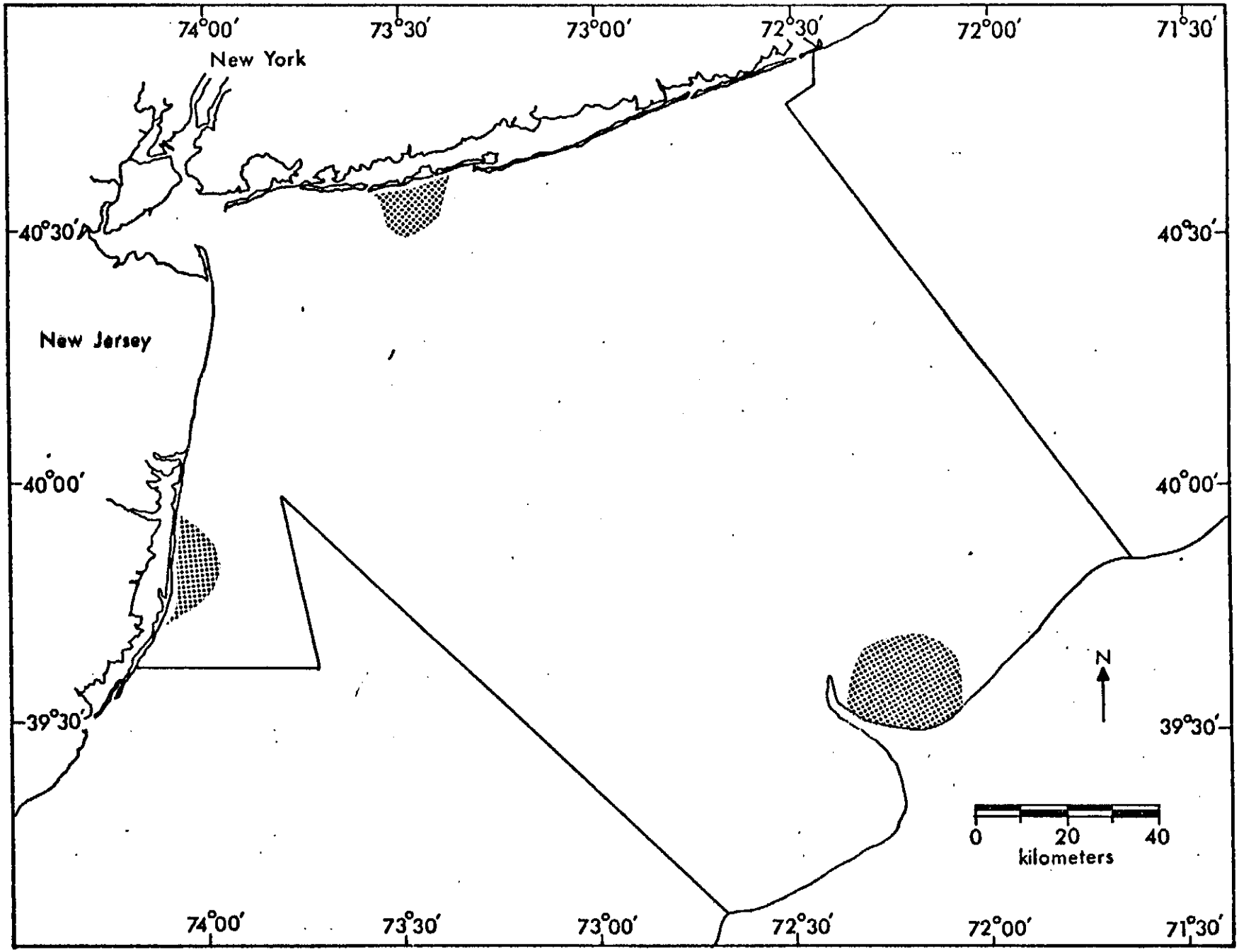

FIGURE 64.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, March 1975.

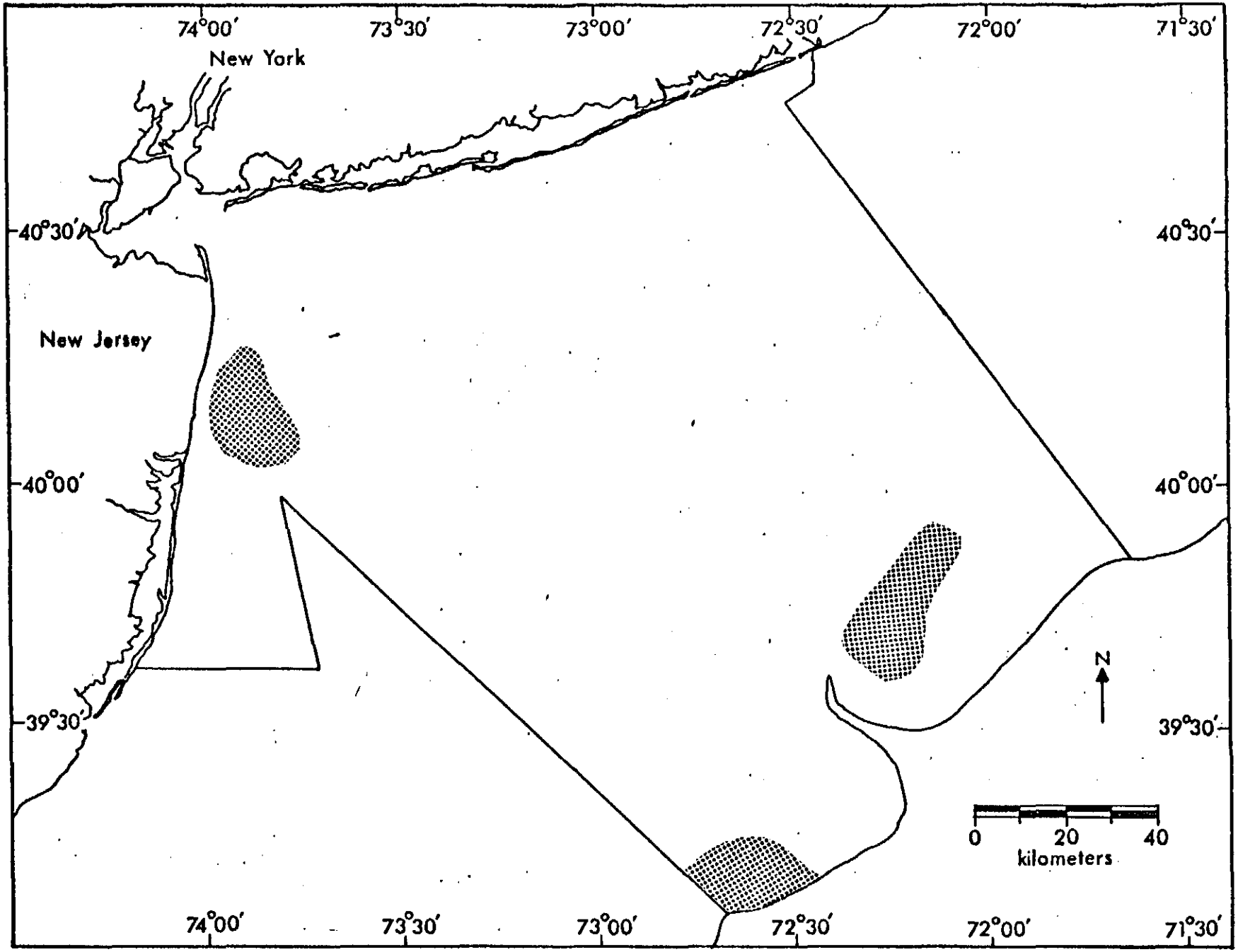

FIGURE 65.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, April 1975.

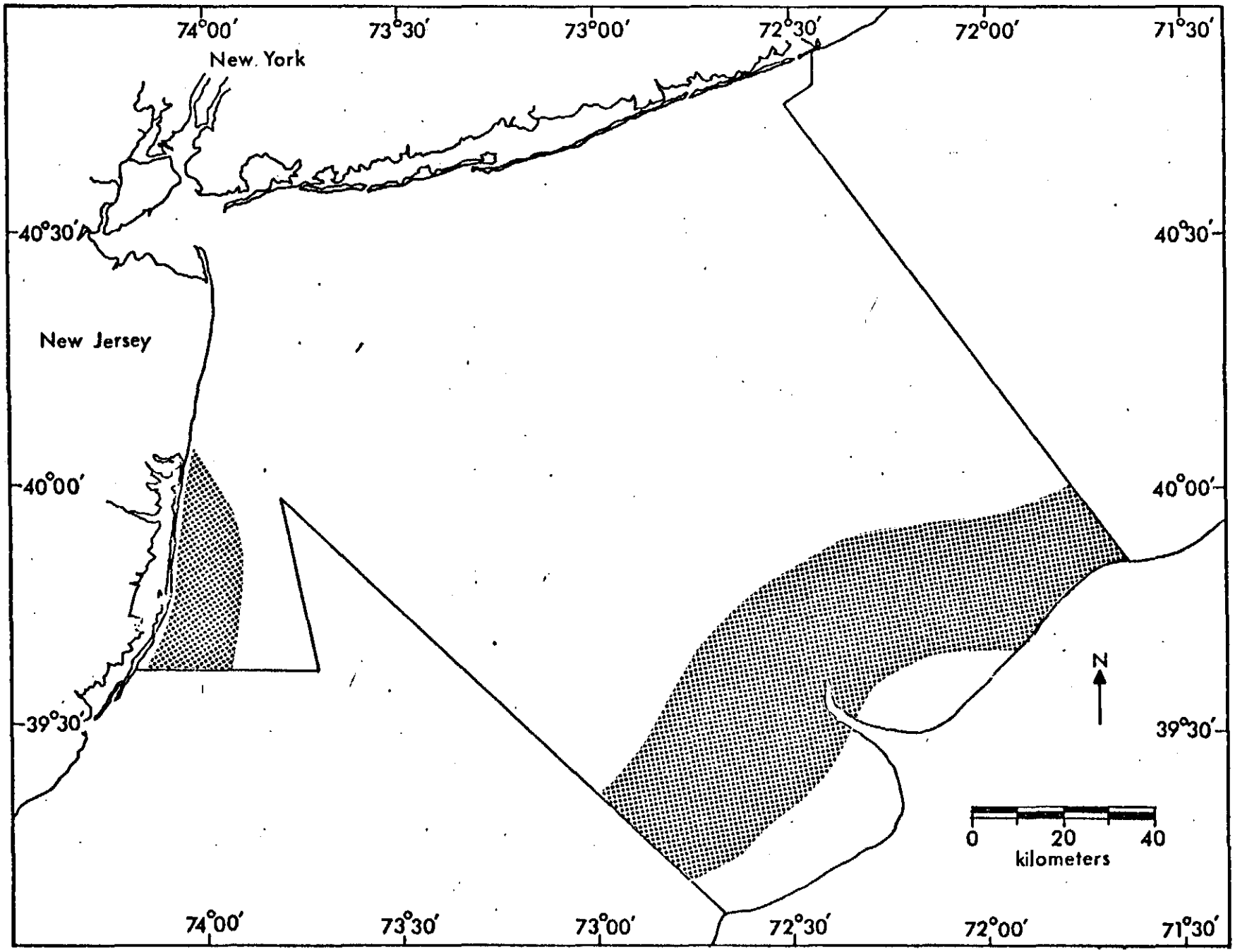

FIGURE 66.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, May 1975.

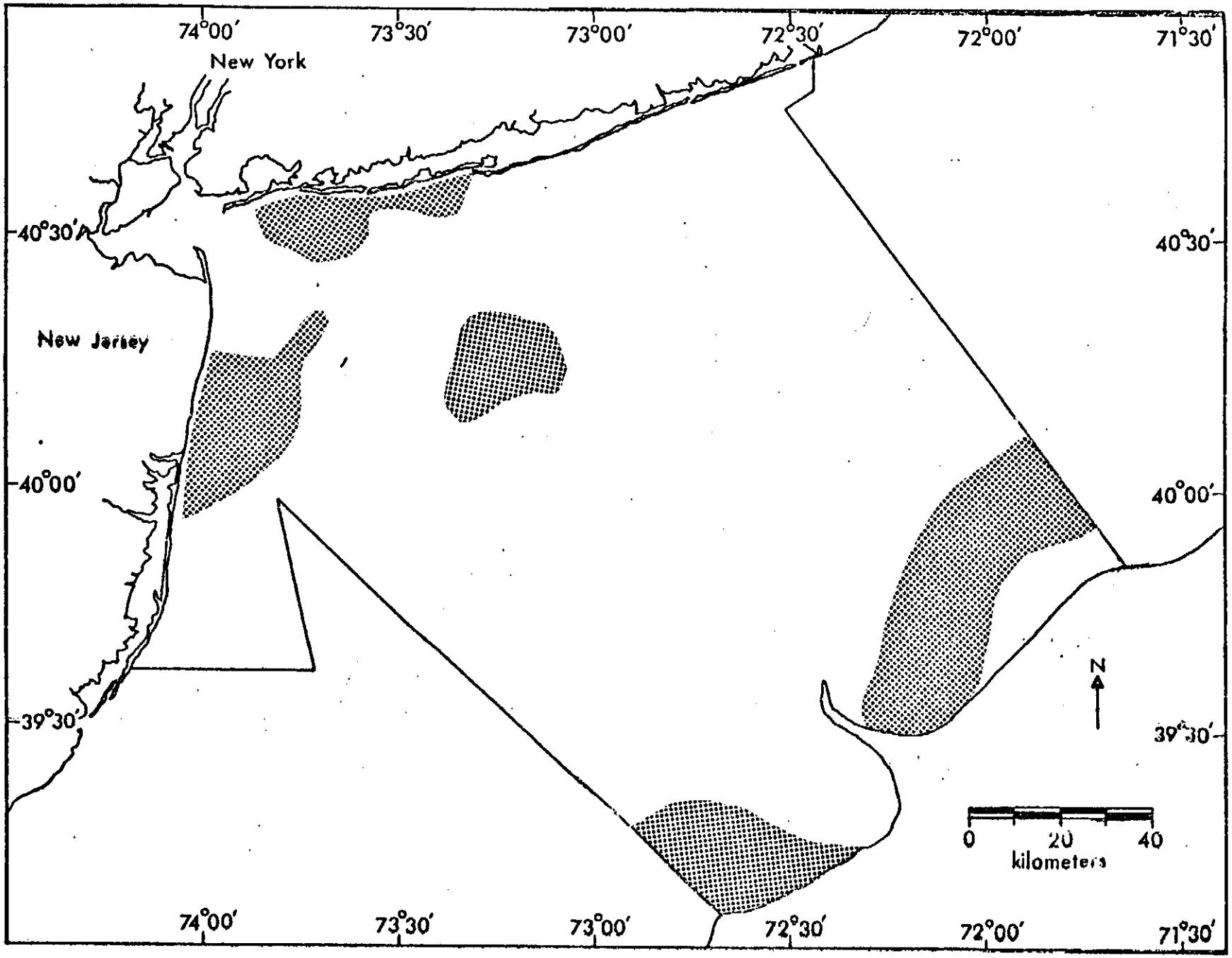

FIGURE 67.--Distribution of spotted hake (Urophycis regius) collected in New York Bight, June 1975.

BLACK SEA BASS

(Centropristis striata)

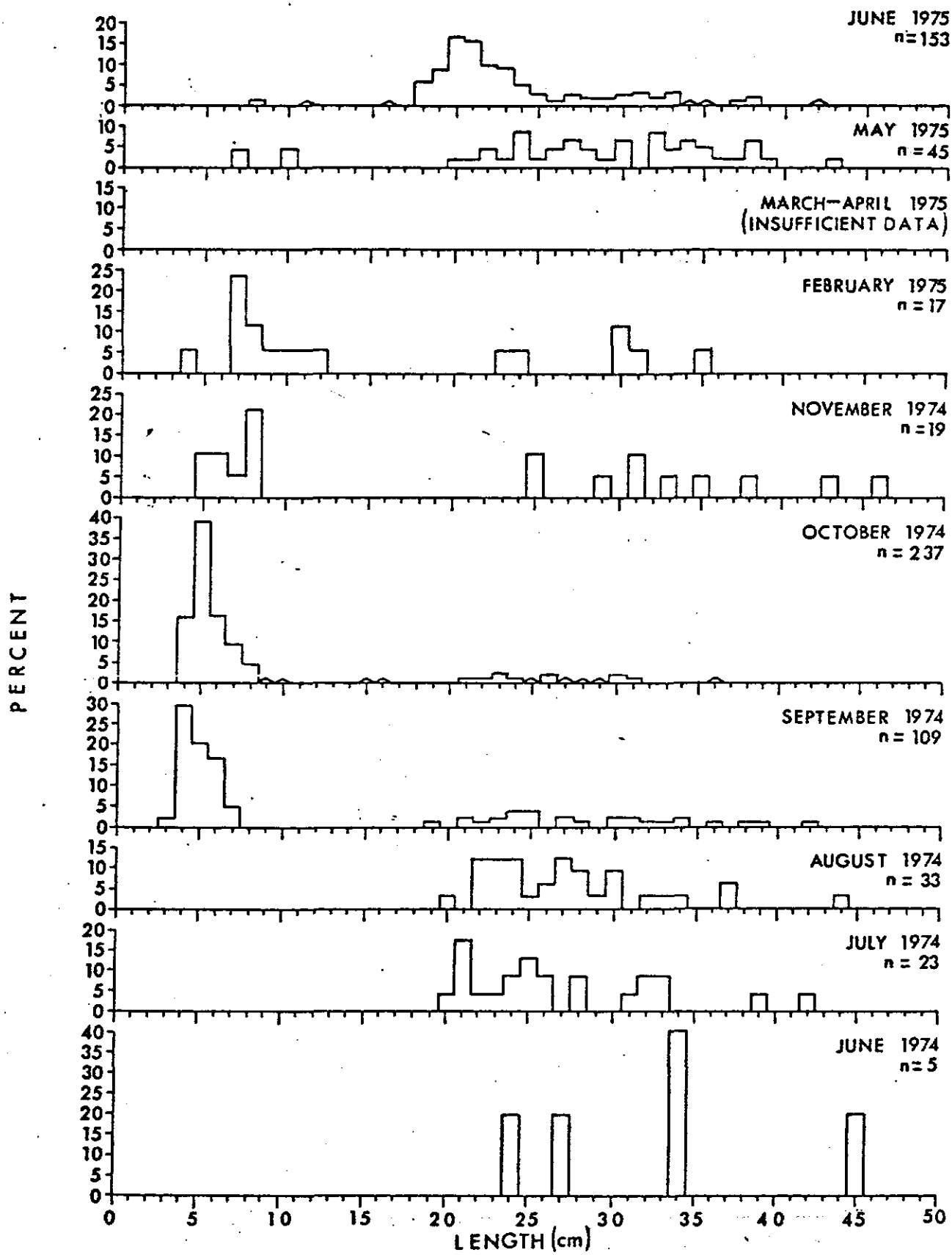

FIGURE 68.--Monthly length-frequency distributions of black sea bass (Centropristis striata) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

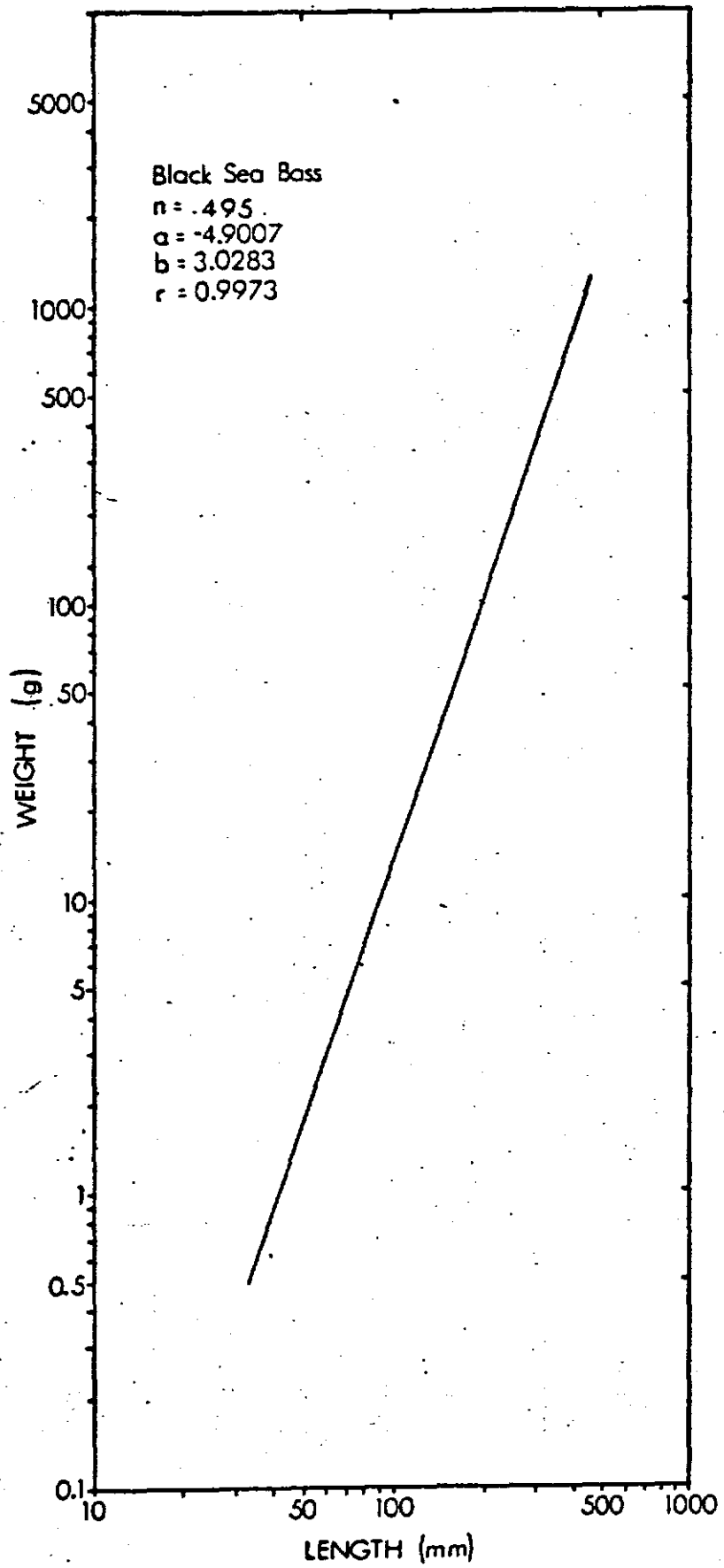

FIGURE 69.--Weight-length relationship of black sea bass (Centropristis striata) collected in New York Bight, June 1974 to June 1975.

TABLE 5.--Monthly sex ratios of black sea bass (Centropristis striata) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	5	4	80.0	1	20.0	-	-
July	23	6	26.1	17	73.9	-	-
August	34	9	26.5	25	73.5	-	-
September	111	10	9.0	21	18.9	80	72.1
October	97	9	9.3	20	20.6	68	70.1
November	21	2	9.5	8	38.1	11	52.4
January 1/	-	-	-	-	-	-	-
February	12	-	-	2	16.7	10	83.3
March	1	-	-	-	-	1	100.0
April	1	-	-	1	100.0	-	-
May	45	15	33.3	26	57.8	4	8.9
June	144	63	43.8	72	50.0	9	6.2
TOTAL	494	118	23.9	193	39.1	183	37.0

1/ Bay stations only.

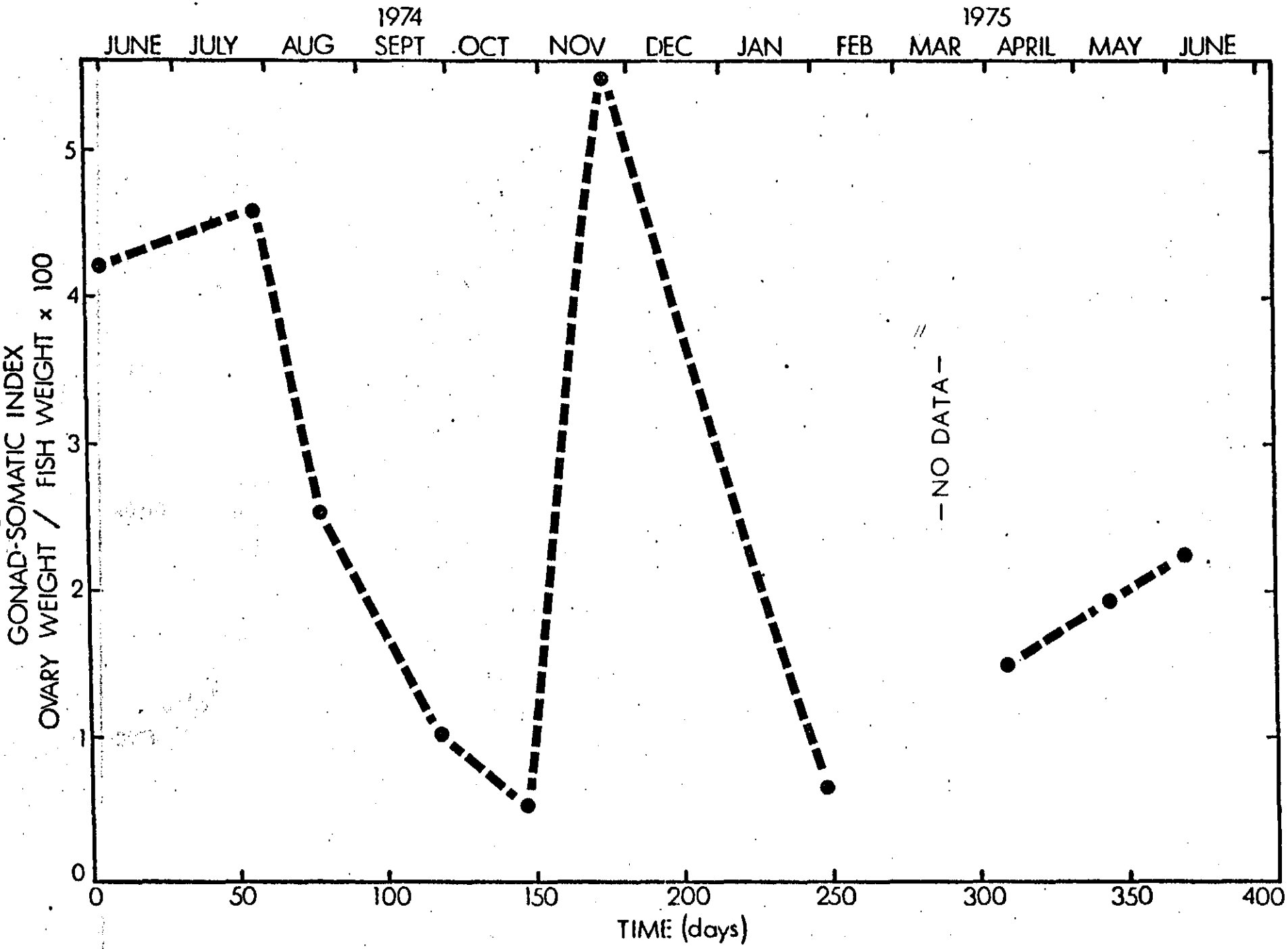

FIGURE 70.--Monthly gonad-somatic indices of black sea bass (Centropristis striata) collected in New York Bight, June 1974 to June 1975.

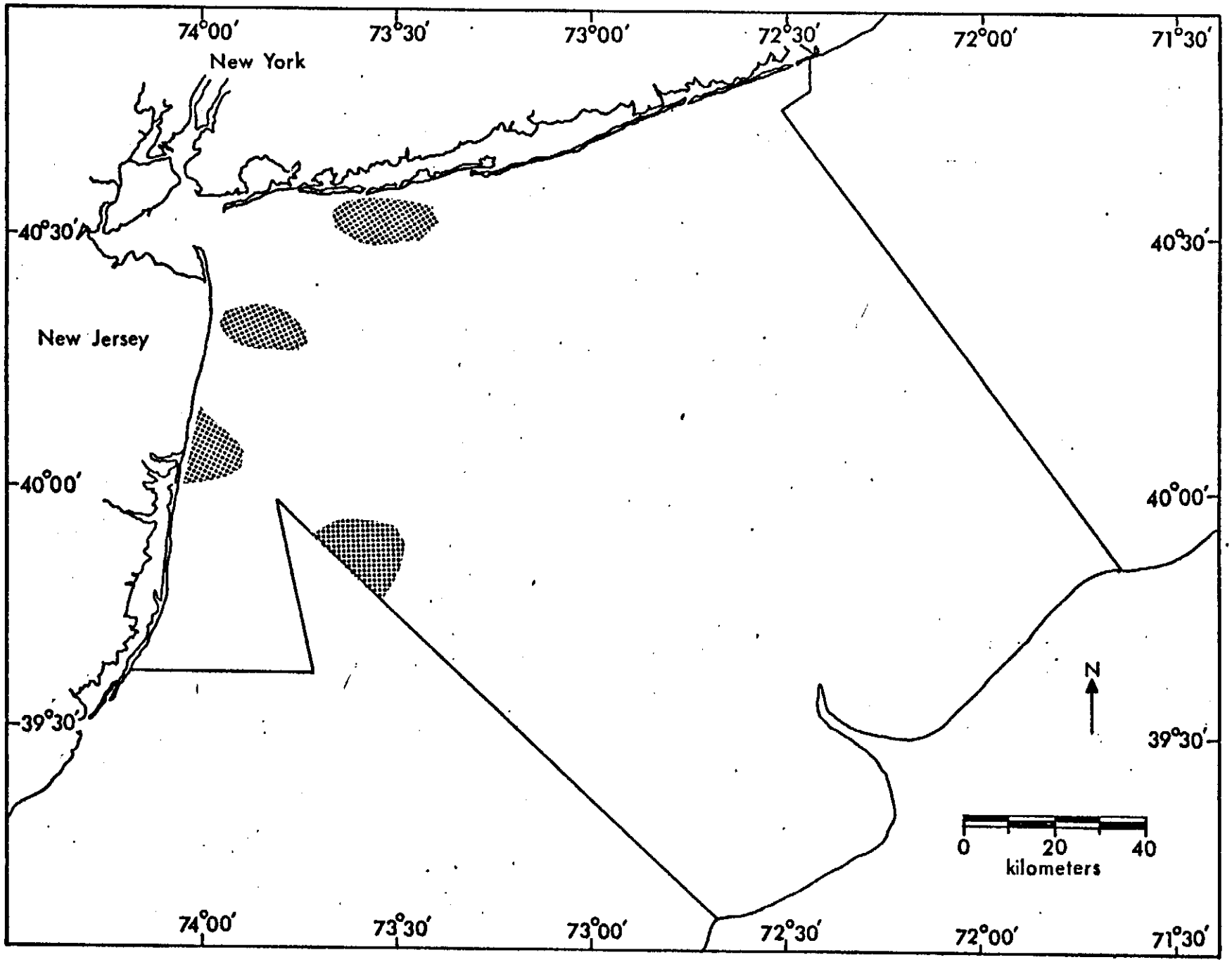

FIGURE 71.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, June 1974.

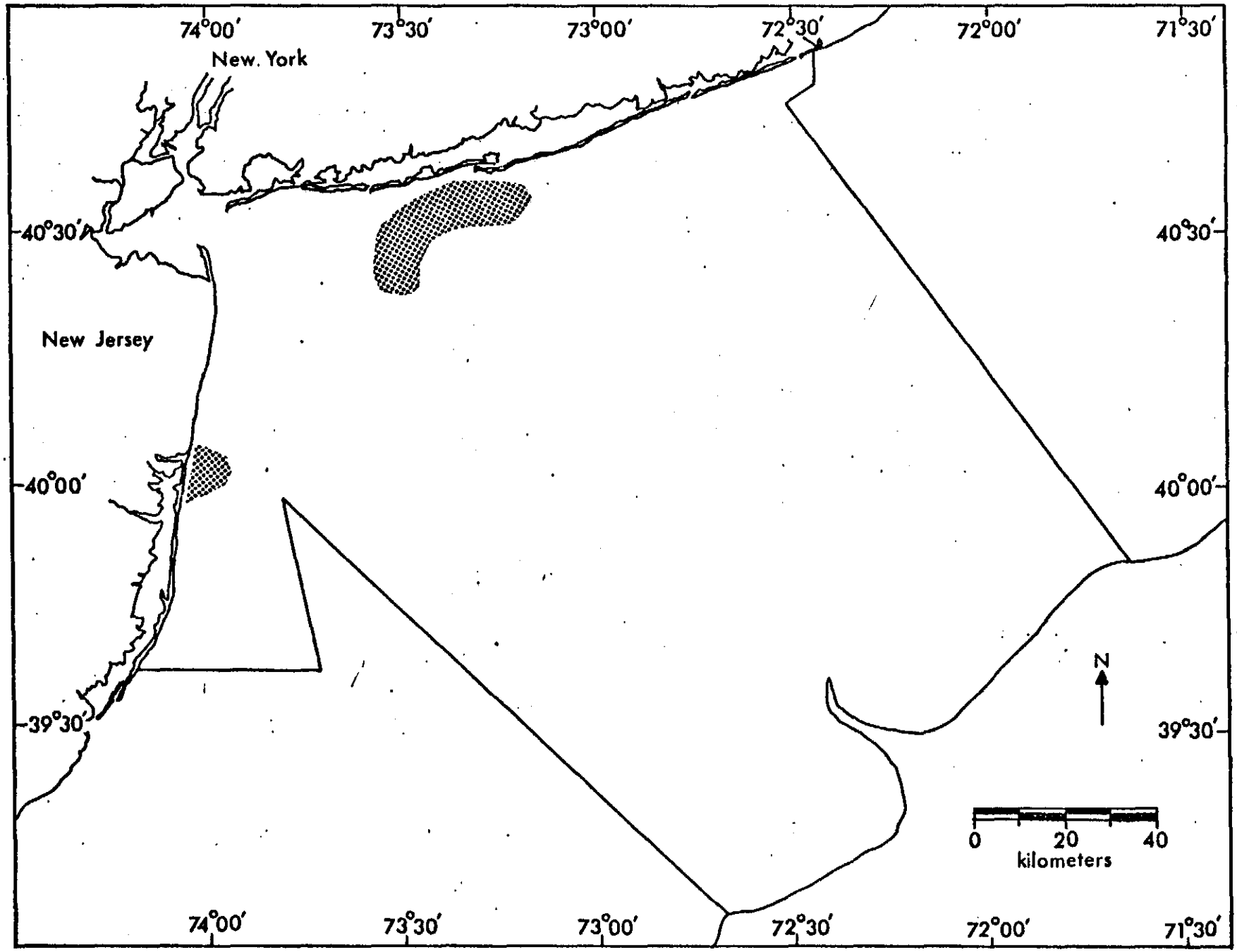

FIGURE 72.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, July 1974.

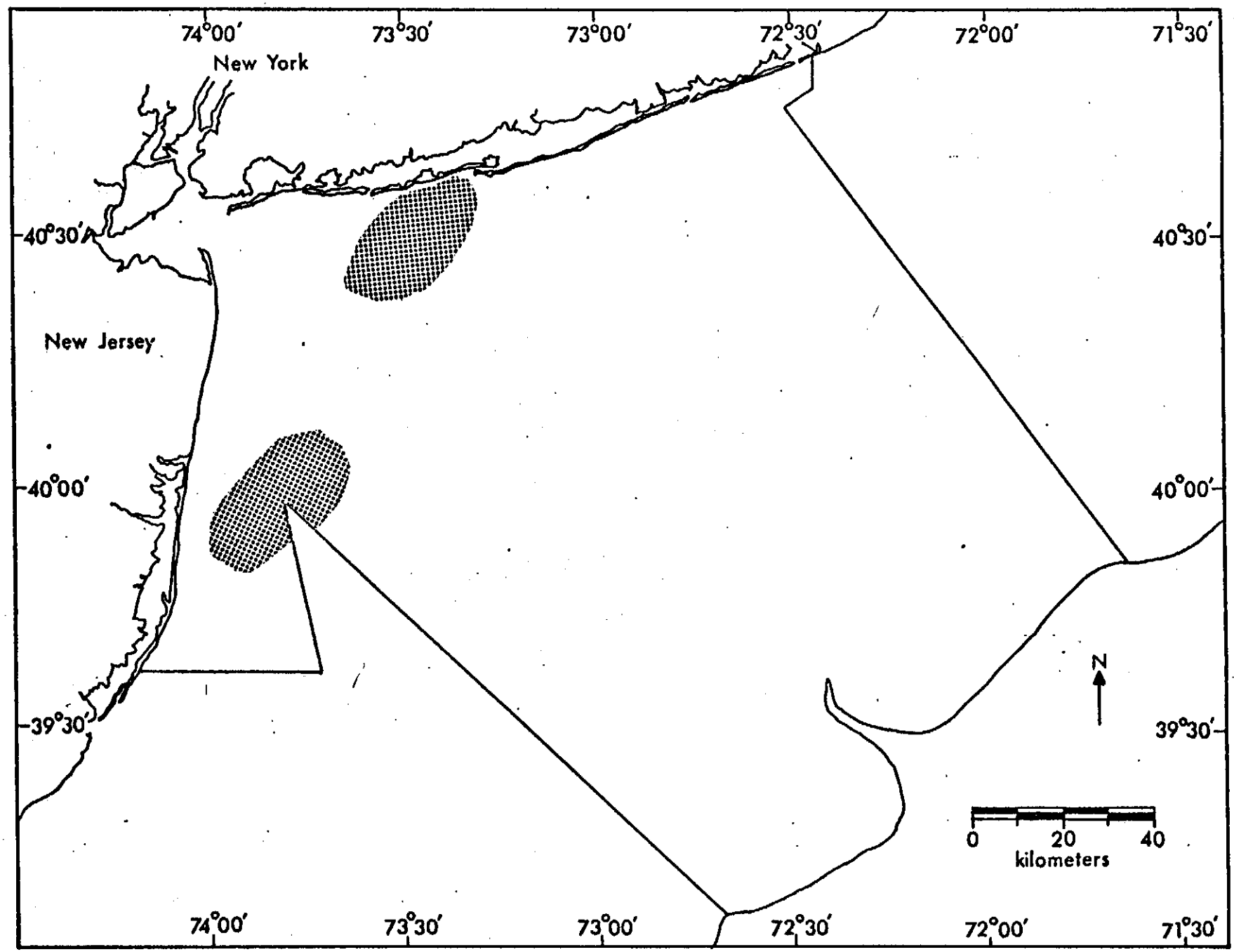

FIGURE 73.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, August 1974.

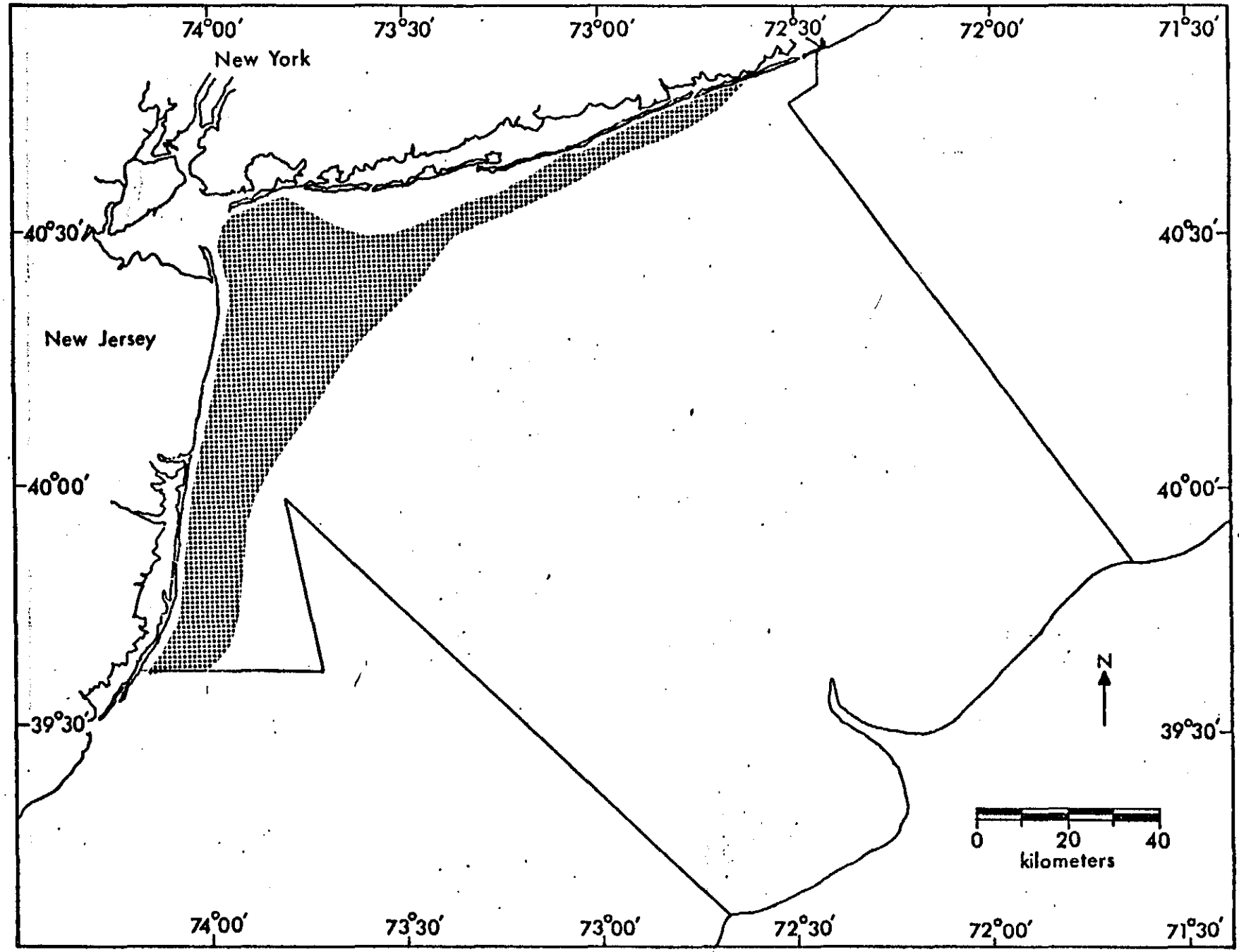

FIGURE 74.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, September 1974.

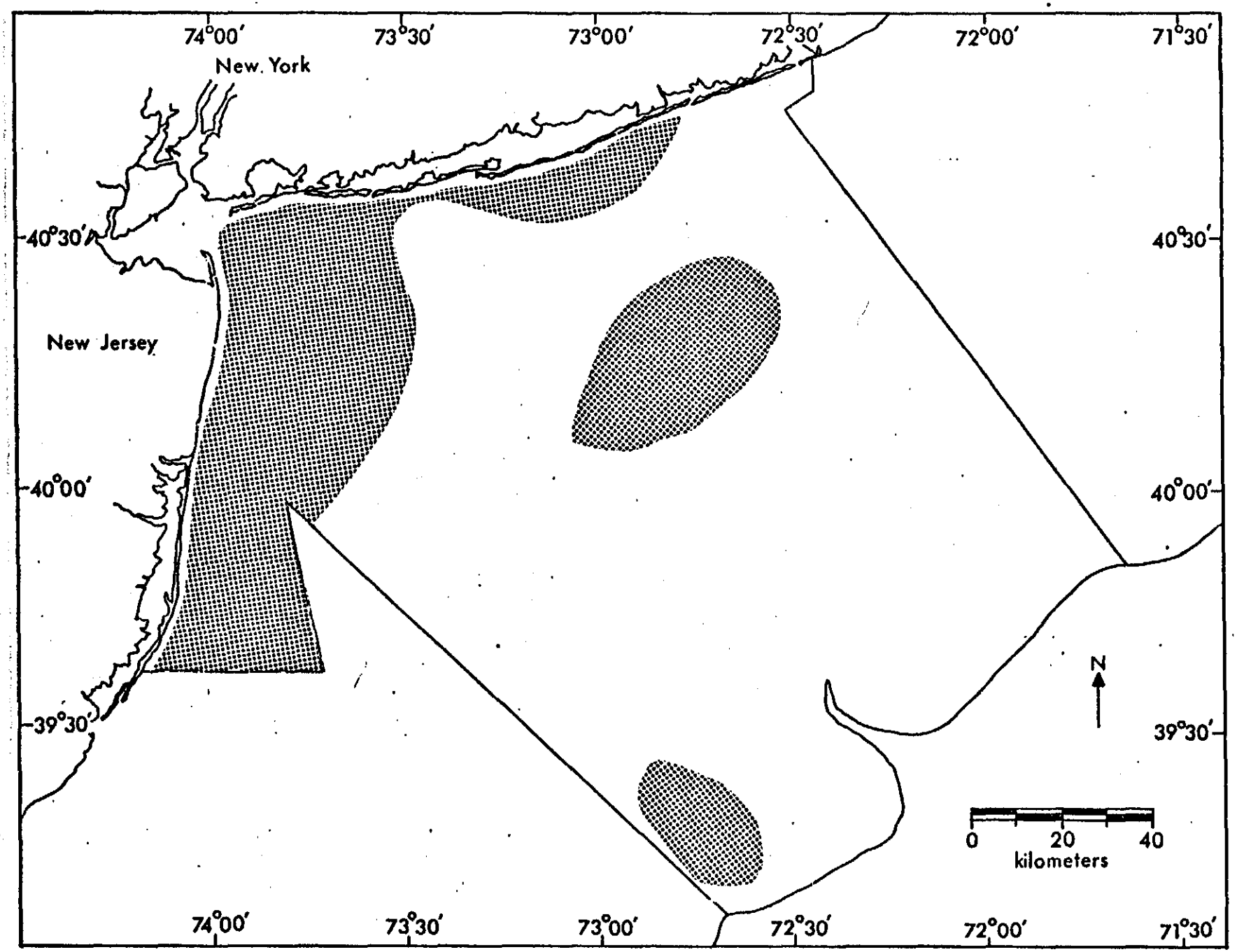

FIGURE 75.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, October 1974.

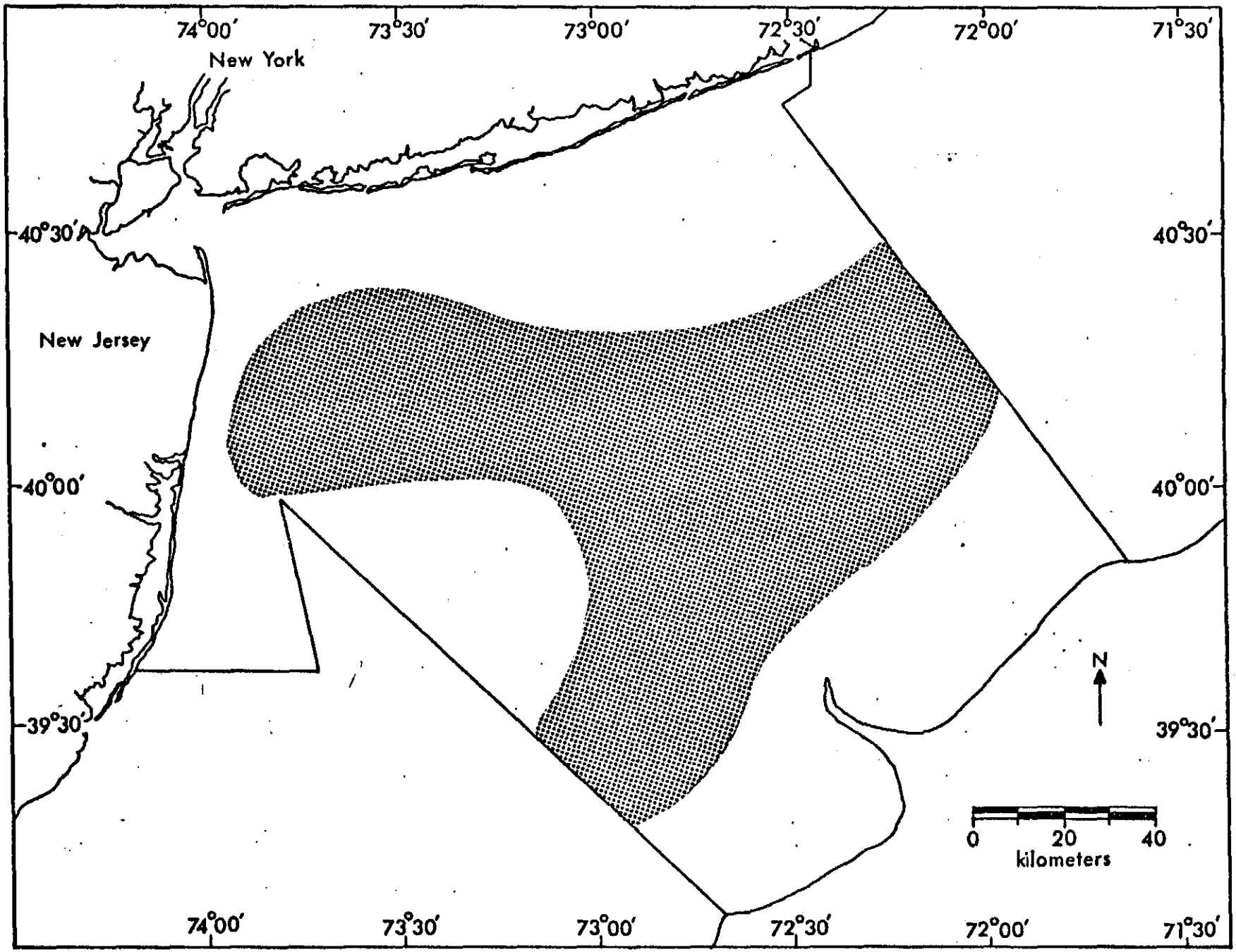

FIGURE 76.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, November 1974.

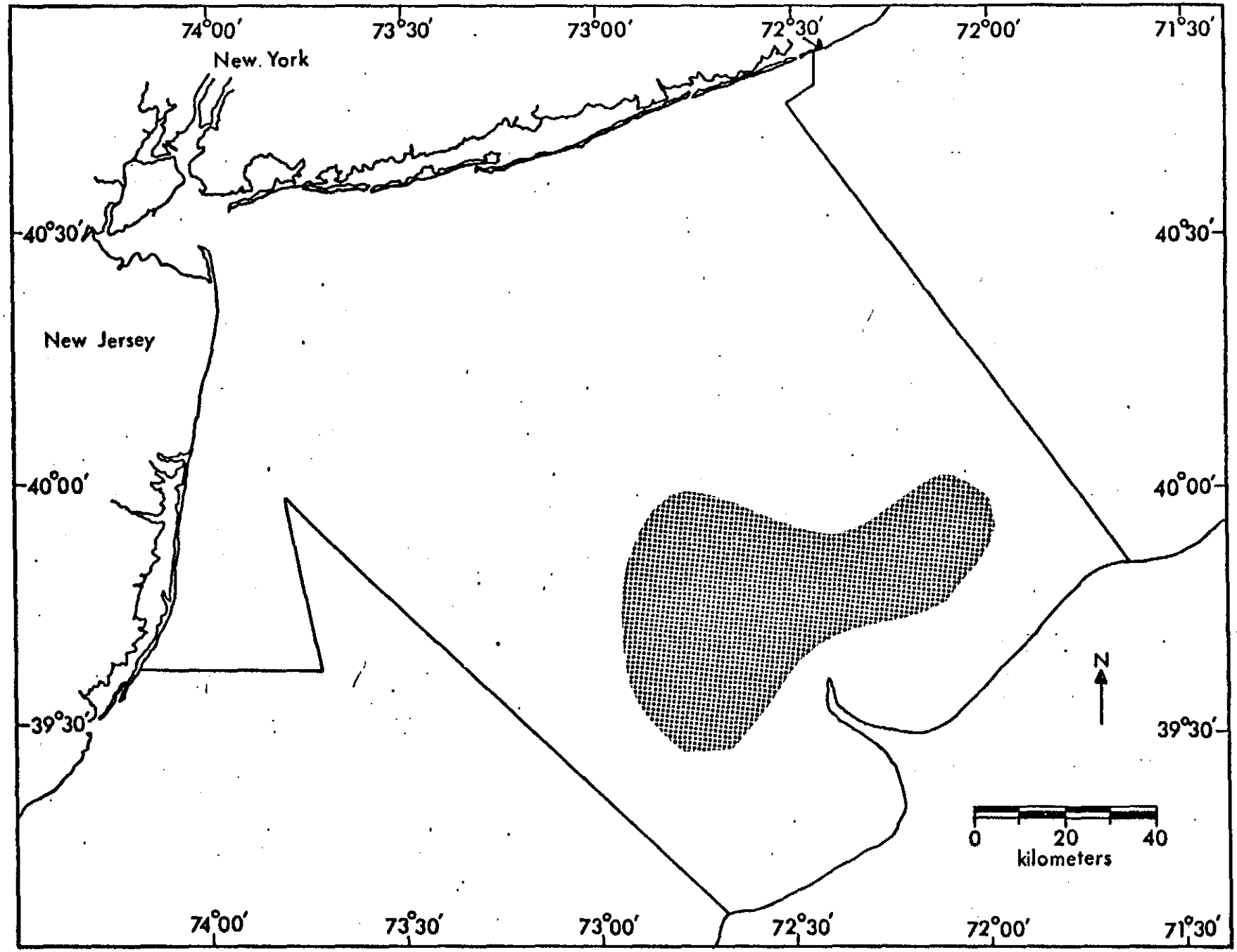

FIGURE 77.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, February 1975.

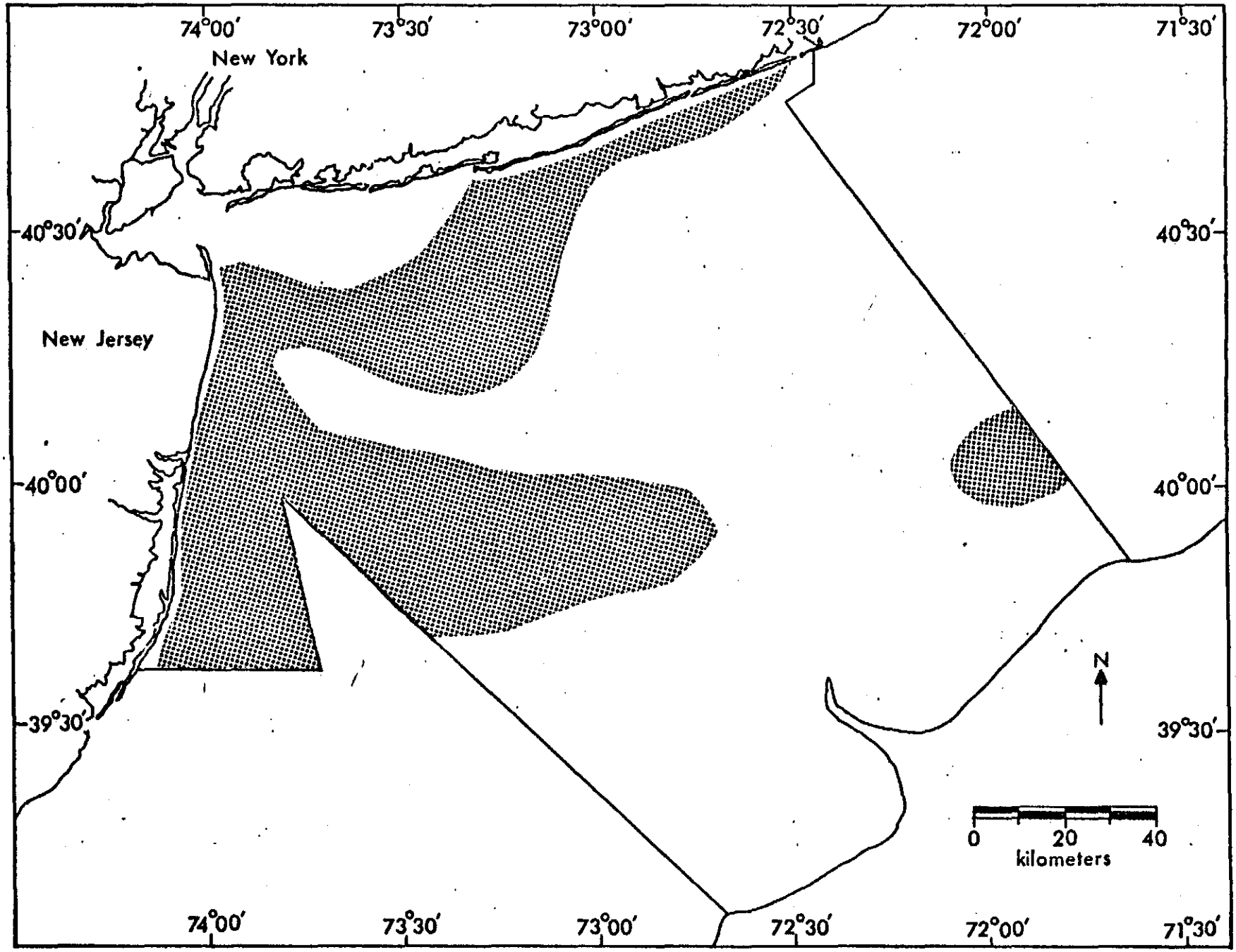

FIGURE 78.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, May 1975.

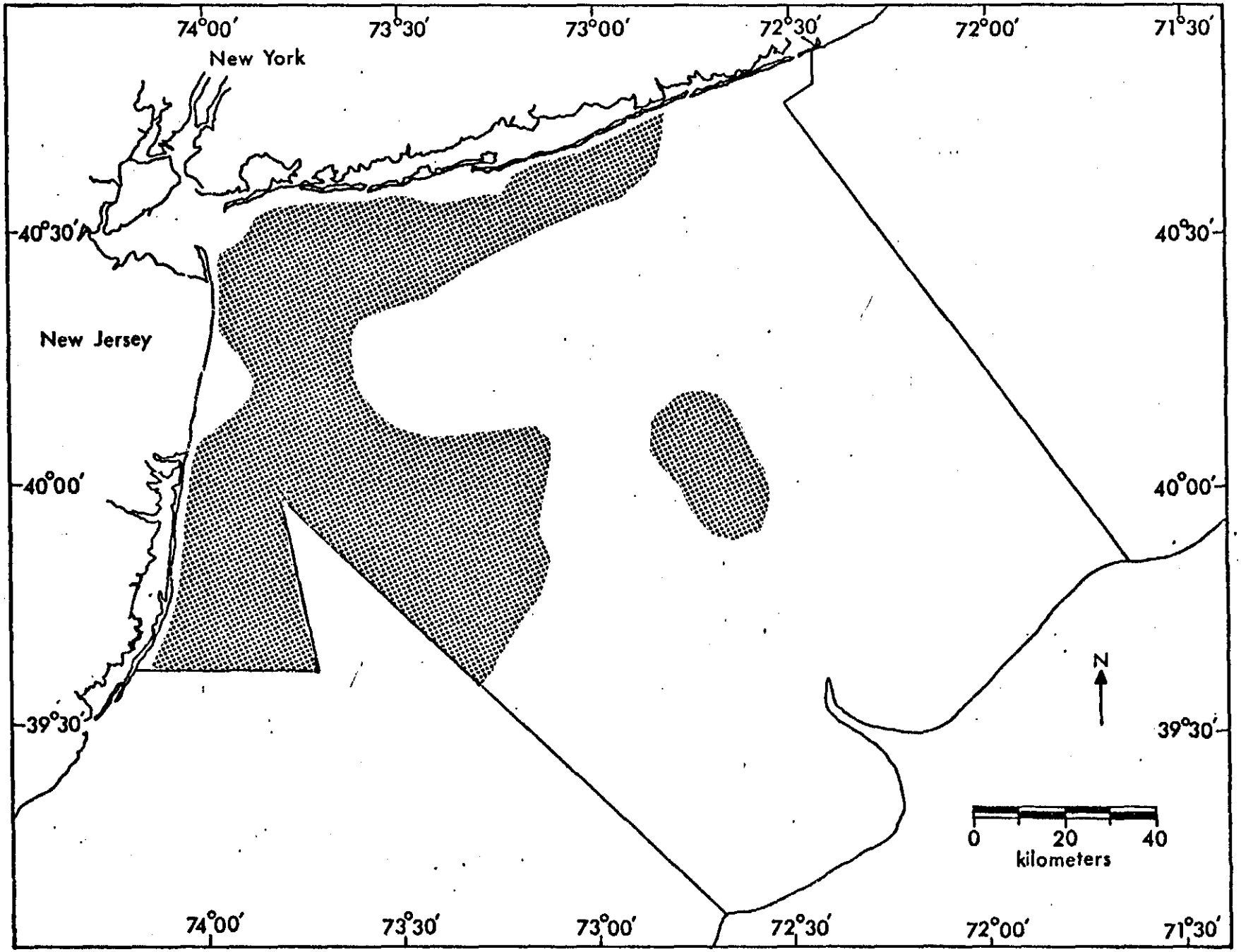

FIGURE 79.--Distribution of black sea bass (Centropristis striata) collected in New York Bight, June 1975.

SCUP

(Stenotomus chrysops)

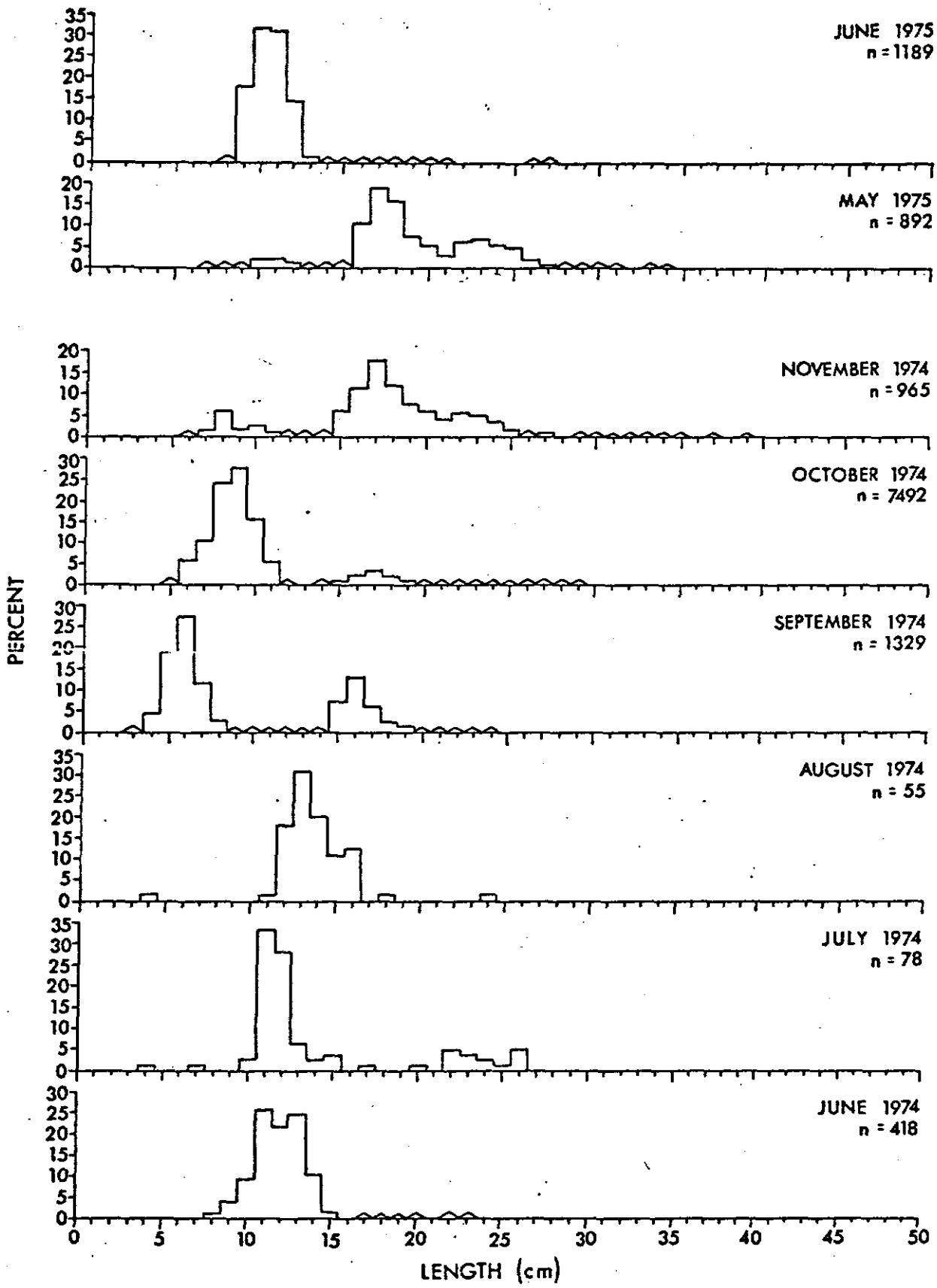

FIGURE 80.--Monthly length-frequency distributions of scup (Stenotomus chrysops) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

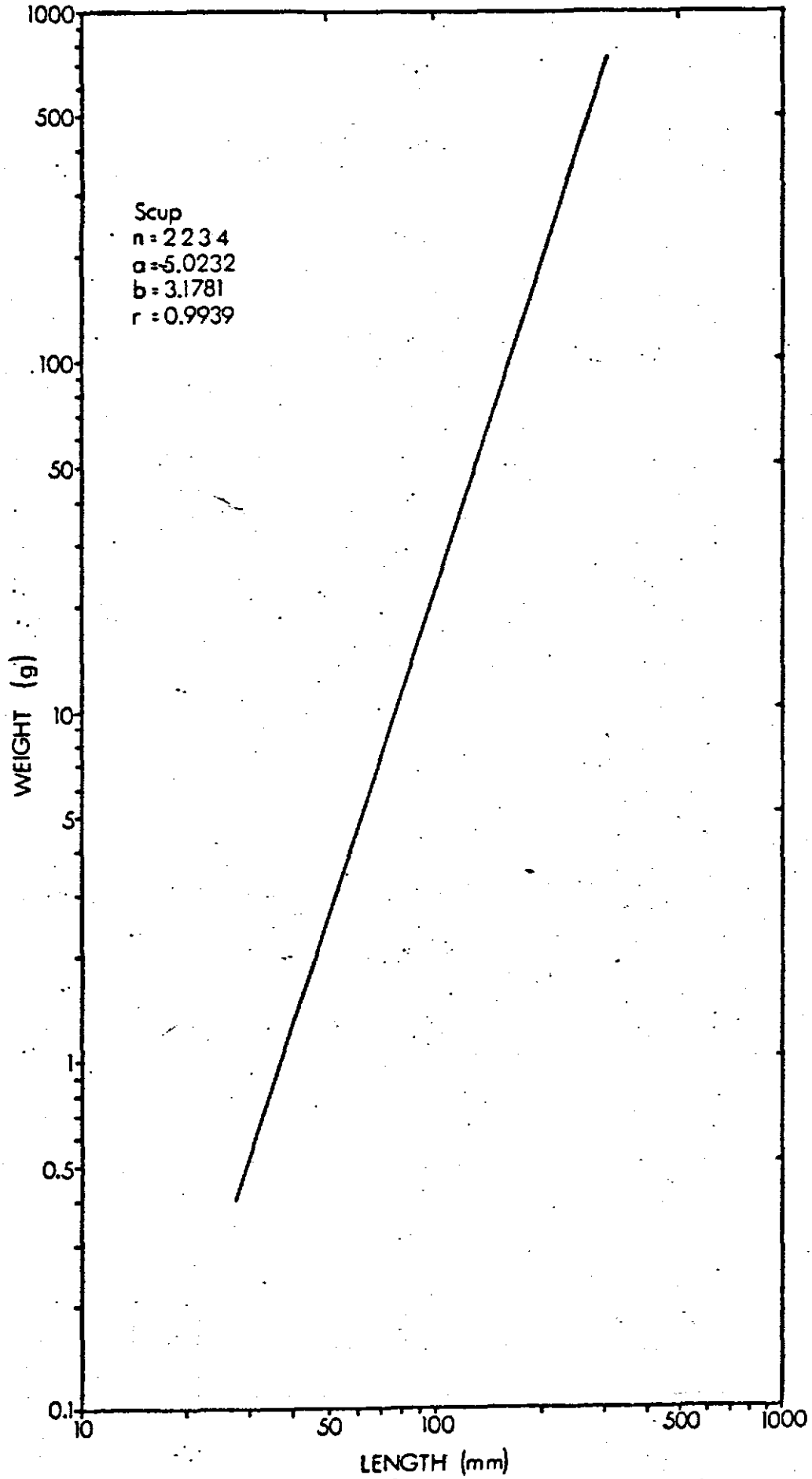

FIGURE 81.--Weight-length relationship of scup (Stenotomus chrysops) collected in New York Bight, June 1974 to June 1975.

TABLE 6.--Monthly sex ratios of scup (Stenotomus chrysops) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	162	3	1.9	1	0.6	158	97.5
July	50	4	8.0	10	20.0	36	72.0
August	90	3	3.3	2	2.2	85	94.5
September	385	23	6.0	9	2.3	353	91.7
October	467	59	12.6	71	15.2	337	72.2
November	309	37	12.0	104	33.6	168	54.4
January 1/	-	-	-	-	-	-	-
February	3	1	33.3	-	-	2	66.7
March	-	-	-	-	-	-	-
April	24	11	45.83	11	45.83	2	8.33
May	397	159	40.1	180	45.3	58	14.6
June	367	16	4.4	10	2.7	341	92.9
TOTAL	2254	316	14.0	398	17.7	1540	68.3

1/ Bay stations only.

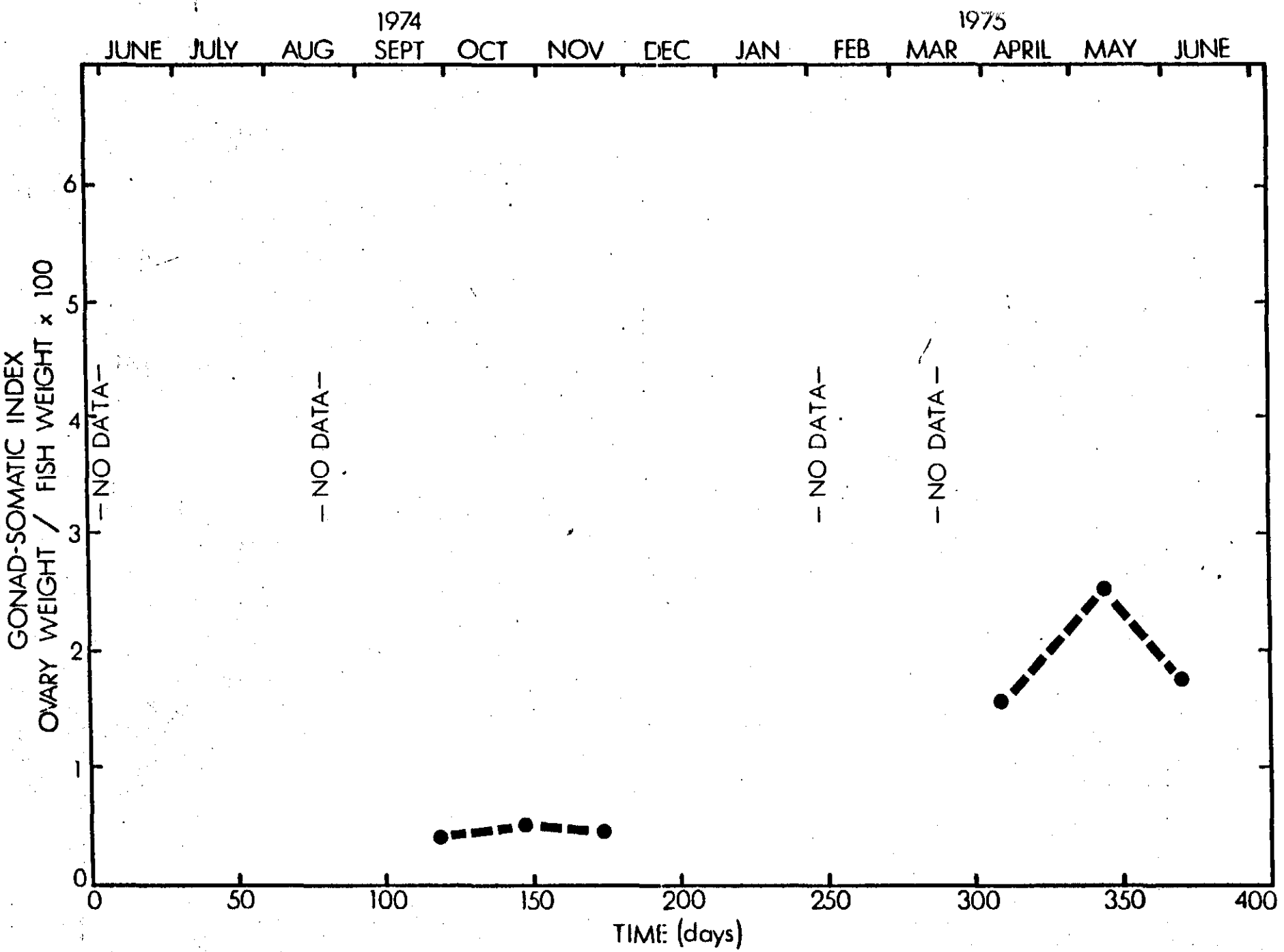

FIGURE 82.--Monthly gonad-somatic indices of scup (Stenotomus chrysops) collected in New York Bight, June 1974 to June 1975.

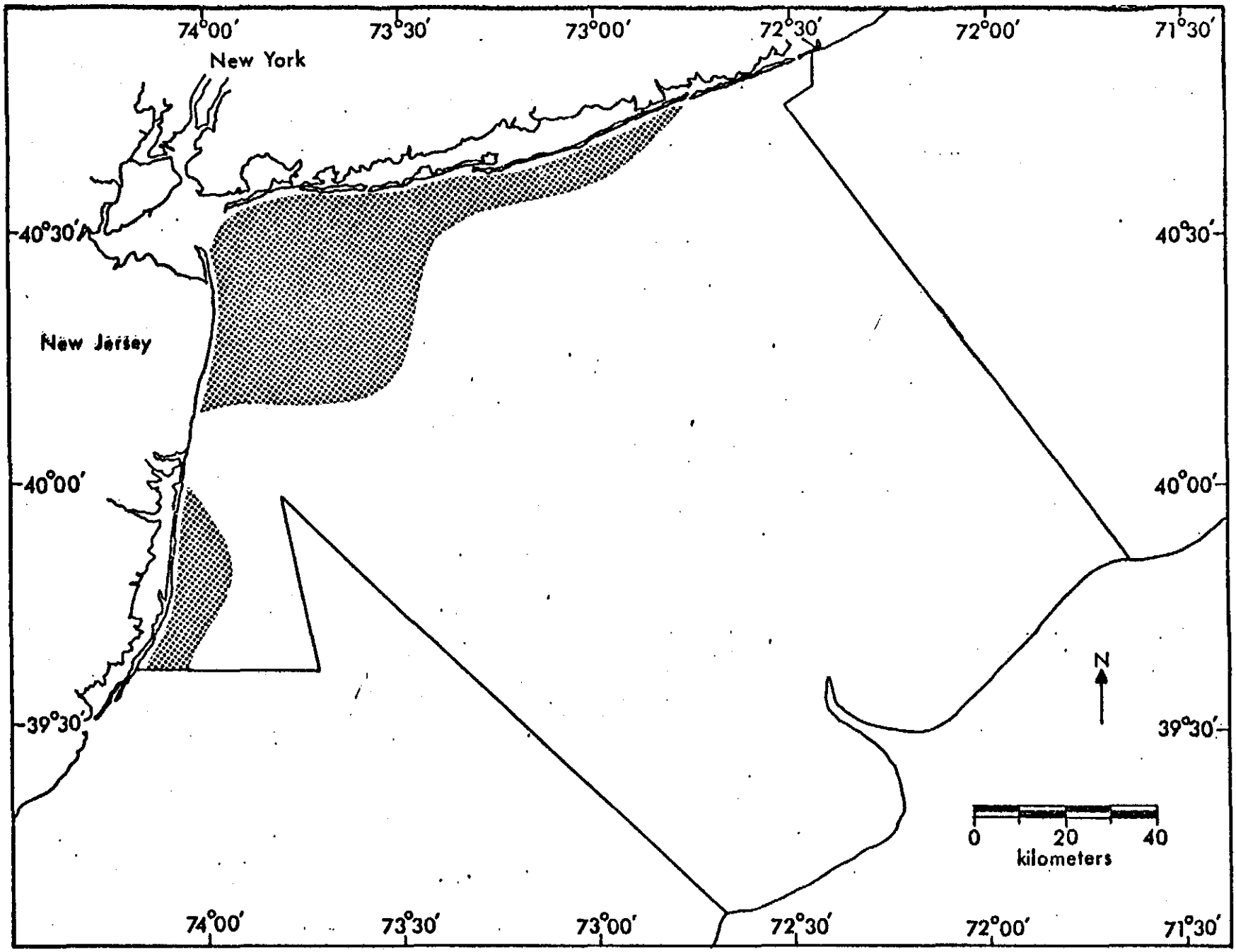

FIGURE 83.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, June 1974.

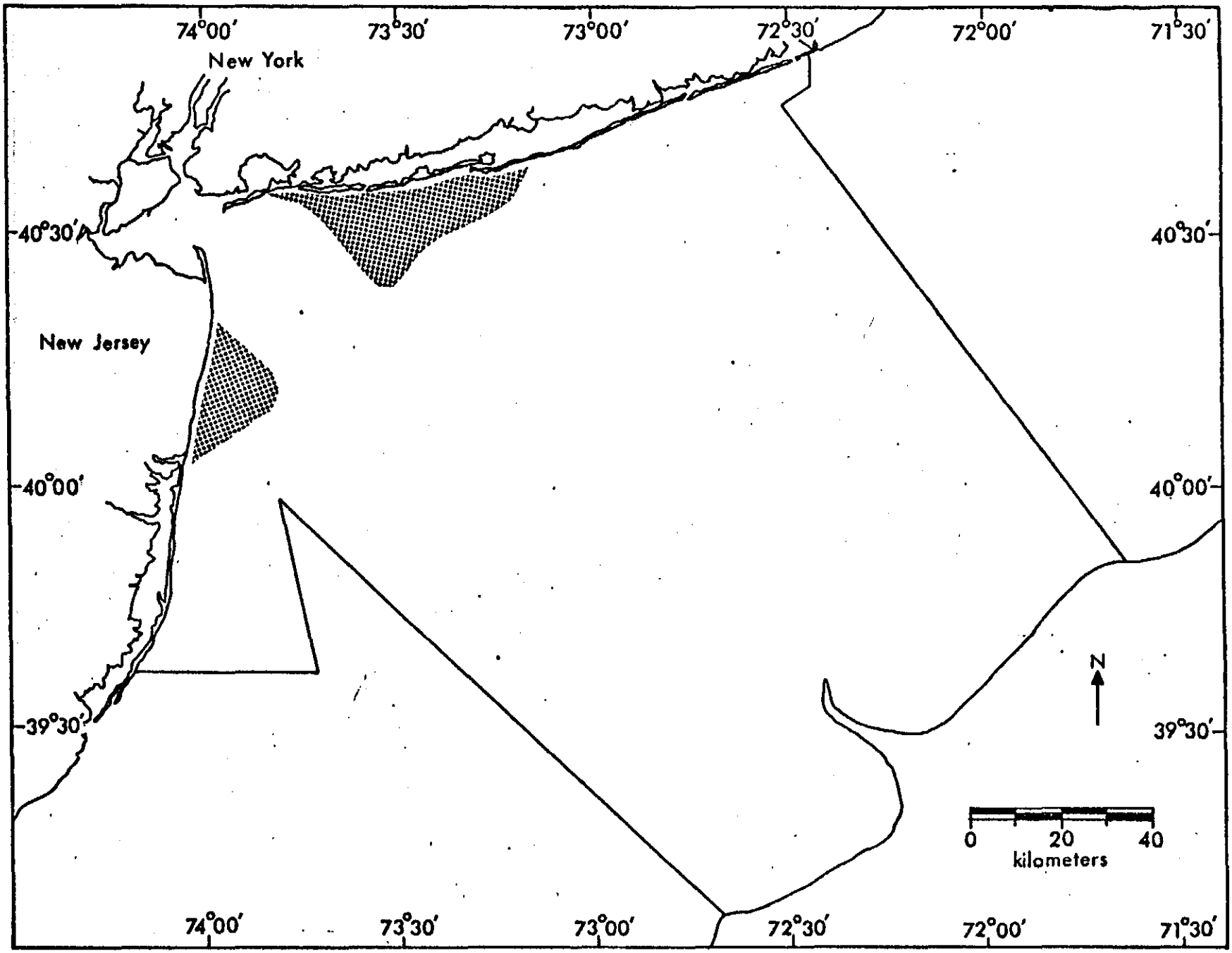

FIGURE 84.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, July 1974.

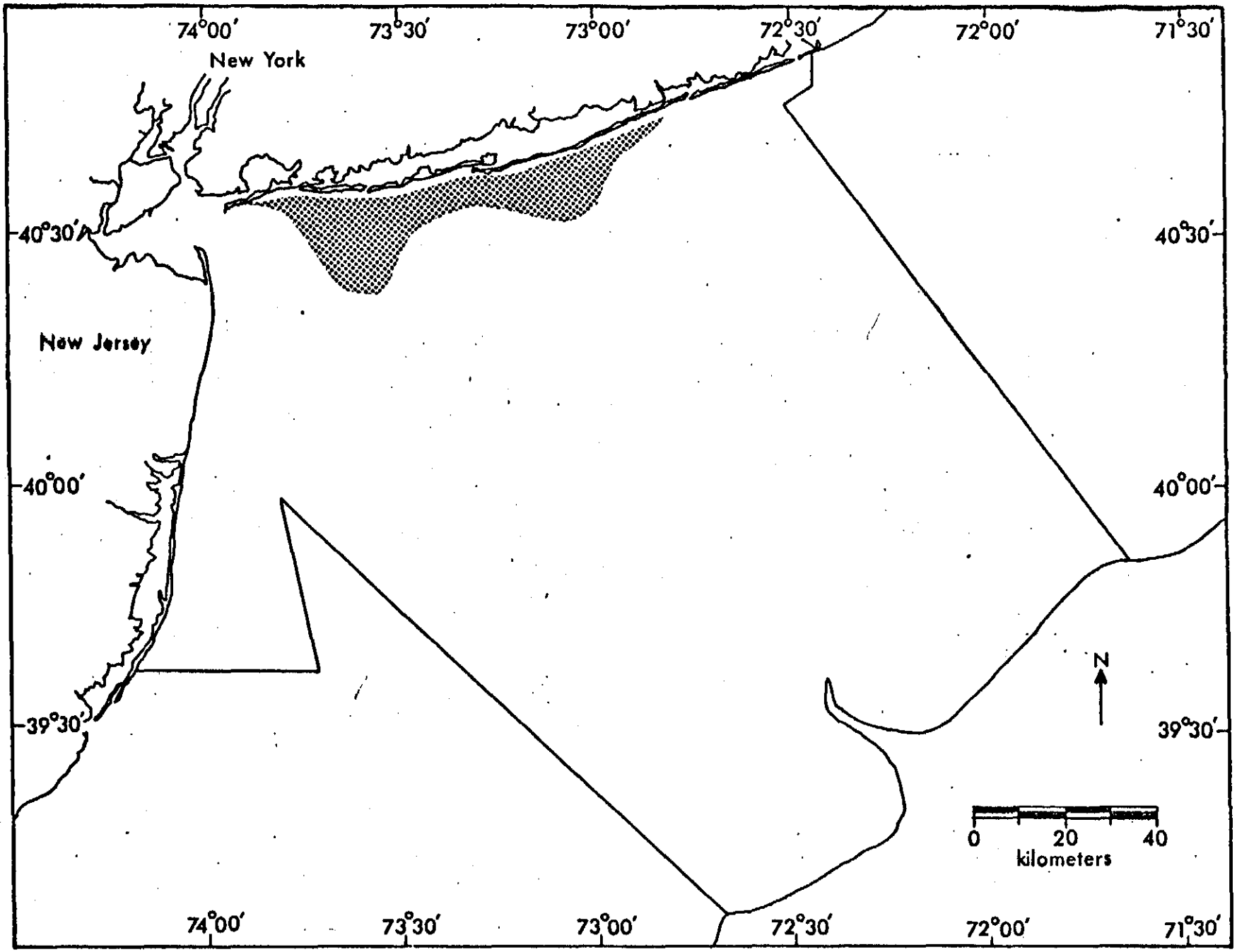

FIGURE 85.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, August 1974.

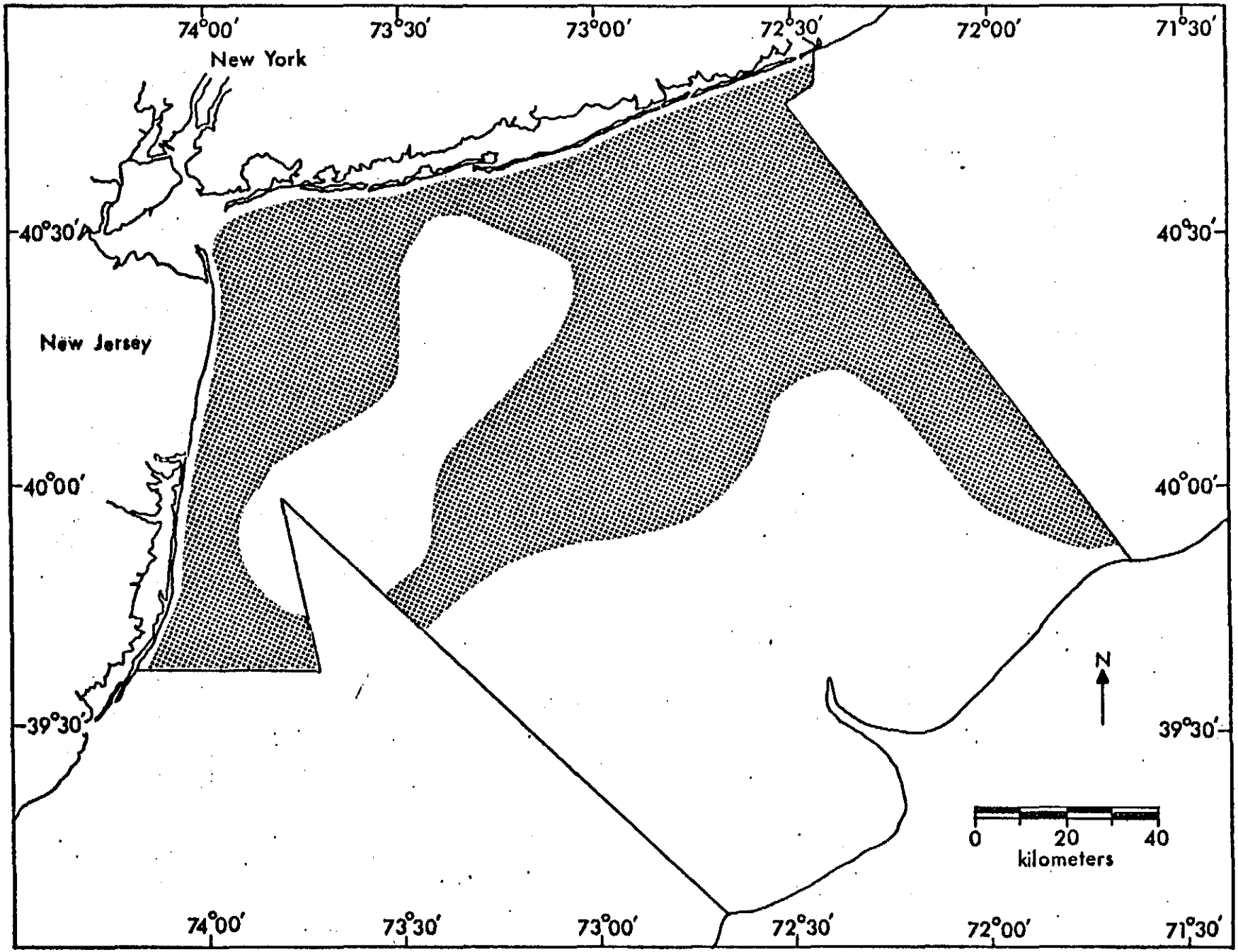

FIGURE 86.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, September 1974.

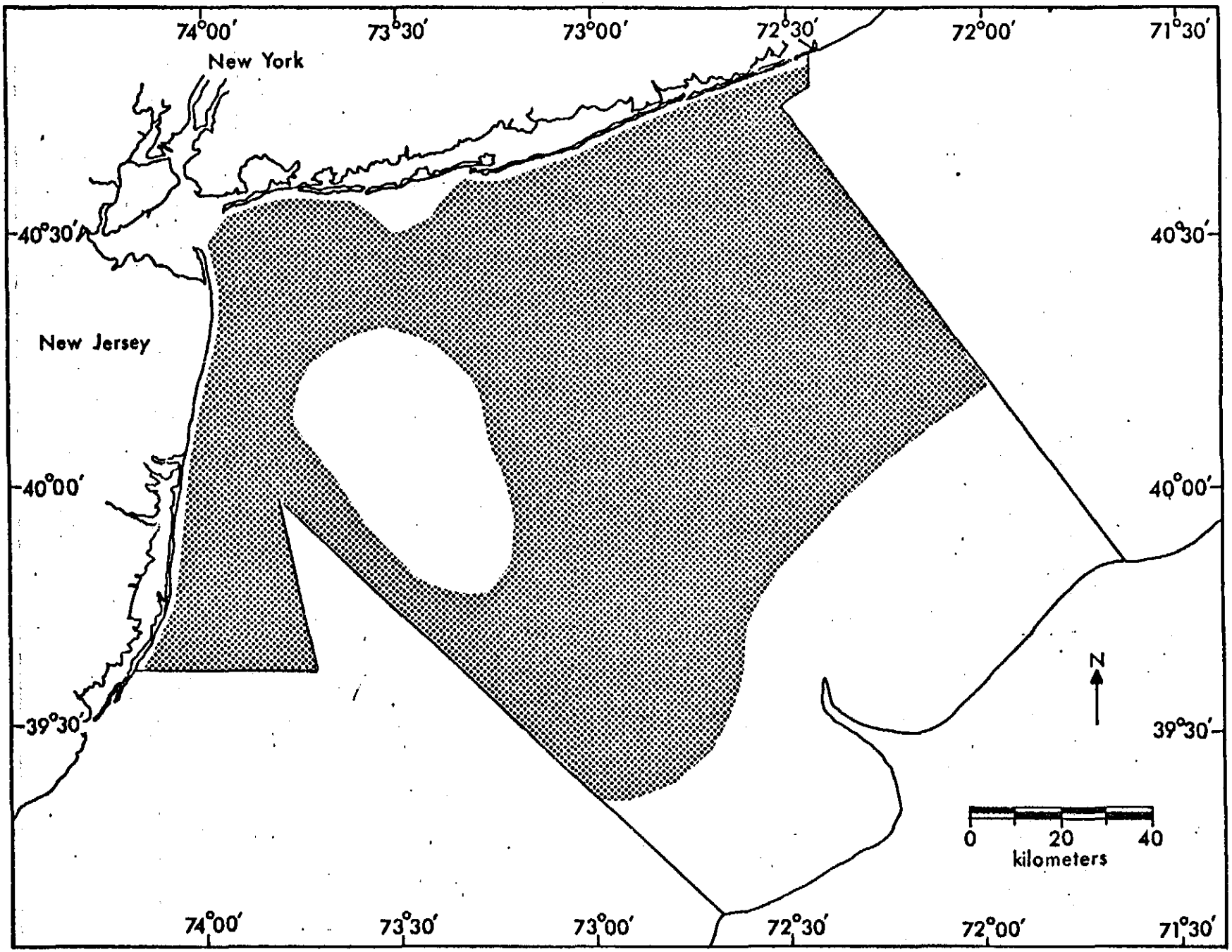

FIGURE 87.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, October 1974.

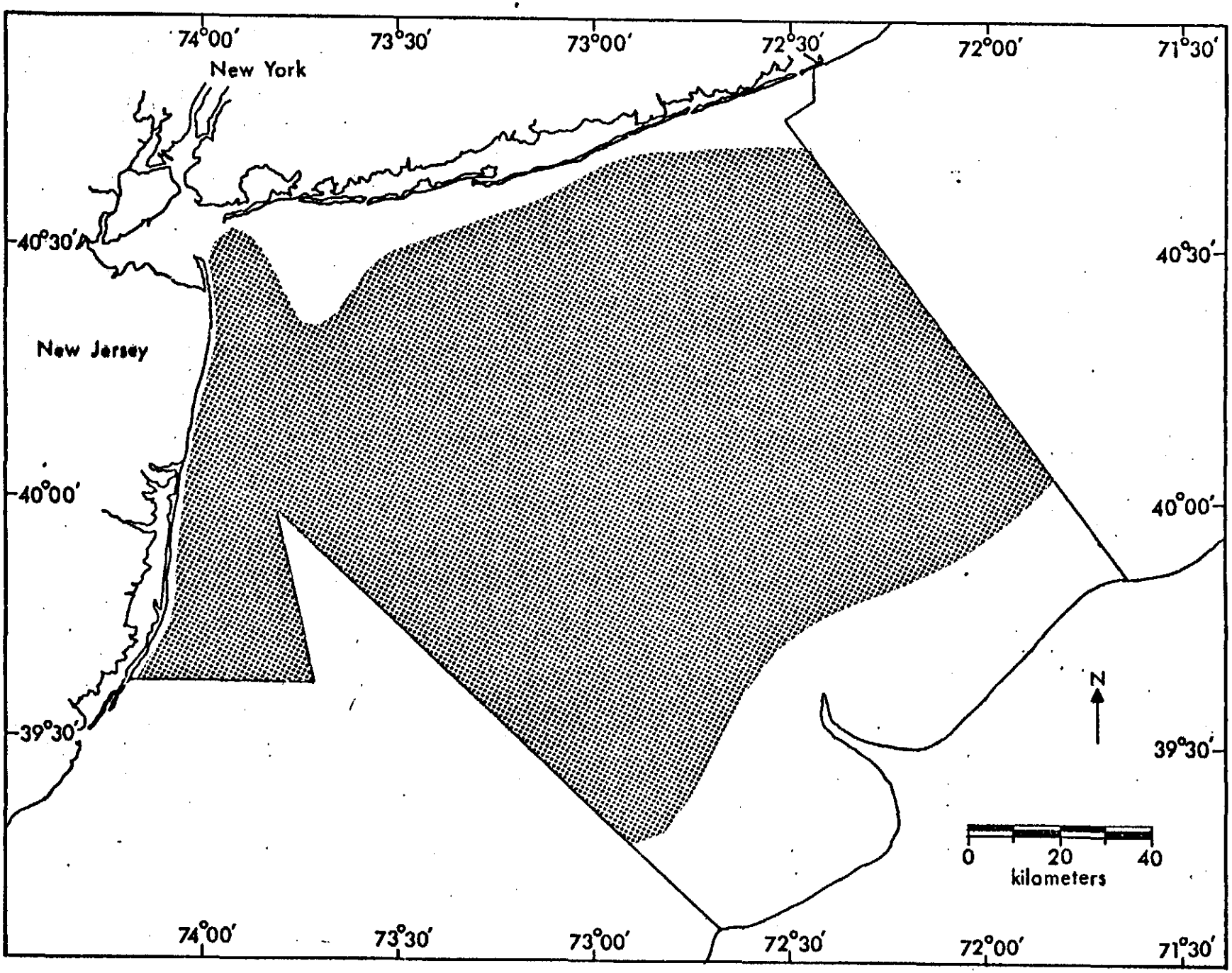

FIGURE 88.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, November 1974.

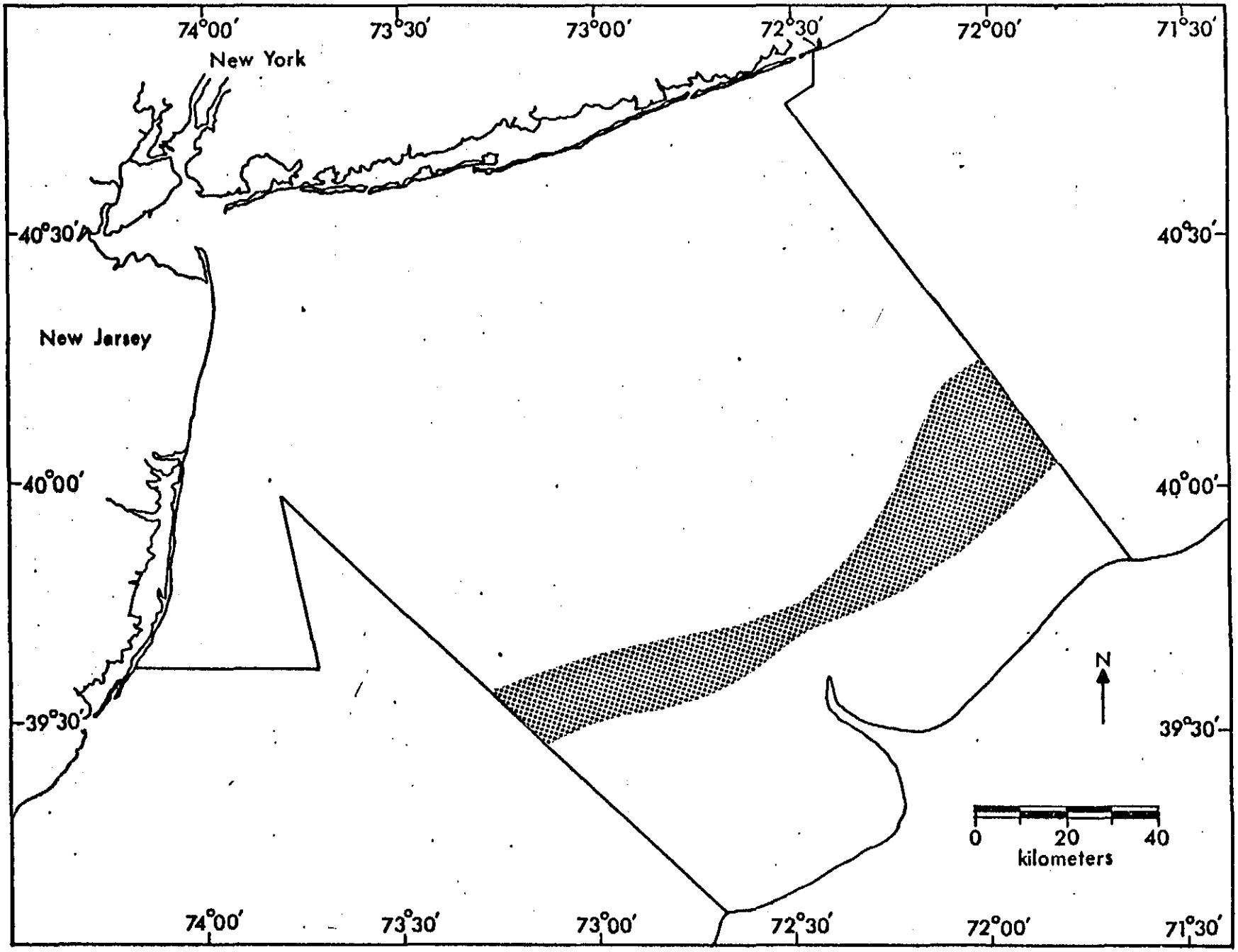

FIGURE 89.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, February 1975.

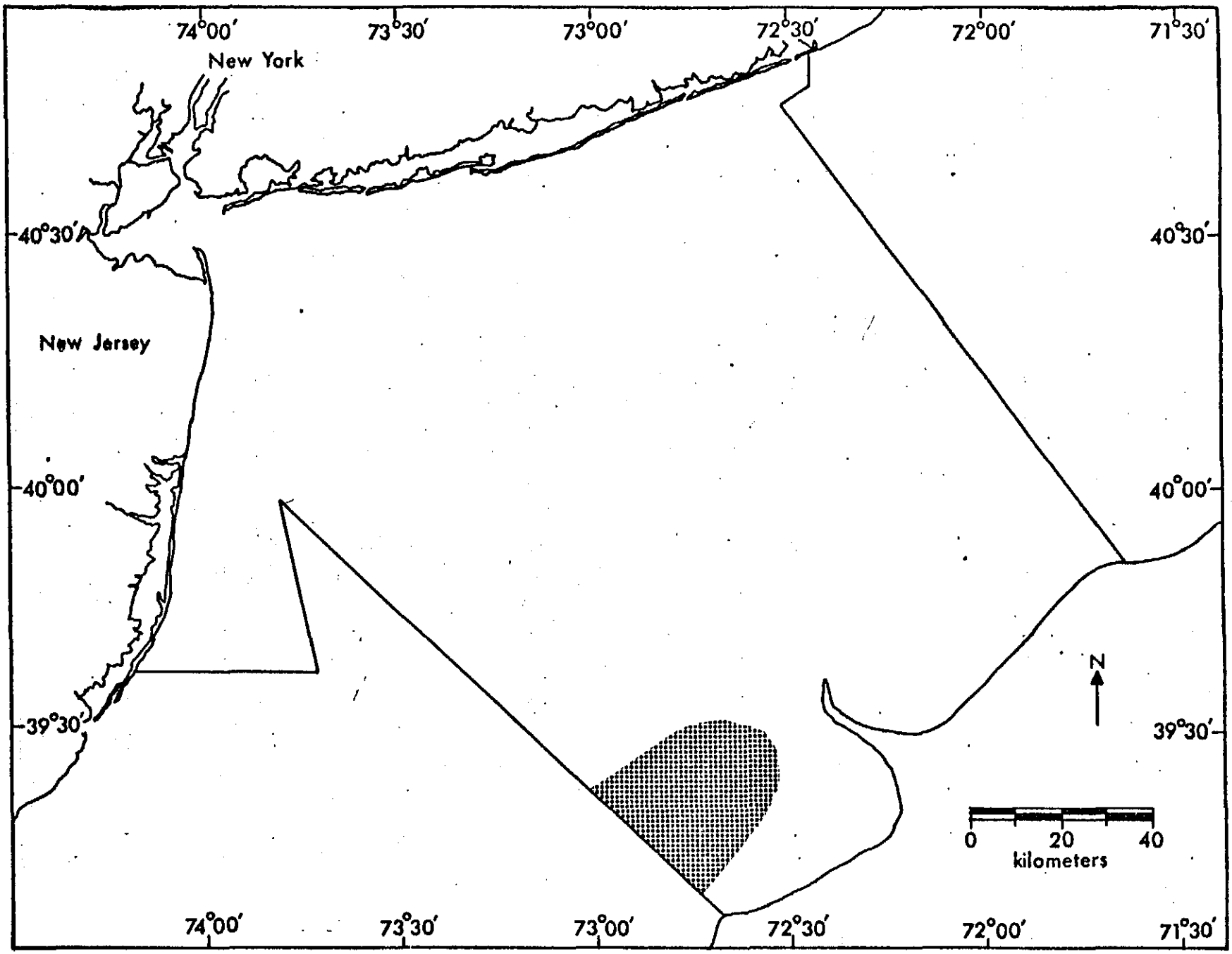

FIGURE 90.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, April 1975.

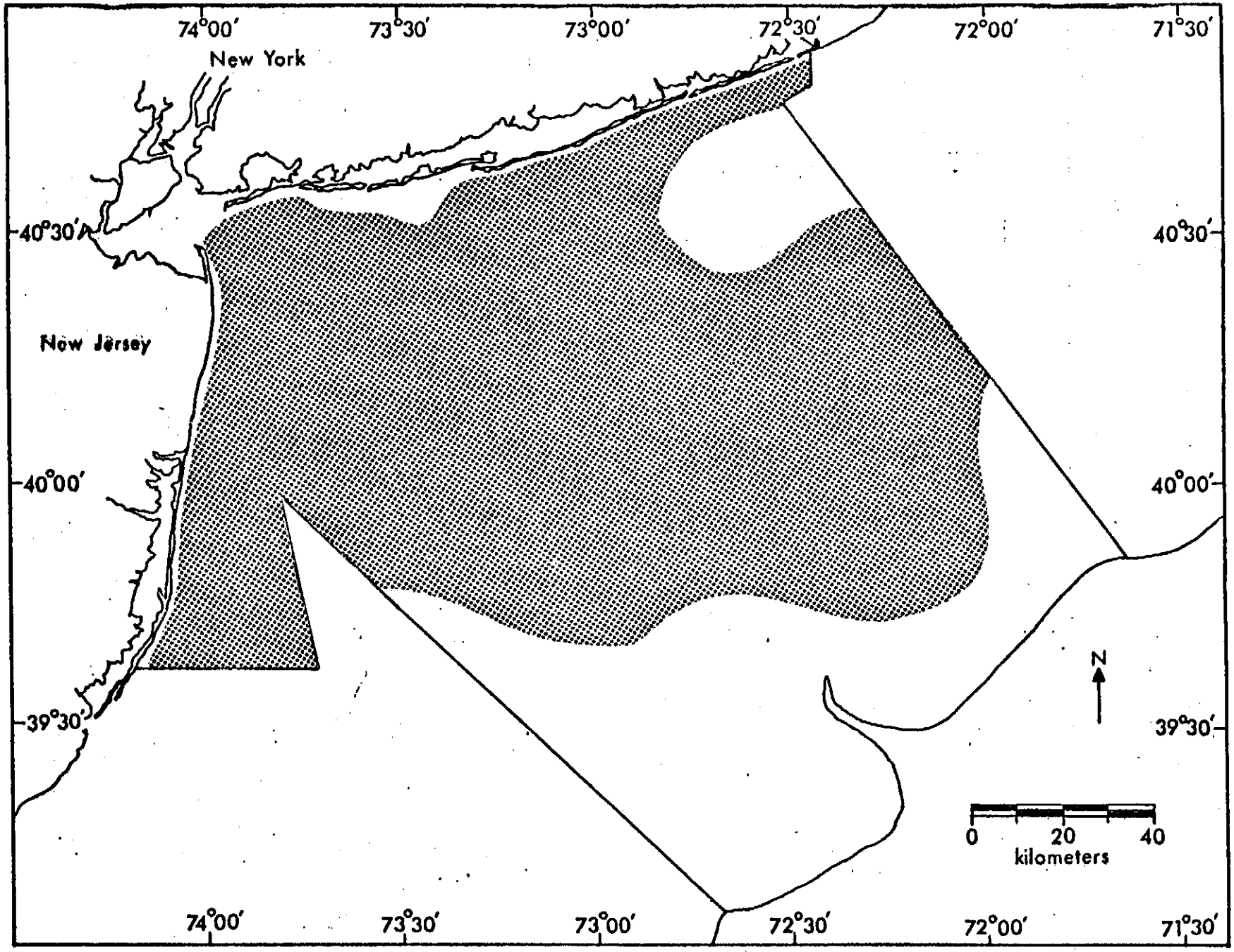

FIGURE 91.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, May 1975.

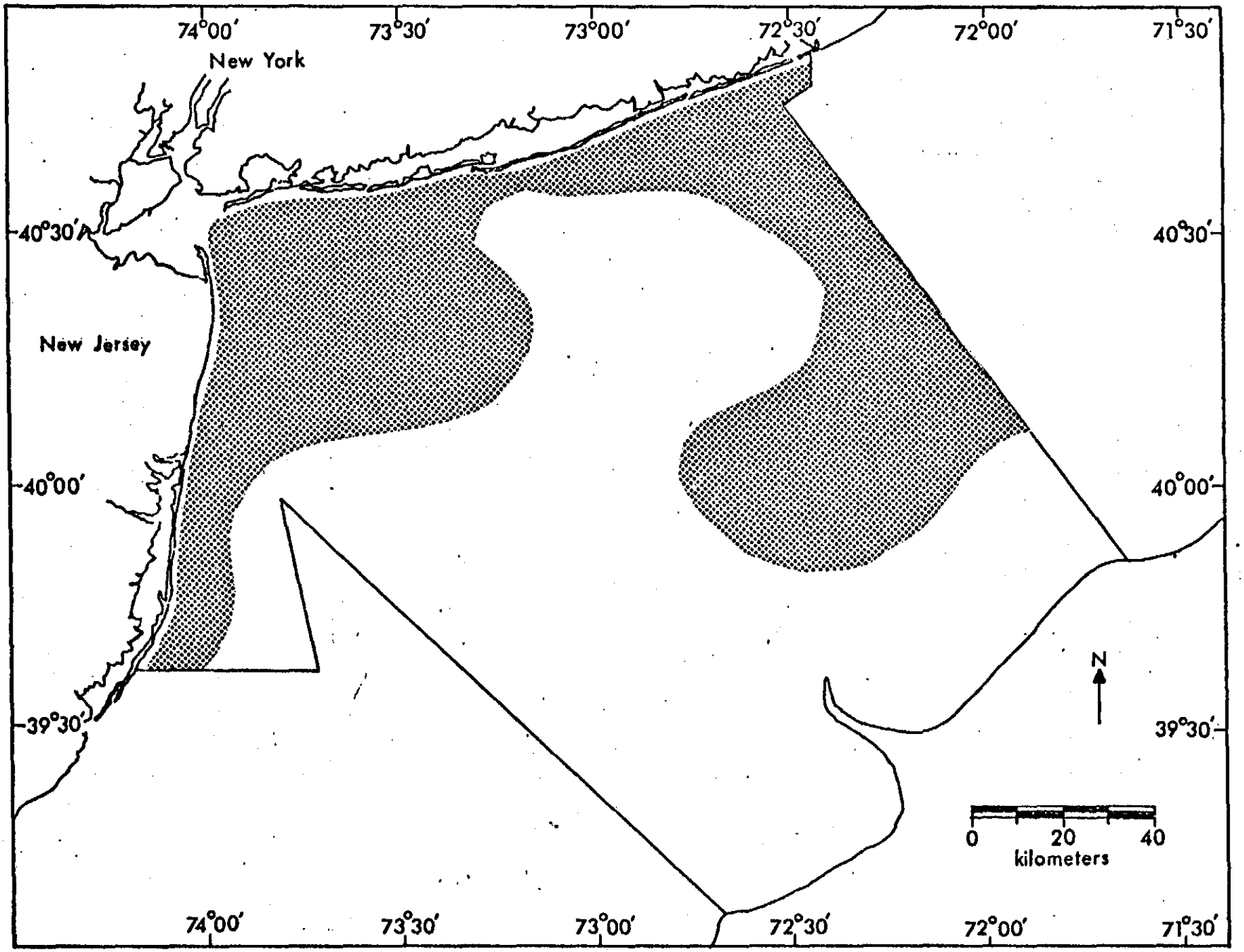

FIGURE 92.--Distribution of scup (Stenotomus chrysops) collected in New York Bight, June 1975.

WEAKFISH

(Cynoscion regalis)

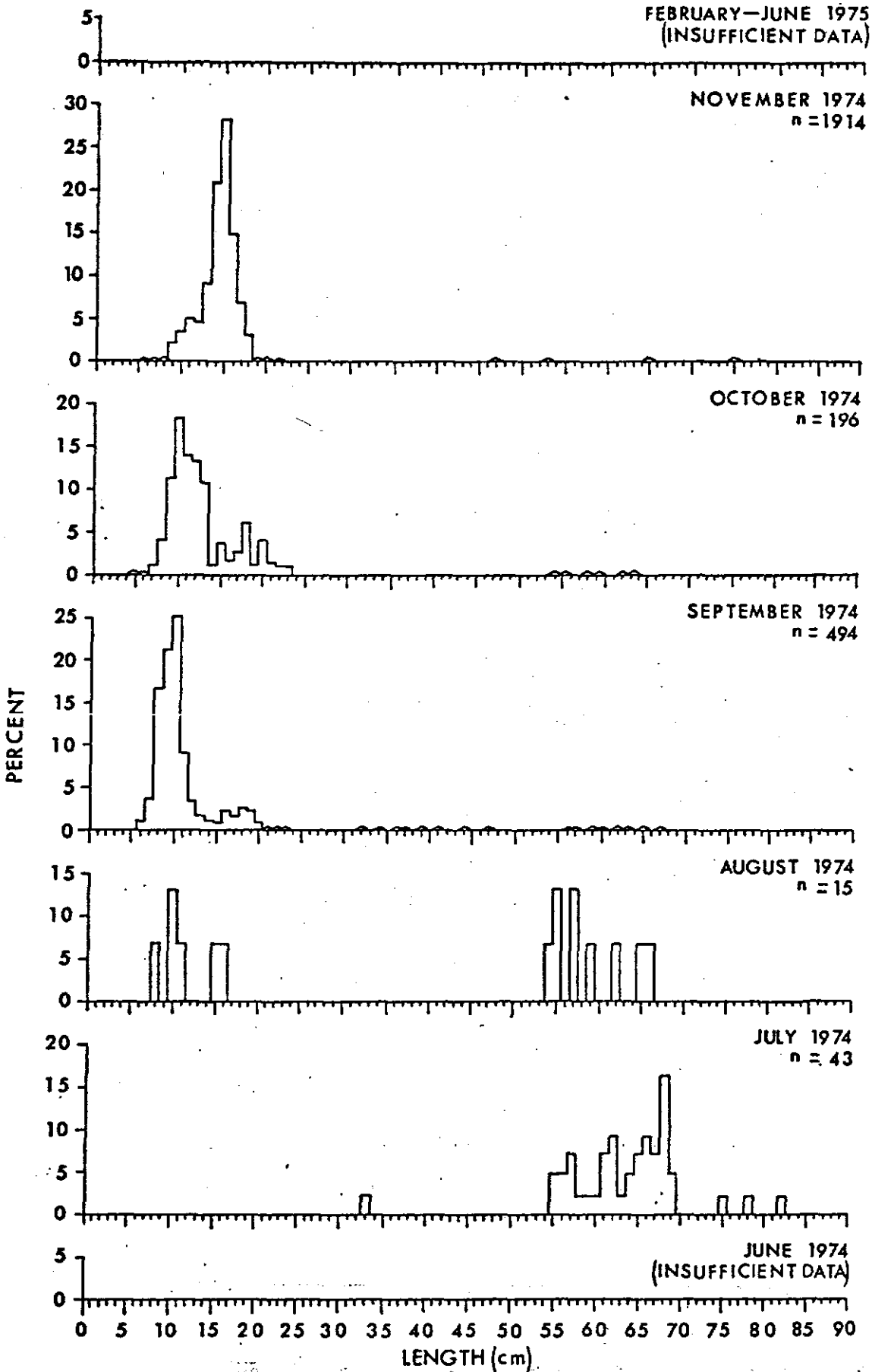

FIGURE 93.--Monthly length-frequency distributions of weakfish (Cynoscion regalis) collected in New York Bight, June 1974 to June 1974. (Δ indicates < 0.5%).

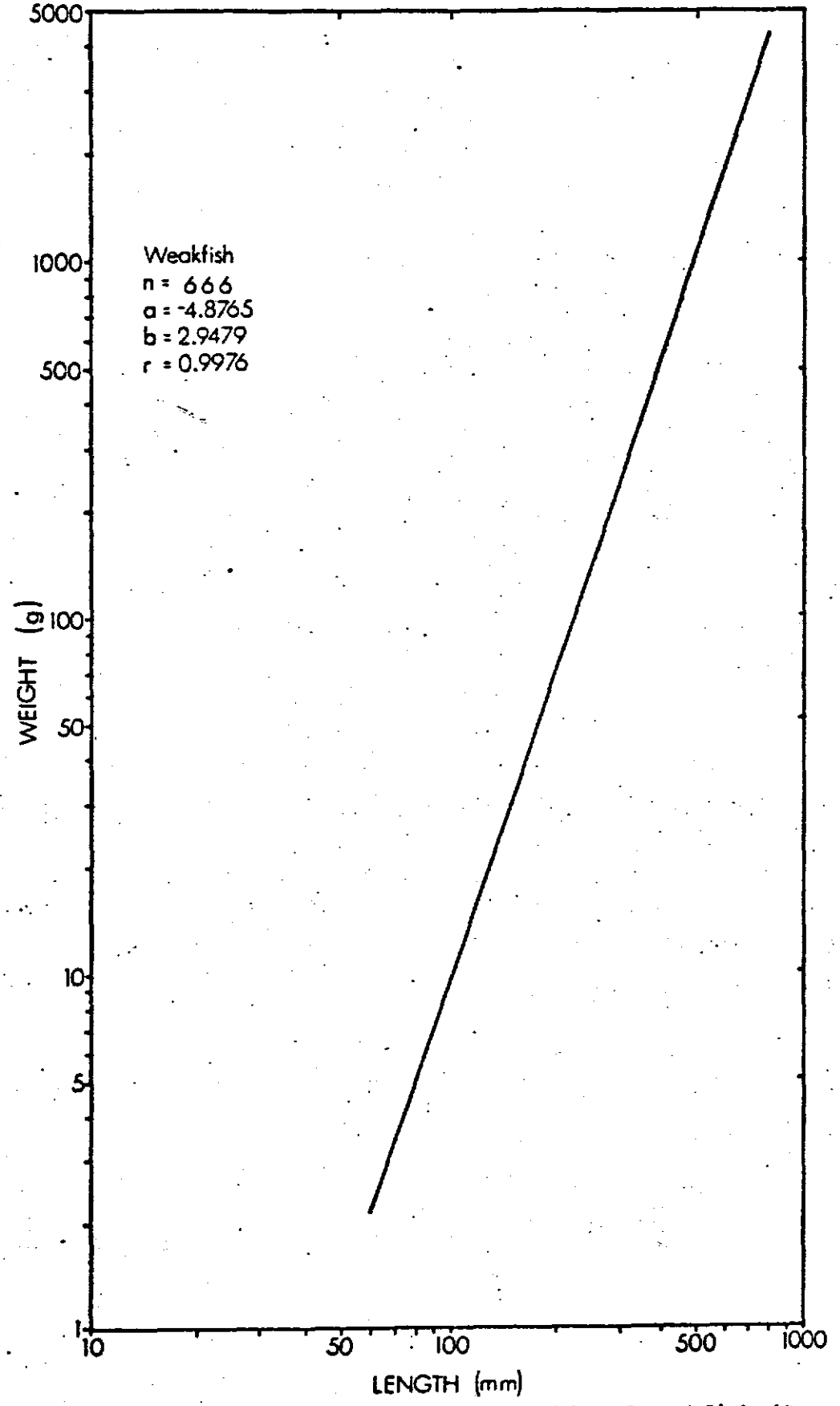

FIGURE 94.--Weight-length relationship of weakfish (Cynoscion regalis) collected in New York Bight, June 1974 to June 1975.

TABLE 7.--Monthly sex ratios of weakfish (Cynoscion regalis) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	1	1	100.0	-	-	-	-
July	48	23	47.9	25	52.1	-	-
August	15	8	53.3	1	6.7	6	40.0
September	255	14	5.5	8	3.1	233	91.4
October	117	7	6.0	2	1.7	108	92.3
November	232	1	0.4	3	1.3	228	98.3
January 1/	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	2	1	50.0	1	50.0	-	-
June	-	-	-	-	-	-	-
TOTAL	670	55	8.2	40	6.0	575	85.8

1/ Bay stations only.

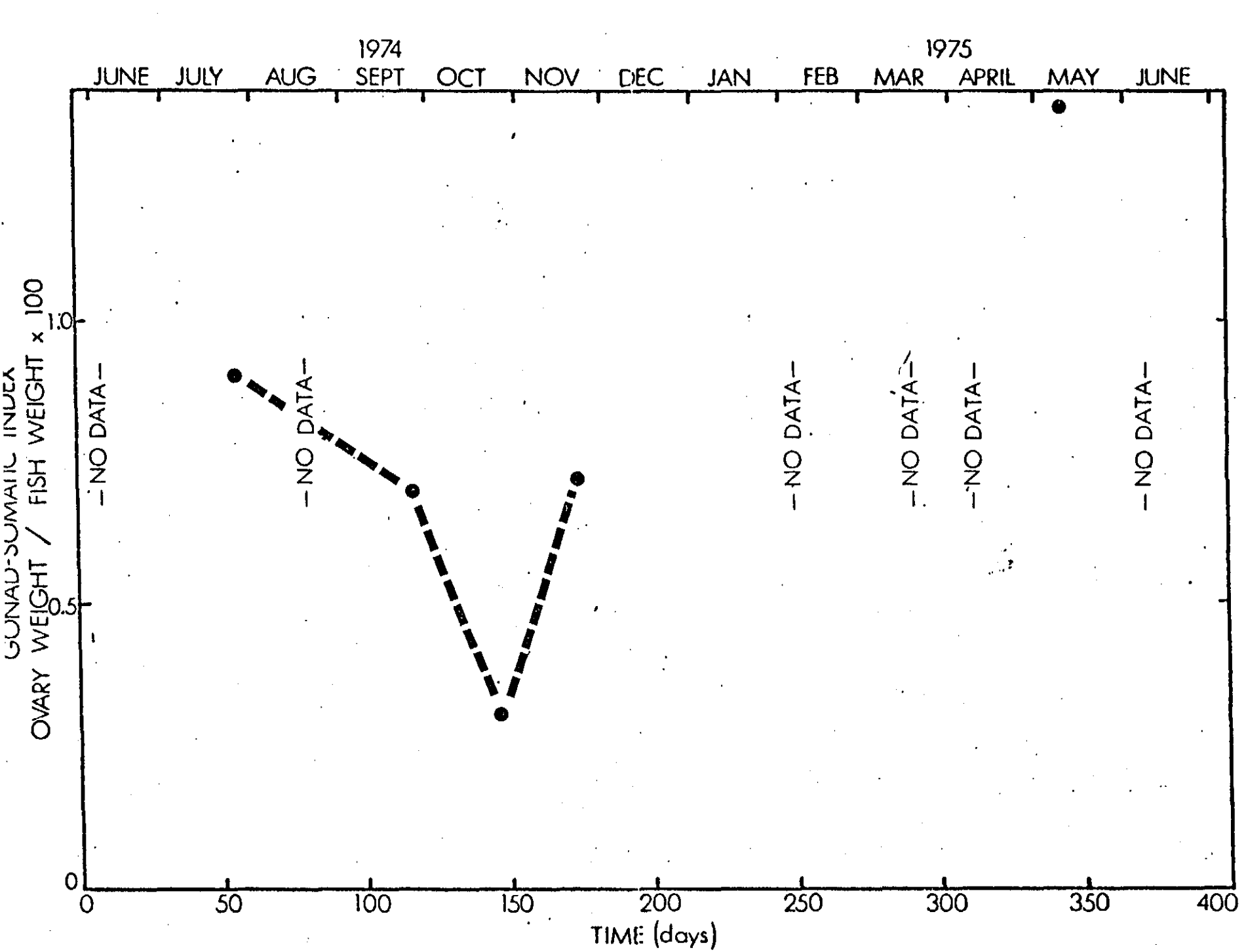

FIGURE 95.--Monthly gonad-somatic indices of weakfish (Cynoscion regalis) collected in New York Bight, June 1974 to June 1975.

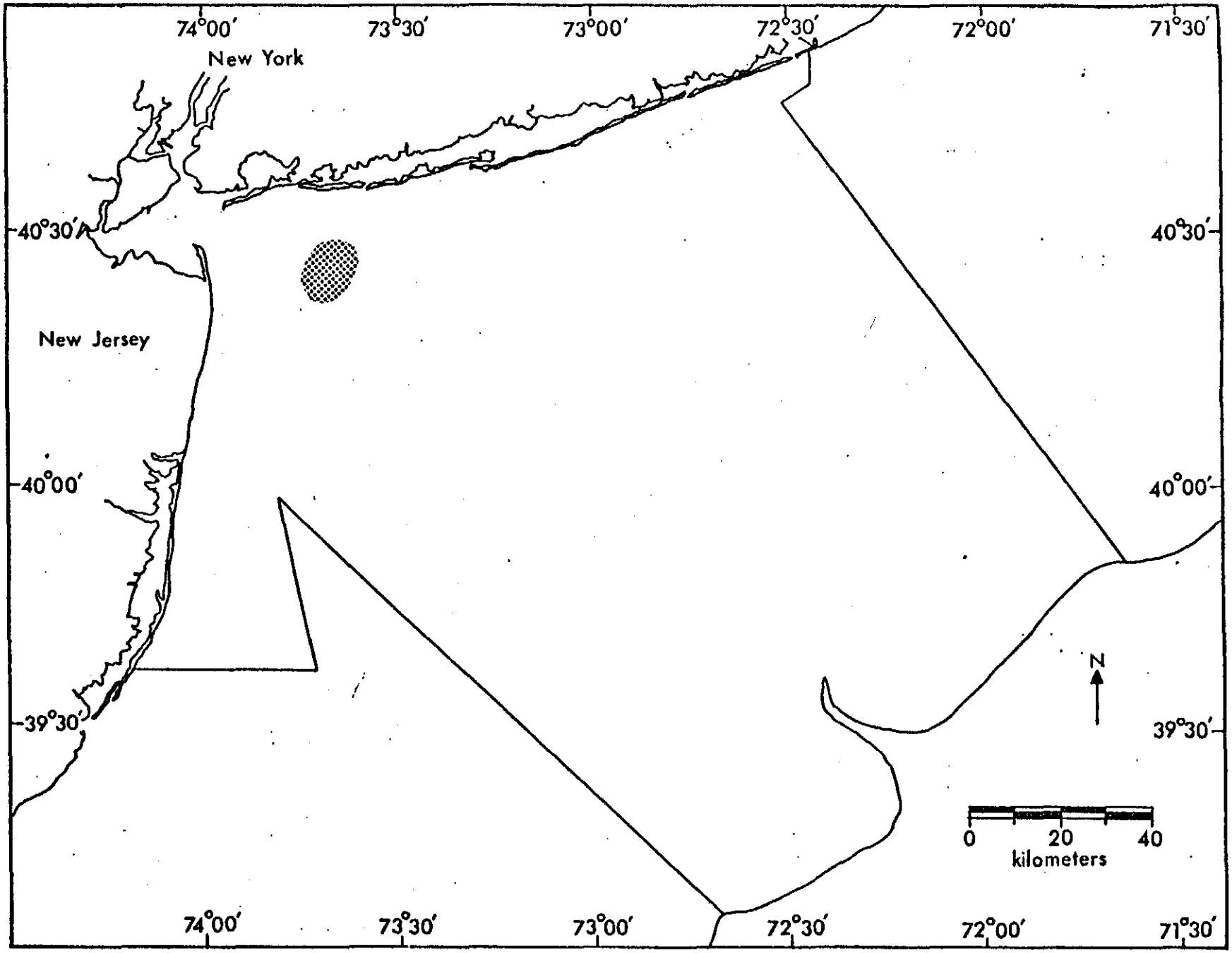

FIGURE 96.--Distribution of weakfish (Cynoscion regalis) collected in New York Bight, July 1974.

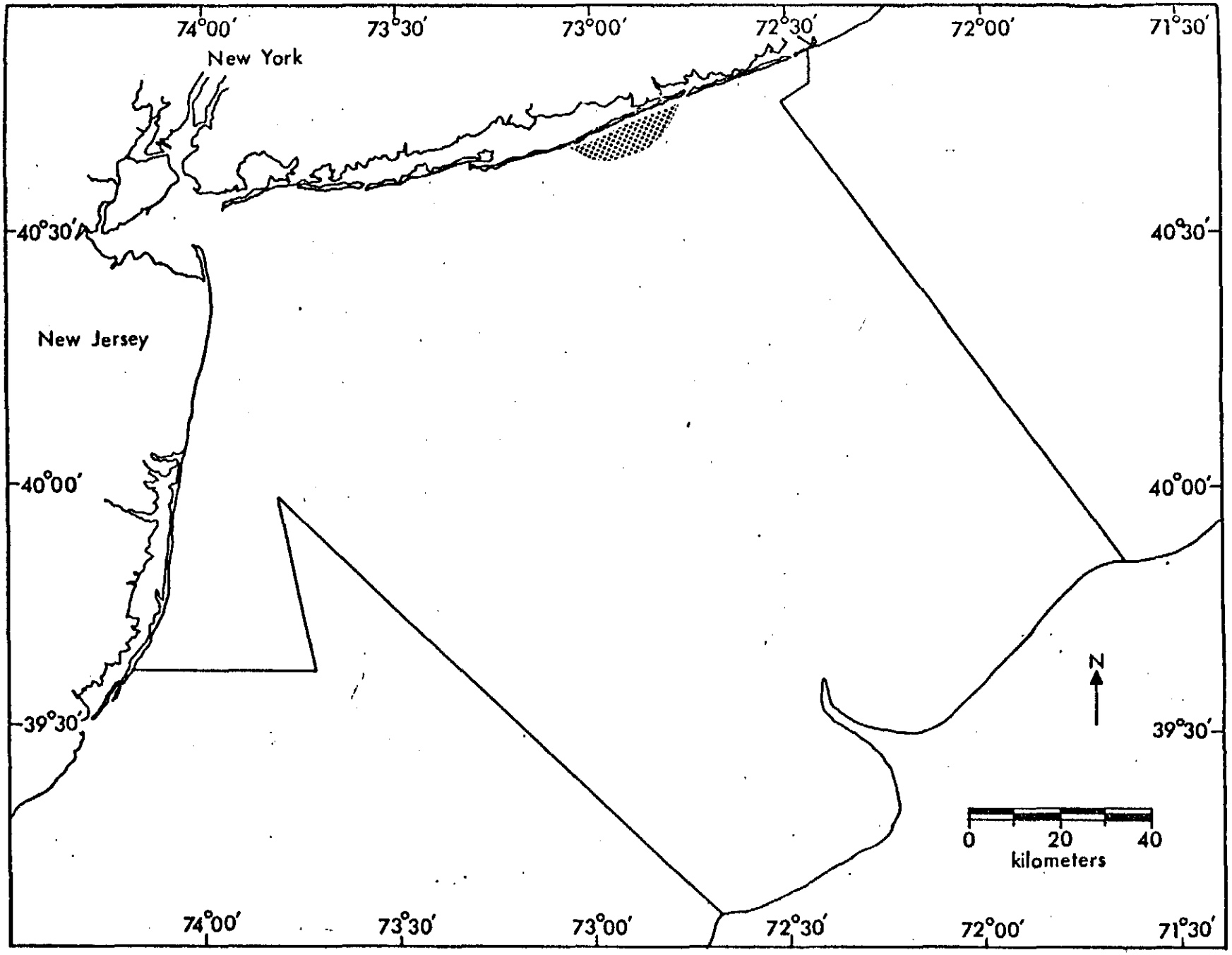

FIGURE 97.--Distribution of weakfish (Cynoscion regalis) collected in New York Bight, August 1974.

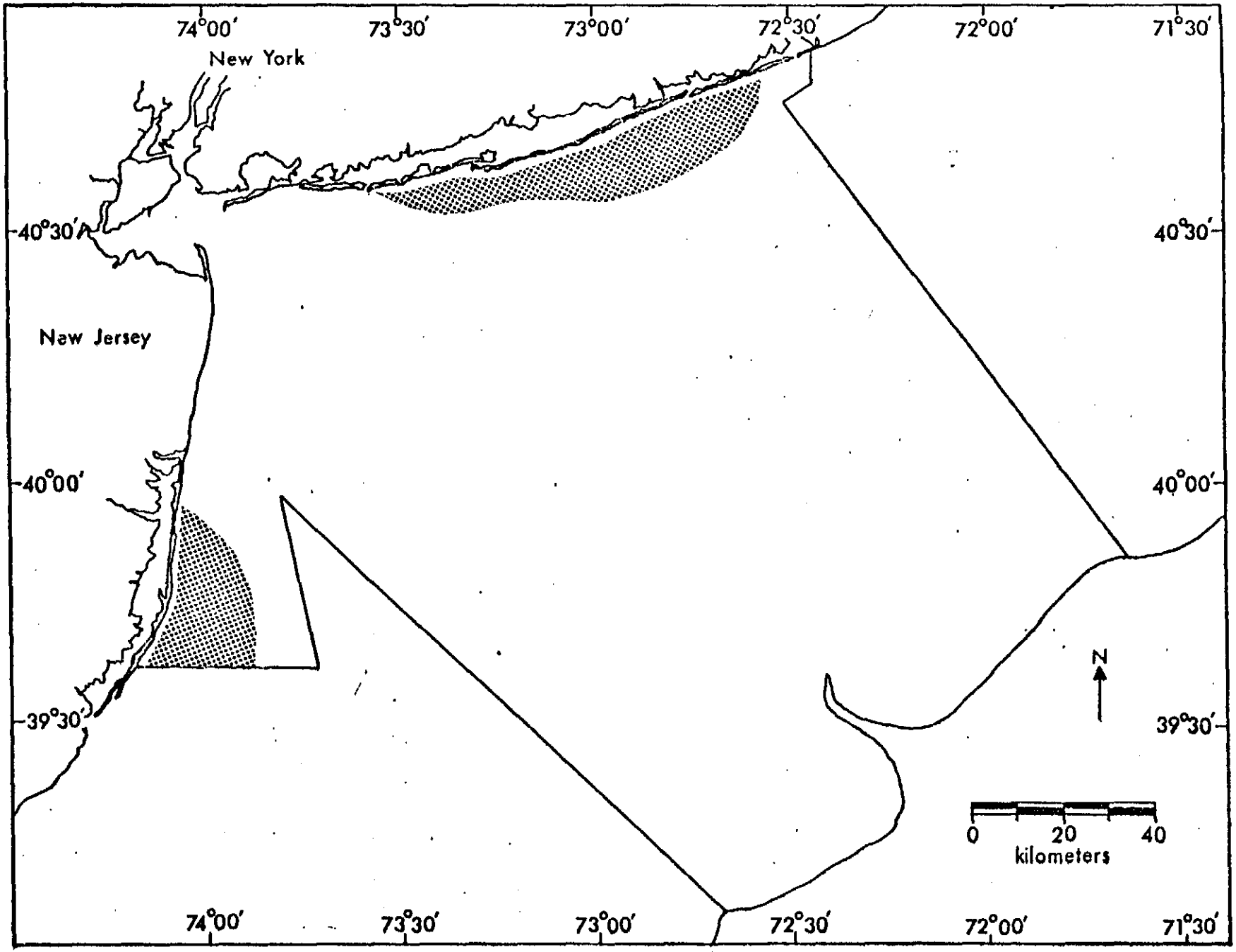

FIGURE 98.--Distribution of weakfish (Cynoscion regalis) collected in New York Bight, September 1974.

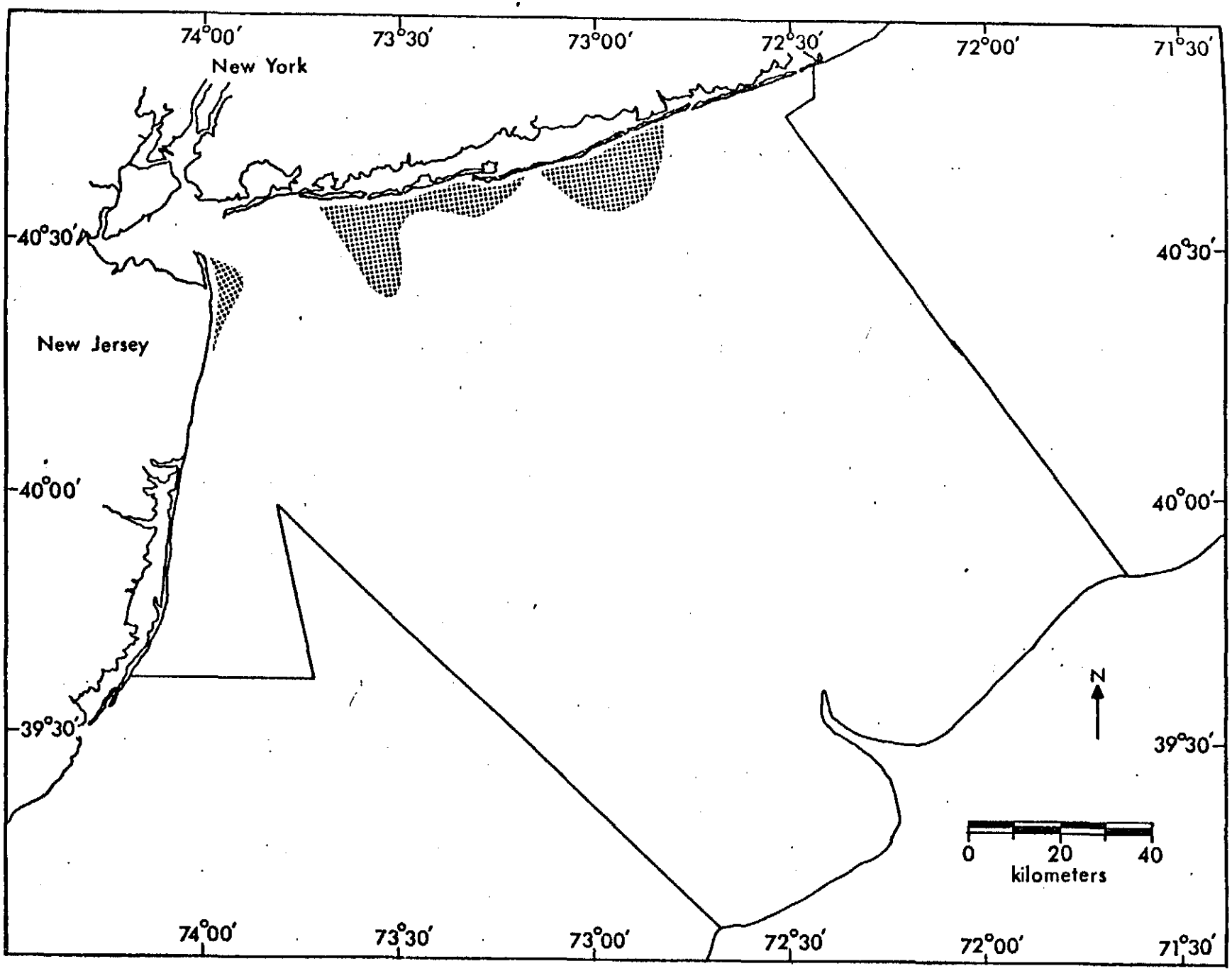

FIGURE 99.--Distribution of weakfish (Cynoscion regalis) collected in New York Bight, October 1974.

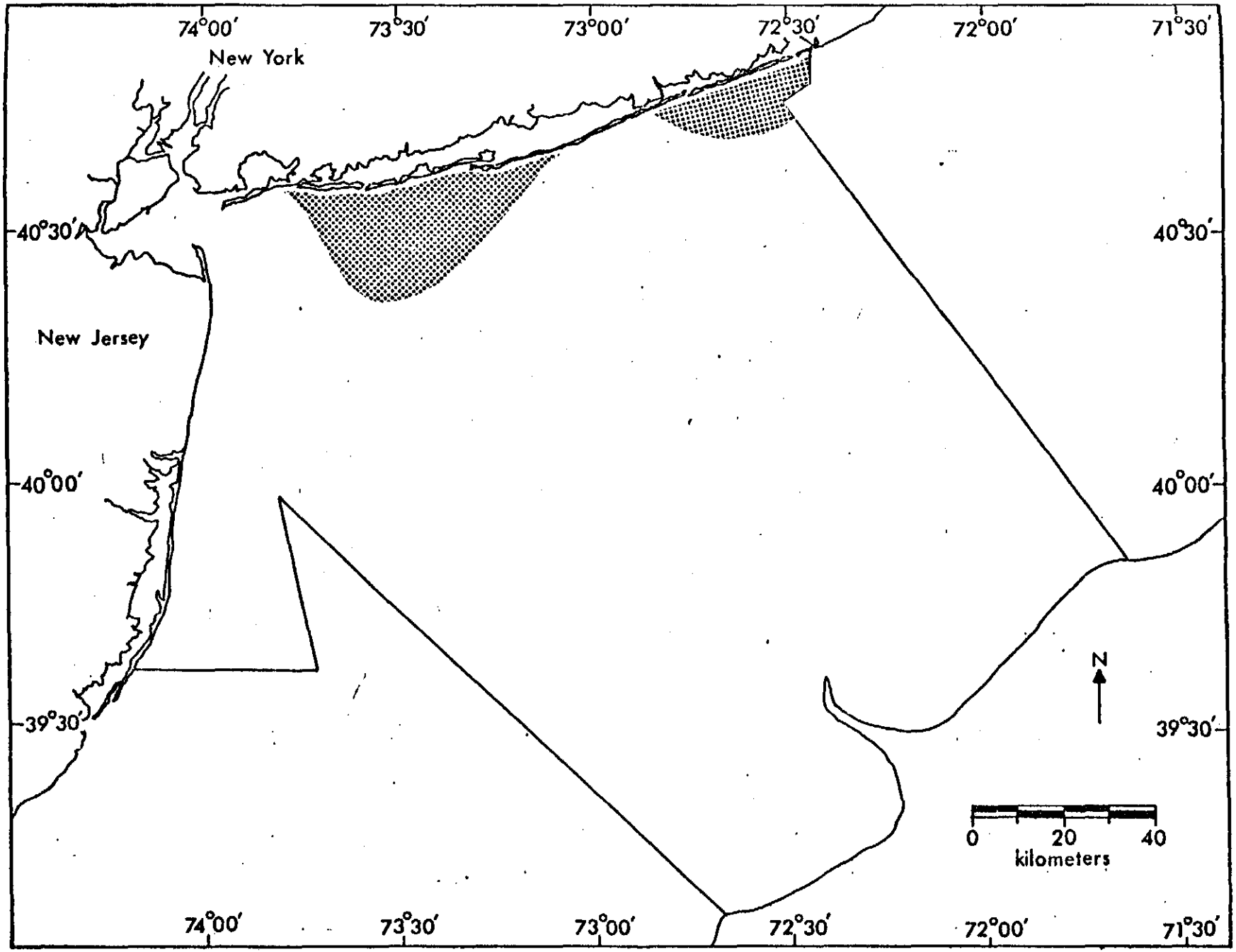

FIGURE 100.--Distribution of weakfish (Cynoscion regalis) collected in New York Bight, November 1974.

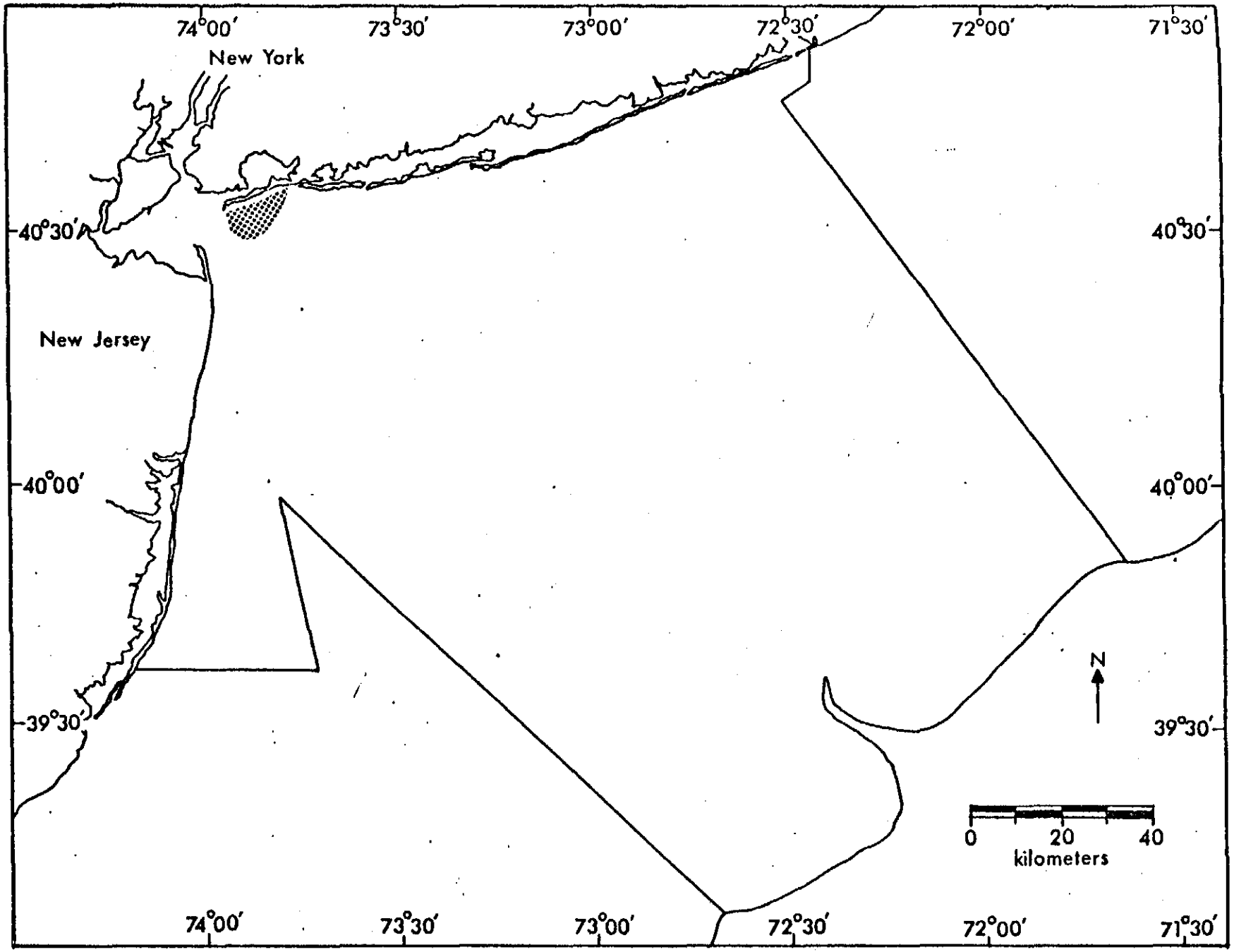

FIGURE 101.--Distribution of weakfish (Cynoscion regalis) collected in New York Bight, May 1975.

BUTTERFISH

(Peprilus triacanthus)

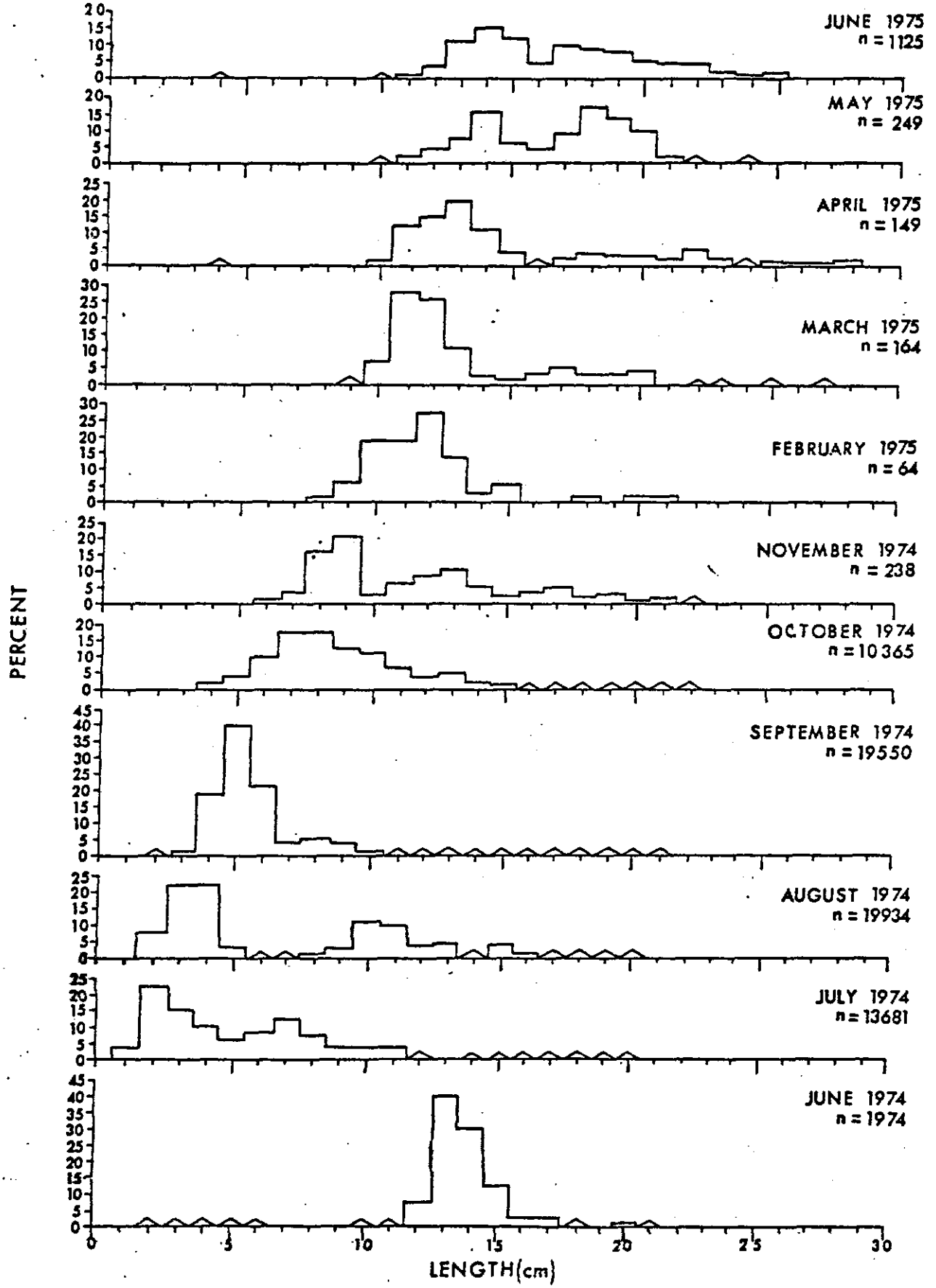

FIGURE 102.--Monthly length-frequency distributions of butterfish (Peprilus triacanthus) collected in New York Bight, June 1974 to June 1975. (Δ indicates <0.5%).

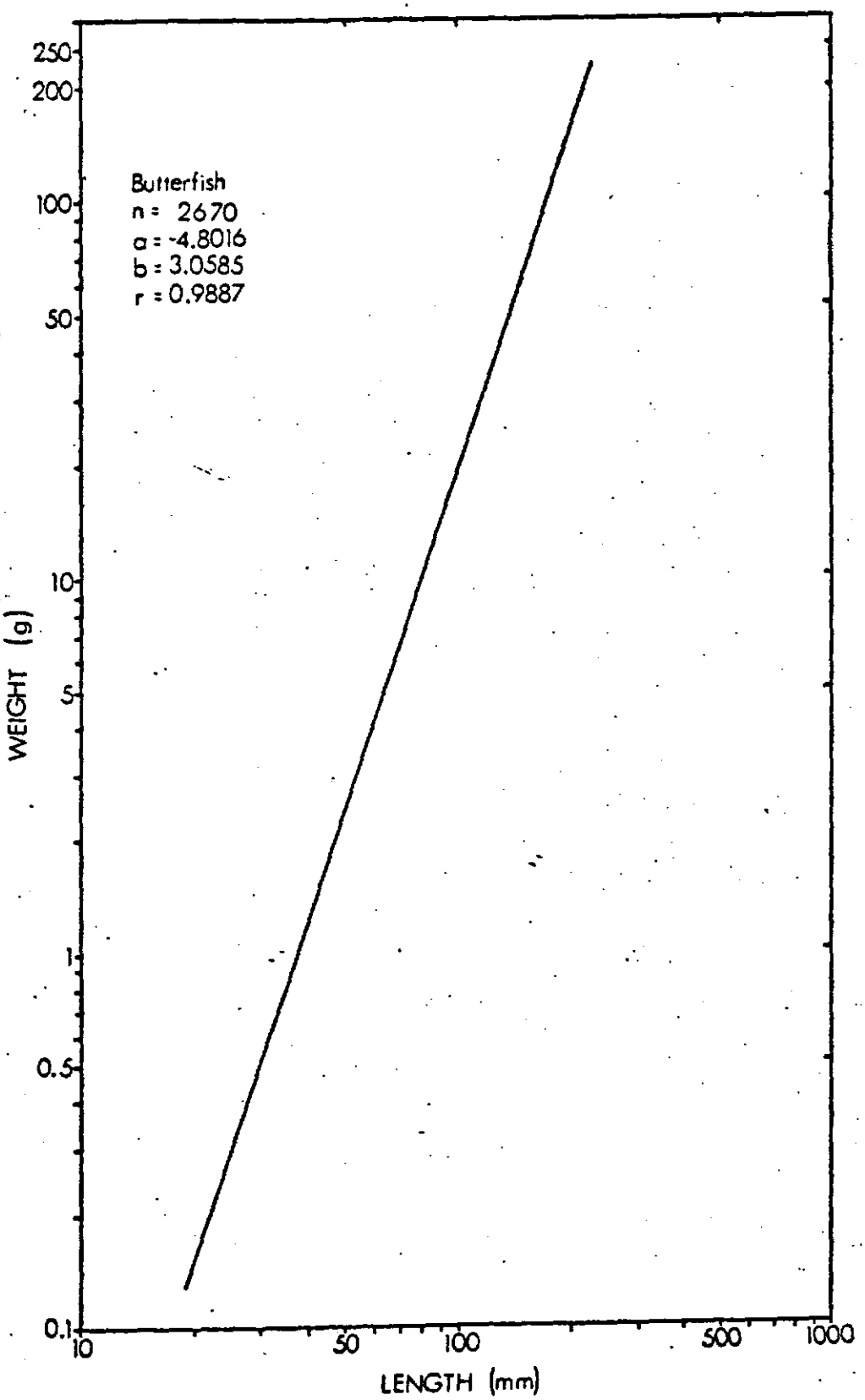

FIGURE 103.--Weight-length relationship of butterfish (Peprilus triacanthus) collected in New York Bight, June 1974 to June 1975.

TABLE 8.--Monthly sex ratios of butterfish (Peprilus triacanthus) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	343	121	35.3	107	31.2	115	33.5
July	236	36	15.3	25	10.6	175	74.1
August	549	48	8.7	37	6.7	464	84.6
September	330	17	5.1	21	6.4	292	88.5
October	379	32	8.4	34	9.0	313	82.6
November	120	8	6.7	24	20.0	88	73.3
January 1/	-	-	-	-	-	-	-
February	42	2	4.8	1	2.4	39	92.8
March	81	22	27.2	30	37.0	29	35.8
April	117	45	38.5	30	25.6	42	35.9
May	218	97	44.5	96	44.0	25	11.5
June	271	131	48.3	106	39.1	34	12.5
TOTAL	2686	559	20.8	511	19.0	1616	60.2

1/ Bay stations only.

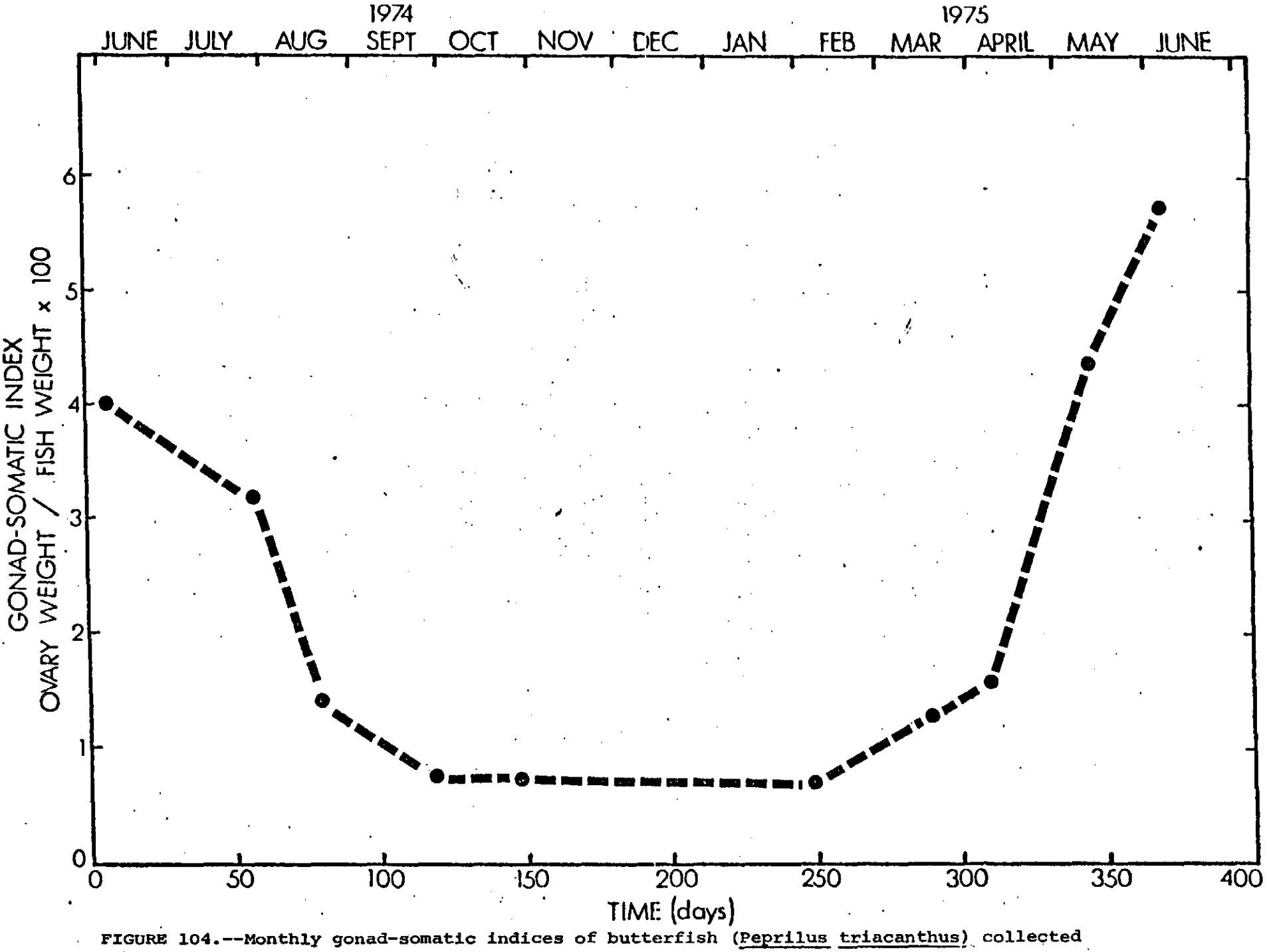

FIGURE 104.--Monthly gonad-somatic indices of butterfish (Peprilus triacanthus) collected in New York Bight, June 1974 to June 1975.

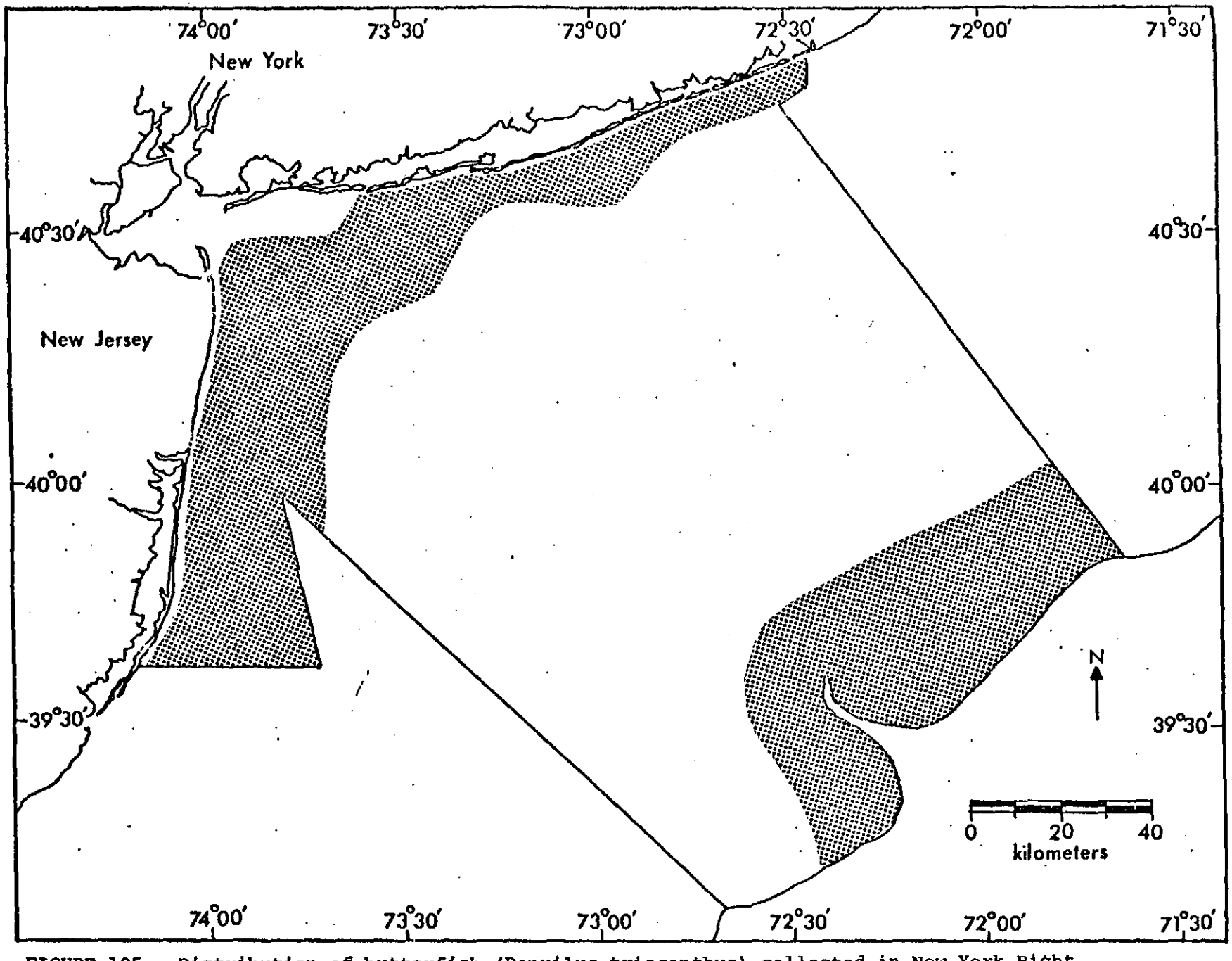

FIGURE 105.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, June 1974.

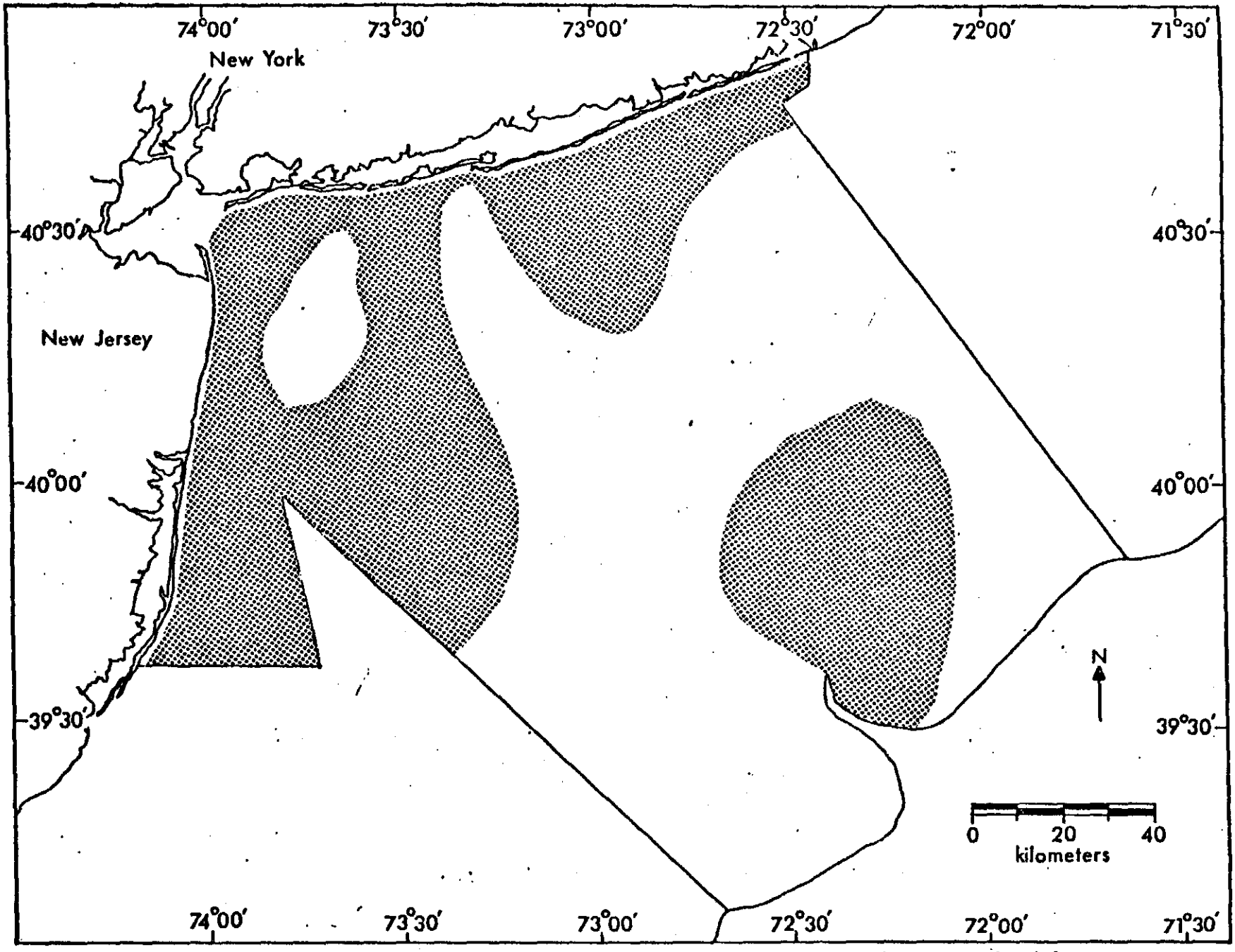

FIGURE 106.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, July 1974.

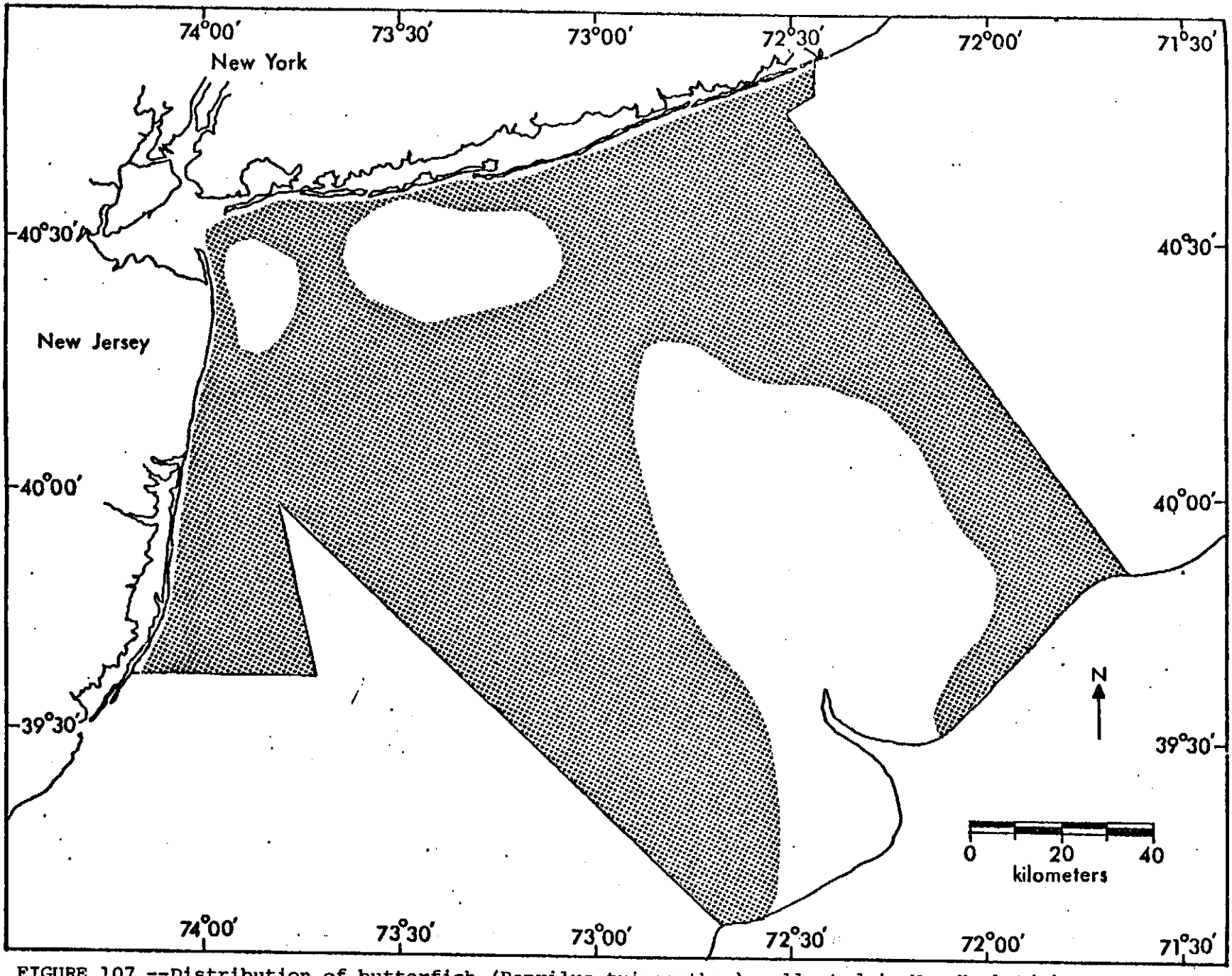

FIGURE 107.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, August 1974.

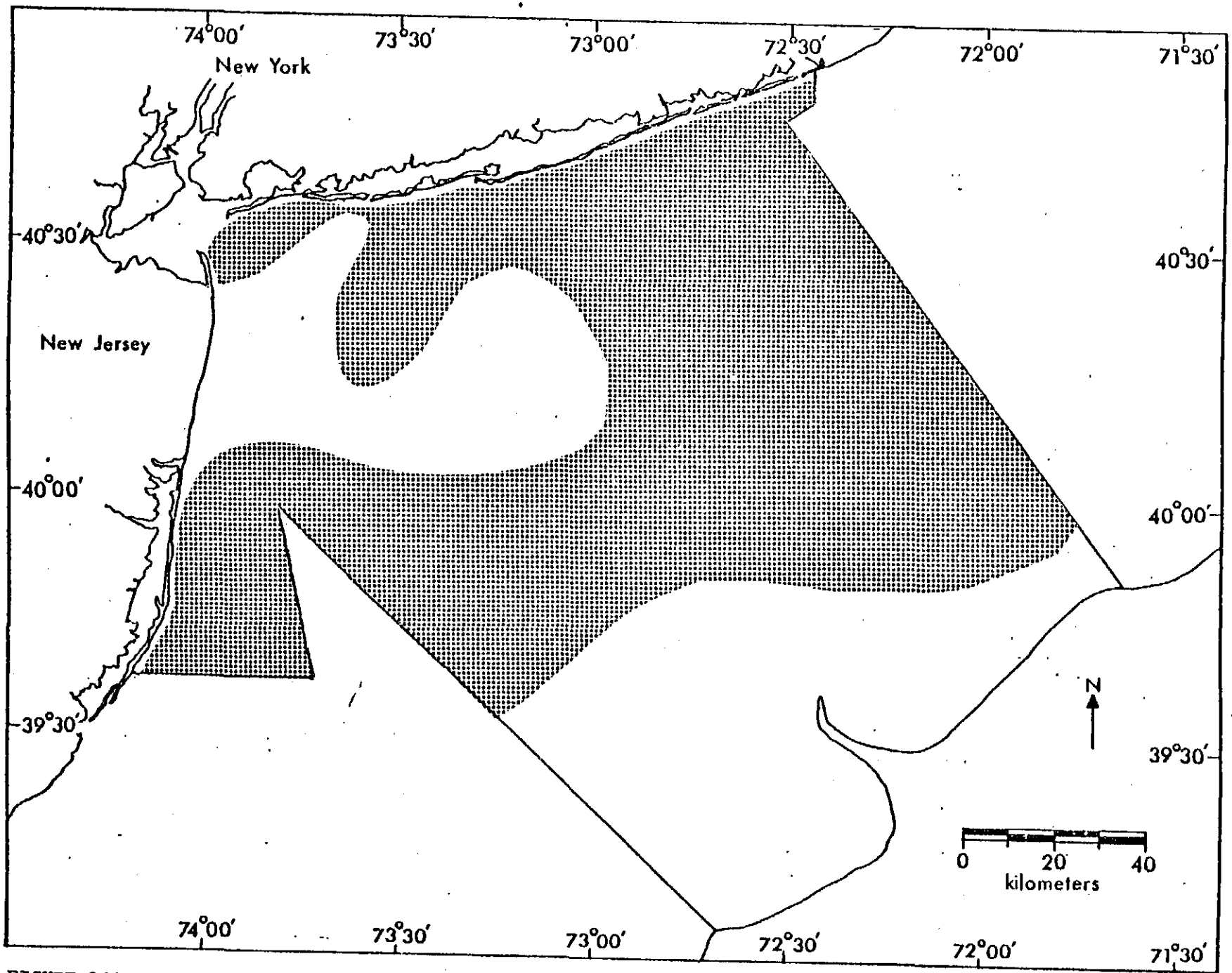

FIGURE 108.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, September 1974.

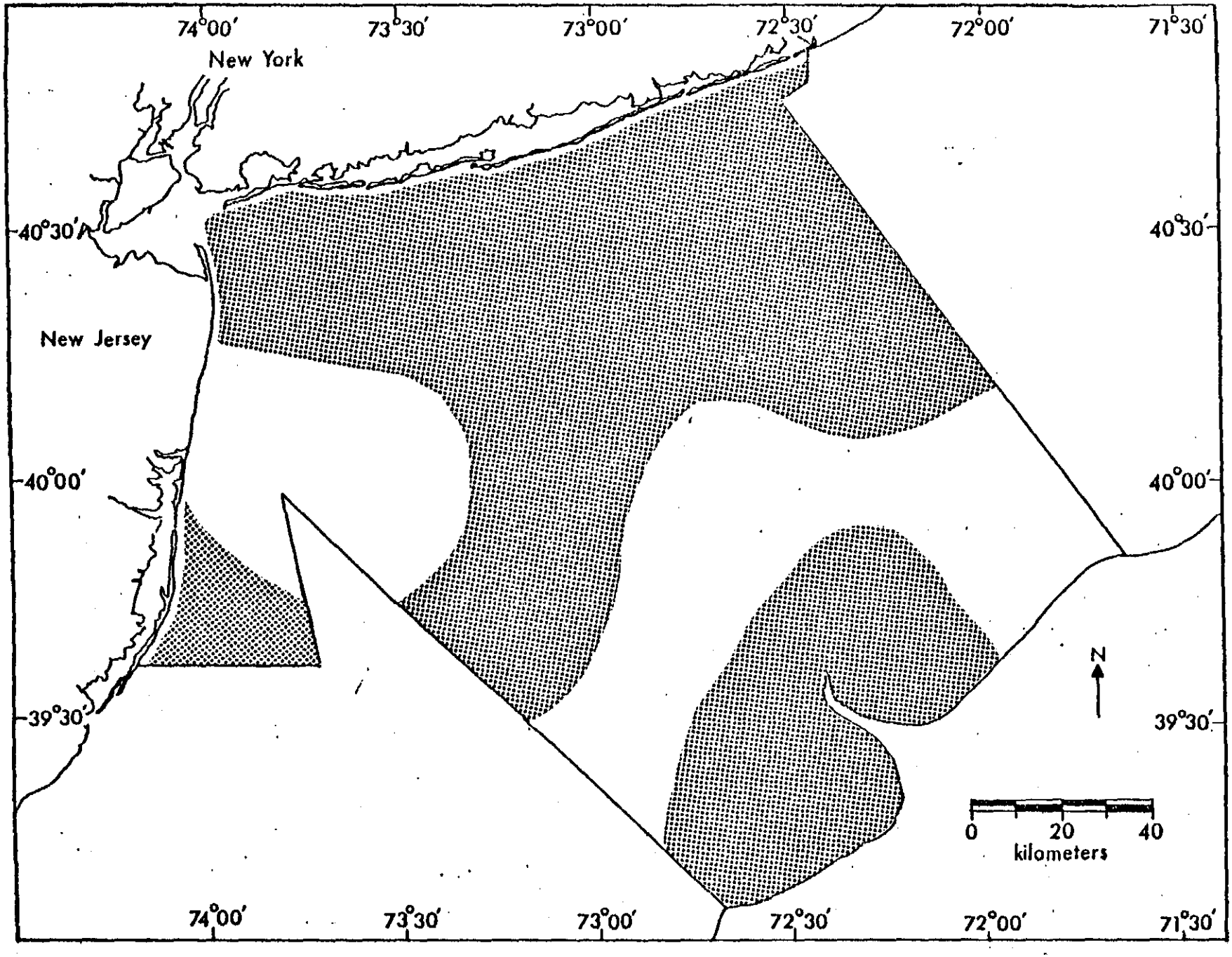

FIGURE 109.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, October 1974.

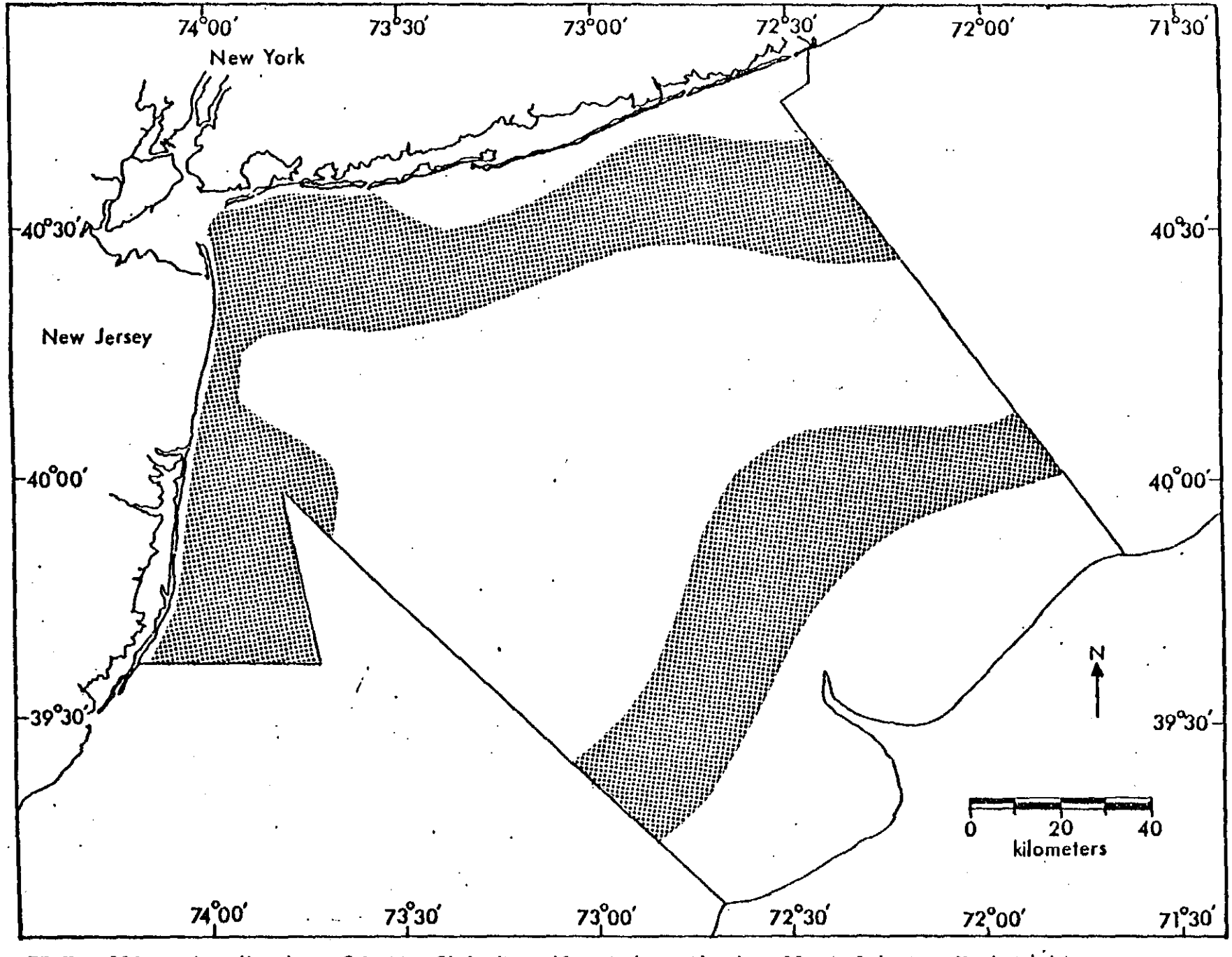

FIGURE 110.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, November 1974.

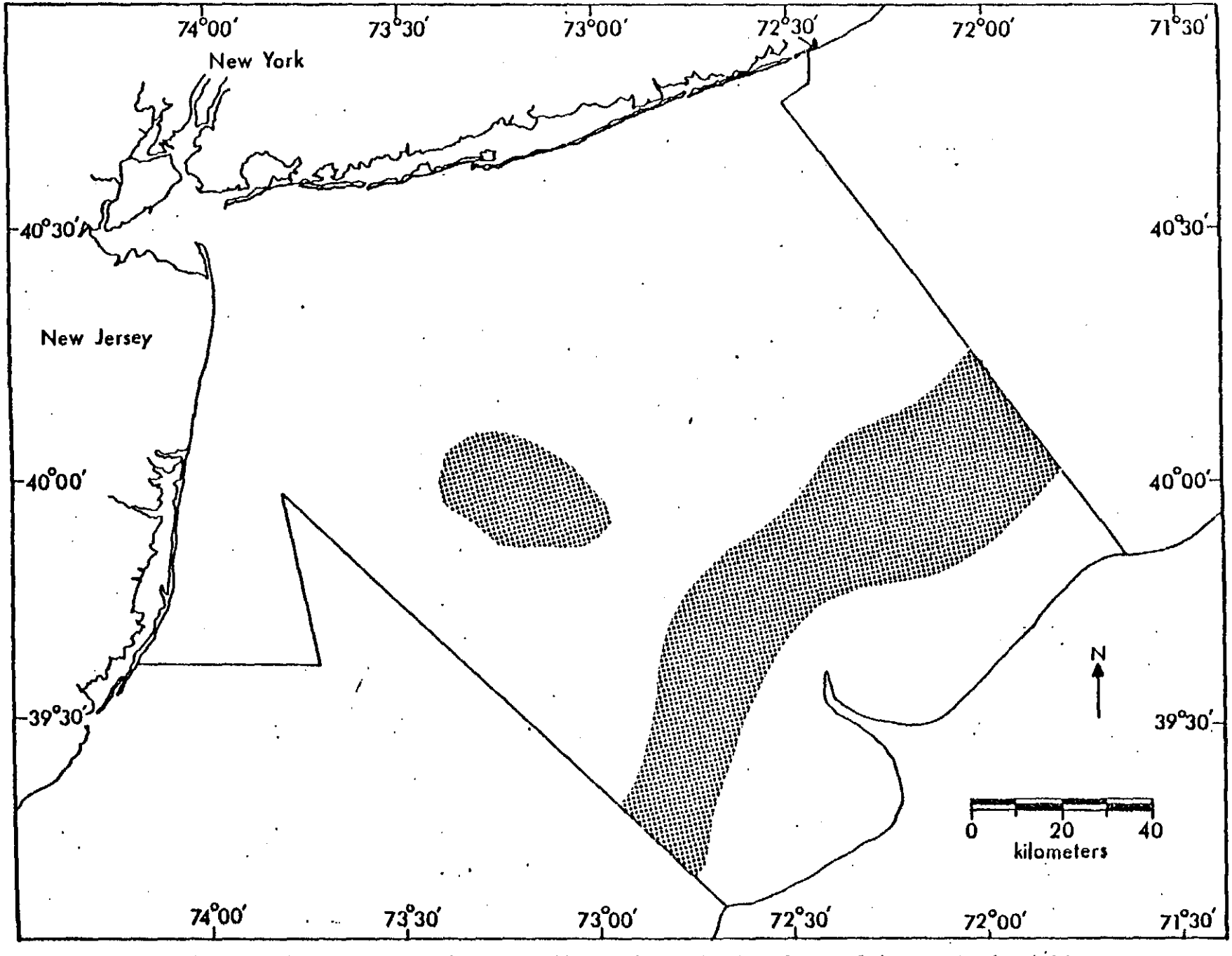

FIGURE 111.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, February 1975.

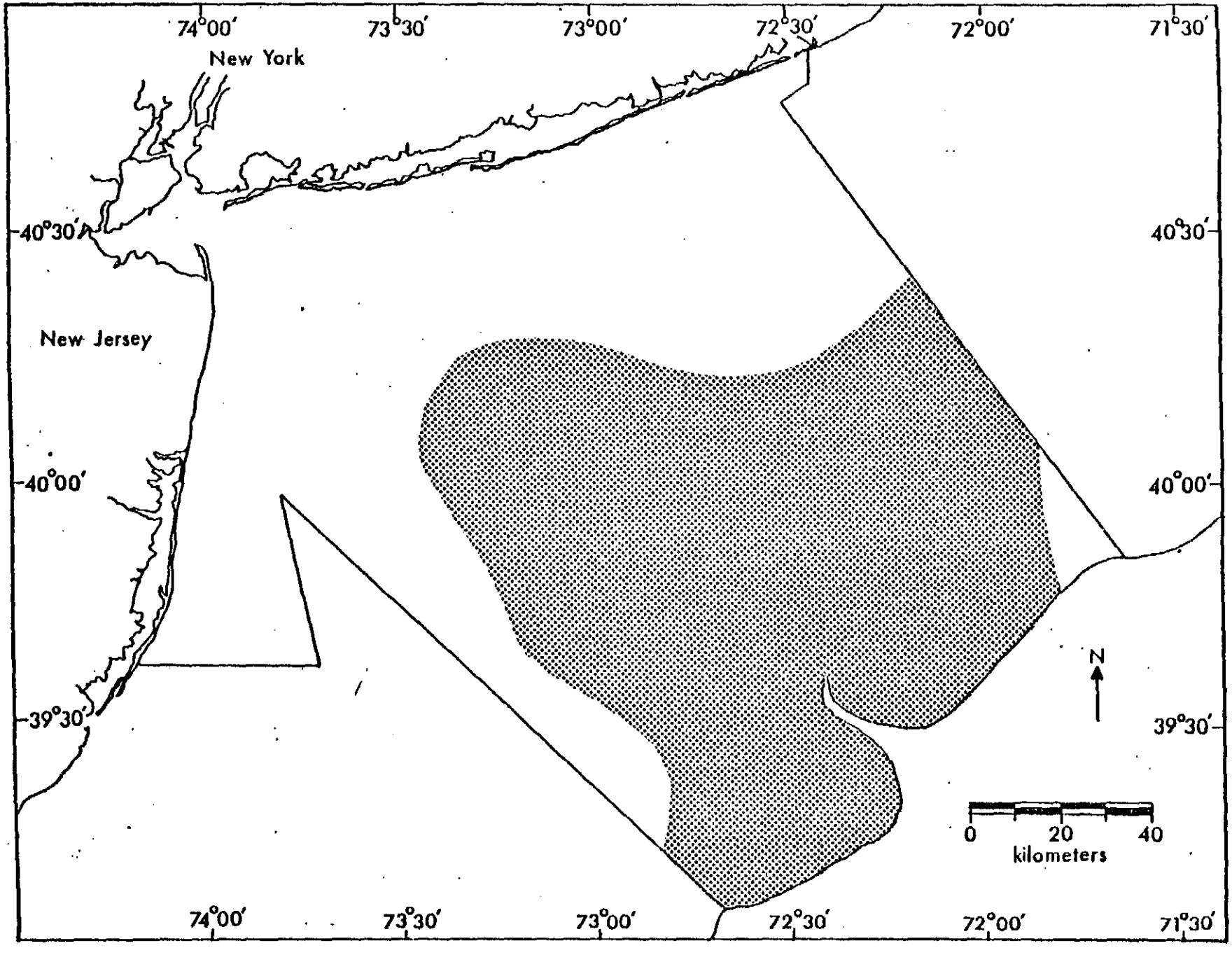

FIGURE 112.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, March 1975.

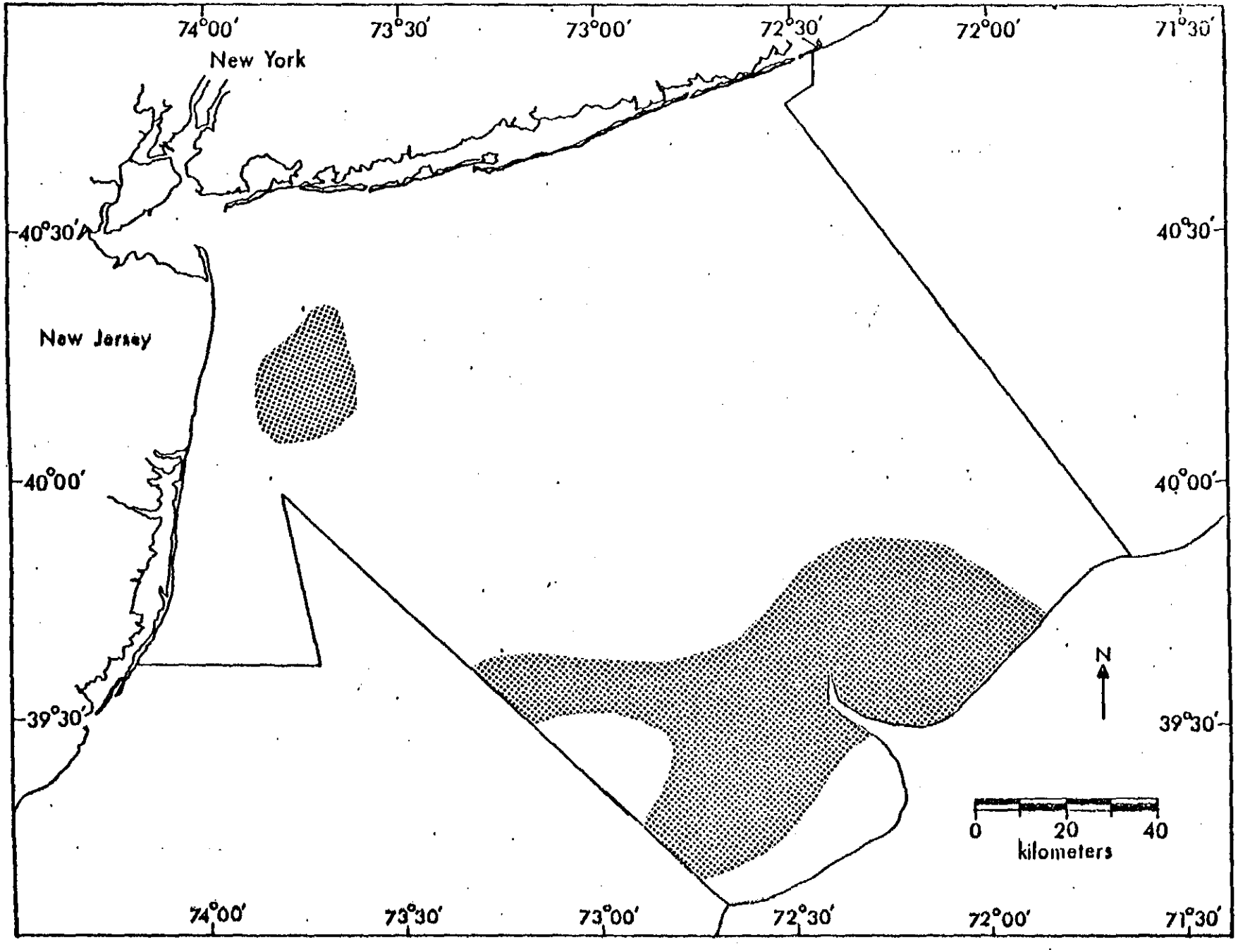

FIGURE 113.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, April 1975.

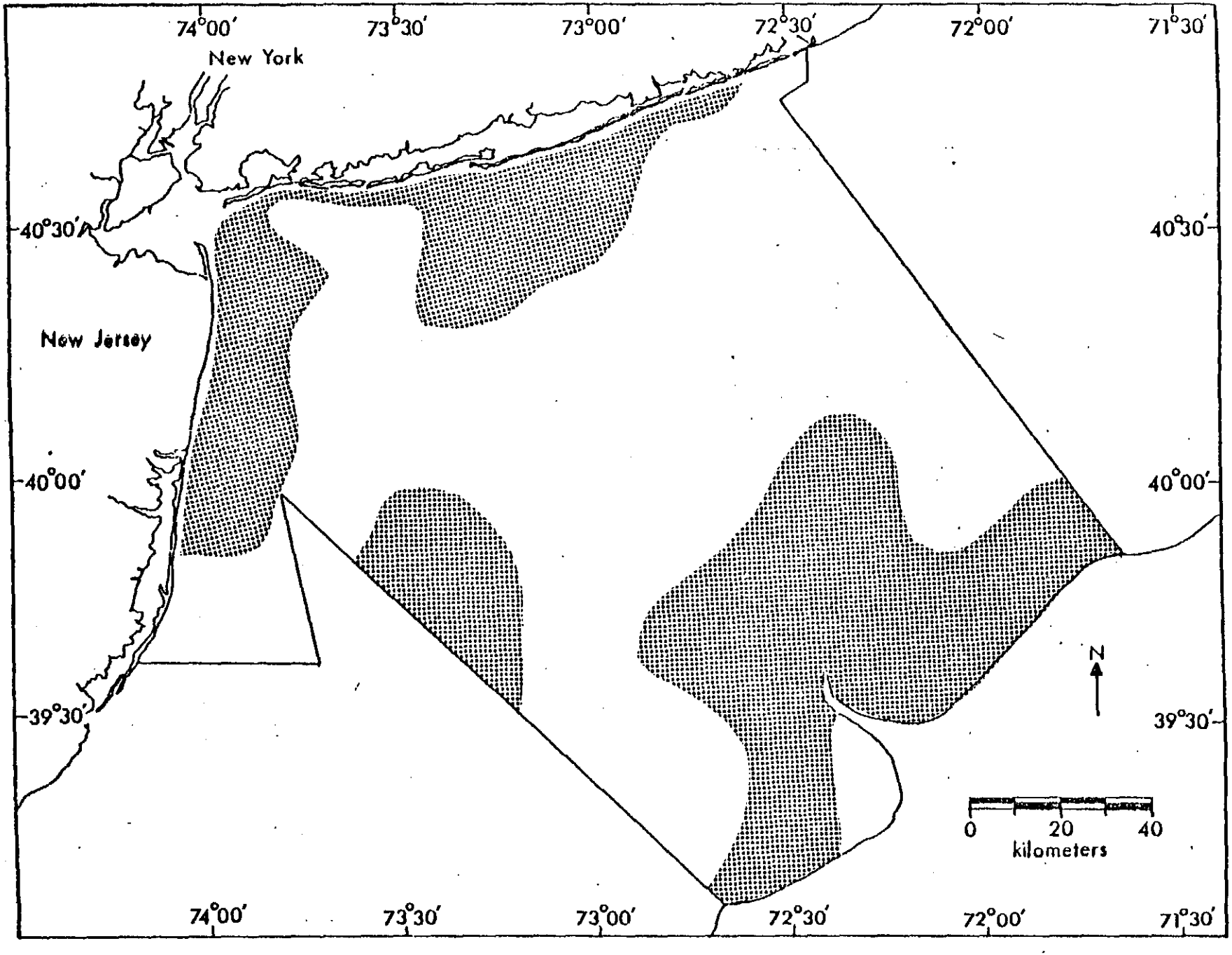

FIGURE 114.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, May 1975.

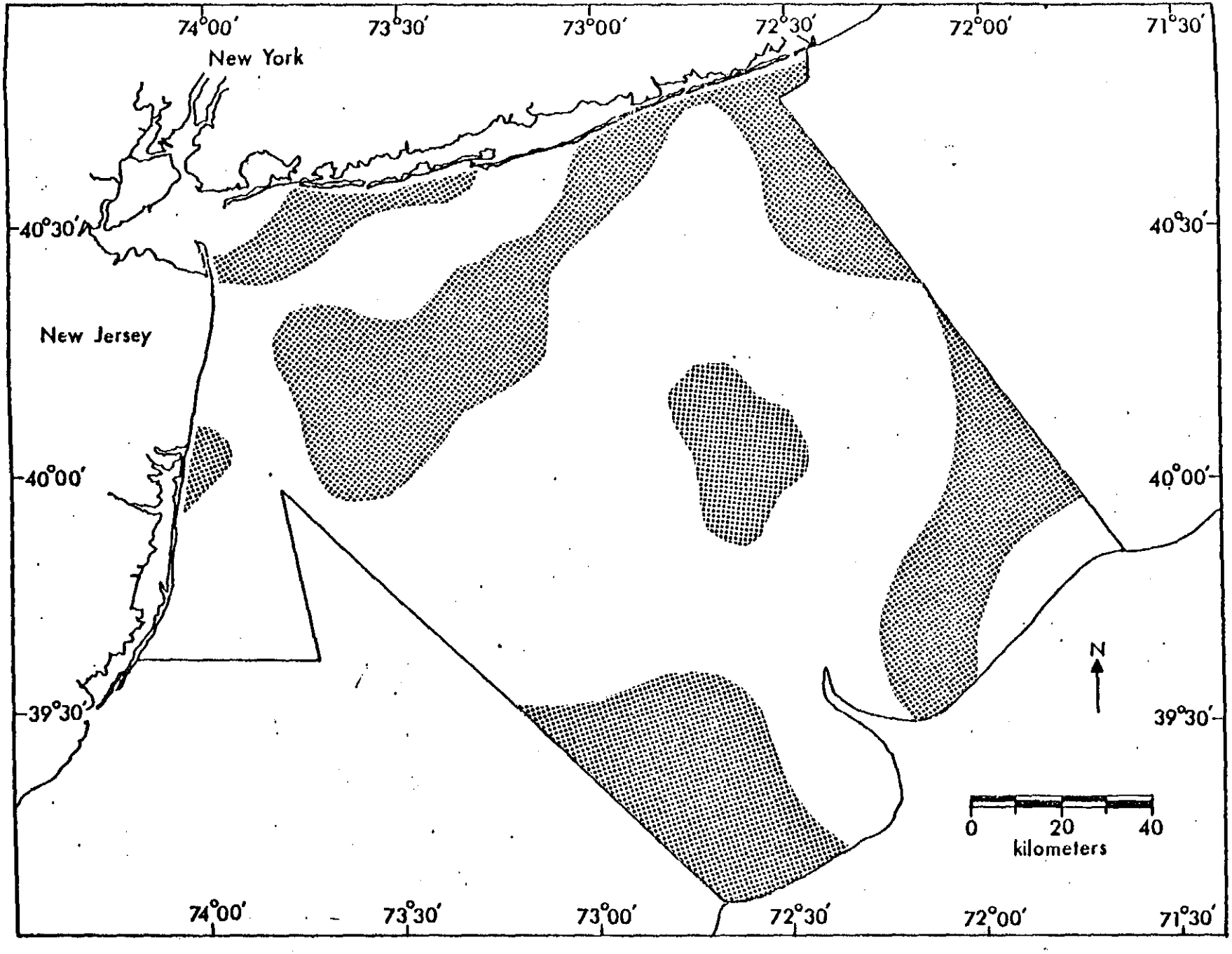

FIGURE 115.--Distribution of butterfish (Peprilus triacanthus) collected in New York Bight, June 1975.

NORTHERN SEAROBIN

(Prionotus carolinus)

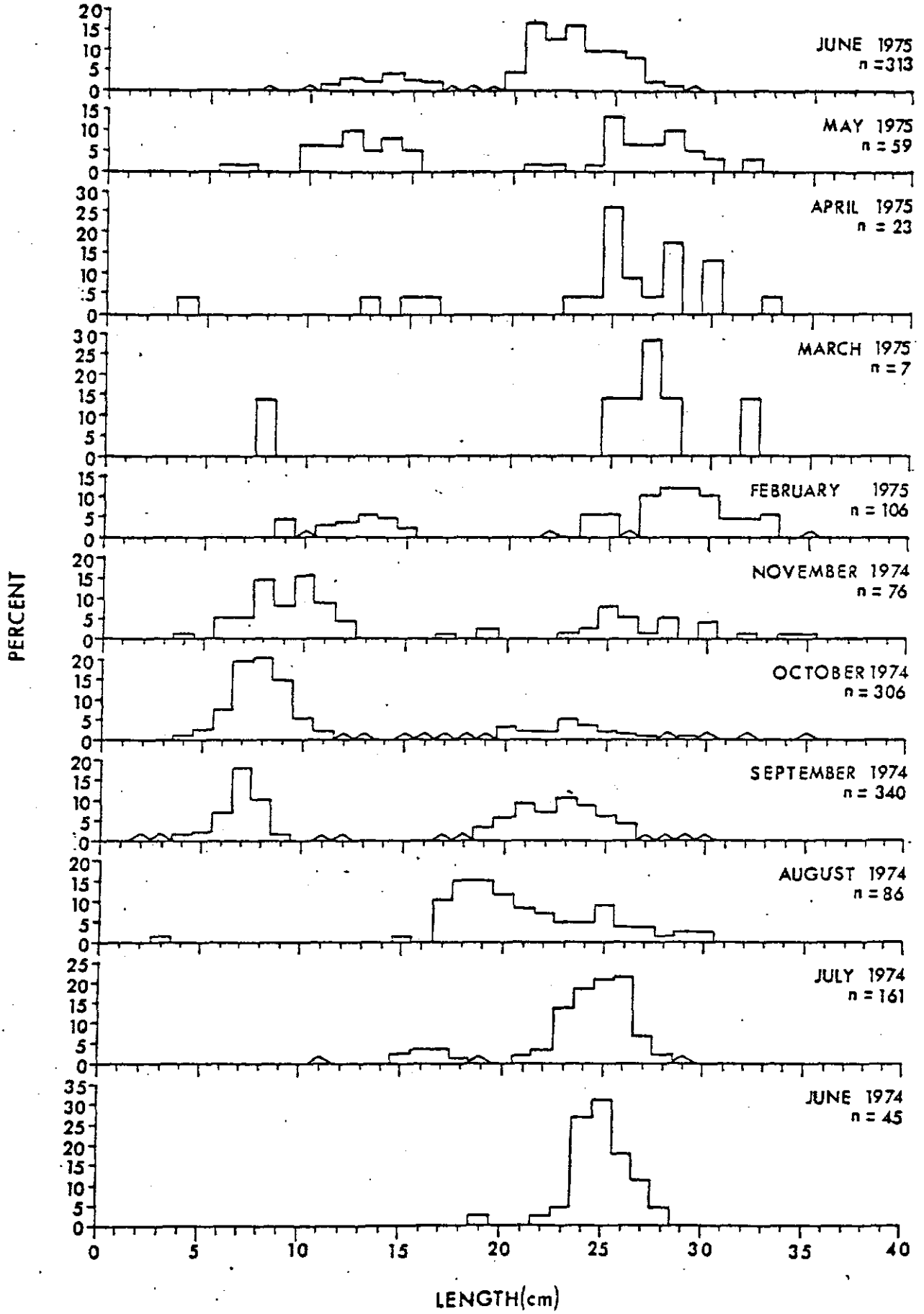

FIGURE 116.--Monthly length-frequency distributions of northern searobin (Prionotus carolinus) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

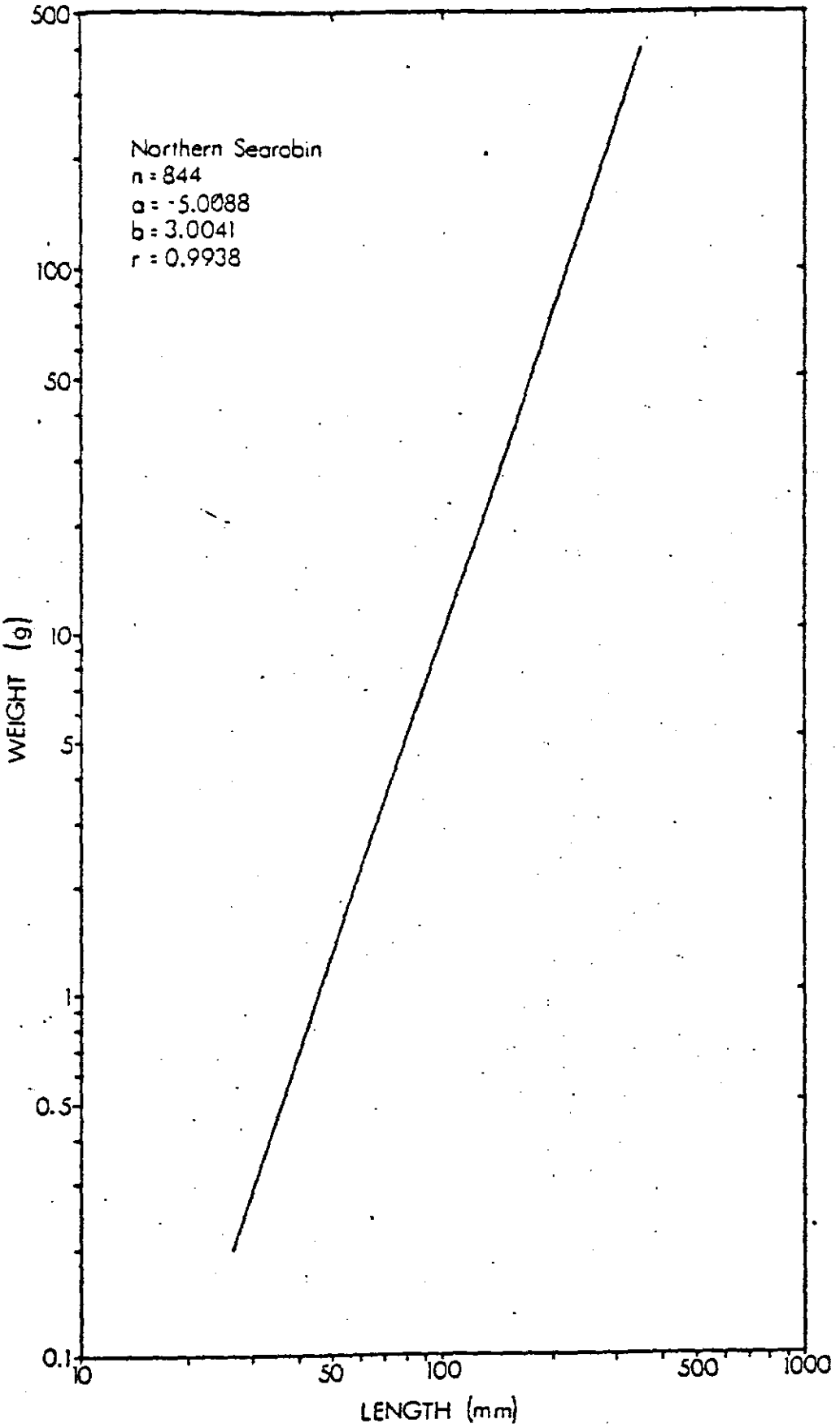

FIGURE 117.--Weight-length relationship of northern searobin (Prionotus carolinus) collected in New York Bight, June 1974 to June 1975.

TABLE 9.--Monthly sex ratios of northern searobin (Prionotus carolinus) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	25	11	44.0	14	56.0	-	-
July	68	23	33.8	22	32.4	23	33.8
August	74	38	51.3	25	33.8	11	14.9
September	184	70	38.0	56	30.5	58	31.5
October	159	10	6.3	24	15.1	125	78.6
November	74	9	12.2	15	20.3	50	67.5
January 1/	-	-	-	-	-	-	-
February	56	16	28.6	13	23.2	27	48.2
March	8	2	25.0	5	62.5	1	12.5
April	21	5	23.8	12	57.1	4	19.1
May	53	17	32.1	12	22.6	24	45.3
June	147	55	37.4	50	34.0	42	28.6
TOTAL	869	256	29.5	248	28.5	365	42.0

1/ Bay stations only.

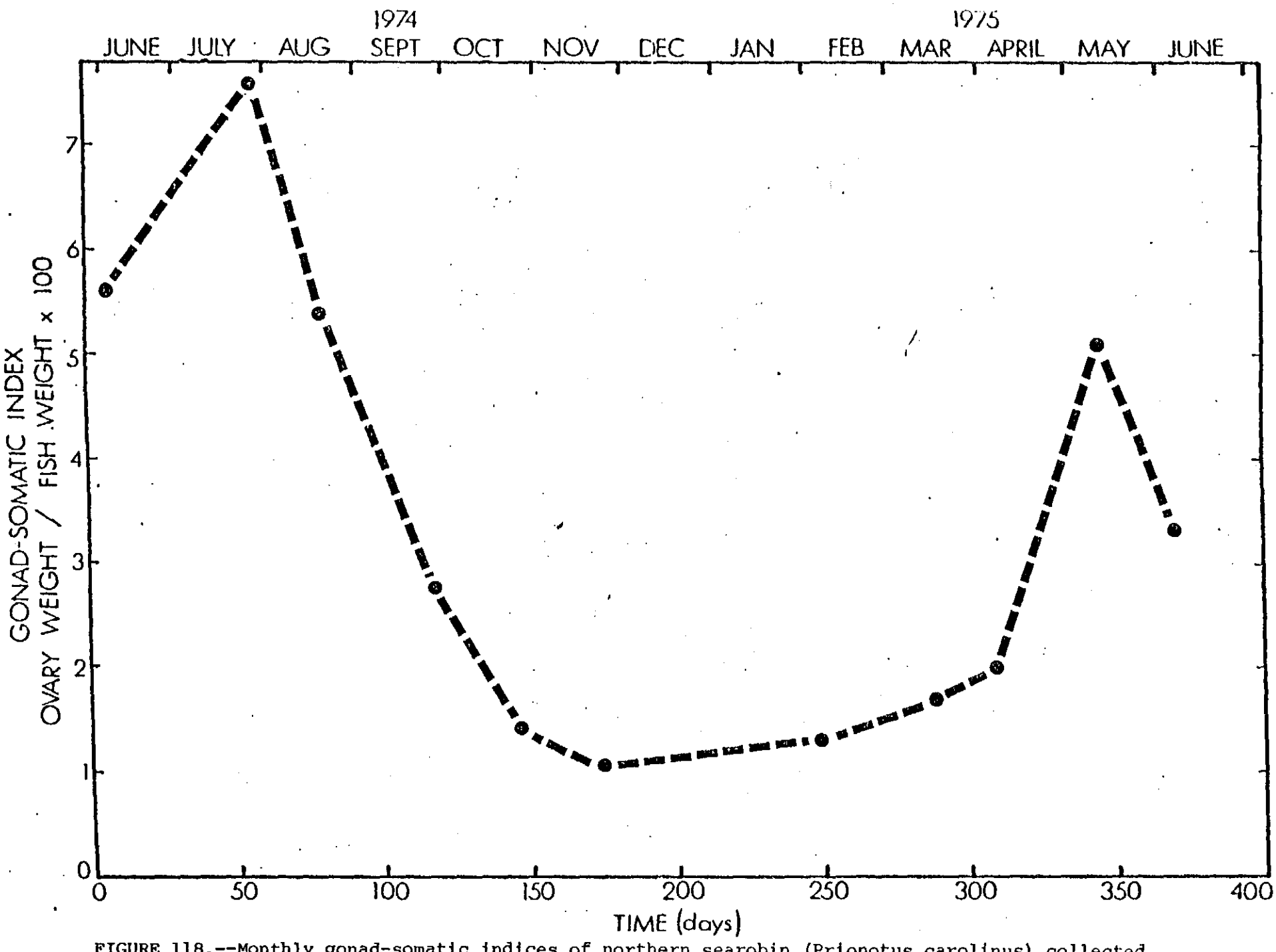

FIGURE 118.--Monthly gonad-somatic indices of northern searobin (Prionotus carolinus) collected in New York Bight, June 1974 to June 1975.

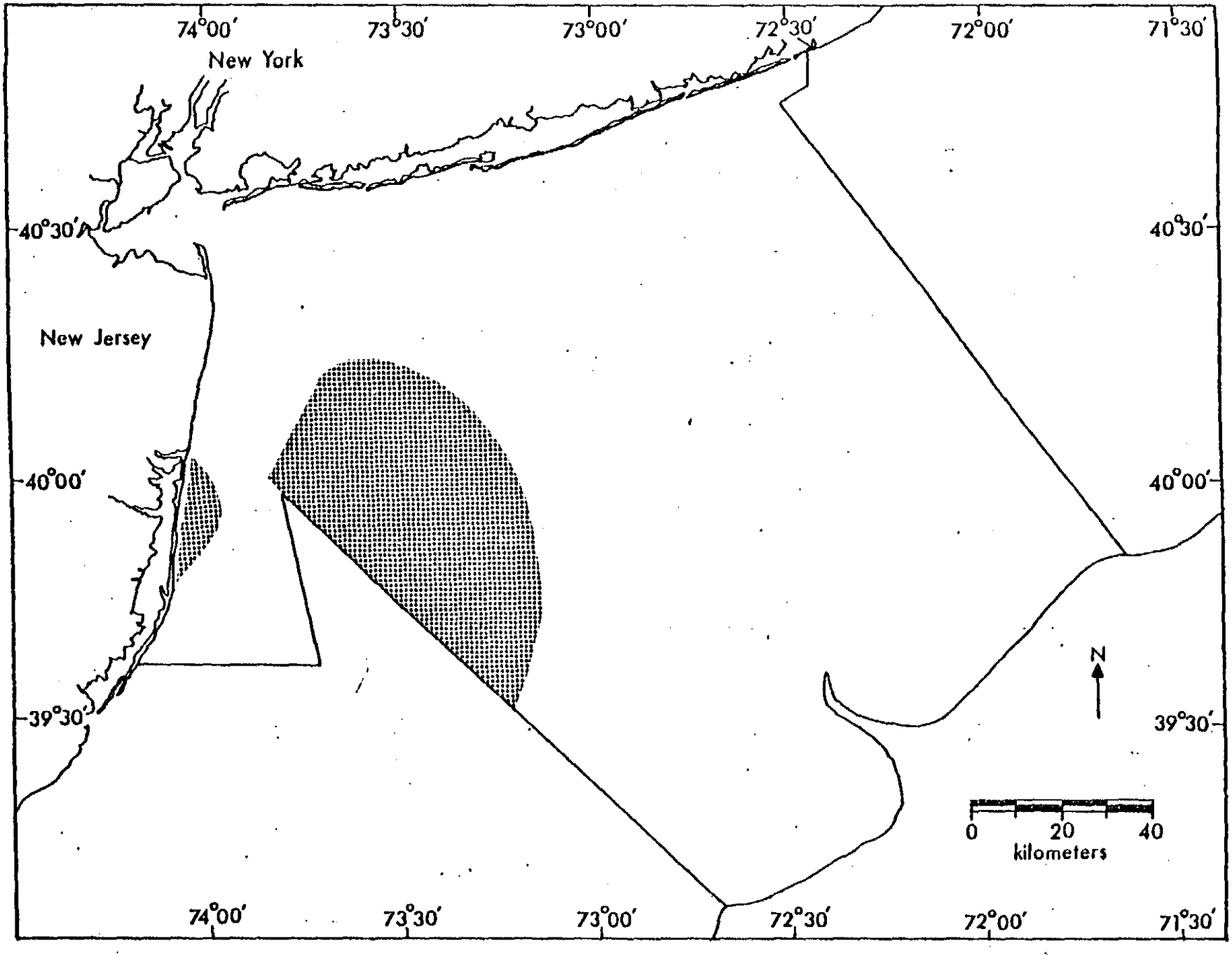

FIGURE 119.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, June 1974.

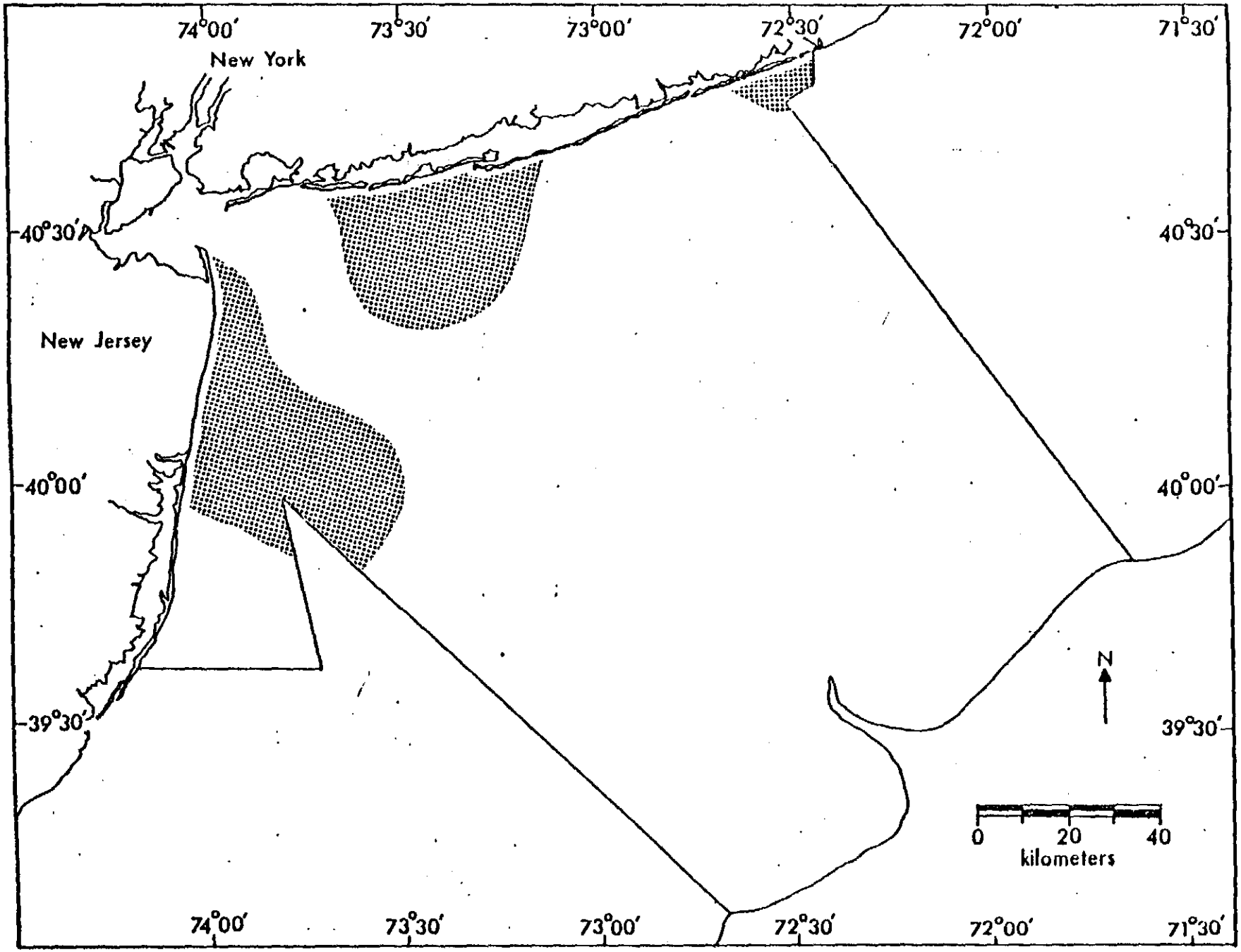

FIGURE 120.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, July 1974.

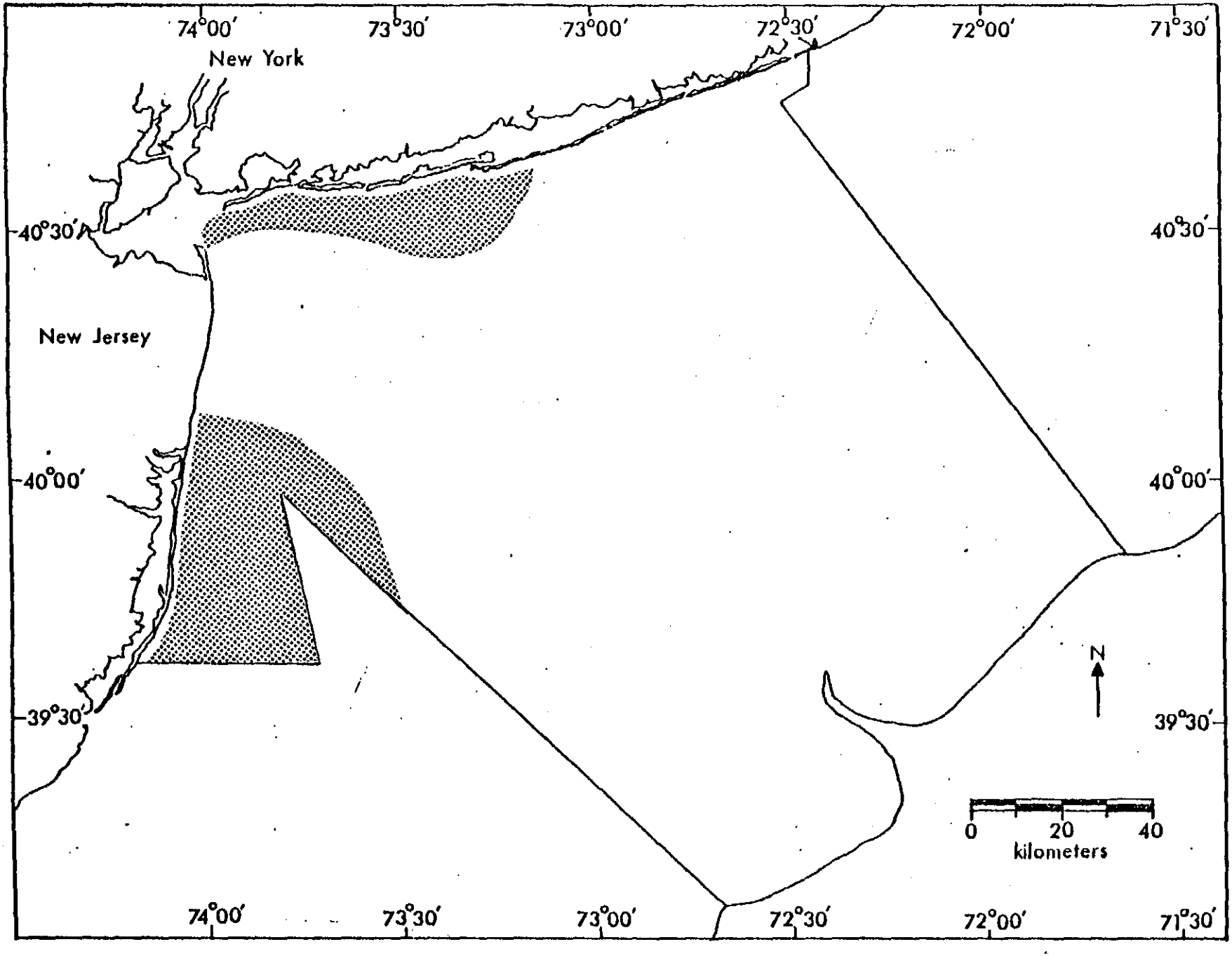

FIGURE 121.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, August 1974.

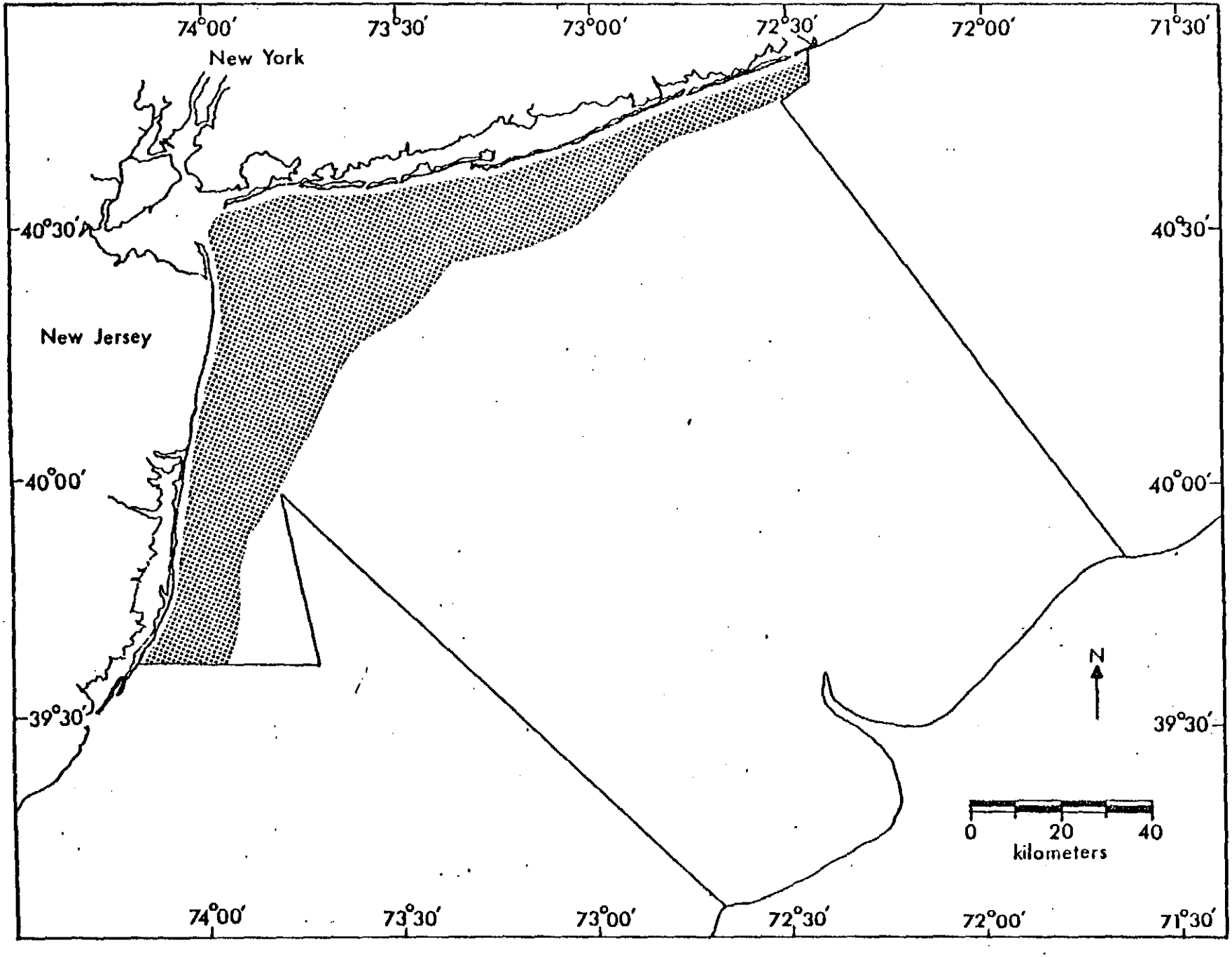

FIGURE 122.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, September 1974.

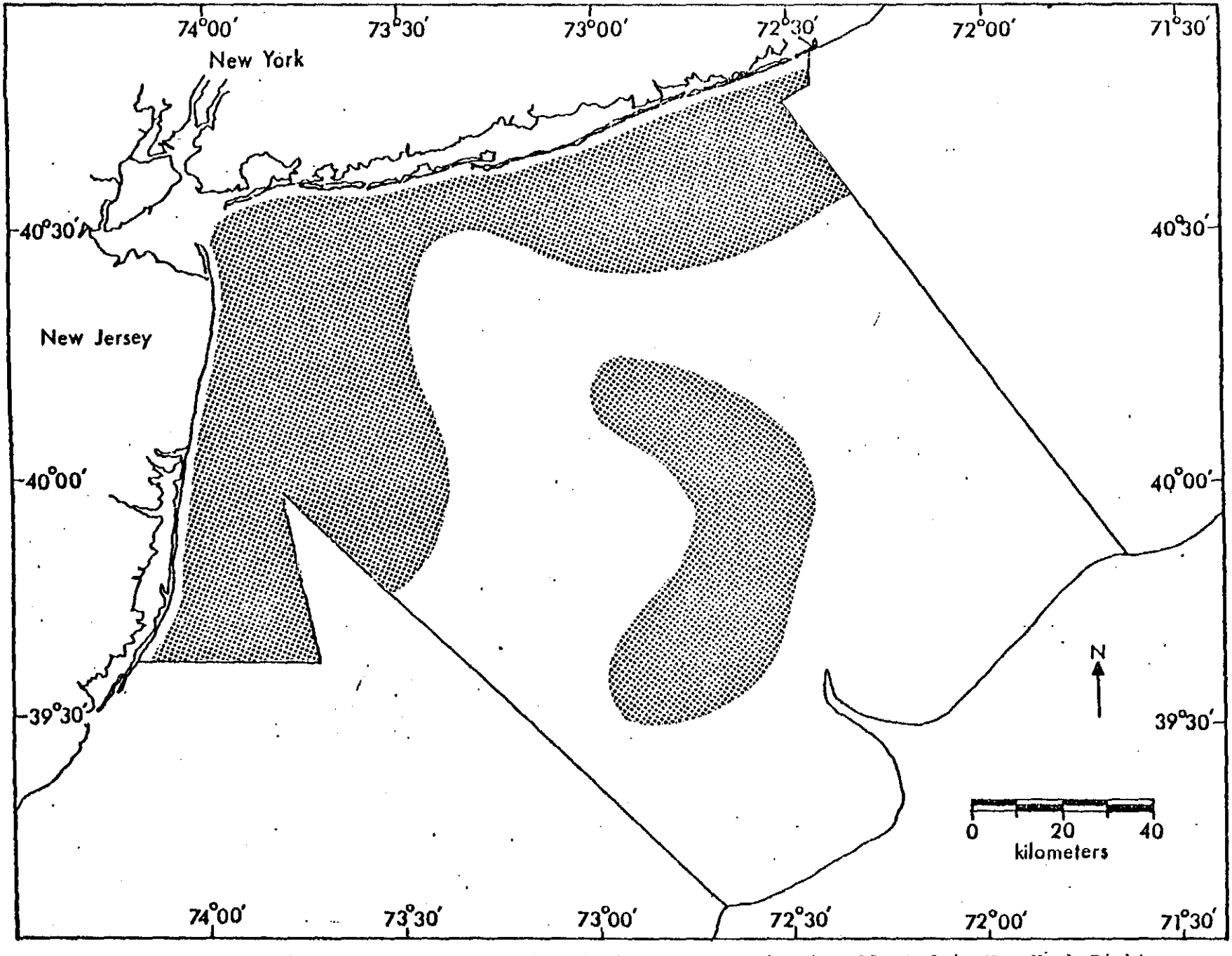

FIGURE 123.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, October 1974.

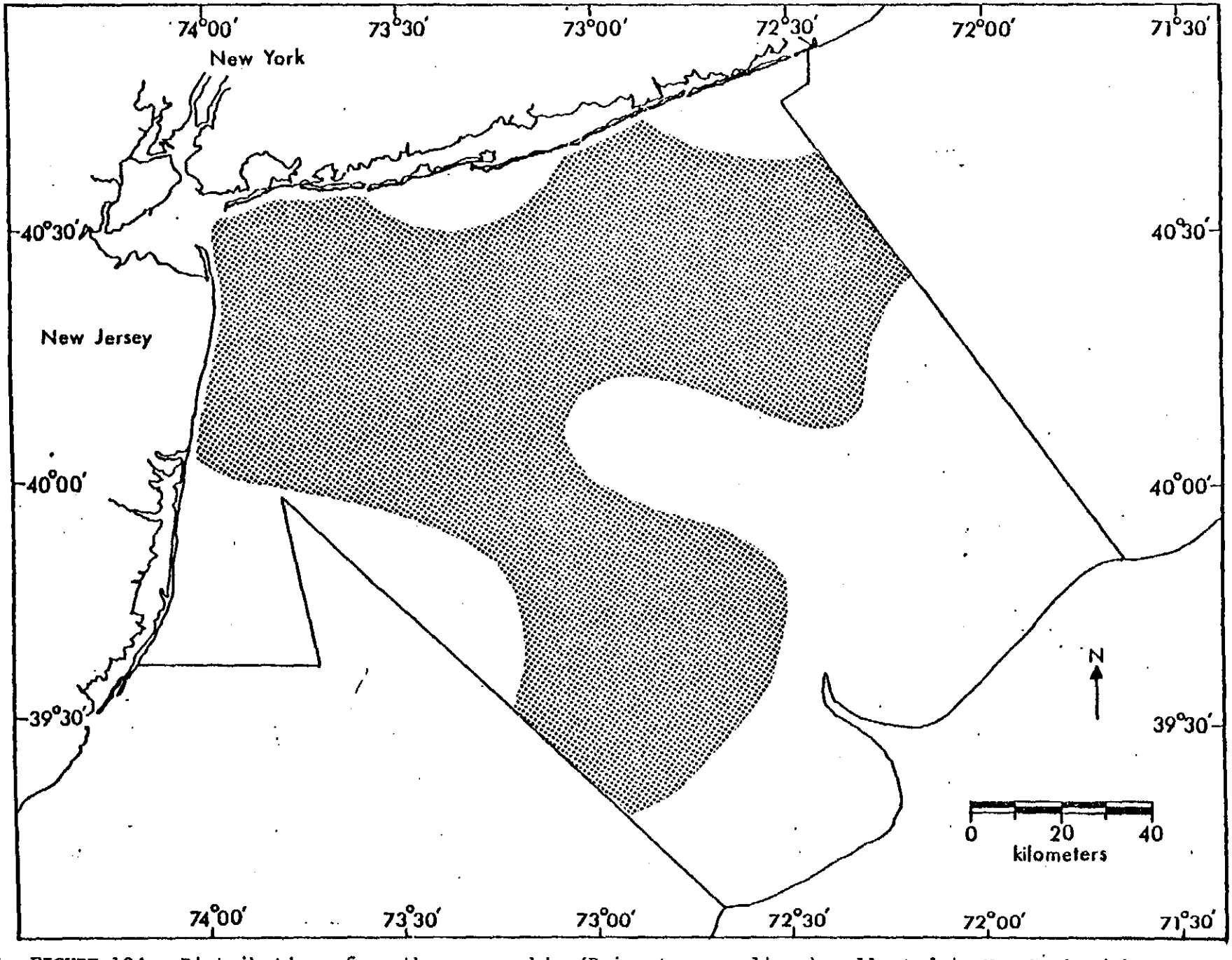

FIGURE 124.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, November 1974.

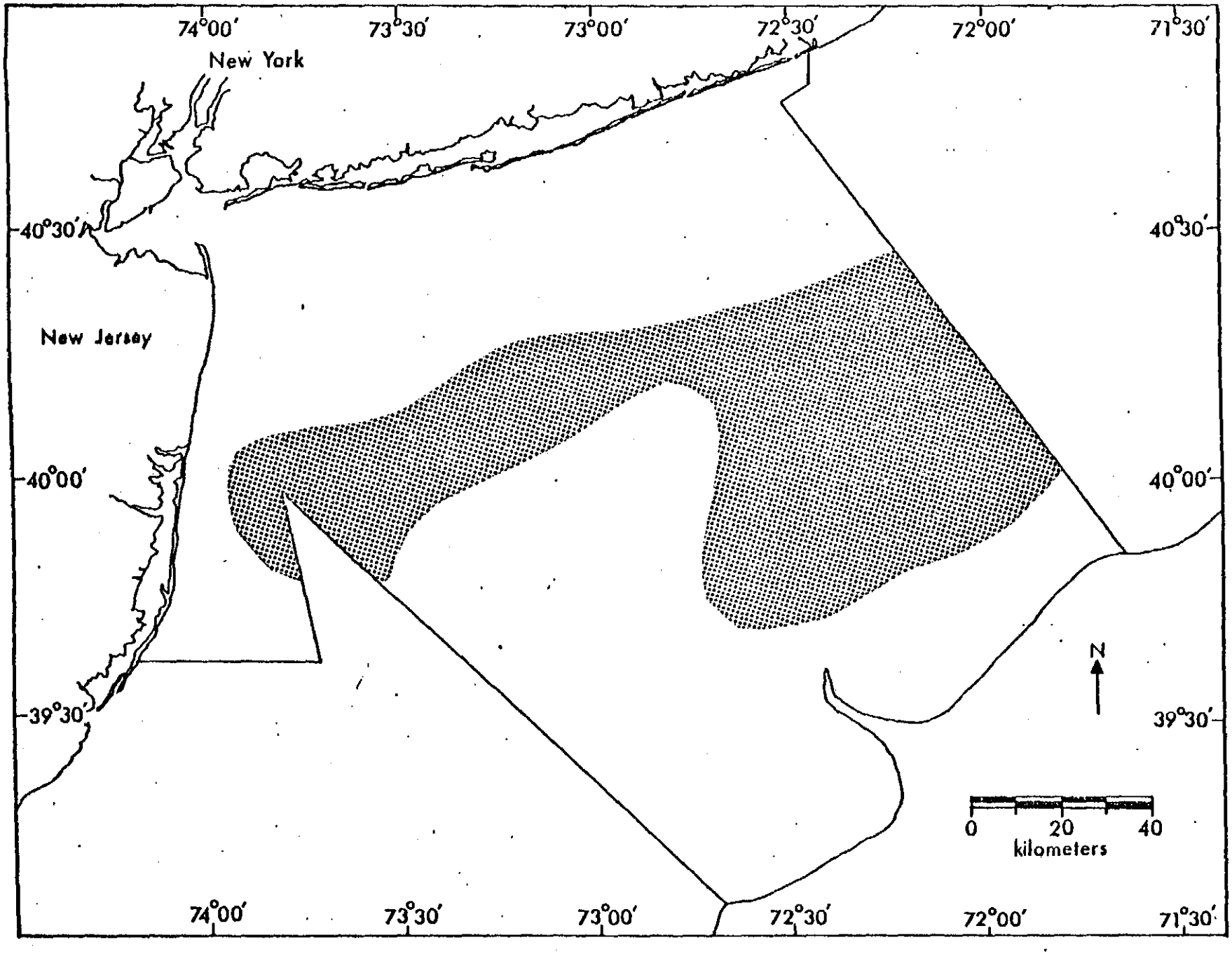

FIGURE 125.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, February 1975.

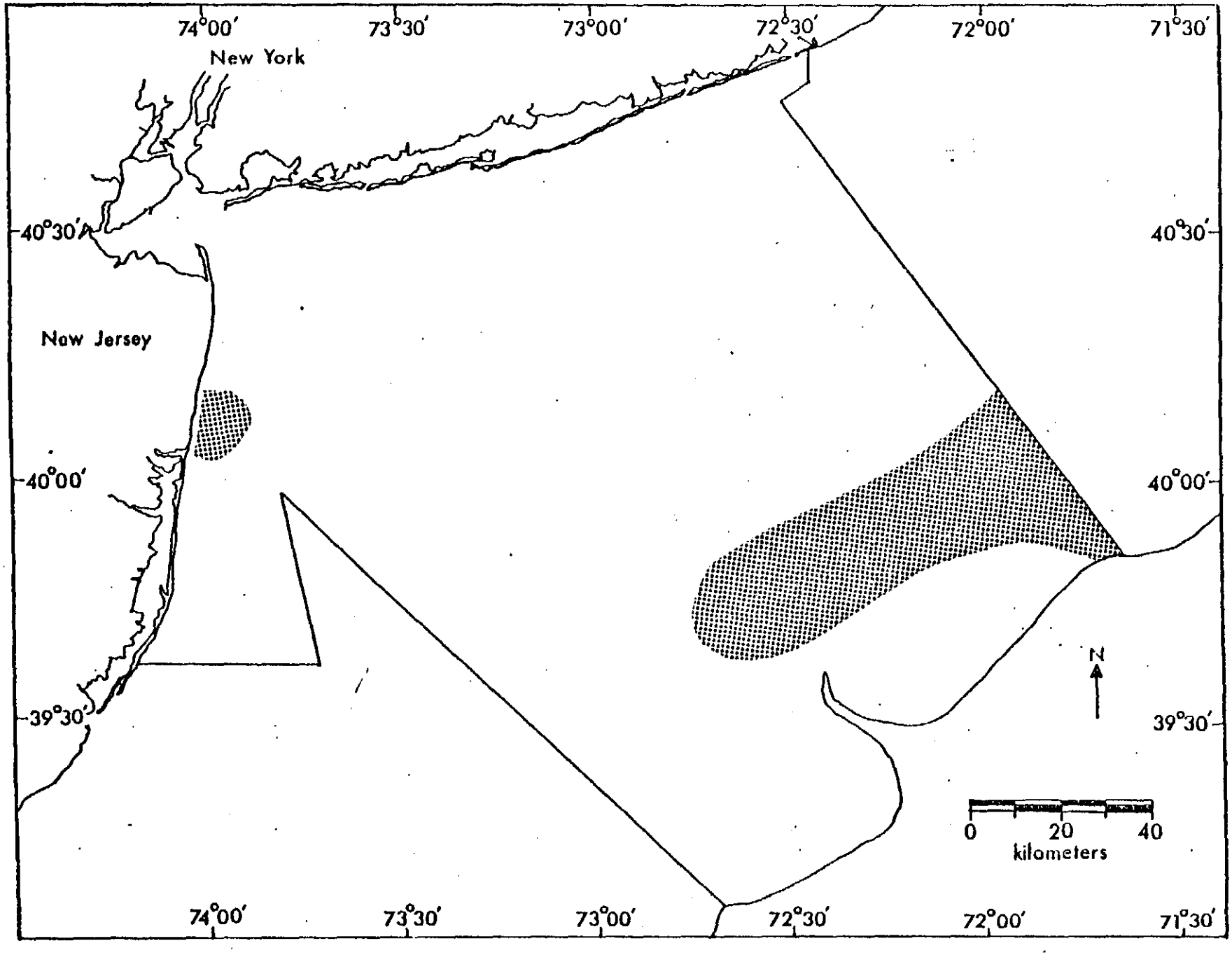

FIGURE 126.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, March 1975.

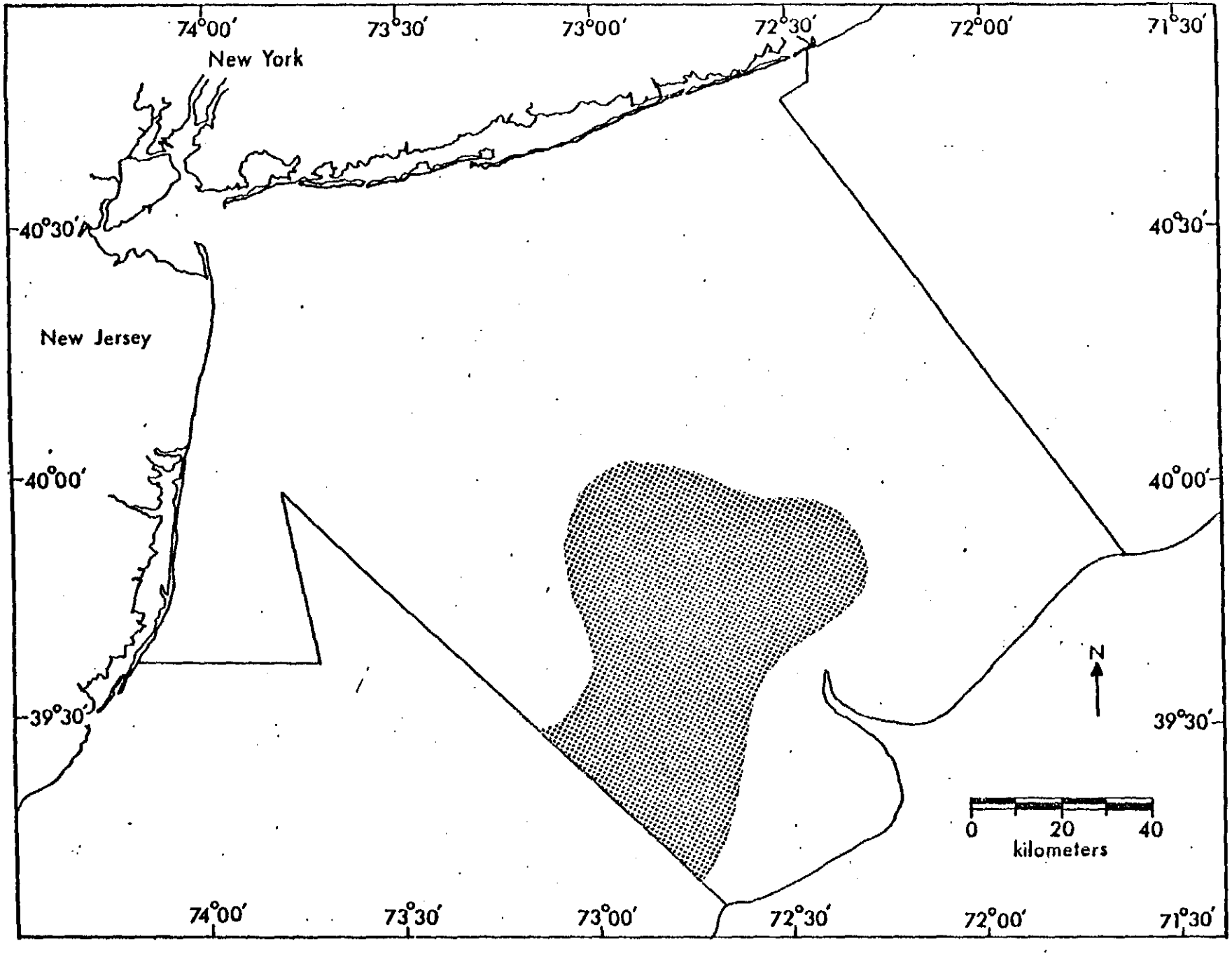

FIGURE 127.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, April 1975.

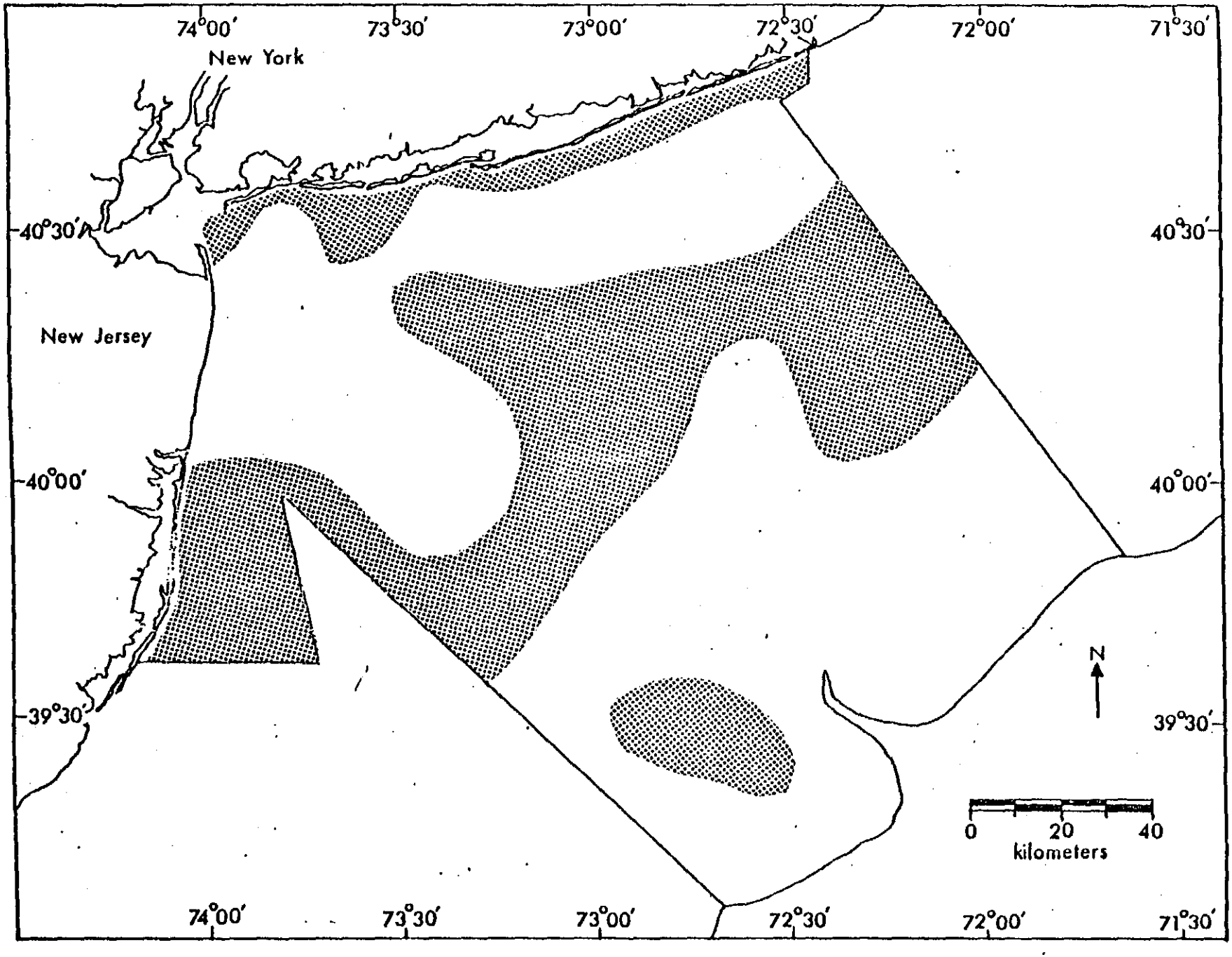

FIGURE 128.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, May 1975.

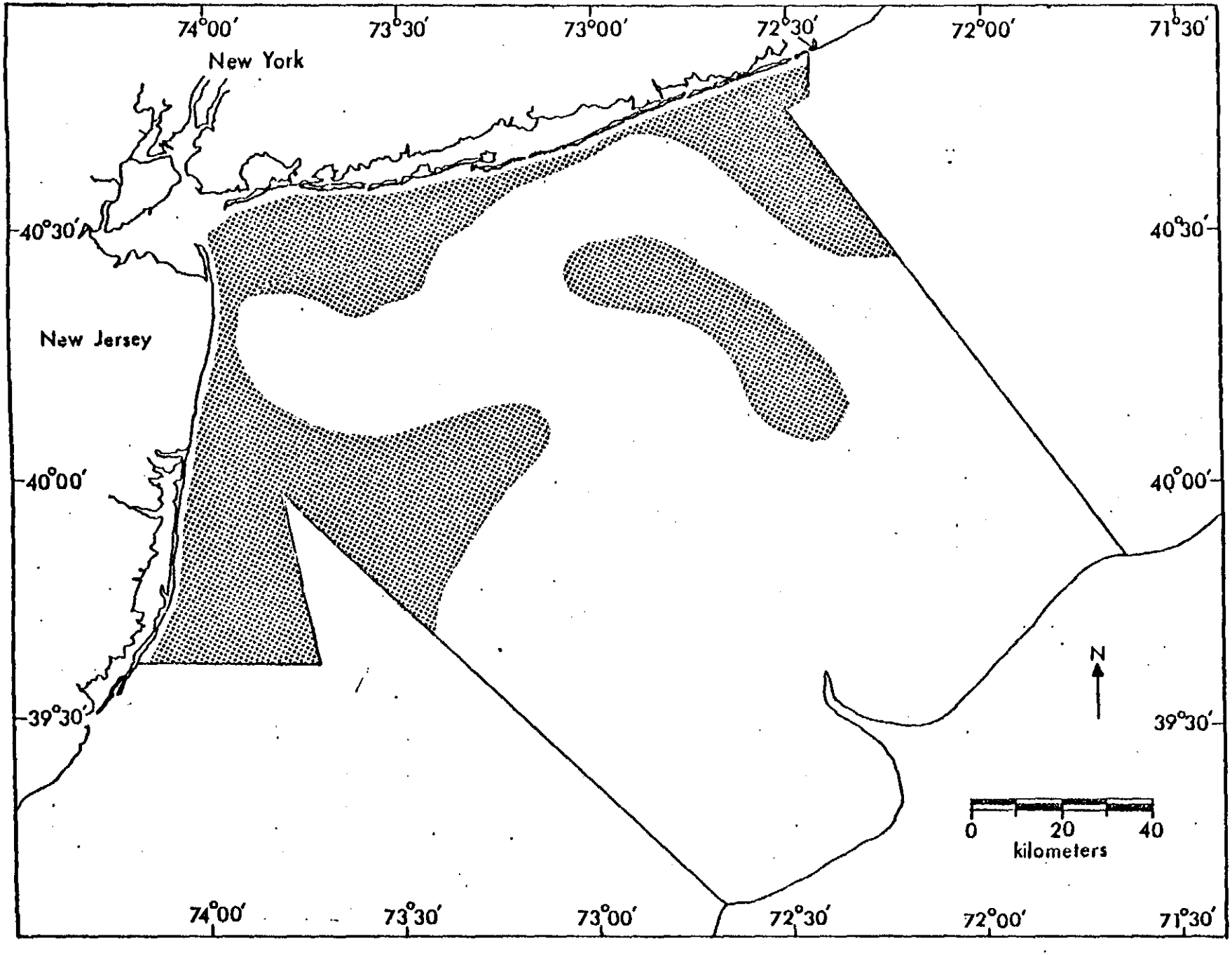

FIGURE 129.--Distribution of northern searobin (Prionotus carolinus) collected in New York Bight, June 1975.

STRIPED SEAROBIN

(Prionotus evolans)

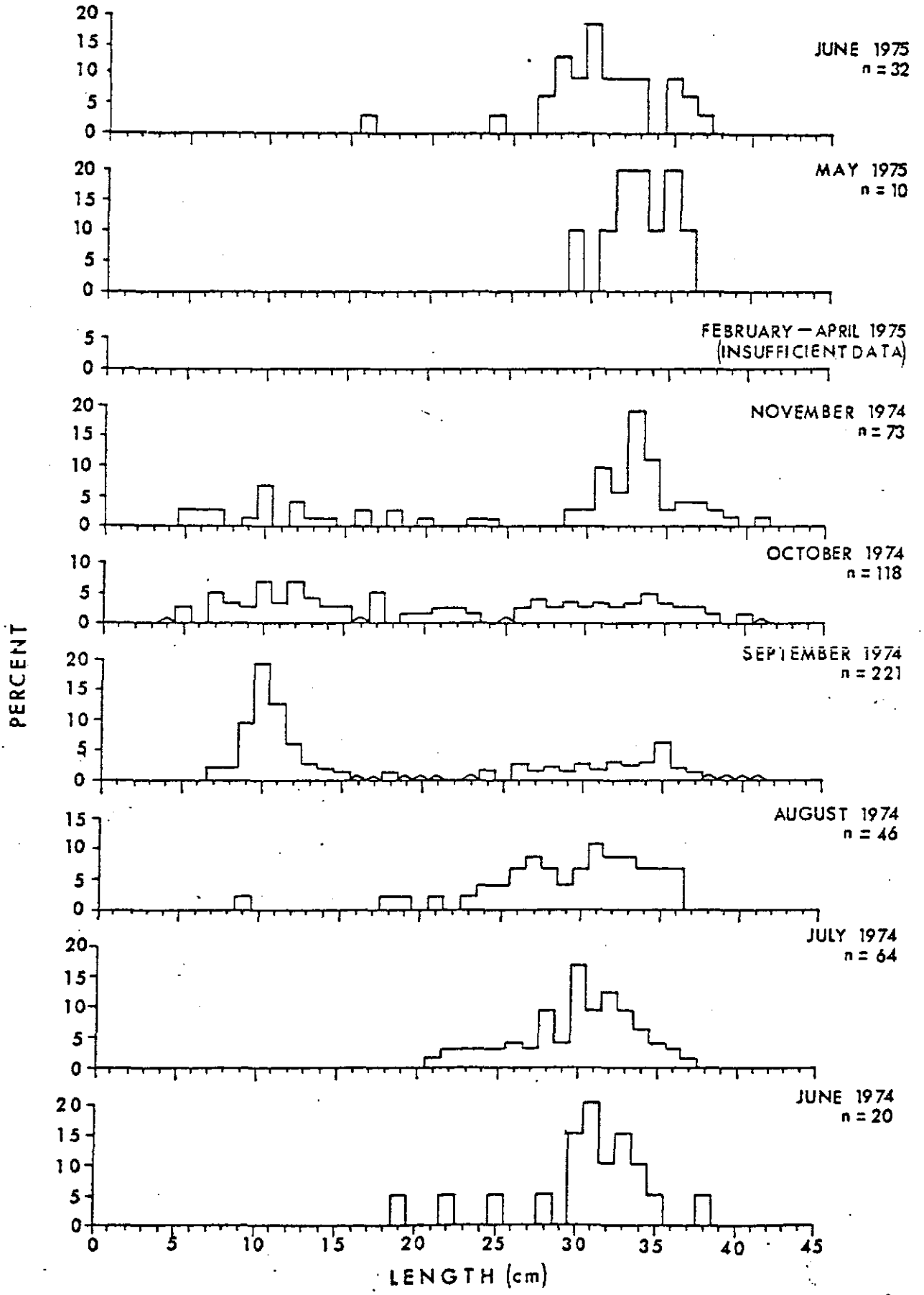

FIGURE 130.--Monthly length-frequency distributions of striped searobin (Prionotus evolans) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

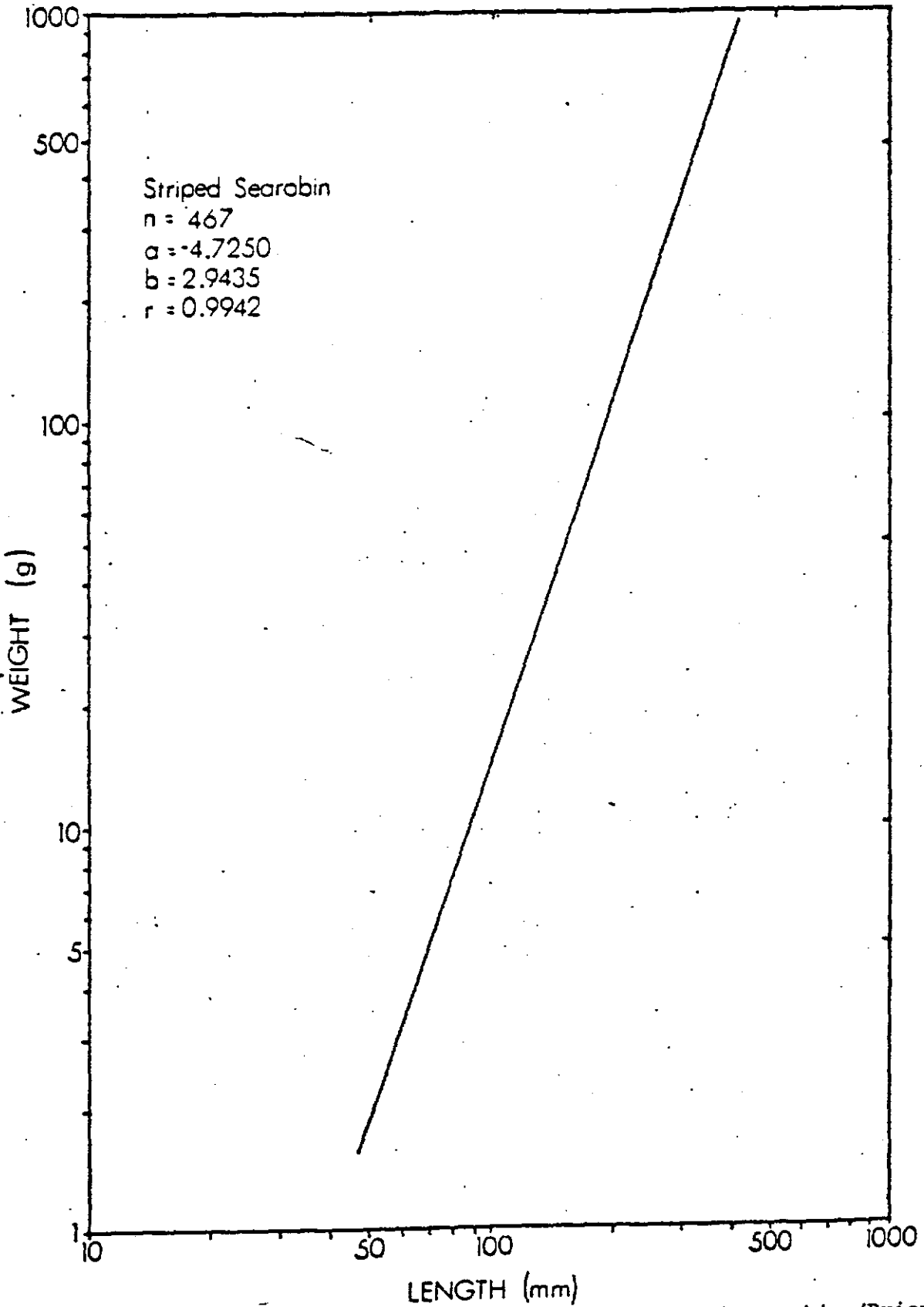

FIGURE 131.--Weight-length relationship of striped searobin (Prionotus evolans) collected in New York Bight, June 1974 to June 1975.

TABLE 10.--Monthly sex ratios of striped searobins (Prionotus evolans) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	19	17	89.5	2	10.5	-	-
July	67	36	53.7	21	31.4	10	14.9
August	46	32	69.6	12	26.1	2	4.3
September	128	23	18.0	21	16.4	84	65.6
October	103	9	8.7	39	37.9	55	53.4
November	69	9	13.0	31	45.0	29	42.0
January 1/	-	-	-	-	-	-	-
February	1	-	-	-	-	1	100.0
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	9	7	77.7	2	28.6	-	-
June	31	19	61.3	12	38.7	-	-
TOTAL	473	152	32.1	140	29.6	181	38.3

1/ Bay stations only.

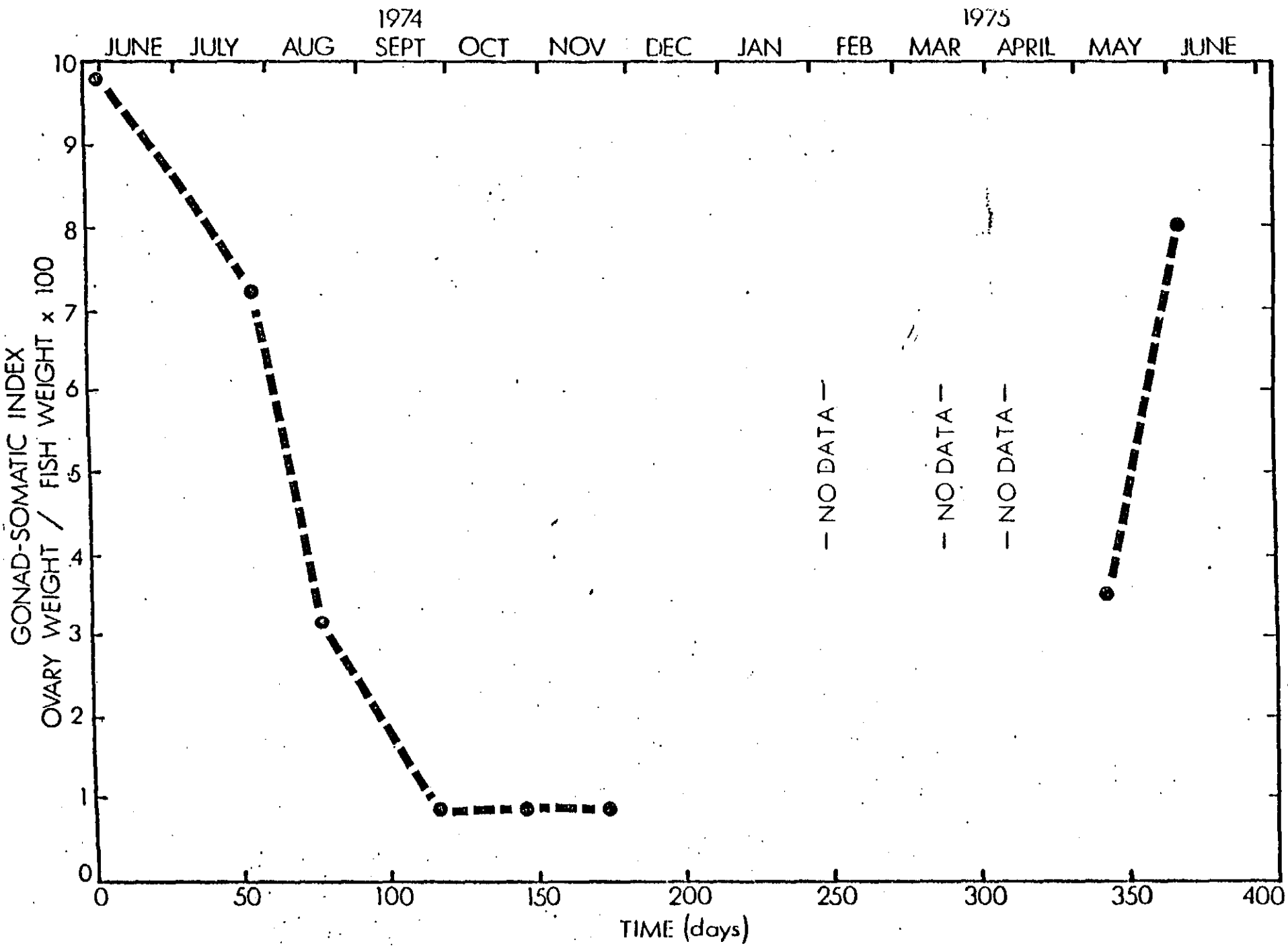

FIGURE 132.--Monthly gonad-somatic indices of striped searobin (Prionotus evolans) collected in New York Bight, June 1974 to June 1975.

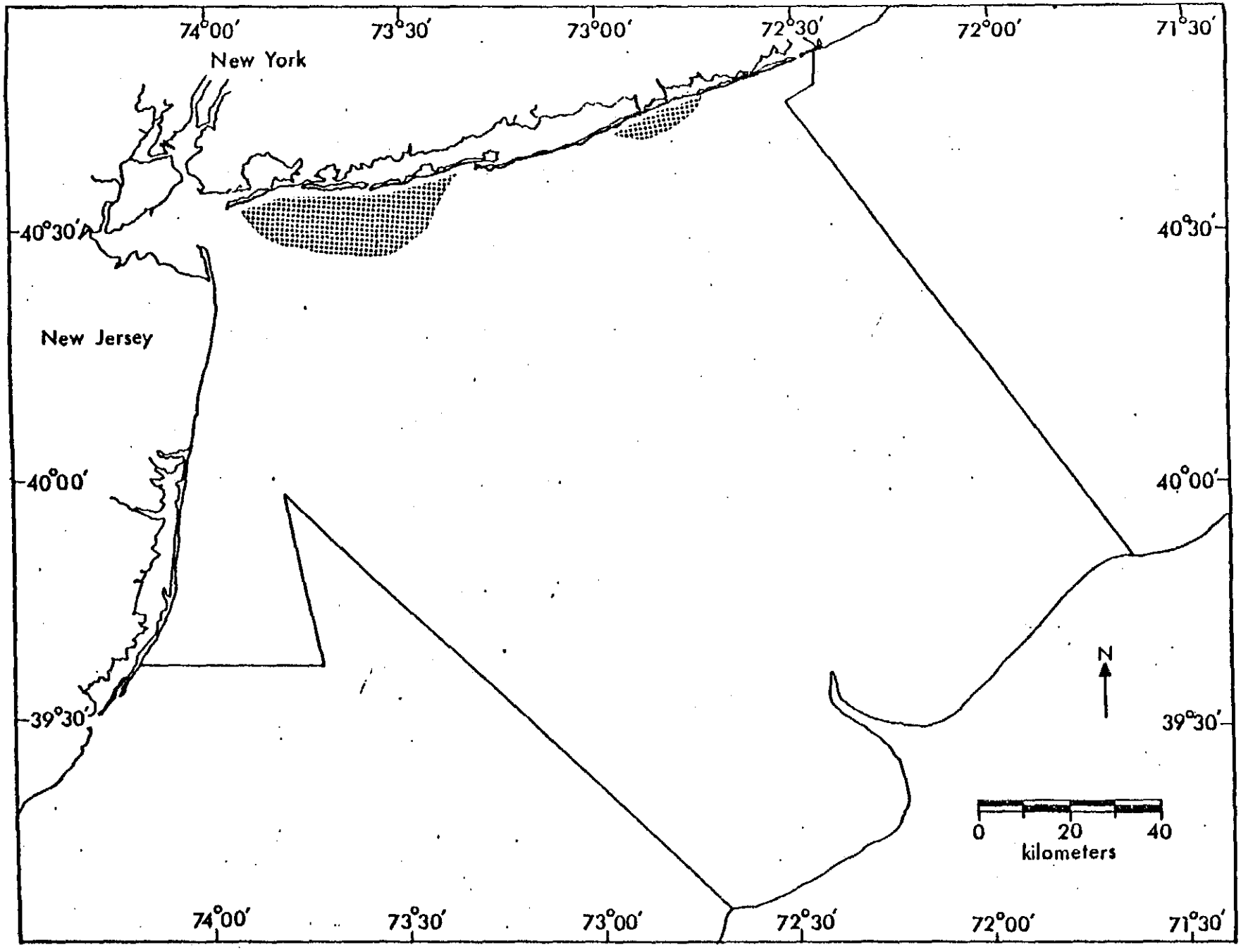

FIGURE 133.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, June 1974.

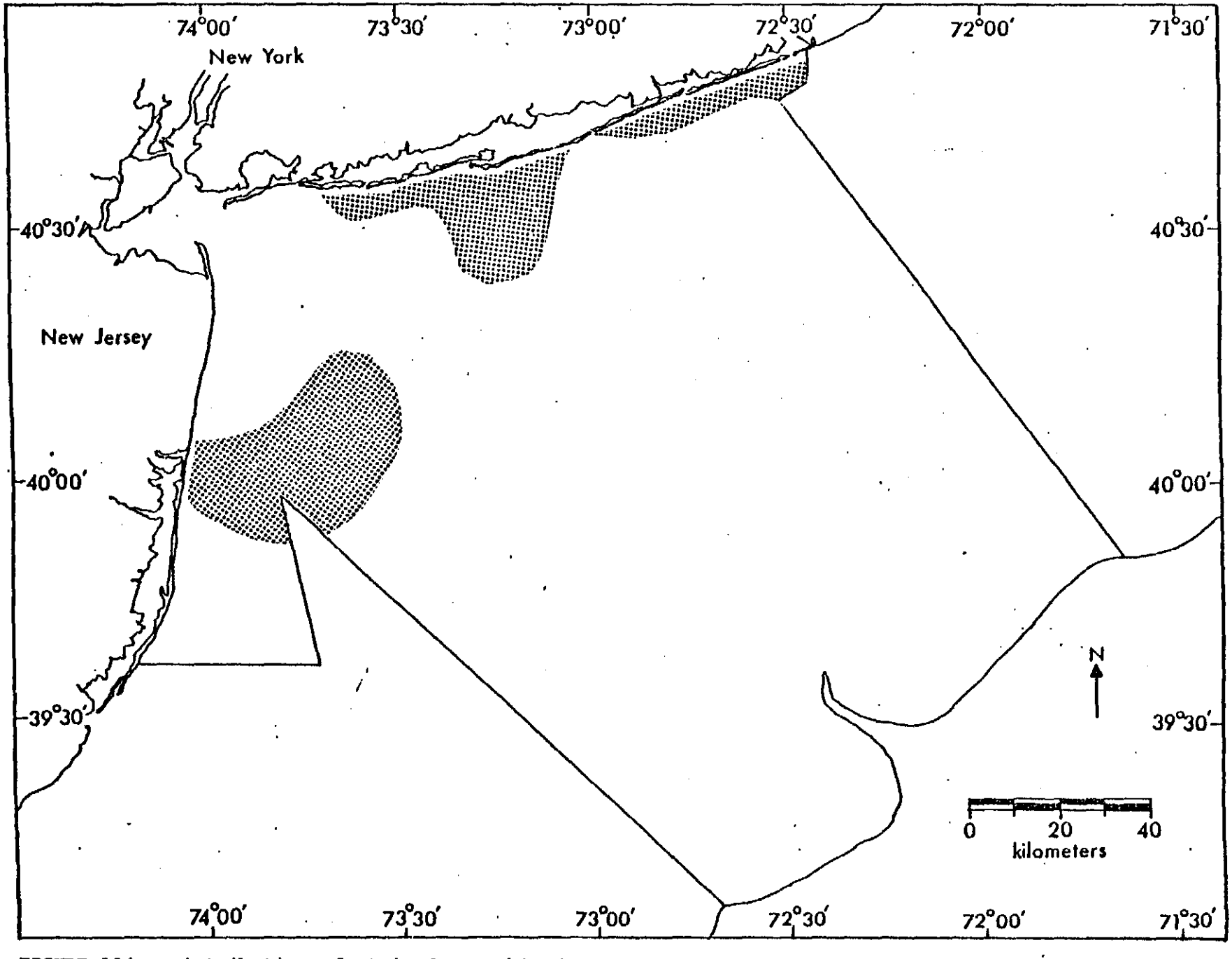

FIGURE 134.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, July 1974.

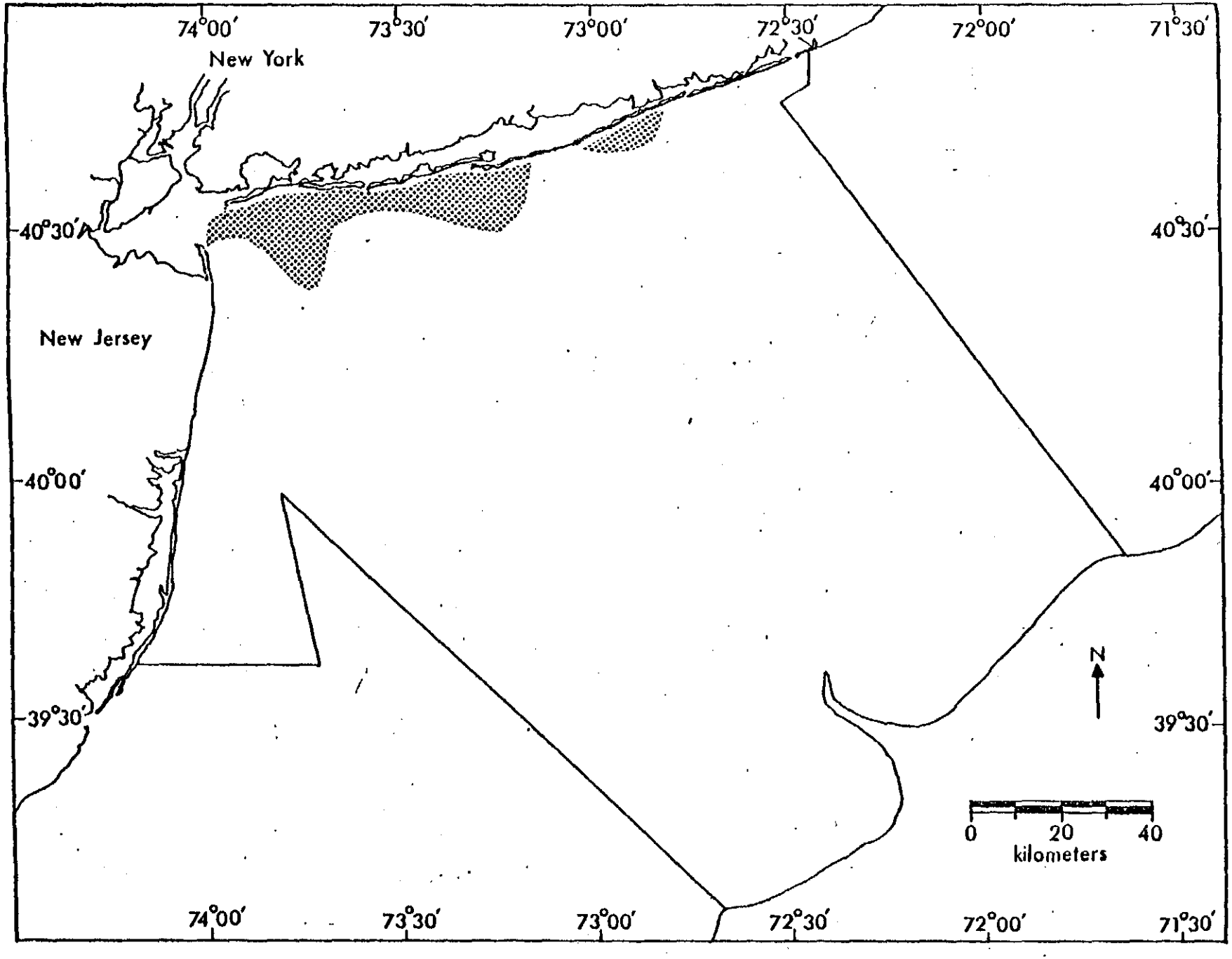

FIGURE 135.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, August 1974.

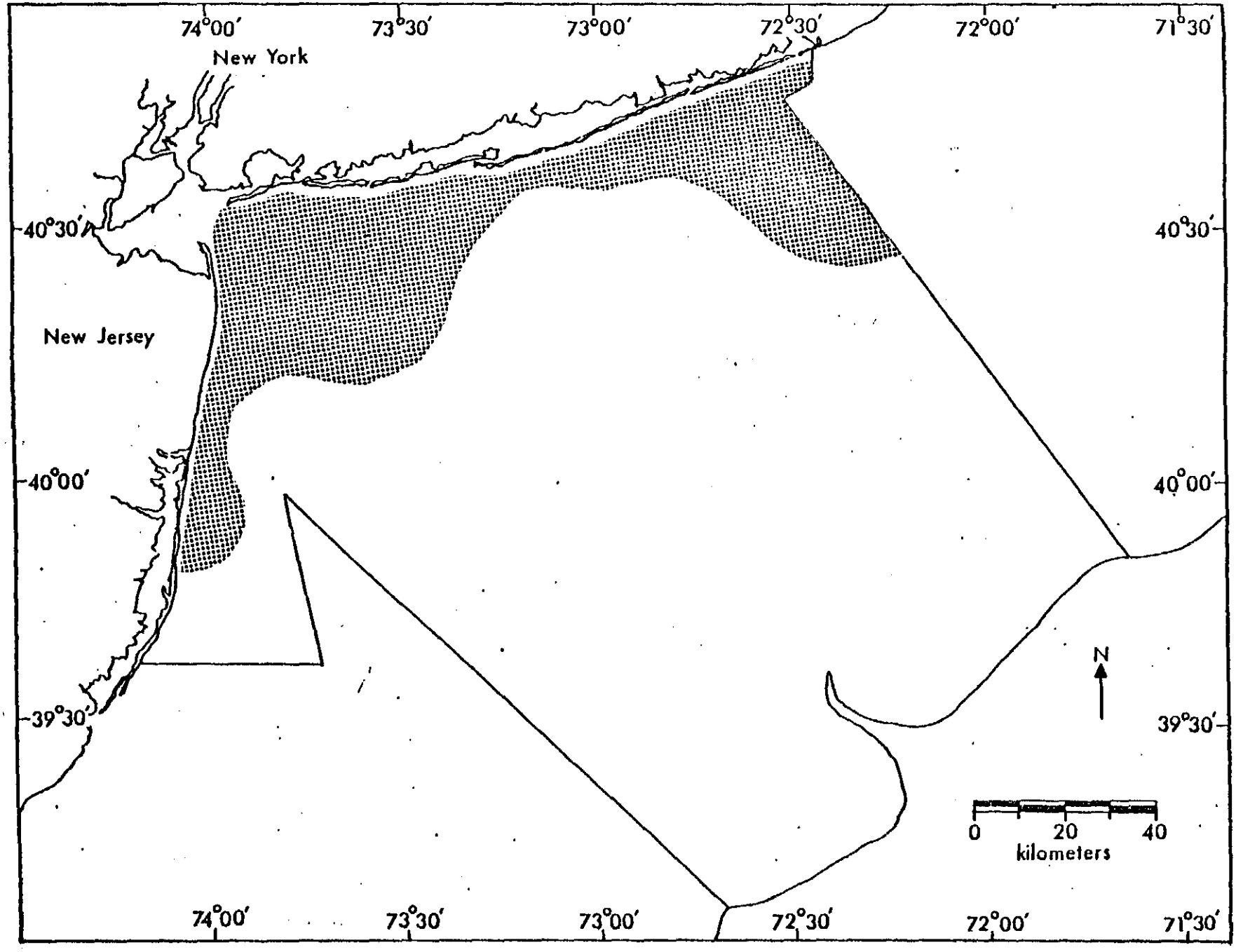

FIGURE 136.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, September 1974.

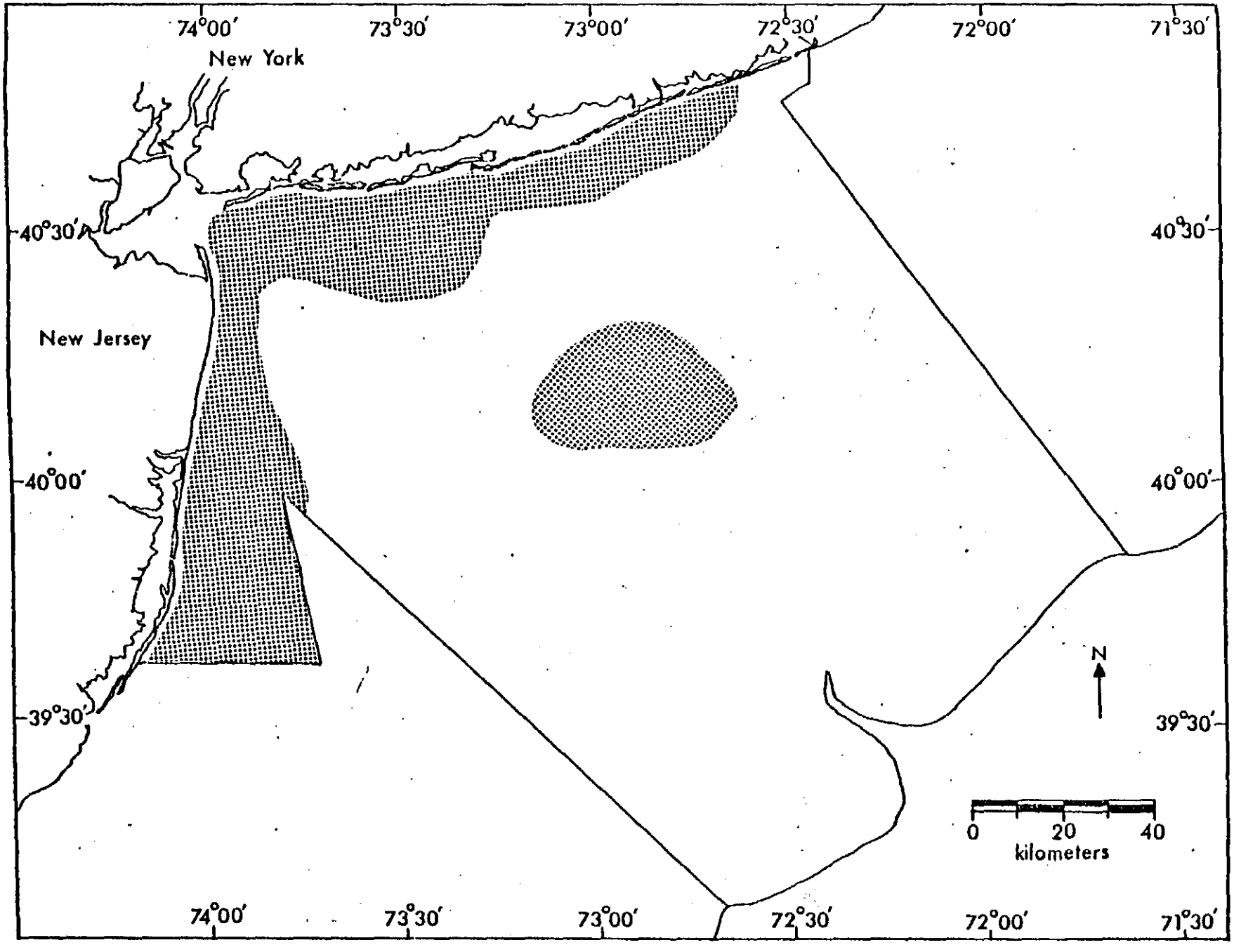

FIGURE 137.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, October 1974.

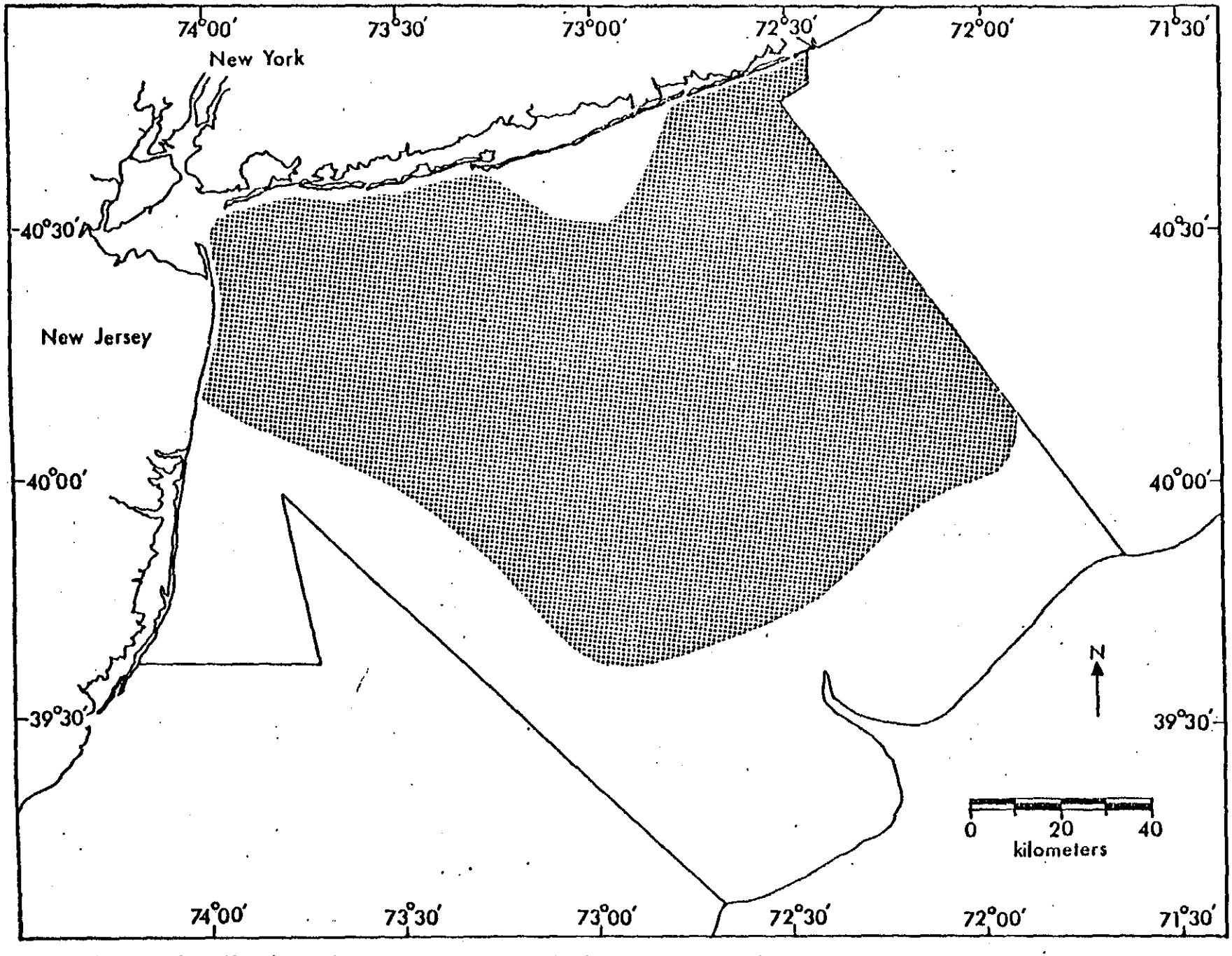

FIGURE 138.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, November 1974.

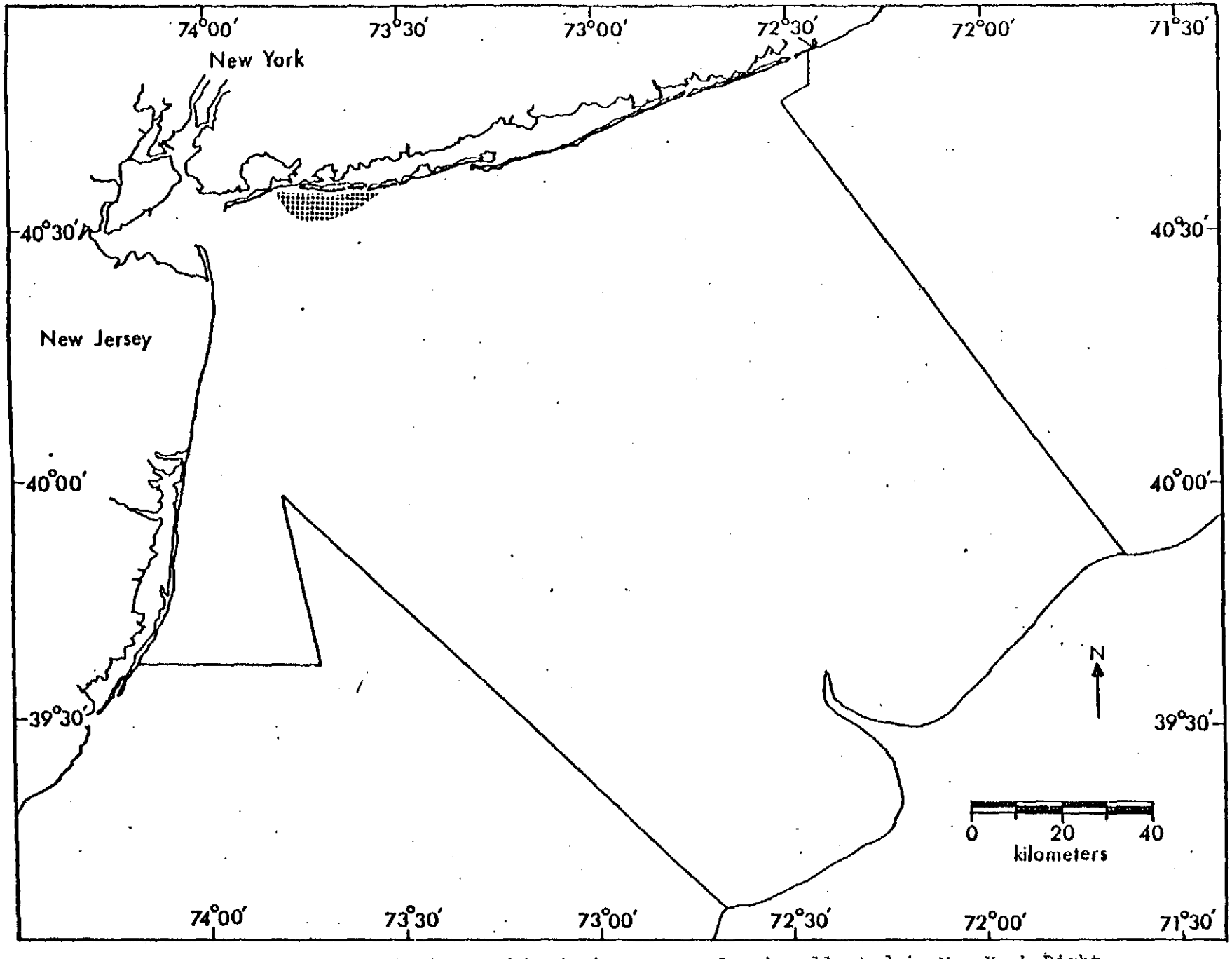

FIGURE 139.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, February 1975.

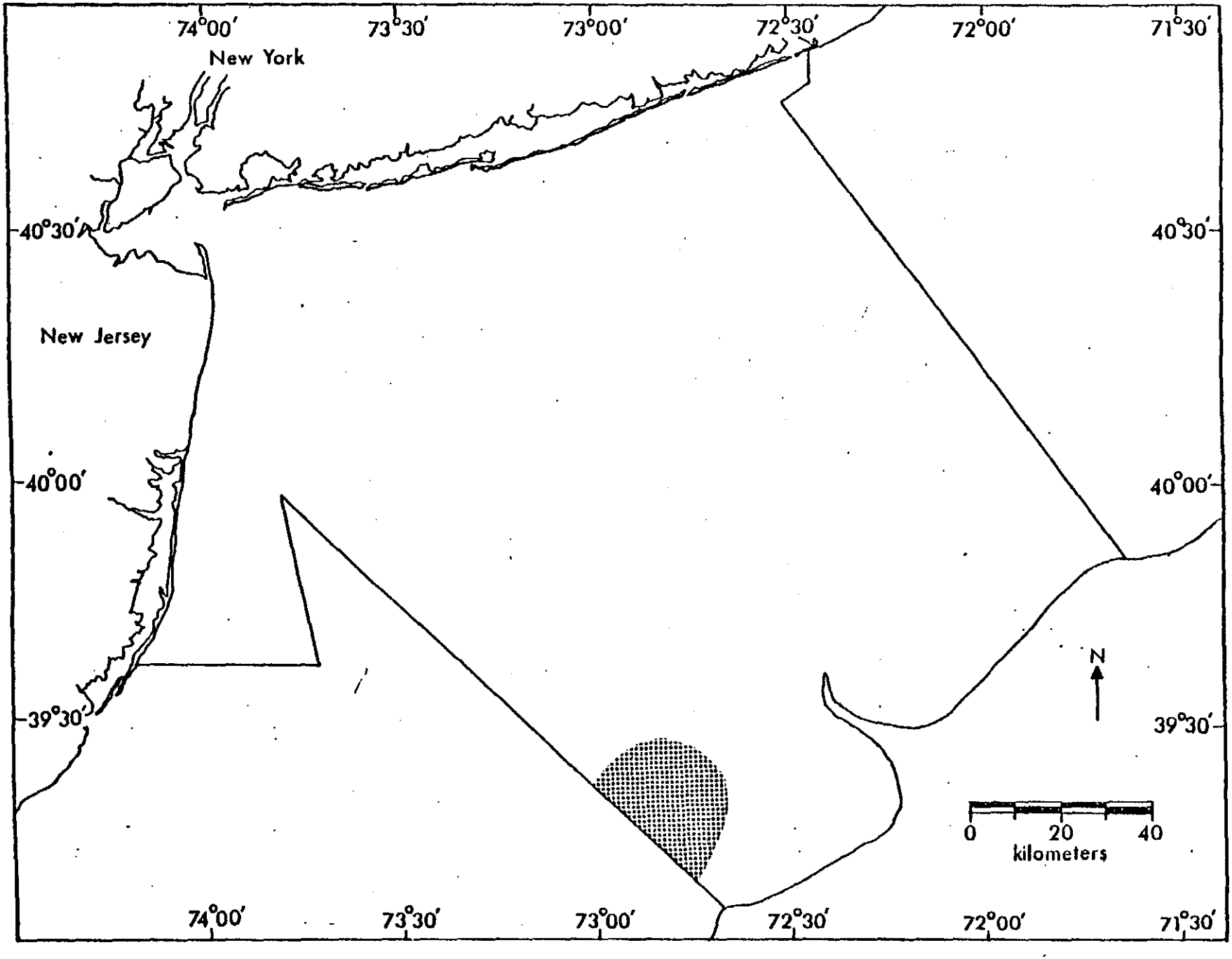

FIGURE 140.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, April 1975.

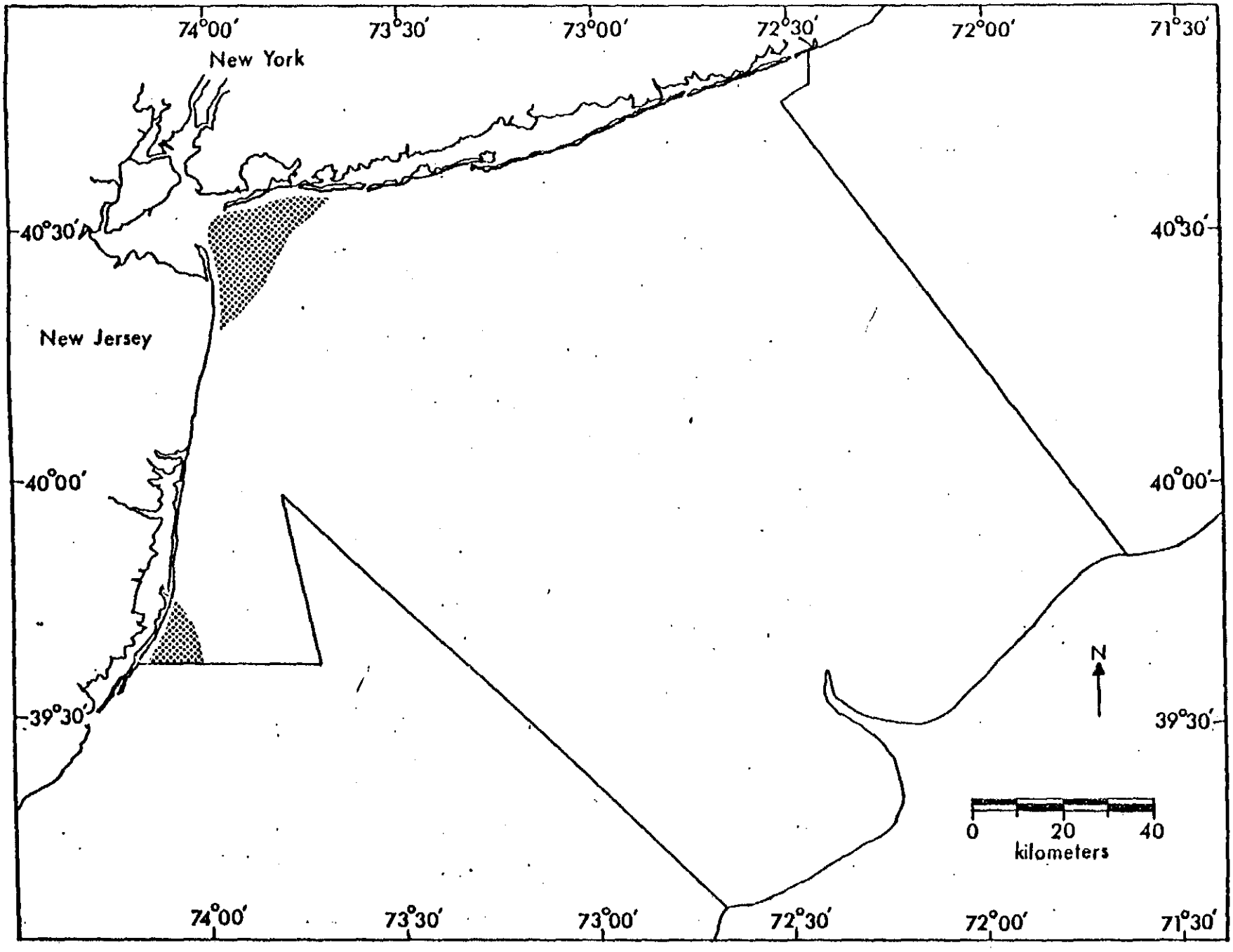

FIGURE 141.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, May 1975.

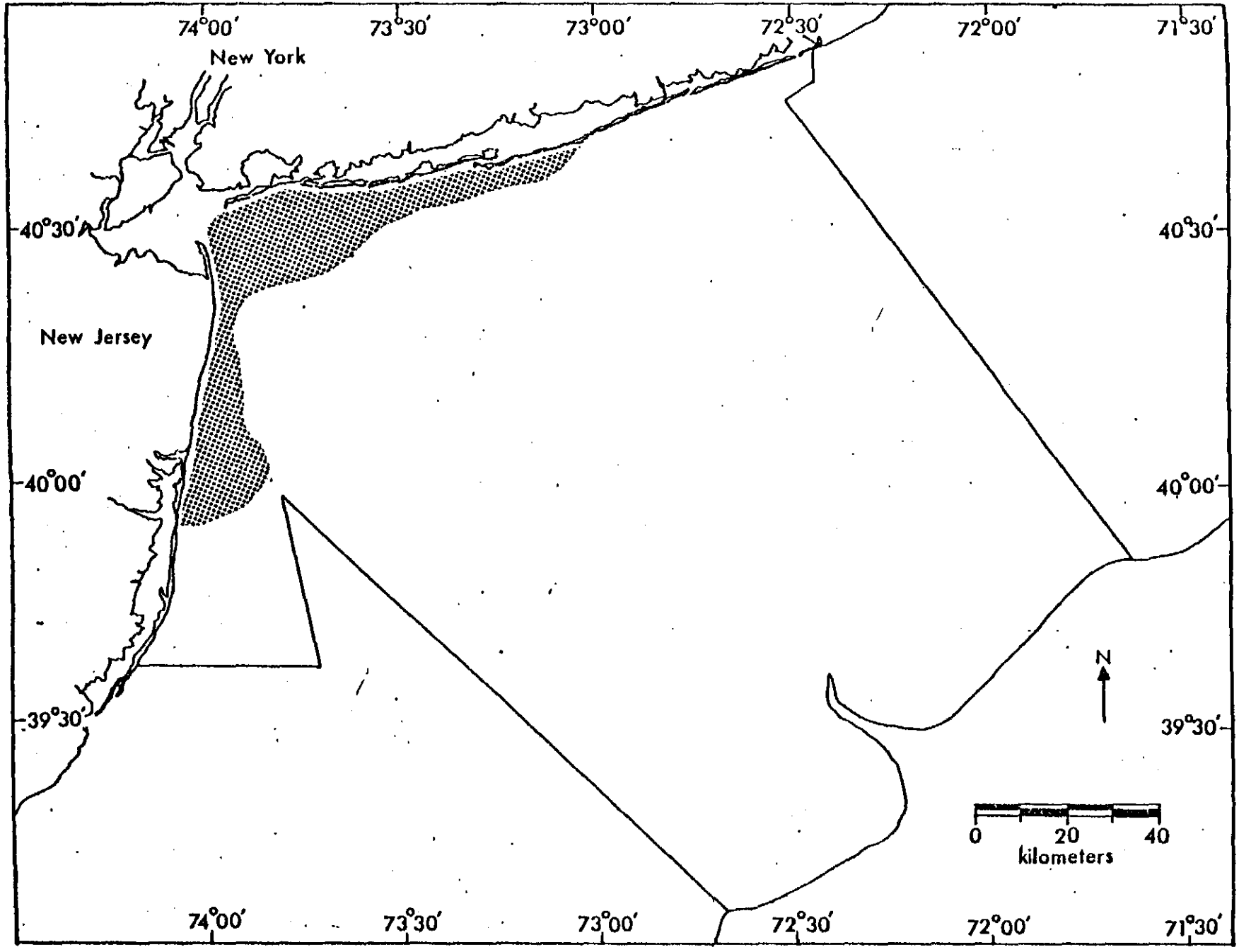

FIGURE 142.--Distribution of striped searobin (Prionotus evolans) collected in New York Bight, June 1975.

SUMMER FLOUNDER

(Paralichthys dentatus)

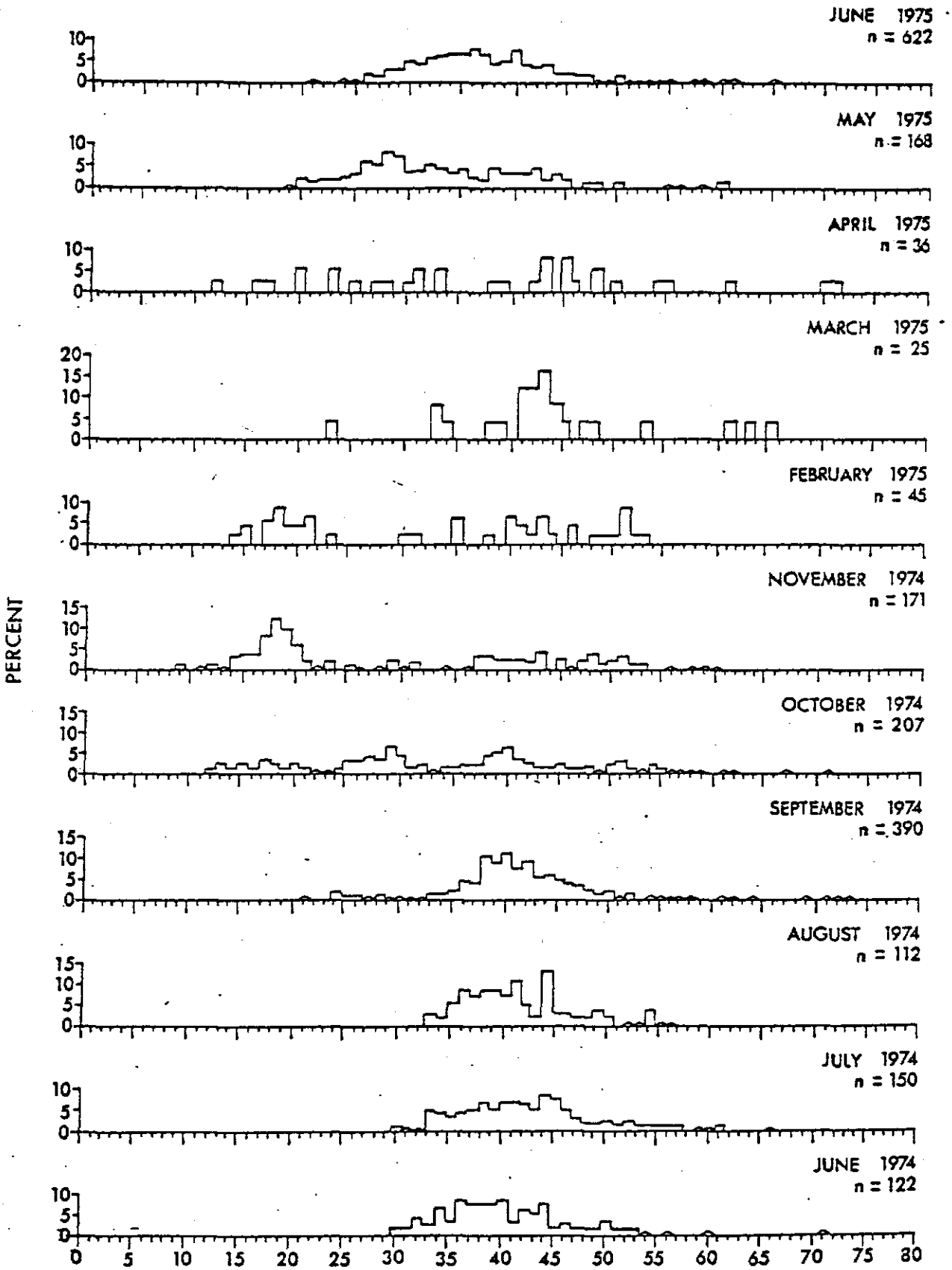

FIGURE 143.--Monthly length-frequency distributions of summer flounder (Paralichthys dentatus) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

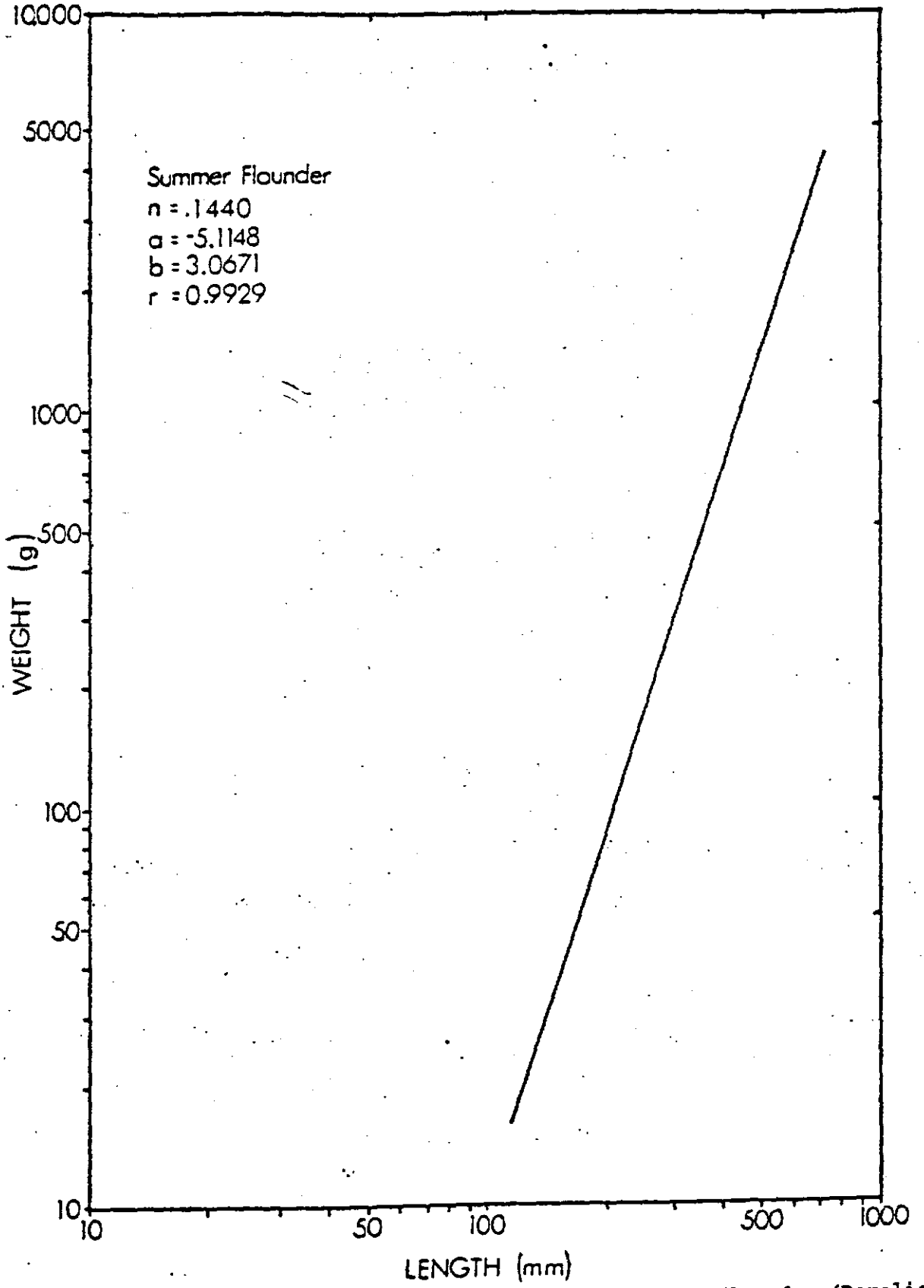

FIGURE 144.--Weight-length relationship of summer flounder (Paralichthys dentatus) collected in New York Bight, June 1974 to June 1975.

TABLE 11.--Monthly sex ratios of summer flounder (Paralichthys dentatus) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	115	45	39.1	68	59.1	2	1.8
July	99	23	23.2	74	74.7	2	2.1
August	74	30	40.5	44	59.5	-	-
September	225	110	48.9	104	46.2	11	4.9
October	195	54	27.7	88	45.1	53	27.2
November	163	42	25.8	40	24.5	81	49.7
January 1/	-	-	-	-	-	-	-
February	47	13	27.7	18	38.3	16	34.0
March	27	11	40.7	15	55.6	1	3.7
April	34	10	29.4	20	58.8	4	11.8
May	145	55	37.9	80	55.2	10	6.9
June	317	154	48.6	151	47.6	12	3.8
TOTAL	1441	547	38.0	702	48.7	192	13.3

1/ Bay stations only.

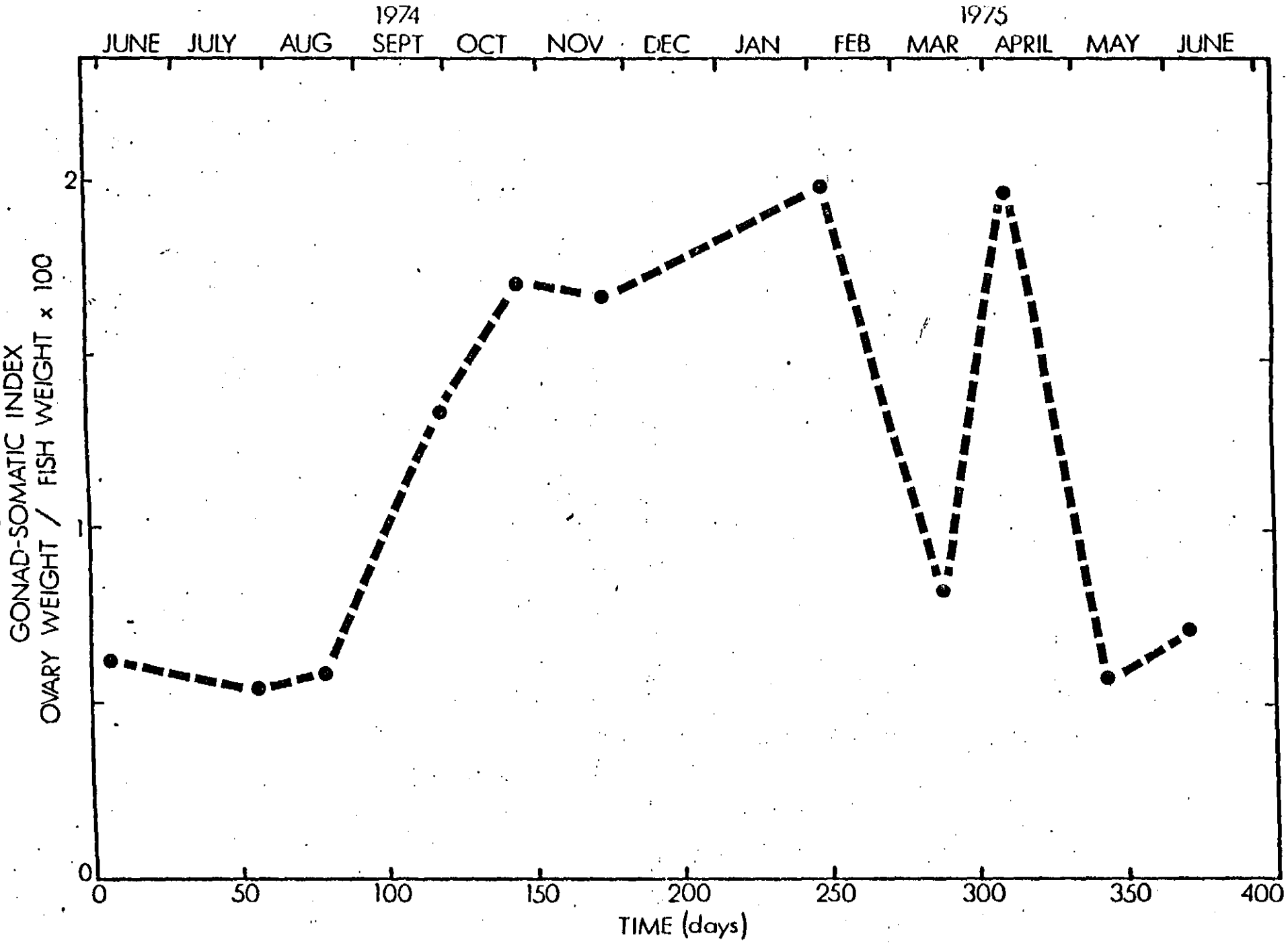

FIGURE 145.--Monthly gonad-somatic indices of summer flounder (Paralichthys dentatus) collected in New York Bight, June 1974 to June 1975.

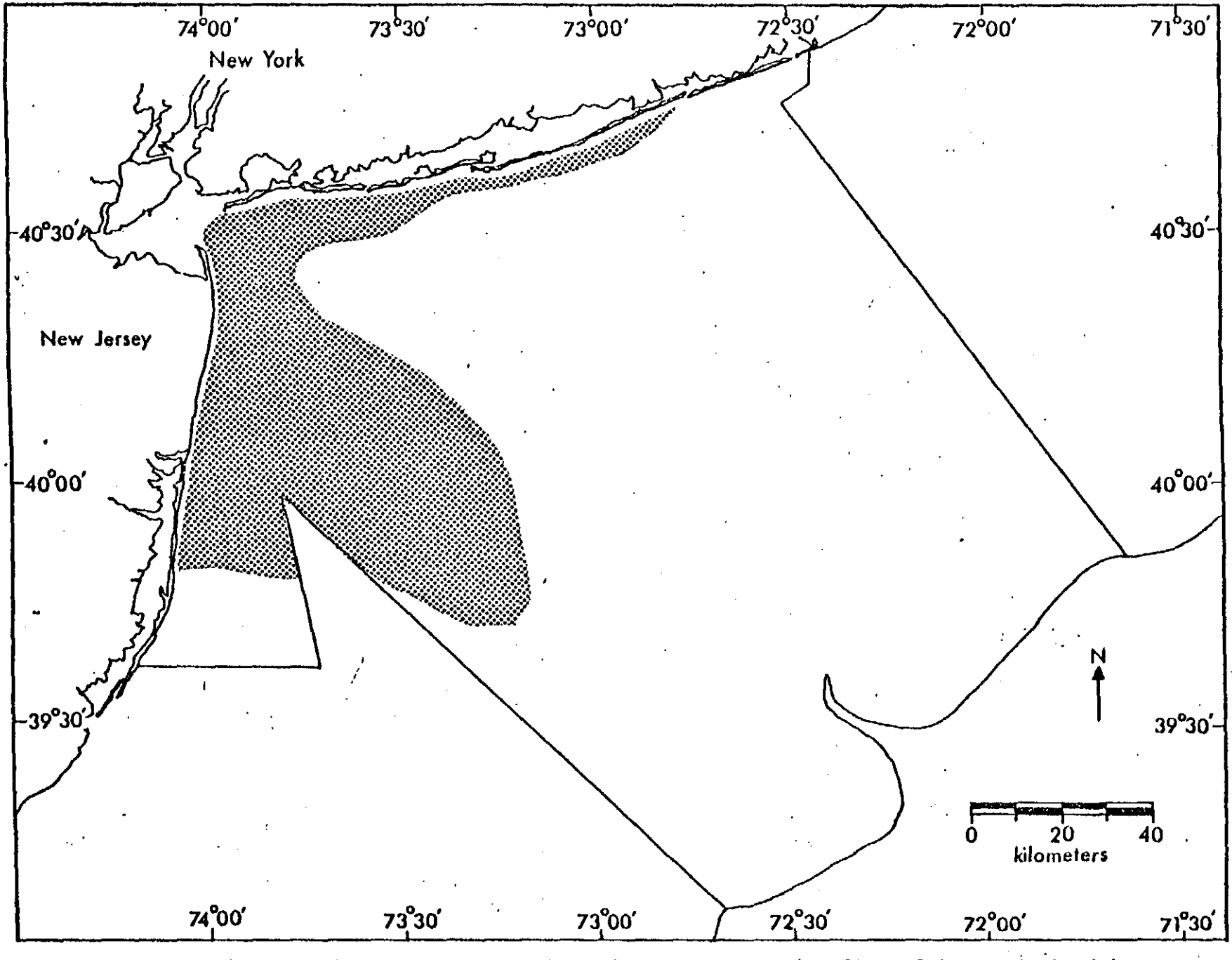

FIGURE 146.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, June 1974.

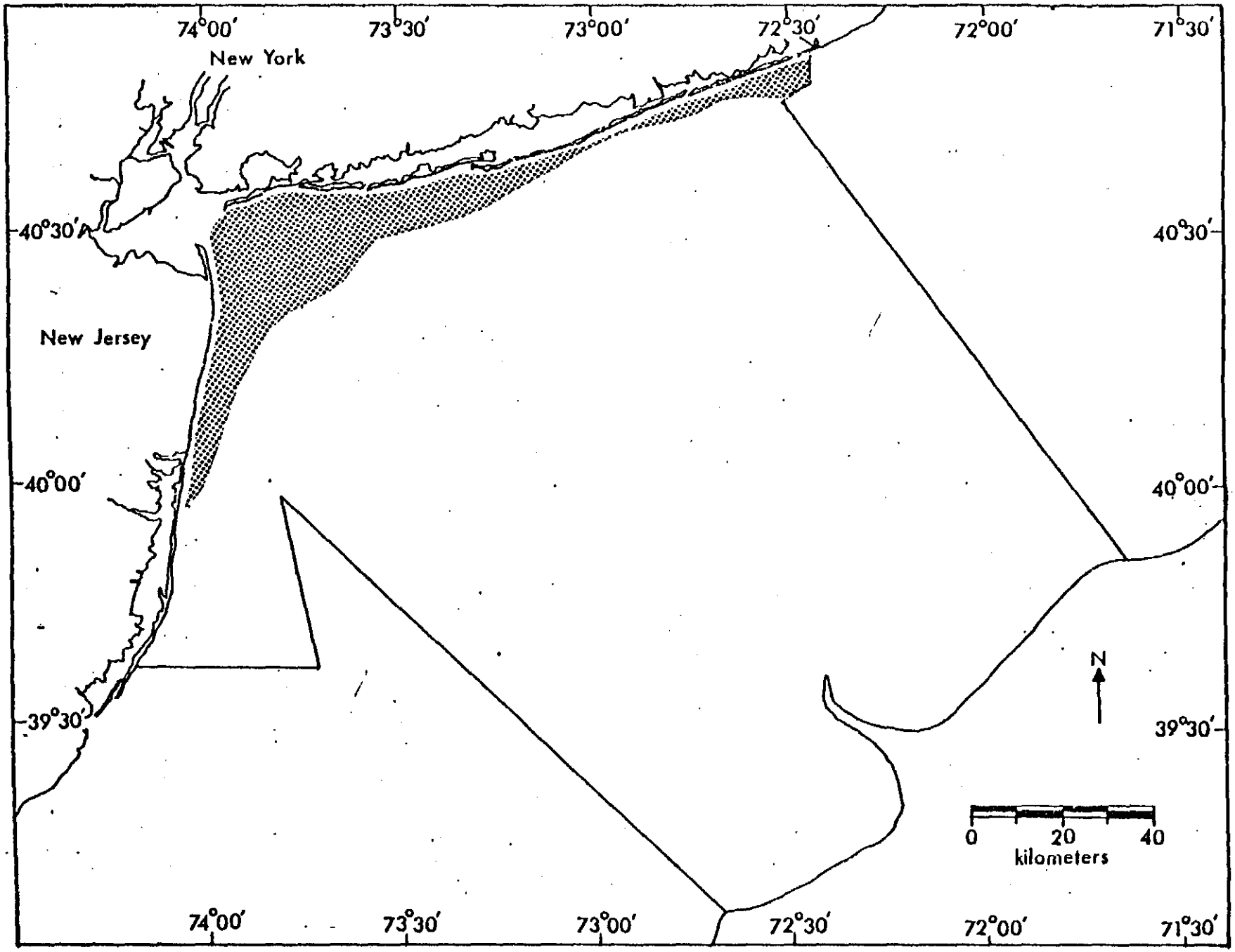

FIGURE 147.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, July 1974.

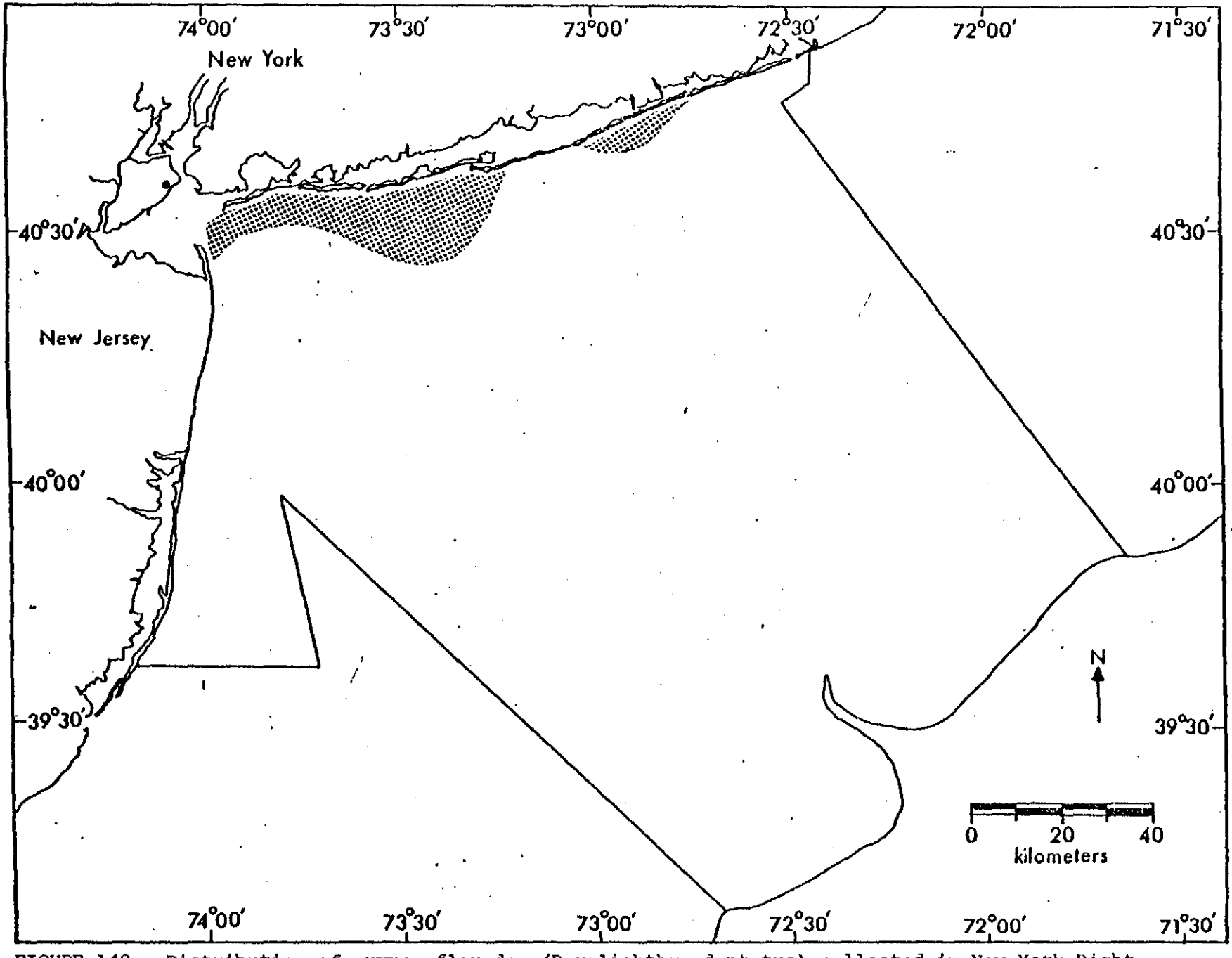

FIGURE 148.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, August 1974.

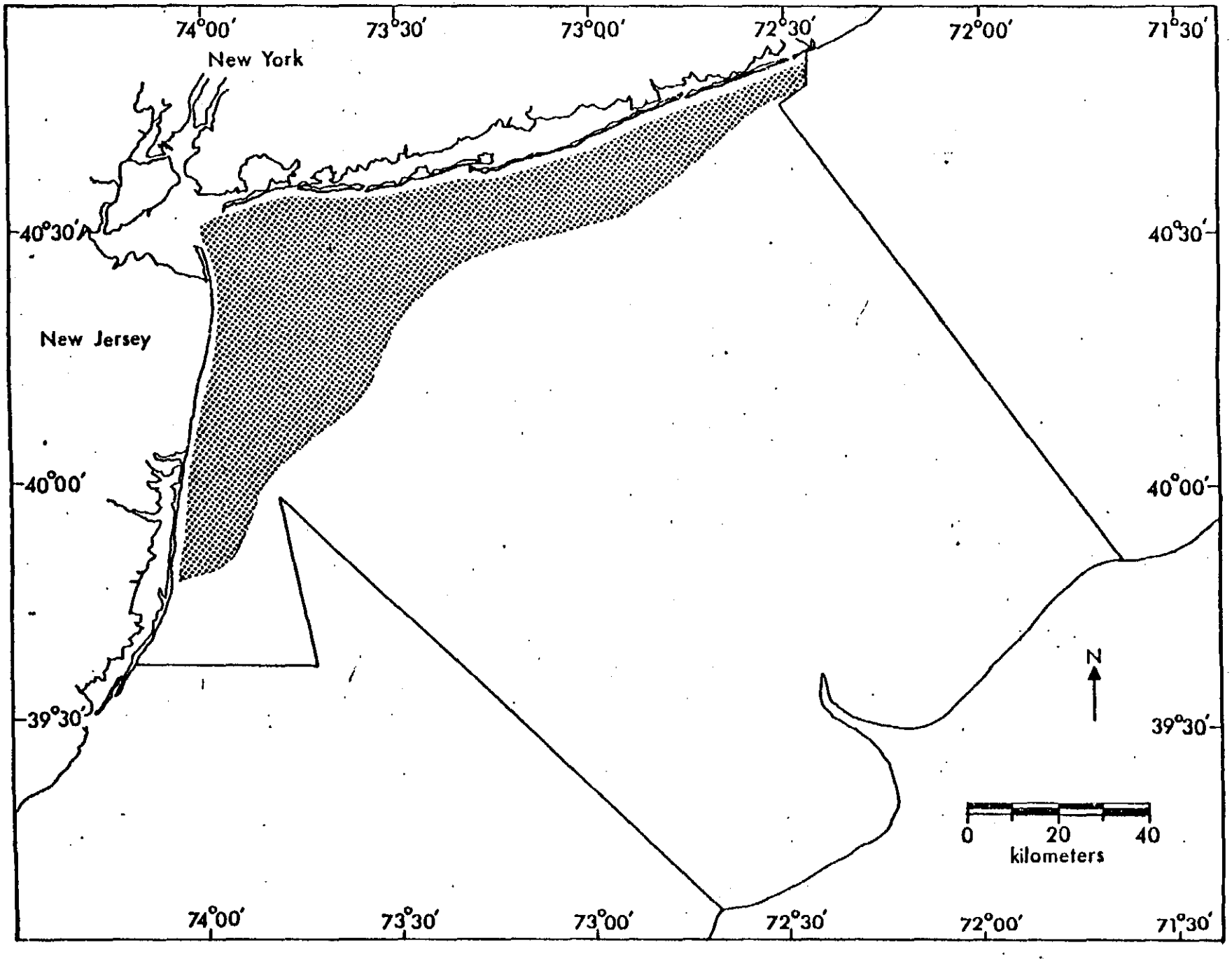

FIGURE 149.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, September 1974.

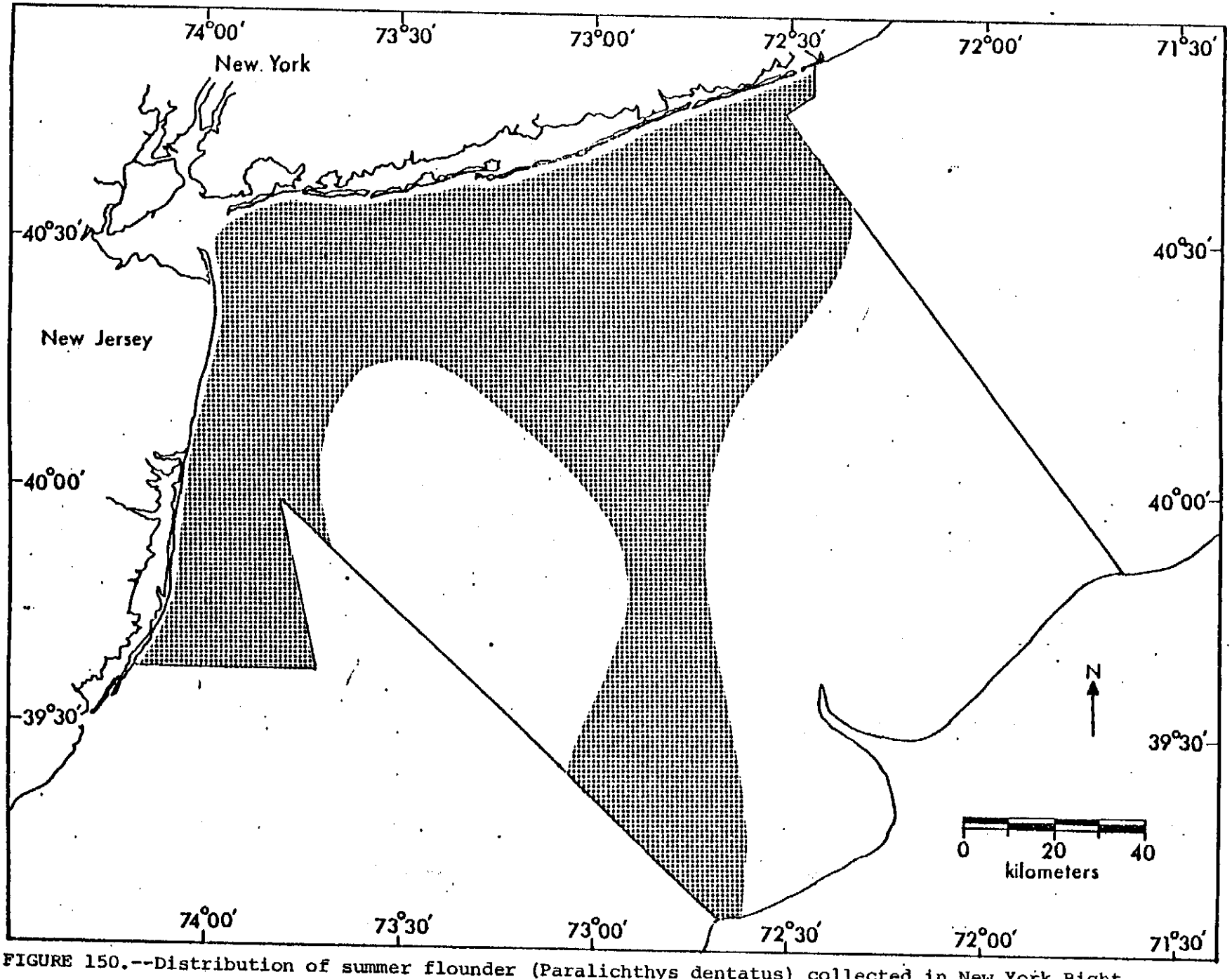

FIGURE 150.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, October 1974.

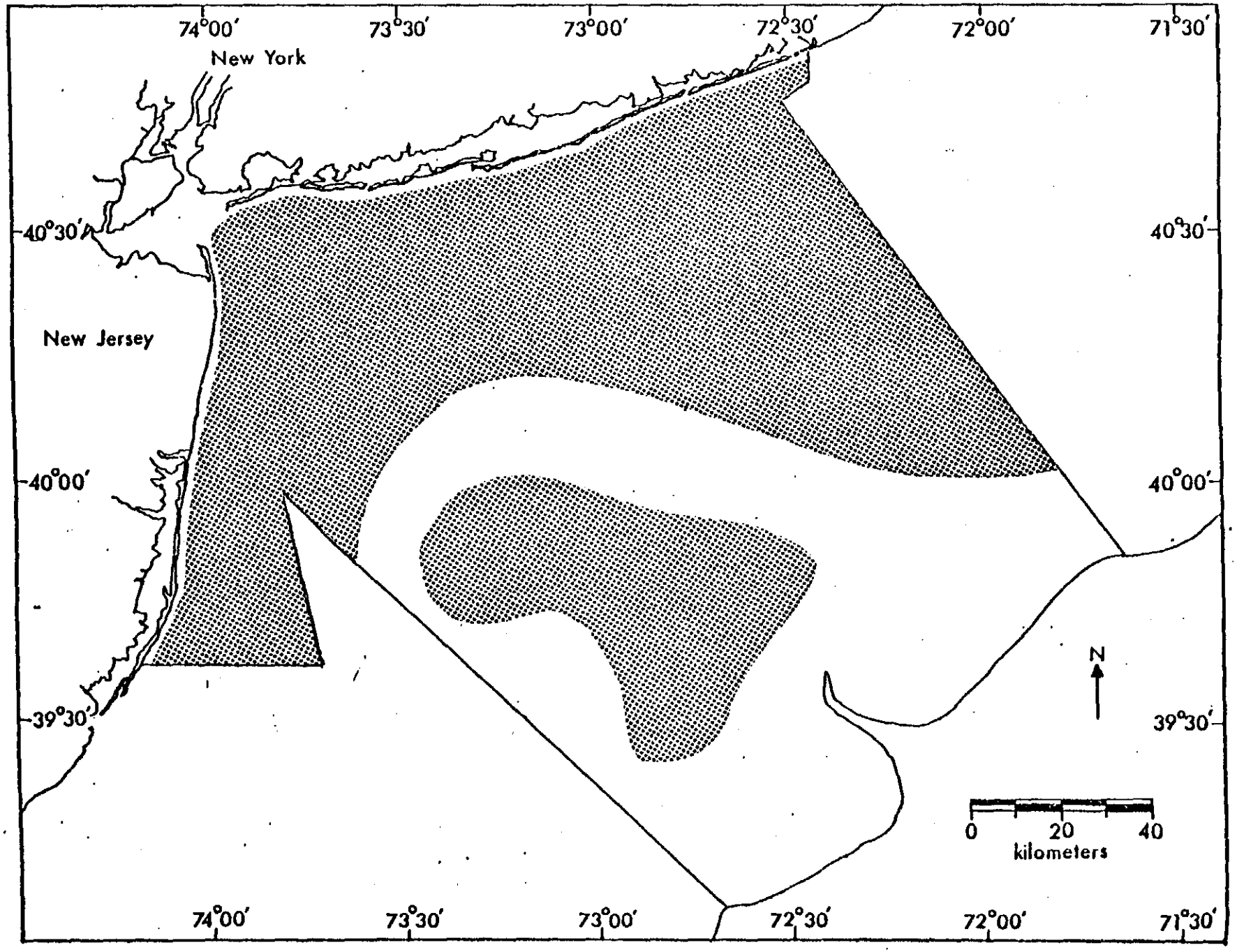

FIGURE 151.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, November 1974.

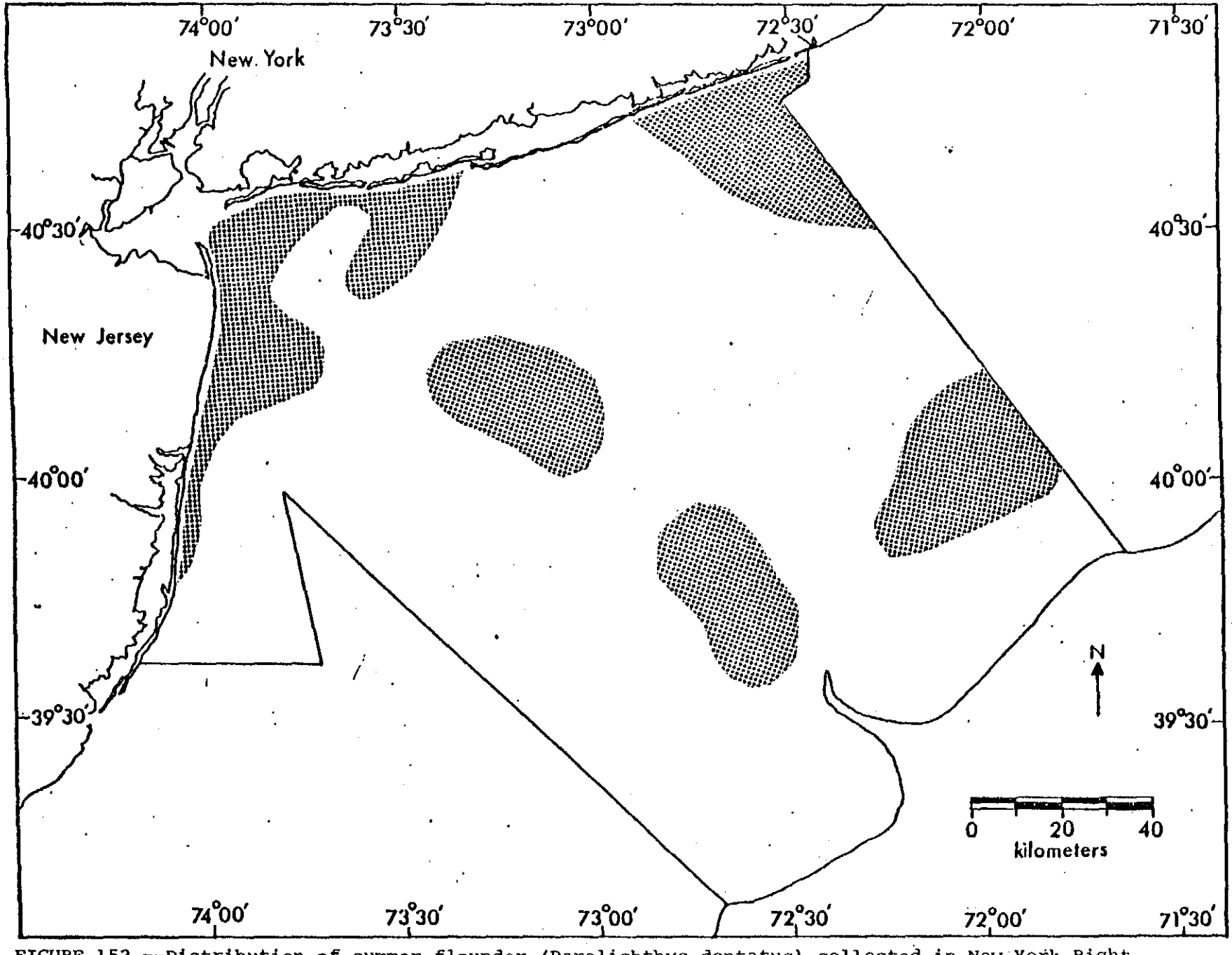

FIGURE 152.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, February 1975.

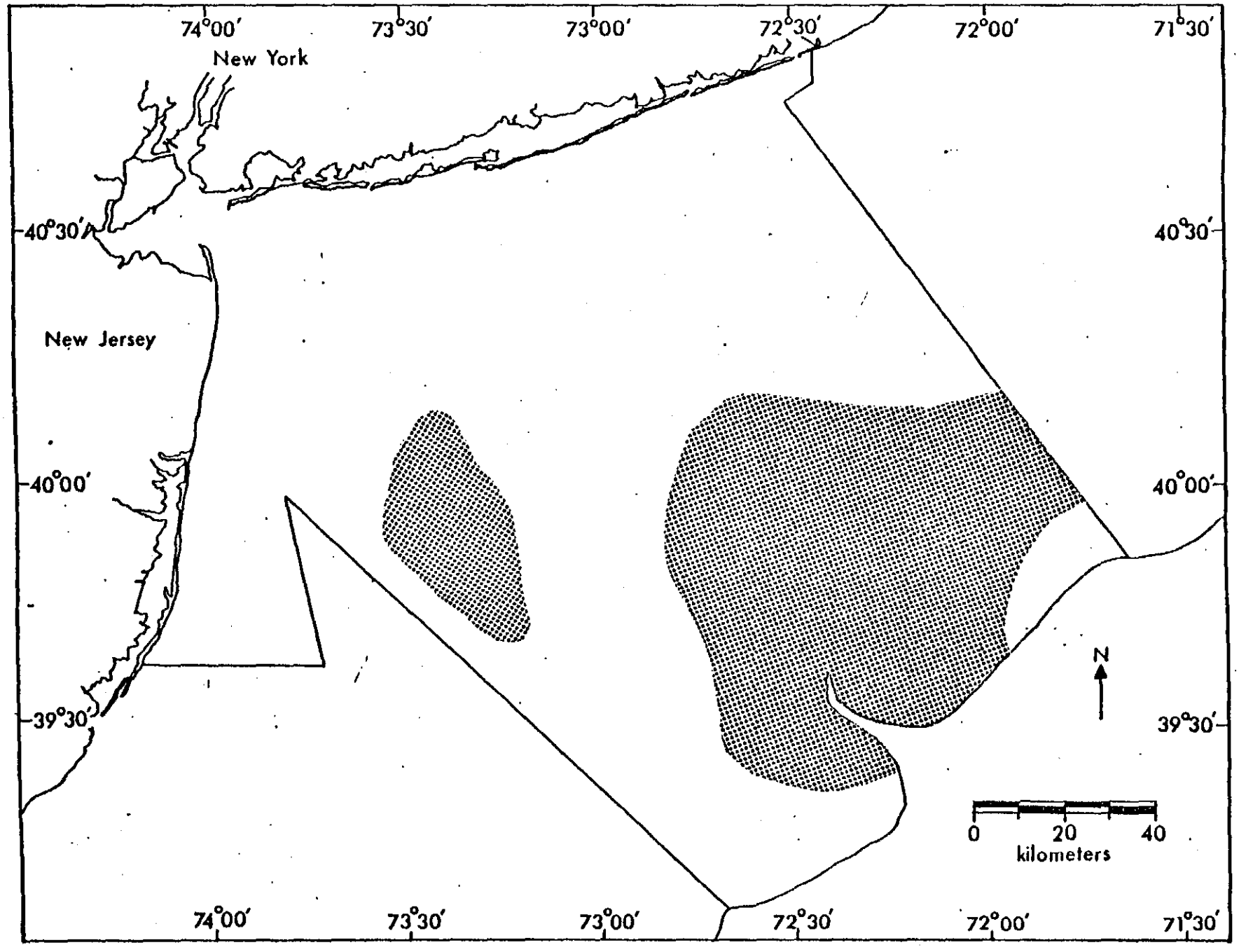

FIGURE 153.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, March 1975.

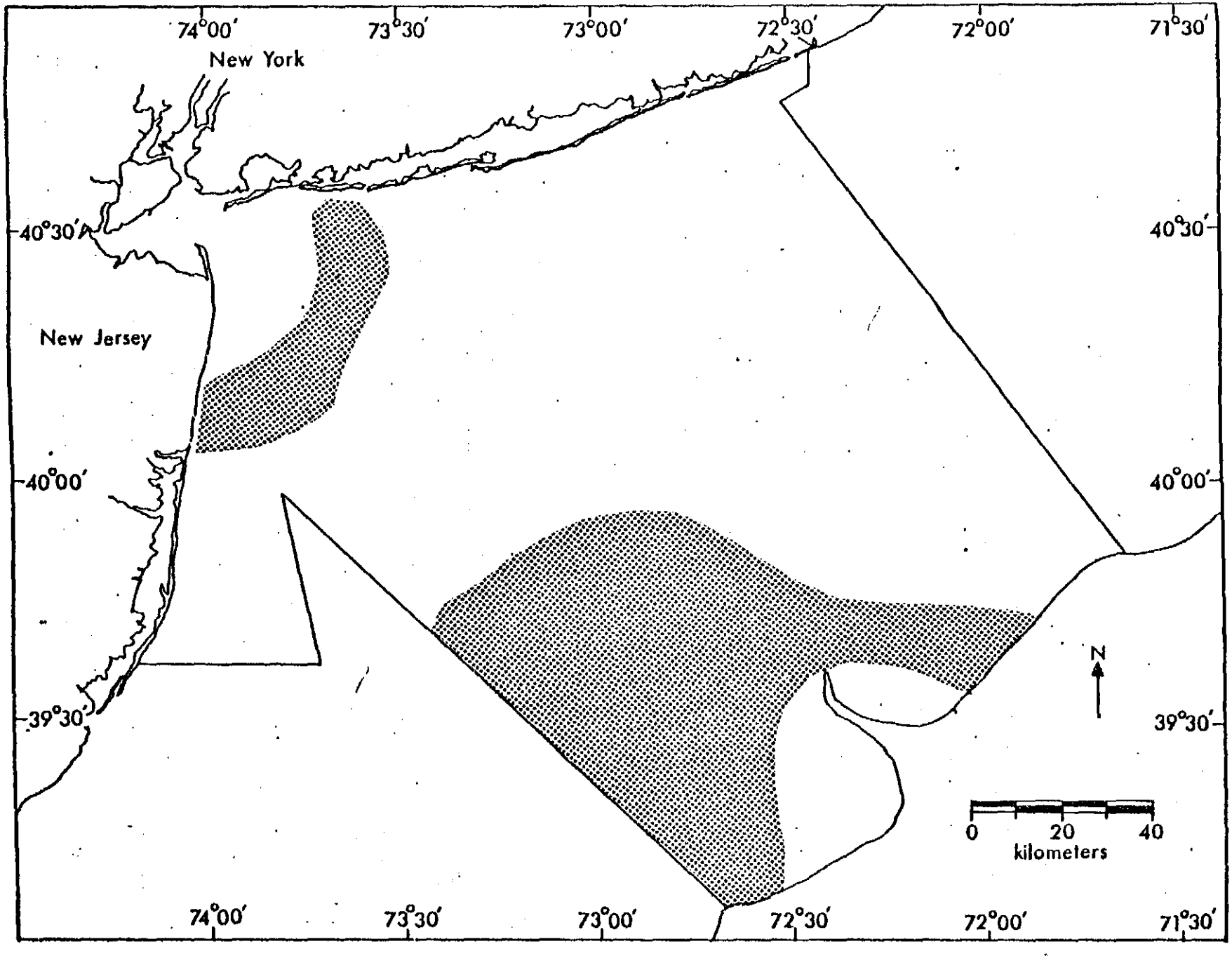

FIGURE 154.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, April 1975.

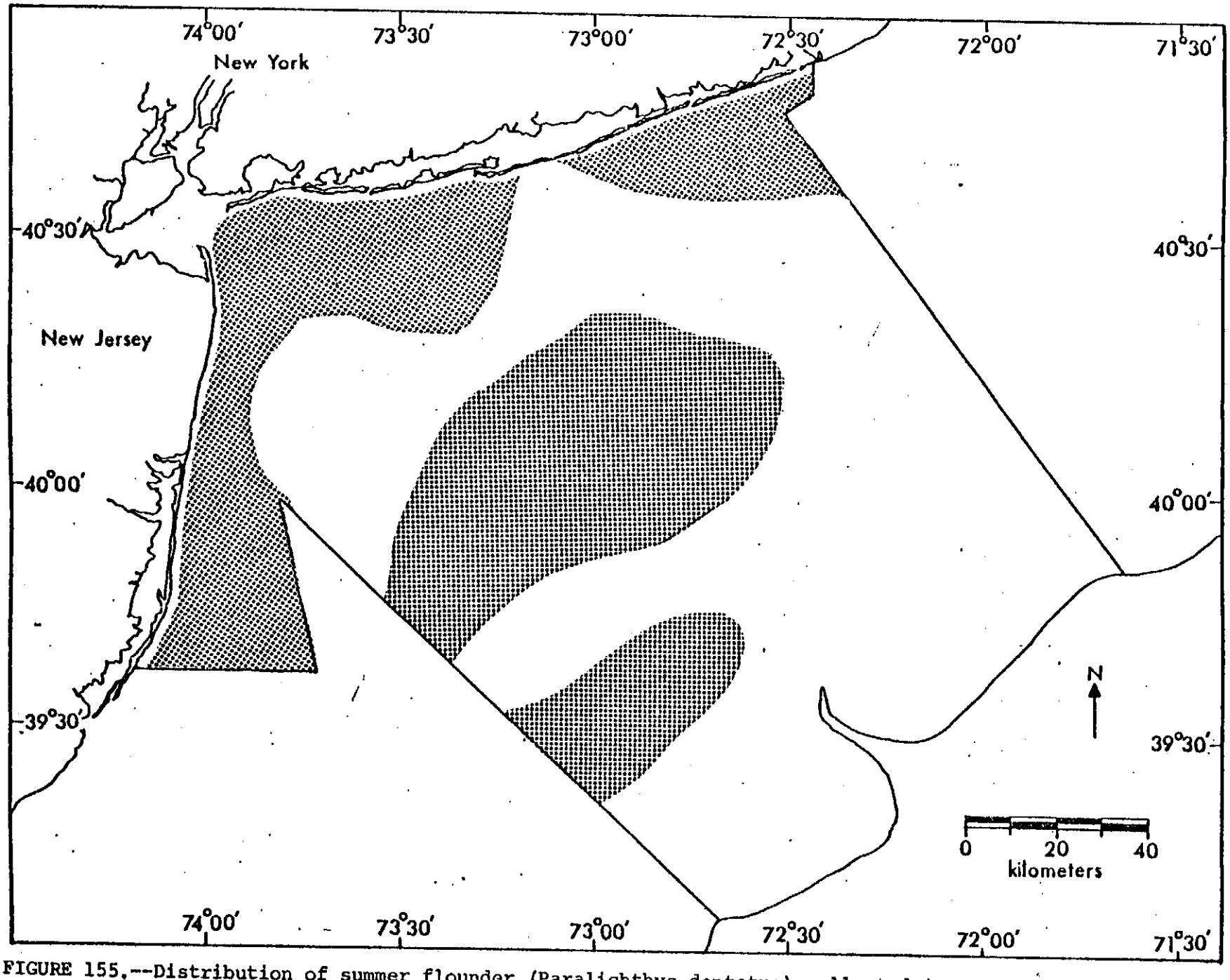

FIGURE 155.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, May 1975.

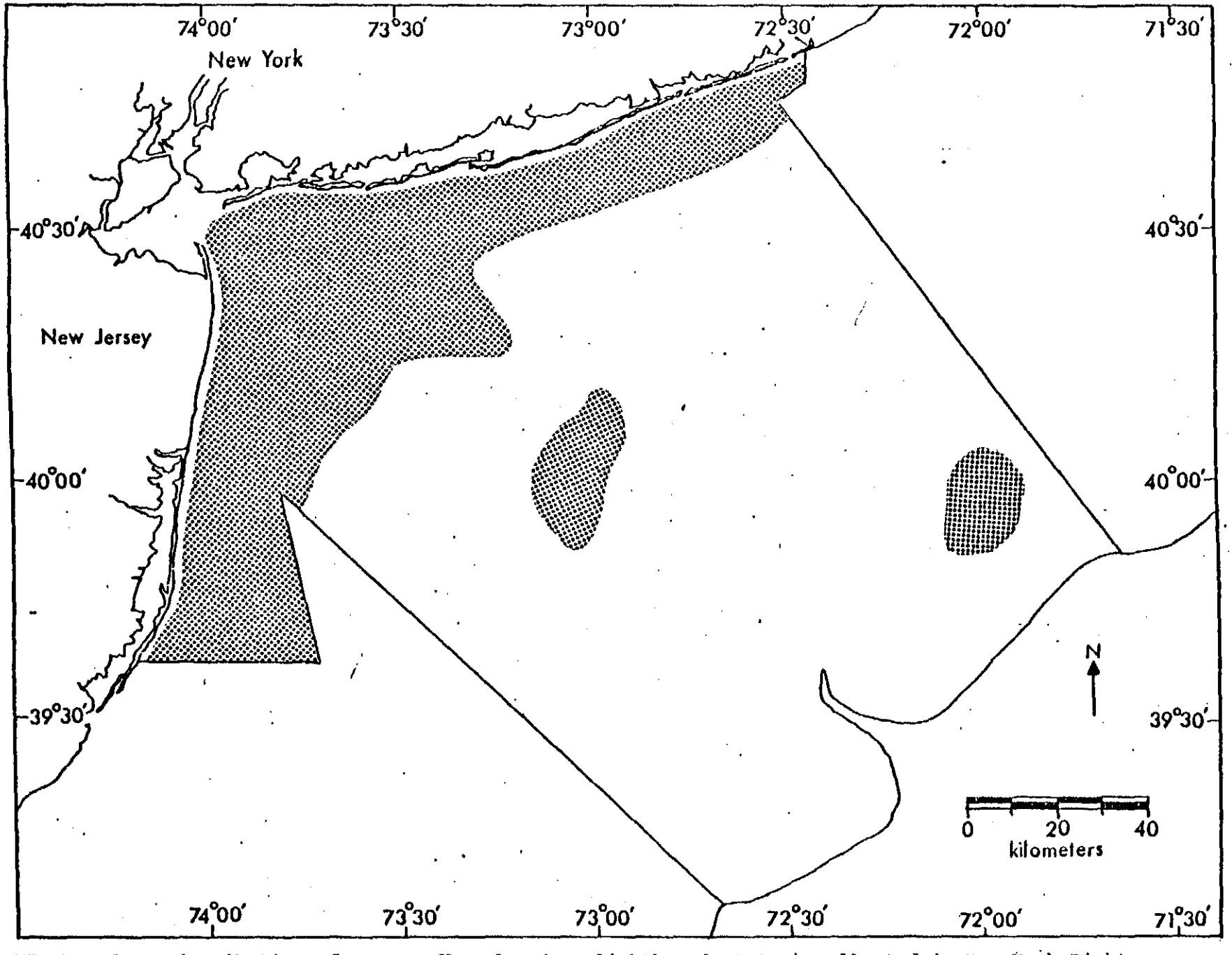

FIGURE 156.--Distribution of summer flounder (Paralichthys dentatus) collected in New York Bight, June 1975.

FOURSPOT FLOUNDER

(Paralichthys oblongus)

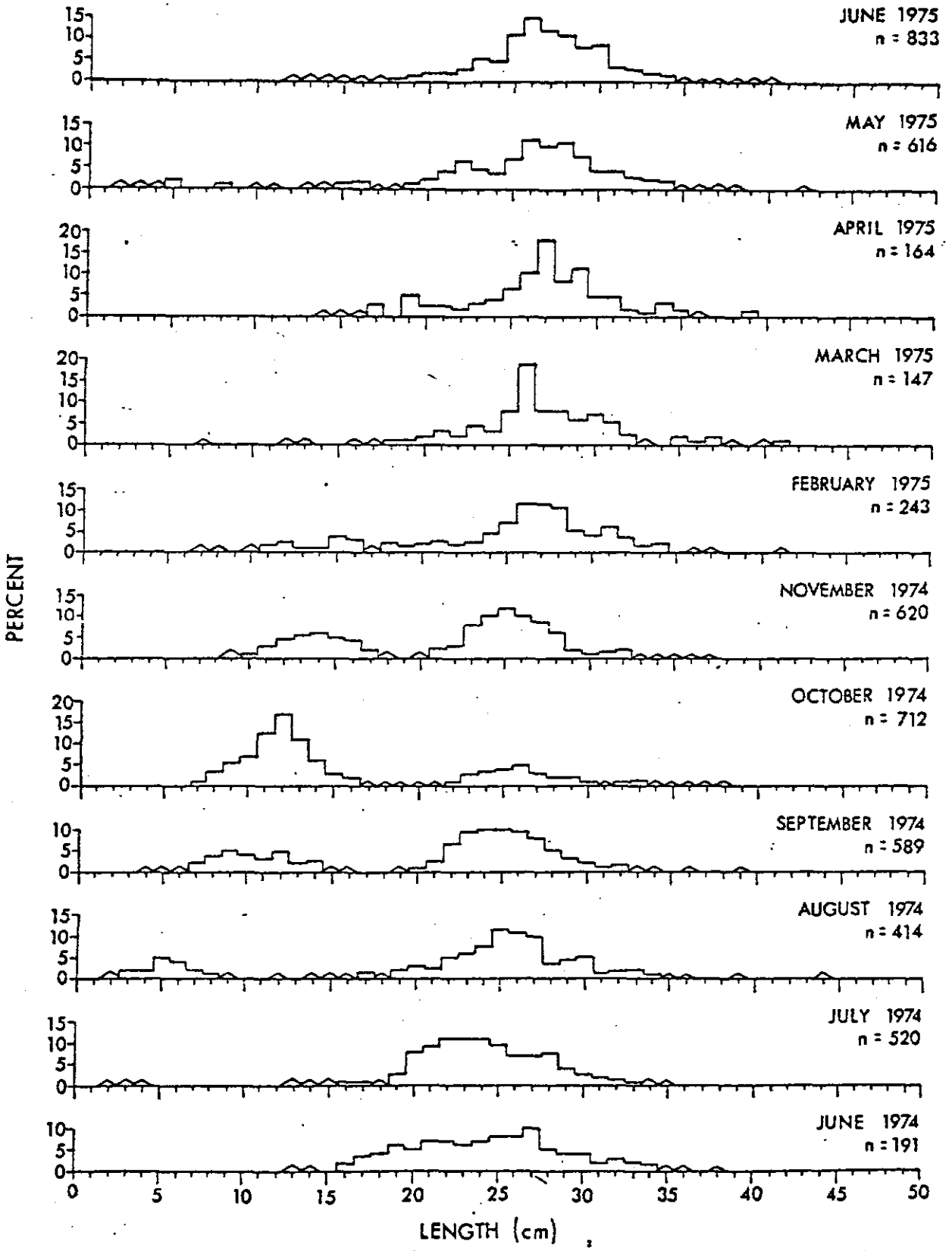

FIGURE 157.--Monthly length-frequency distributions of fourspot flounder (Paralichthys oblongus) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

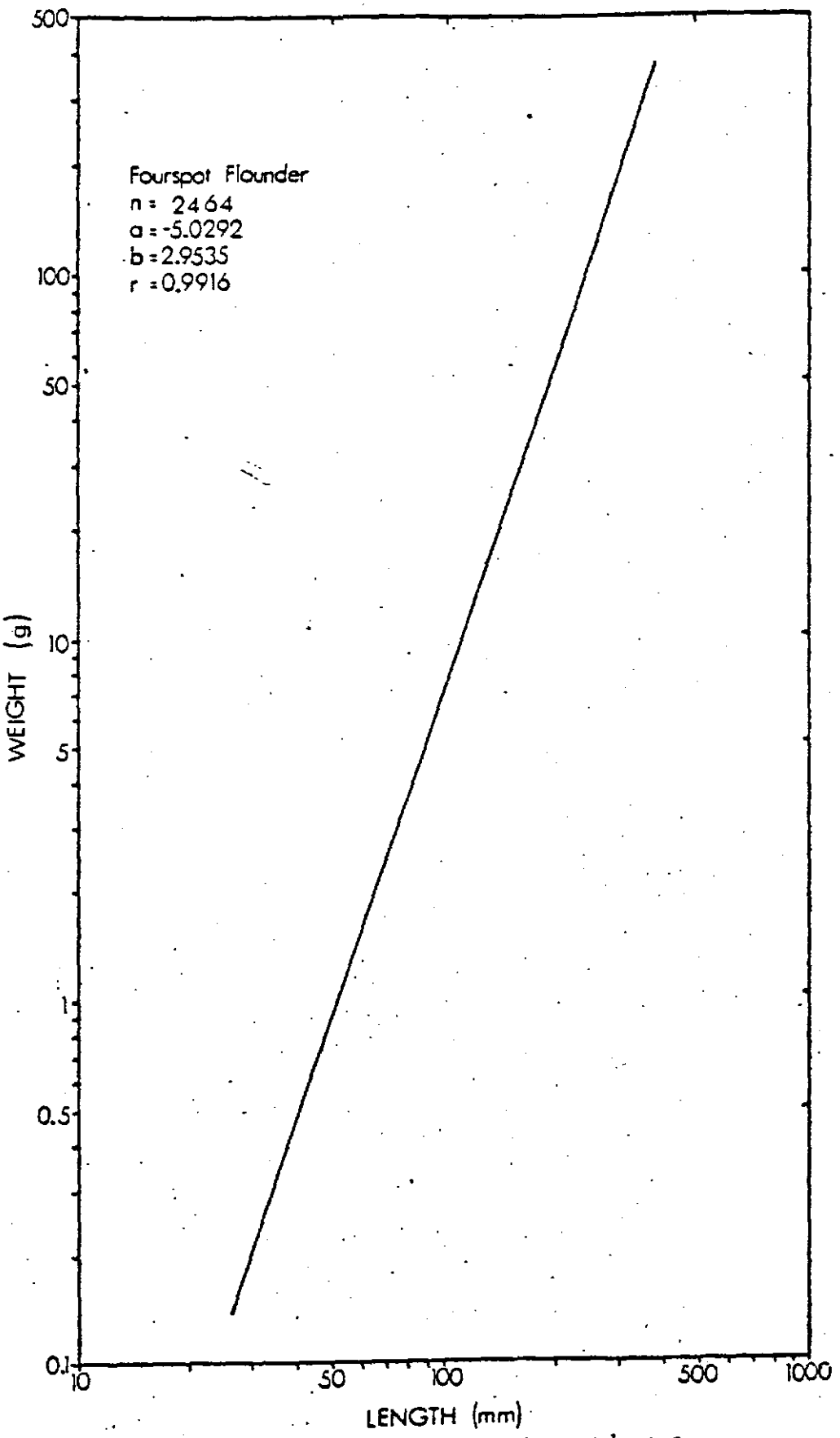

FIGURE 158.--Weight-length relationship of fourspot flounder (Paralichthys oblongus) collected in New York Bight, June 1974 to June 1975.

TABLE 12.--Monthly sex ratios of fourspot flounder (Paralichthys oblongus) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	82	8	9.8	17	20.7	57	69.5
July	228	84	36.8	77	33.8	67	29.4
August	236	103	43.6	87	36.9	46	19.5
September	285	77	27.0	54	19.0	154	54.0
October	307	35	11.4	39	12.7	233	75.9
November	330	84	25.5	105	31.8	141	42.7
January 1/	-	-	-	-	-	-	-
February	177	43	24.3	75	42.4	59	33.3
March	127	34	26.8	58	45.7	35	27.6
April	122	39	32.0	58	48.0	25	21.0
May	337	103	30.5	152	43.8	82	25.7
June	358	109	30.4	120	33.5	129	36.0
TOTAL	2589	719	27.8	842	32.5	1028	39.7

1/ Bay stations only.

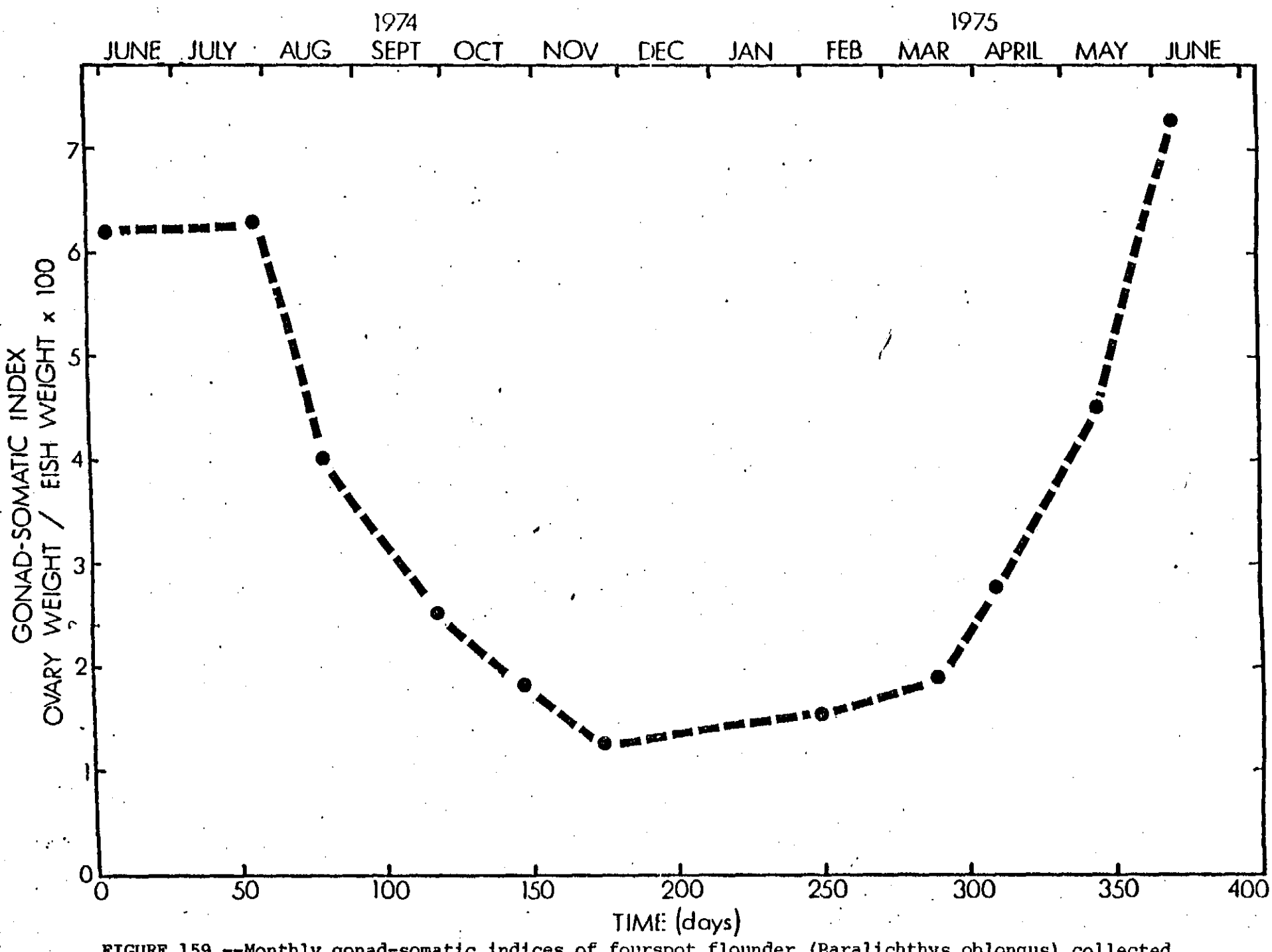

FIGURE 159.--Monthly gonad-somatic indices of fourspot flounder (Paralichthys oblongus) collected in New York Bight, June 1974 to June 1975.

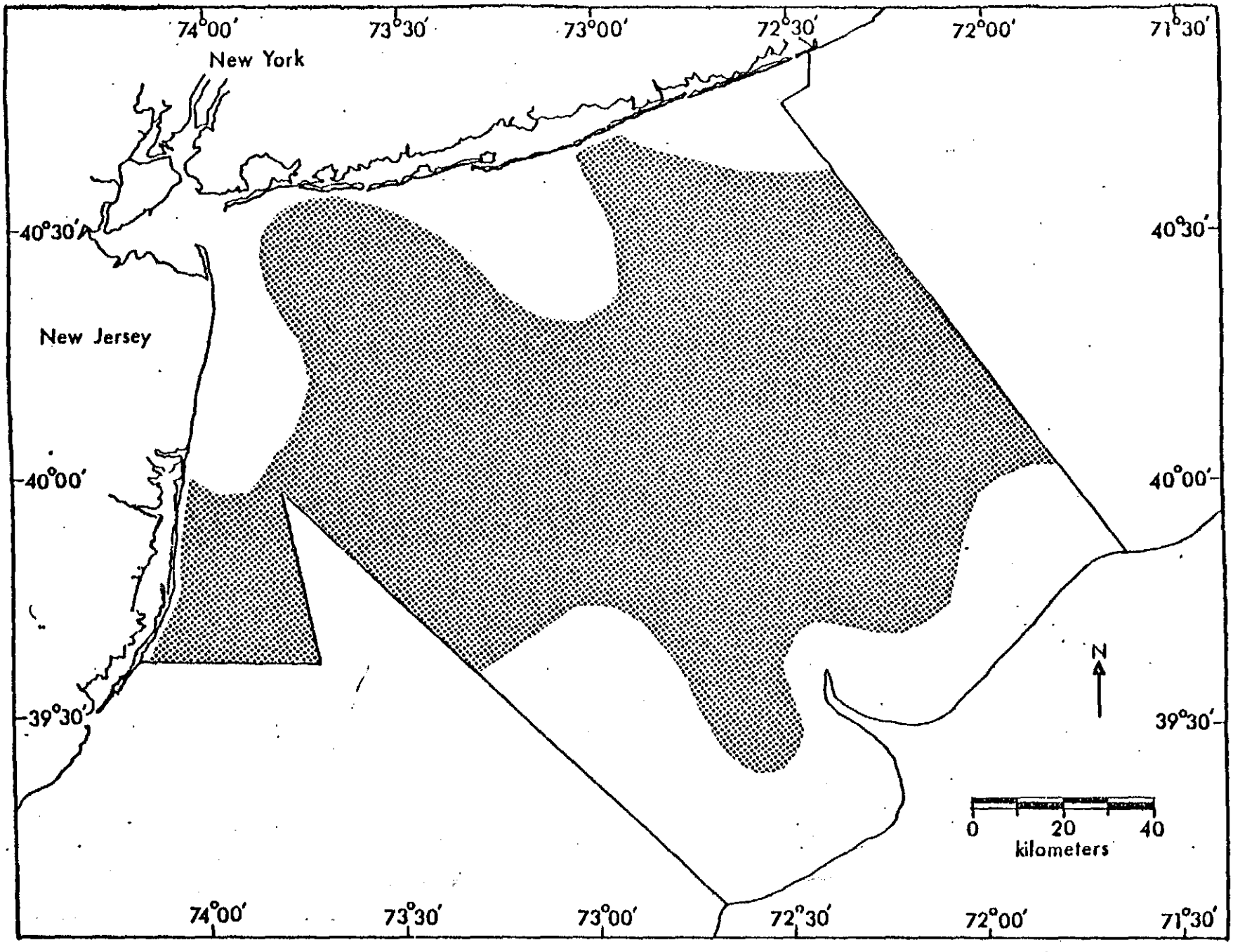

FIGURE 160.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, June 1974.

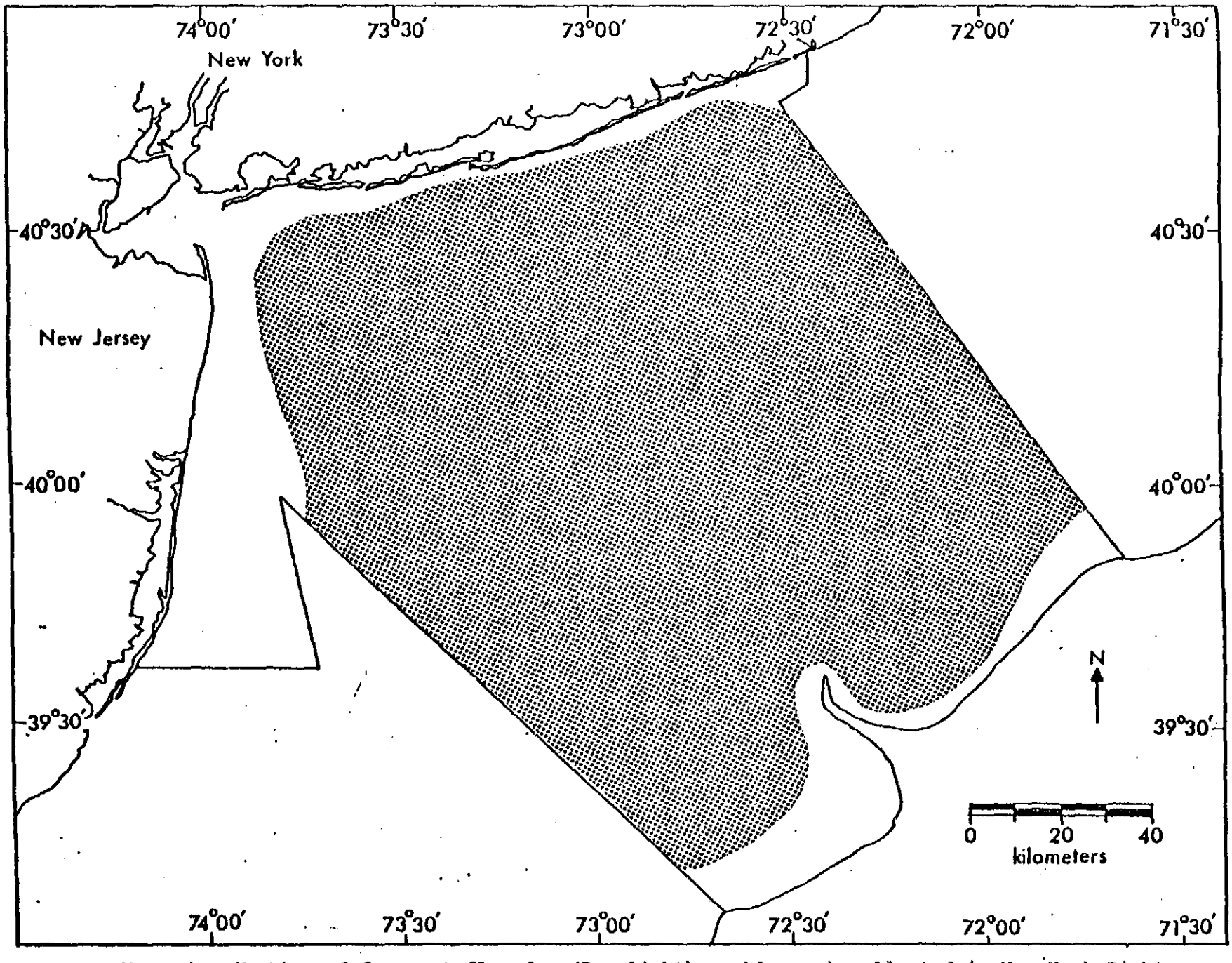

FIGURE 161.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, July 1974.

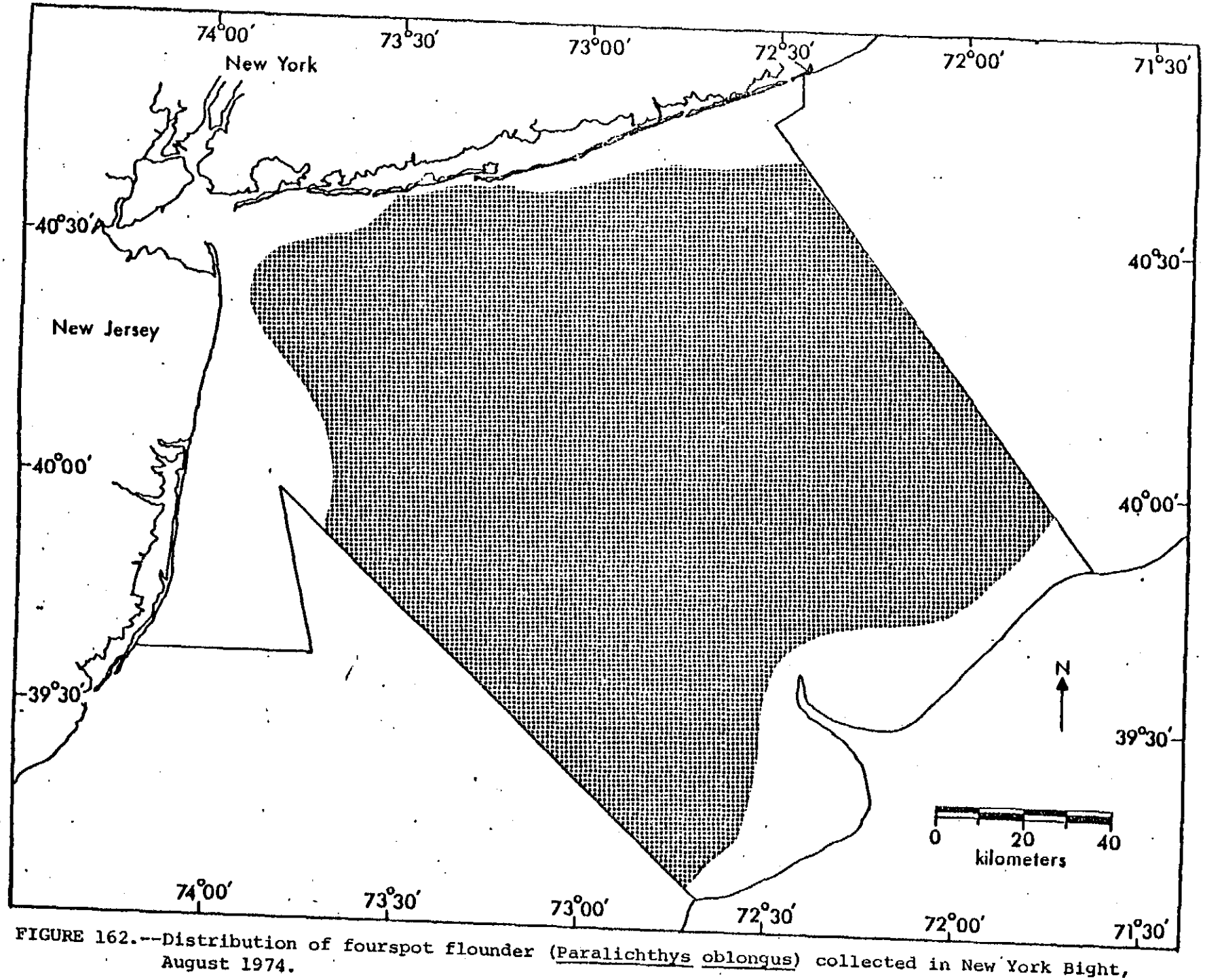

FIGURE 162.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, August 1974.

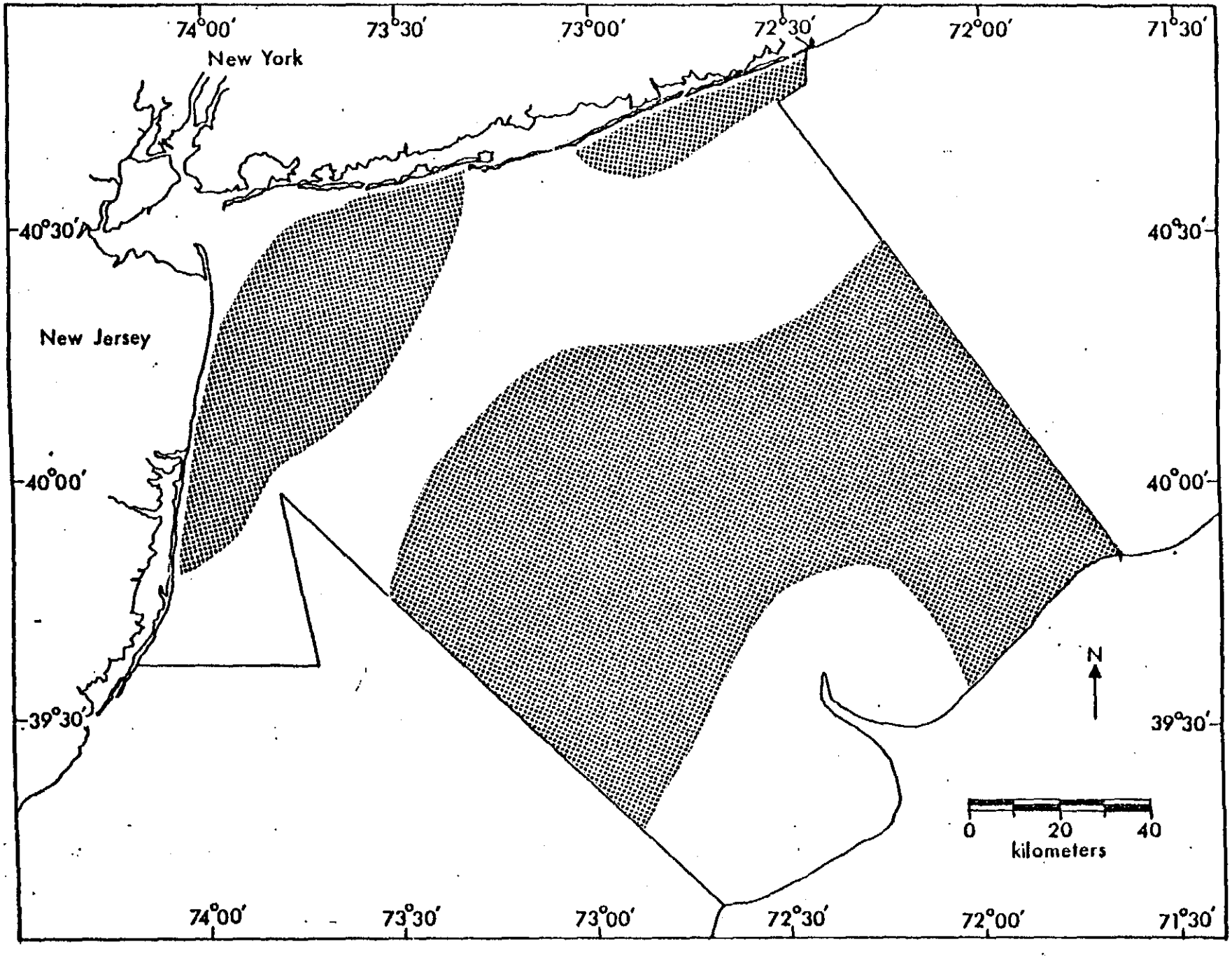

FIGURE 163.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, September 1974.

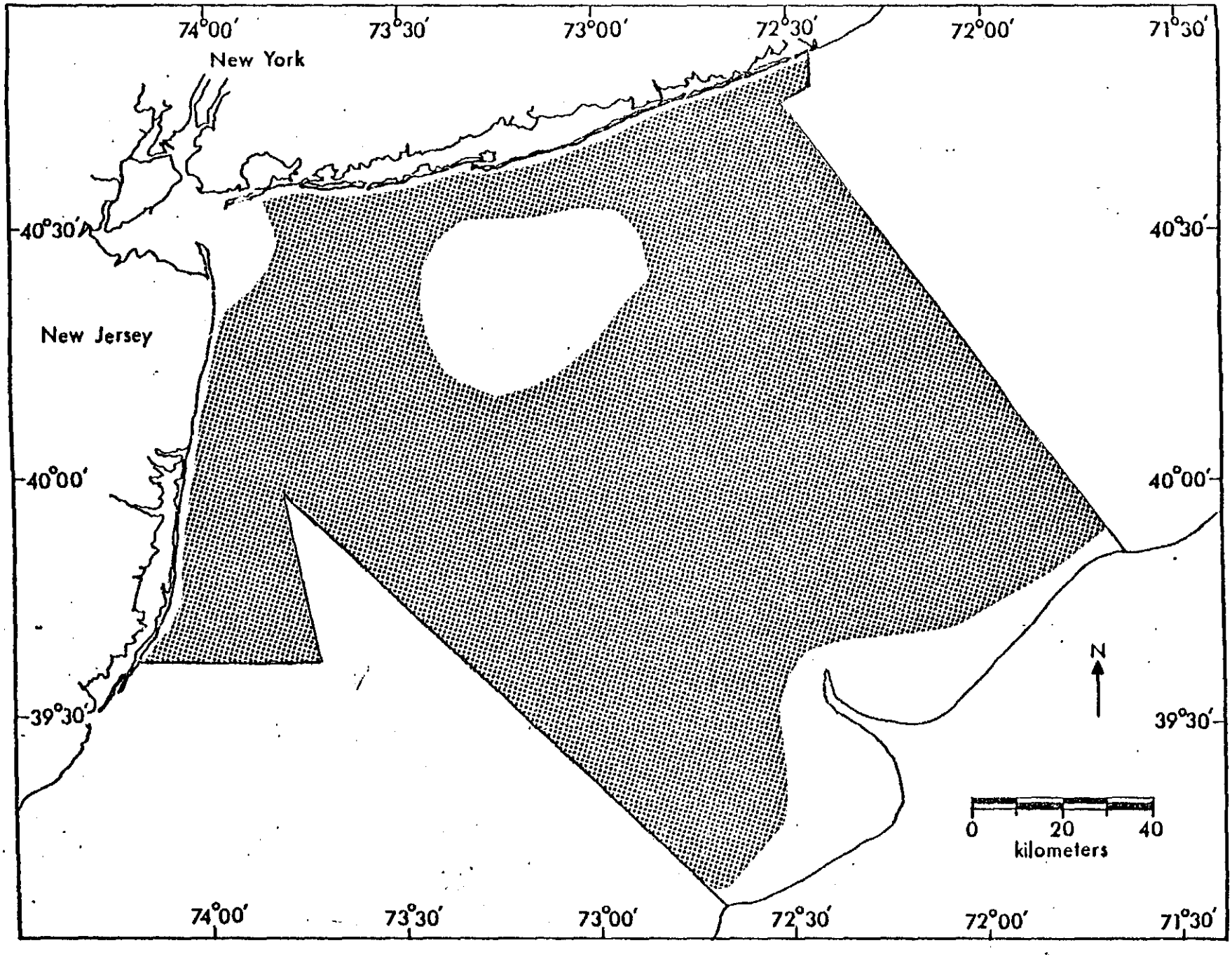

FIGURE 164.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, October 1974.

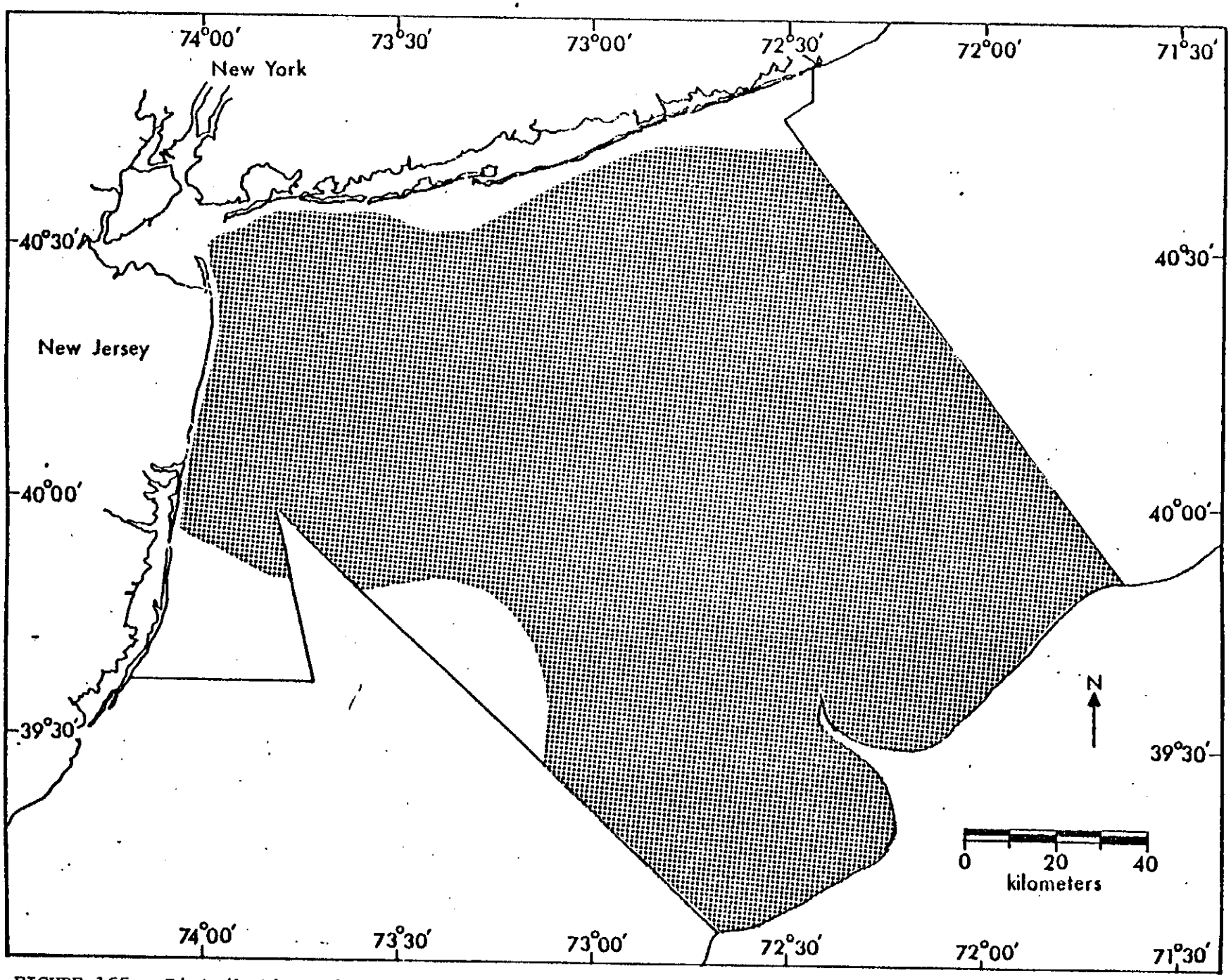

FIGURE 165.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, November 1974.

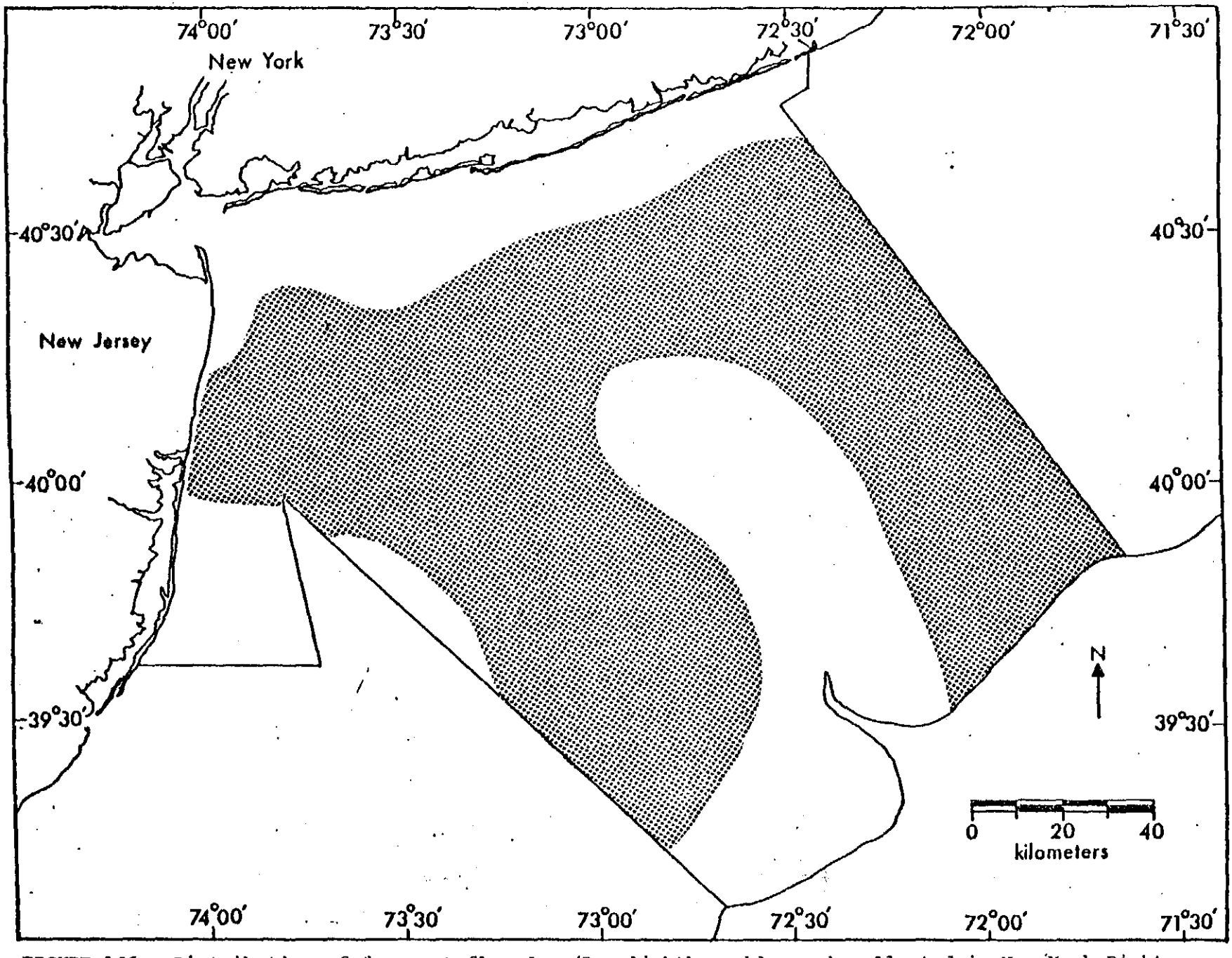

FIGURE 166.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, February 1975.

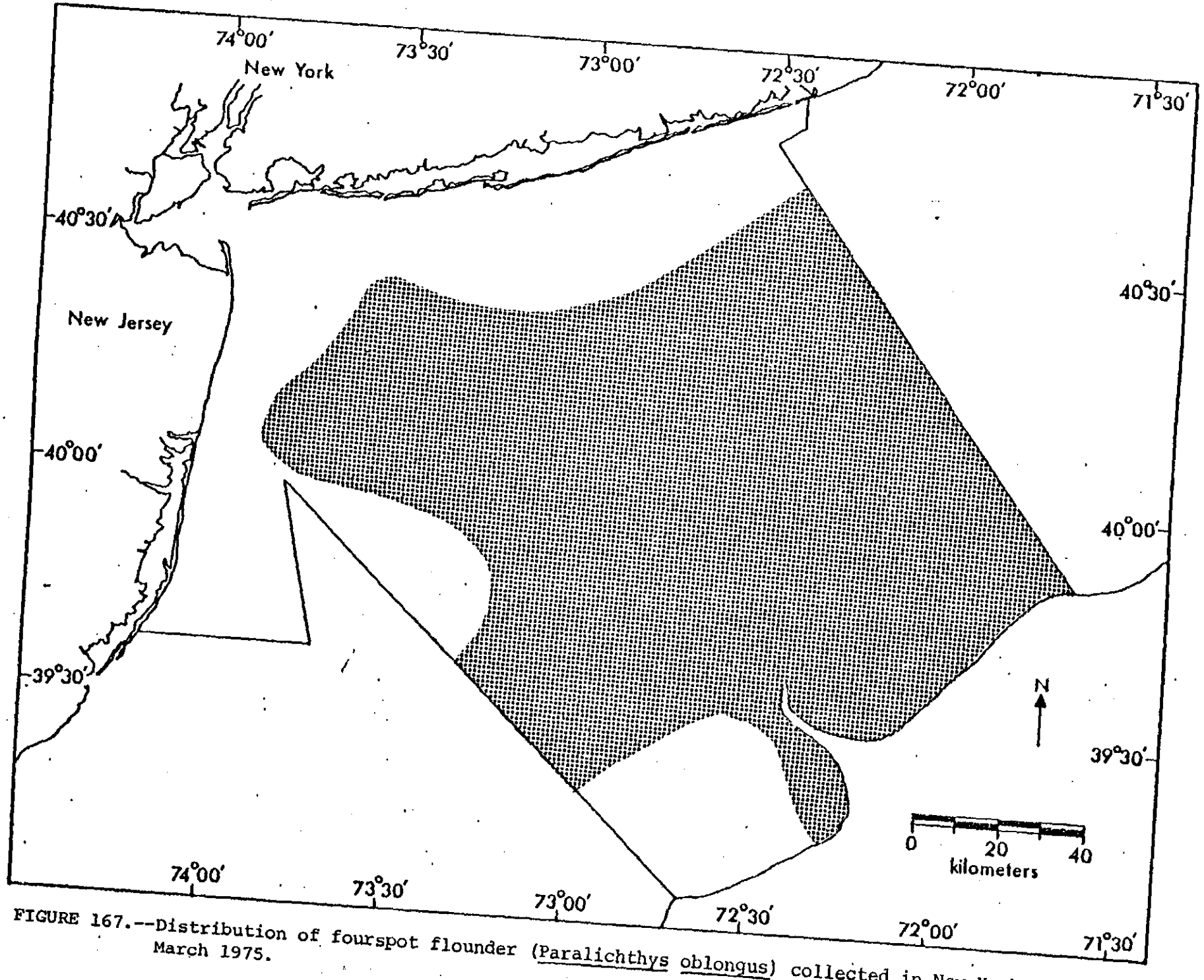

FIGURE 167.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, March 1975.

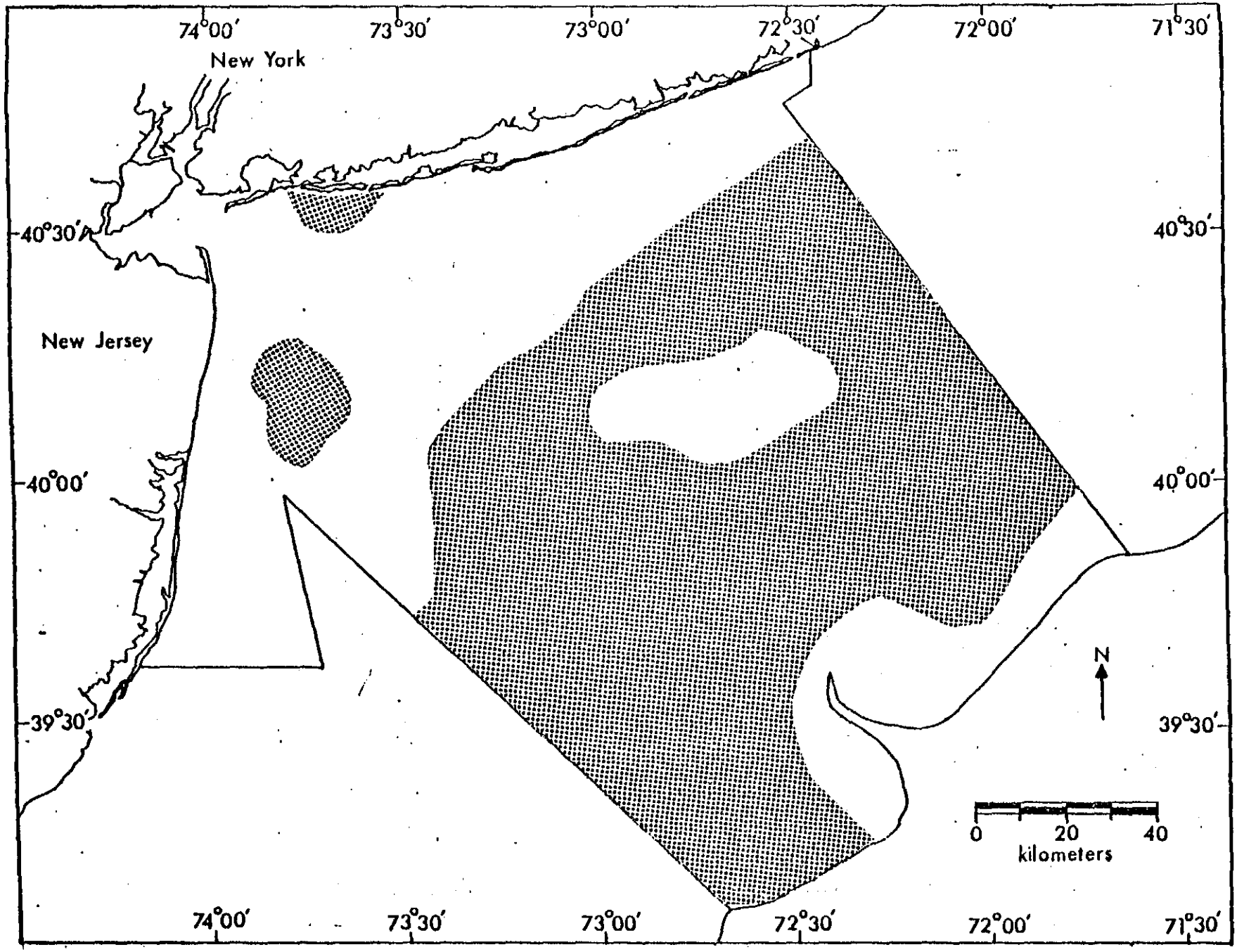

FIGURE 168.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, April 1975.

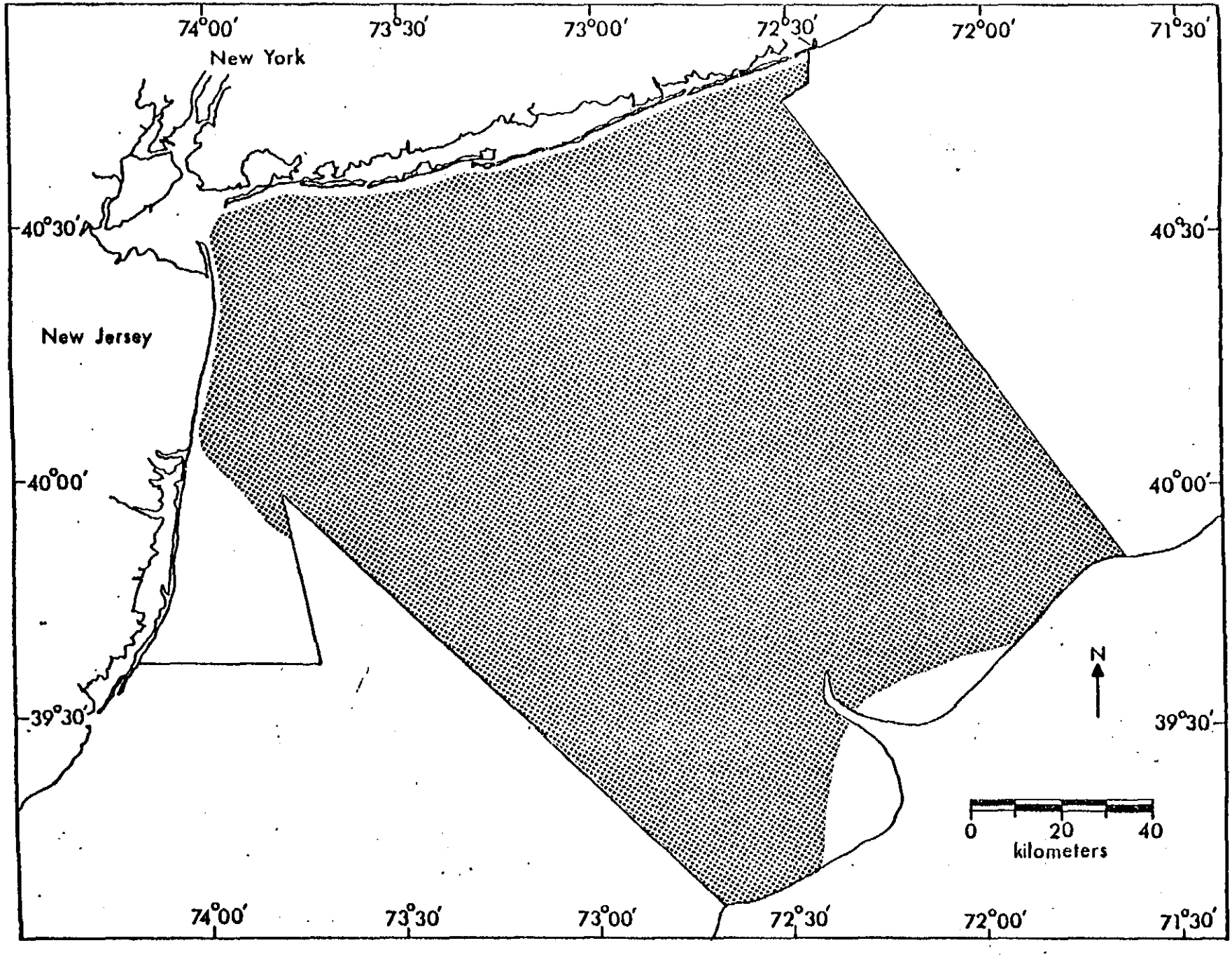

FIGURE 169.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, May 1975.

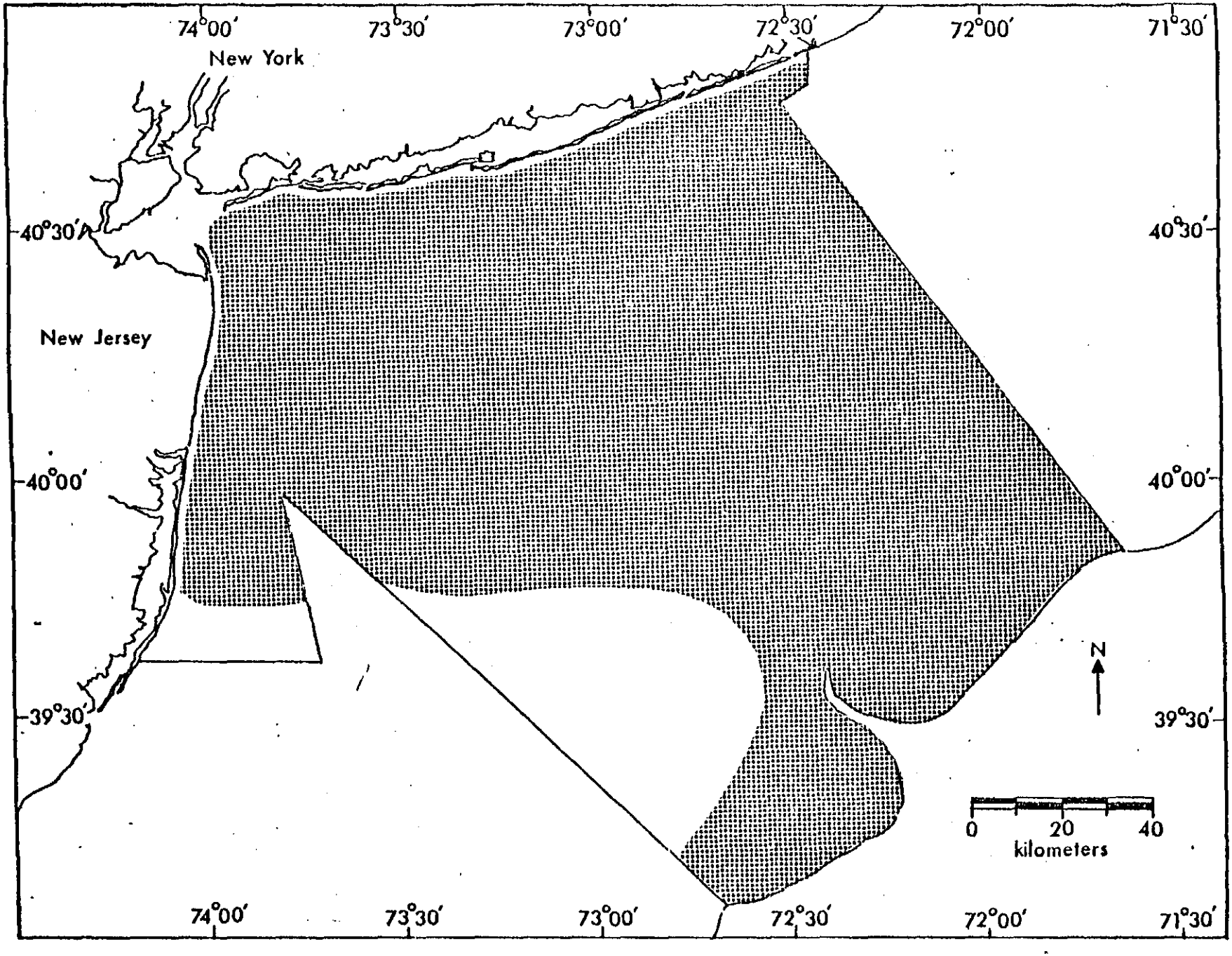

FIGURE 170.--Distribution of fourspot flounder (Paralichthys oblongus) collected in New York Bight, June 1975.

WINDOWPANE

(Scophthalmus aquosus)

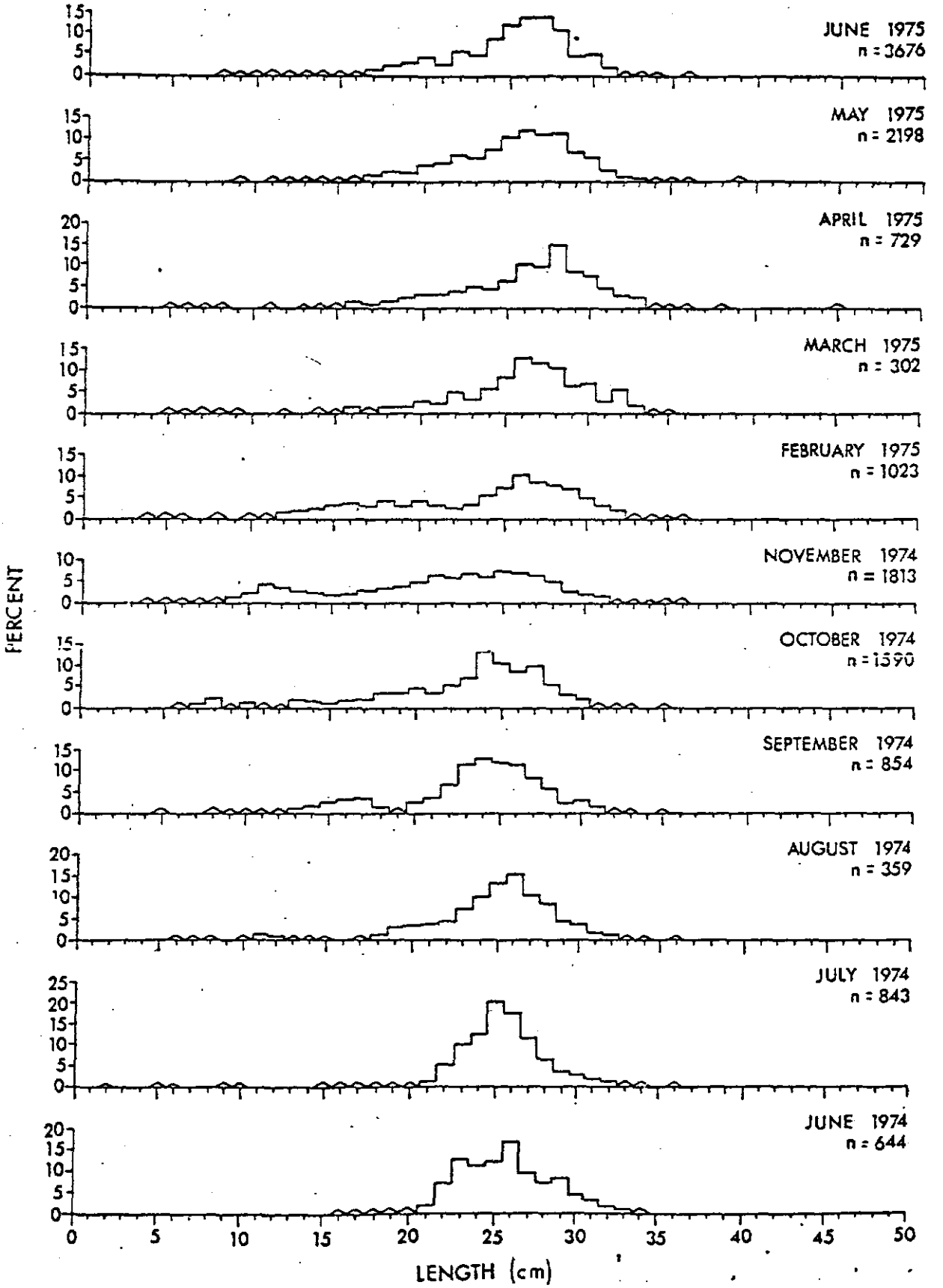

FIGURE 171.--Monthly length-frequency distributions of windowpane (Scophthalmus aquosus) collected in NEw York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

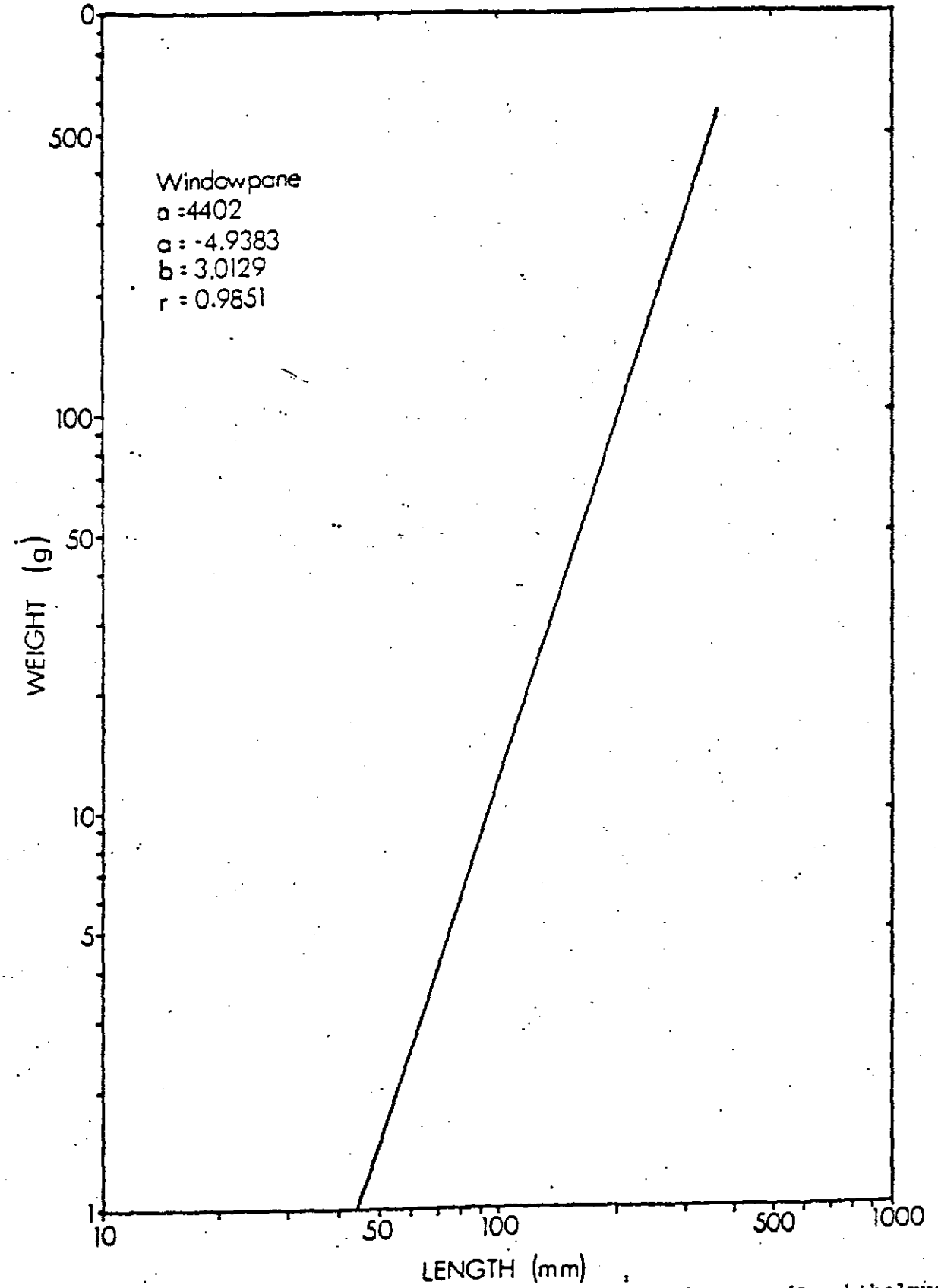

FIGURE 172.--Weight-length relationship of windowpane (Scophthalmus aquosus) collected in New York Bight, June 1974 to June 1975.

TABLE 13.--Monthly sex ratios of windowpane (Scophthalmus aquosus) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	207	75	36.2	81	39.1	51	24.7
July	235	92	39.1	117	49.8	26	11.1
August	279	102	26.5	147	52.7	30	10.8
September	391	175	44.8	172	44.0	44	11.2
October	412	126	30.6	183	44.0	103	25.0
November	599	154	25.7	301	50.3	144	24.0
January 1/	2	1	50.0	1	50.0	-	-
February	663	201	30.3	269	40.6	193	29.1
March	295	131	44.4	146	49.5	18	6.1
April	405	157	39.0	208	51.4	40	9.9
May	517	248	48.0	213	41.2	56	10.8
June	430	218	50.7	174	40.5	38	8.8
TOTAL	4435	1680	37.9	2012	45.4	743	16.7

1/ Bay stations only.

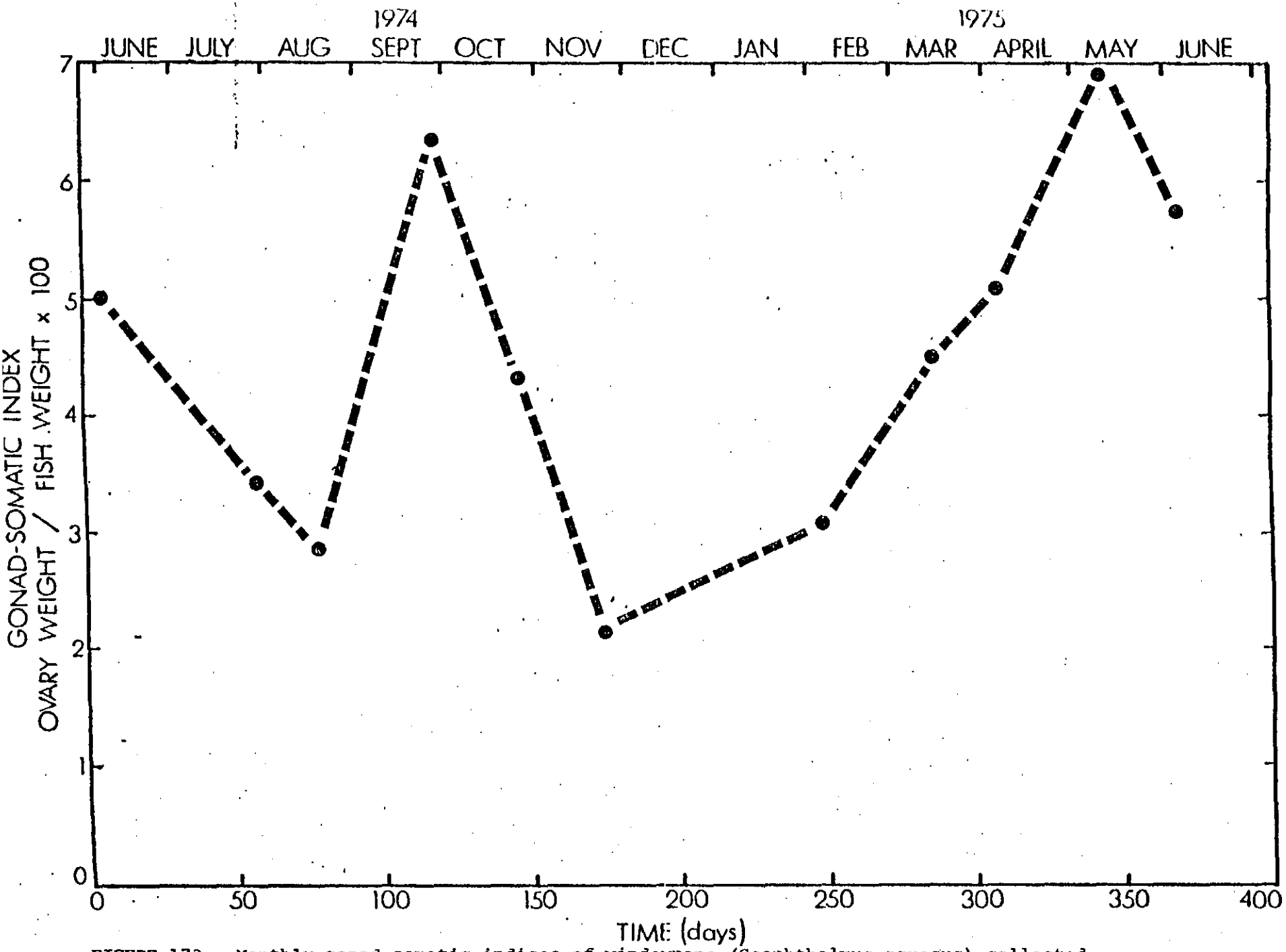

FIGURE 173.--Monthly gonad-somatic indices of windowpane (Scophthalmus aquosus) collected in New York Bight, June 1974 to June 1975.

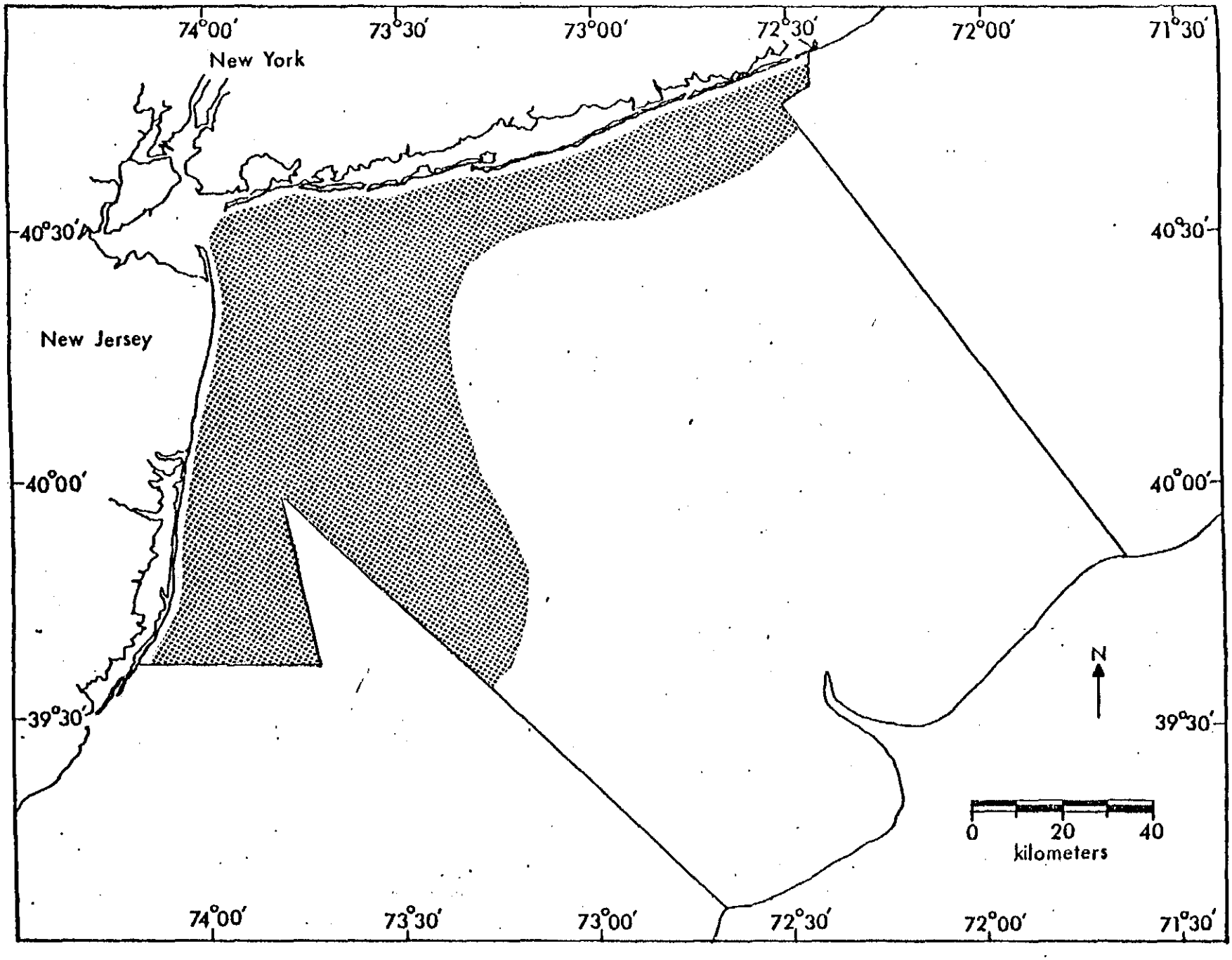

FIGURE 174.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, June 1974.

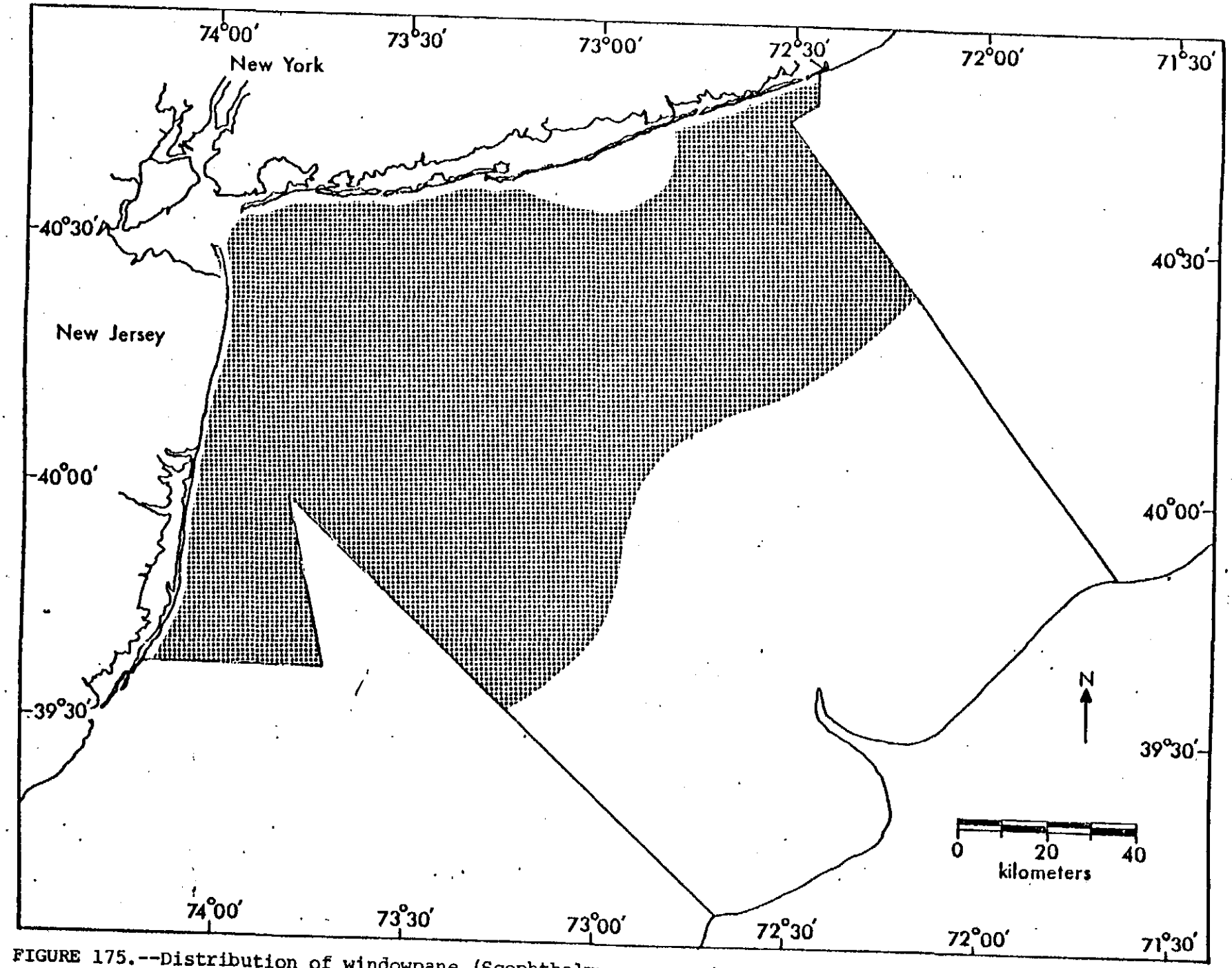

FIGURE 175.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, July 1974.

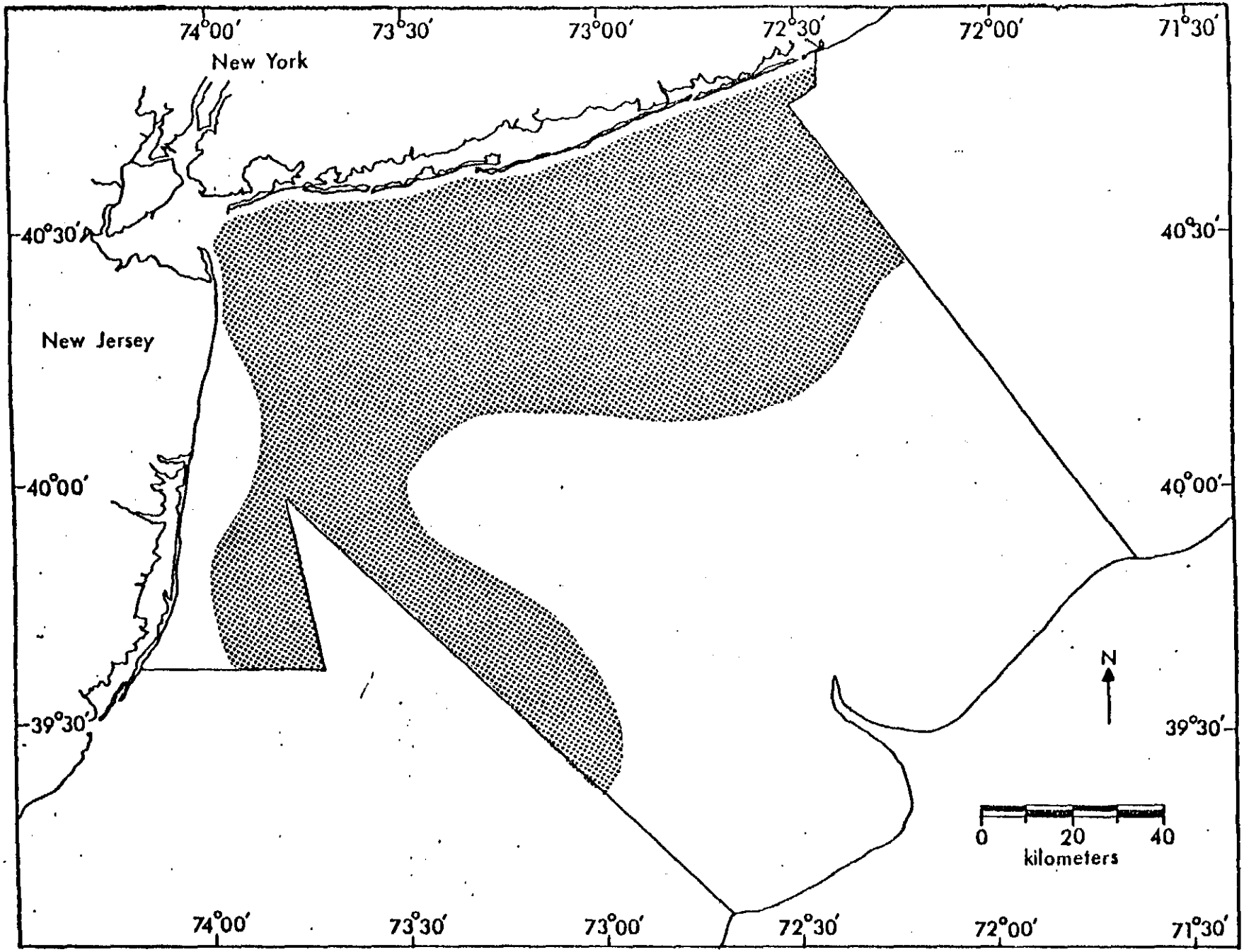

FIGURE 176.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, August 1974.

FIGURE 177.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, September 1974.

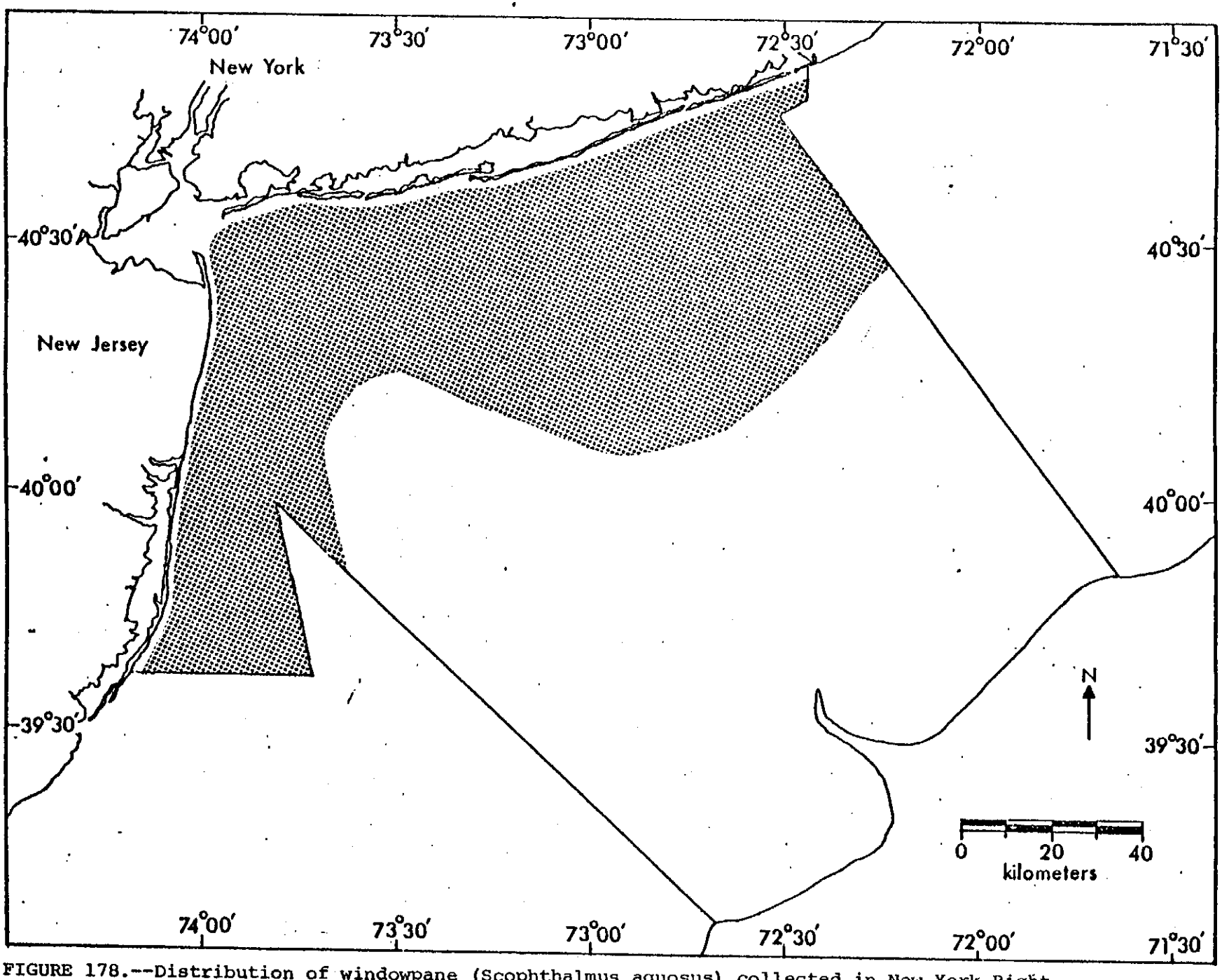

FIGURE 178.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, October 1974.

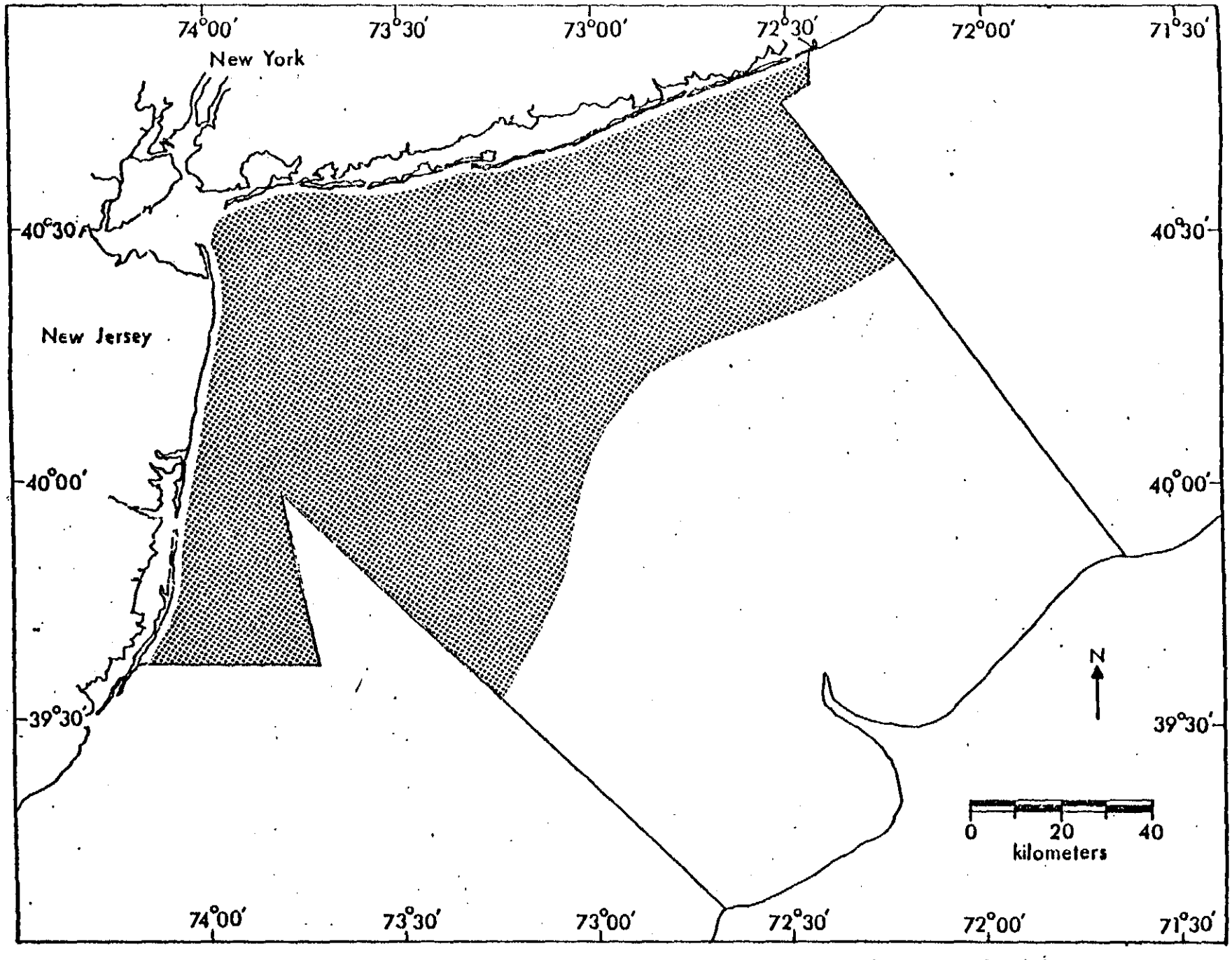

FIGURE 179.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, November 1974.

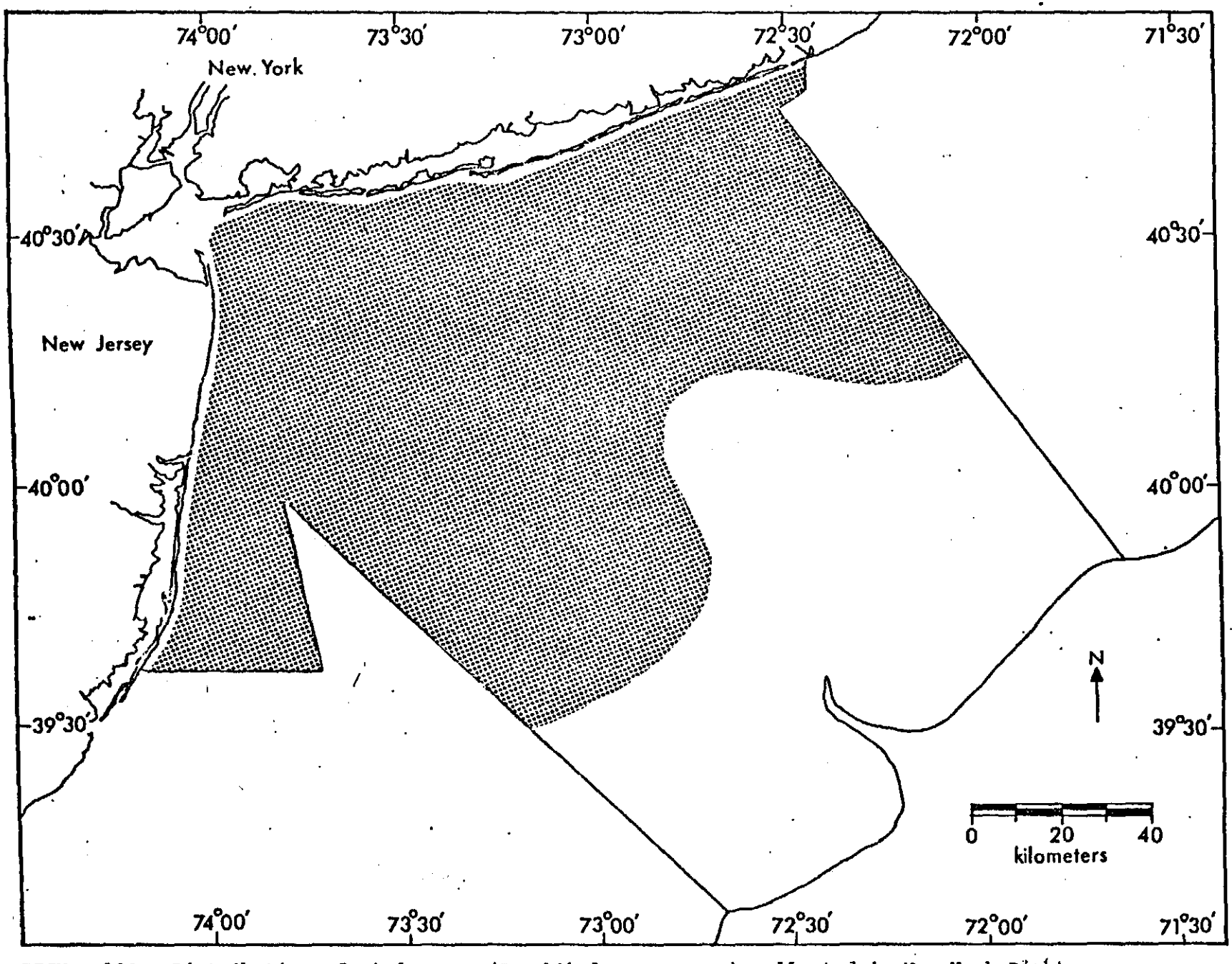

FIGURE 180.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, February 1975.

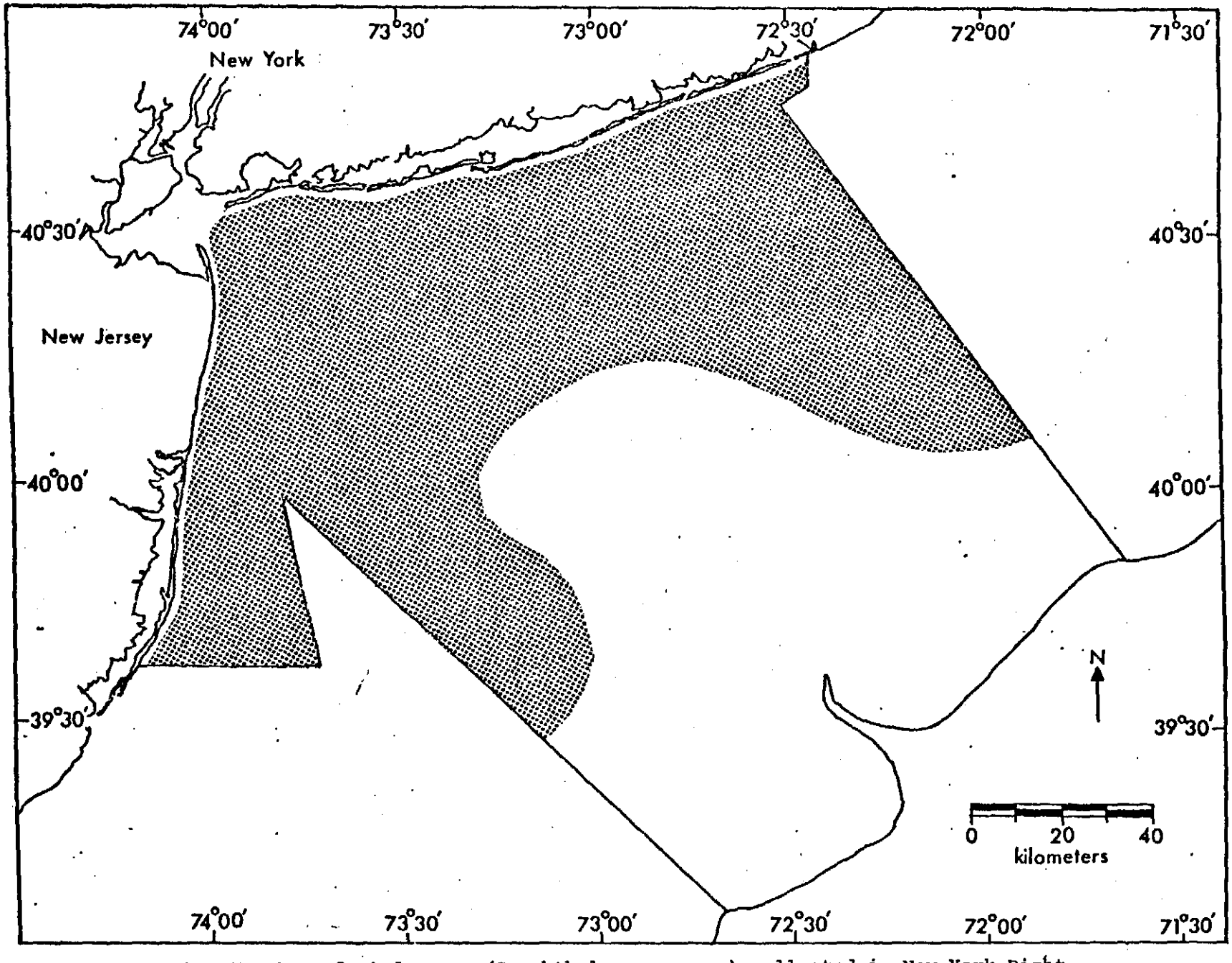

FIGURE 181.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, March 1975.

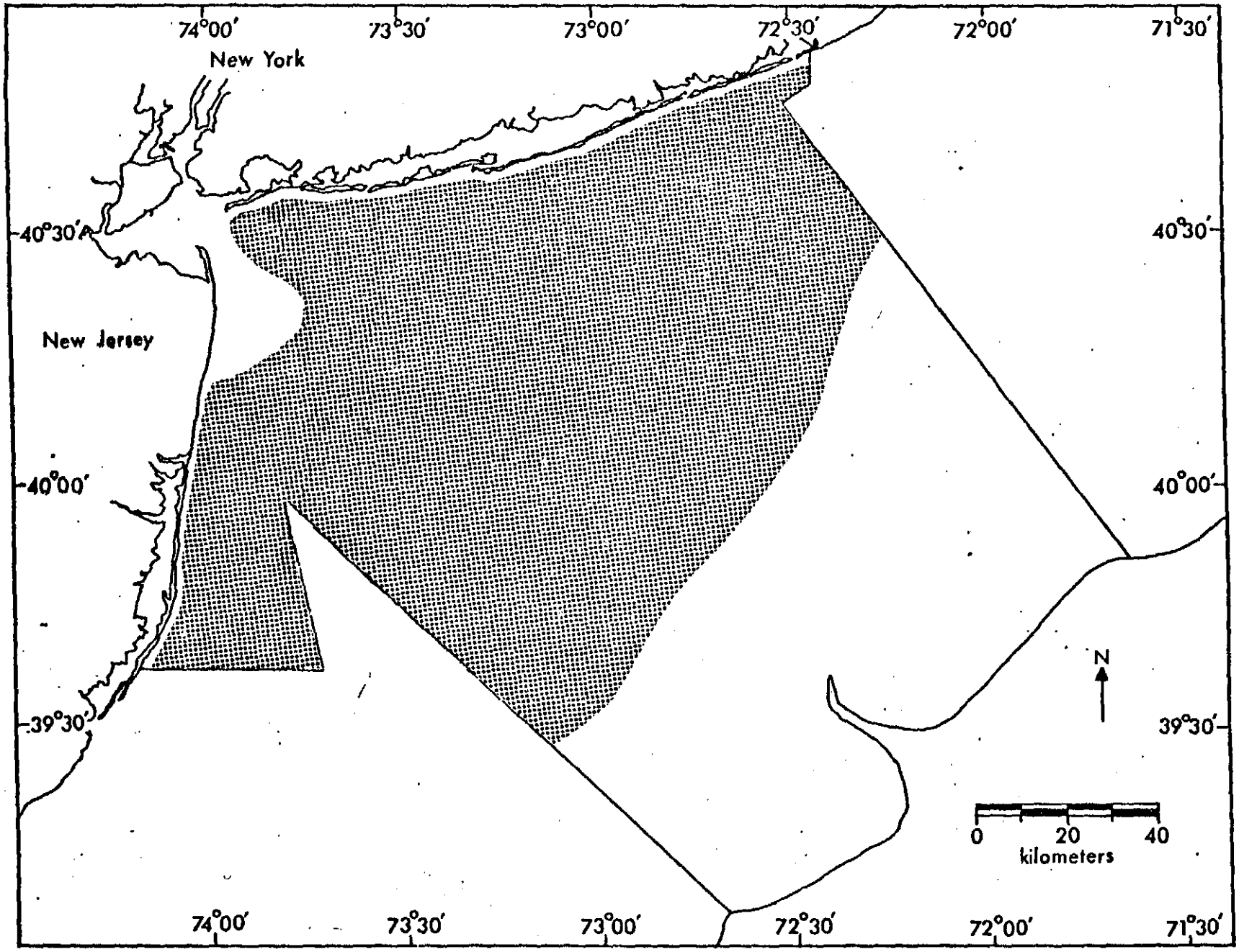

FIGURE 182.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, April 1975.

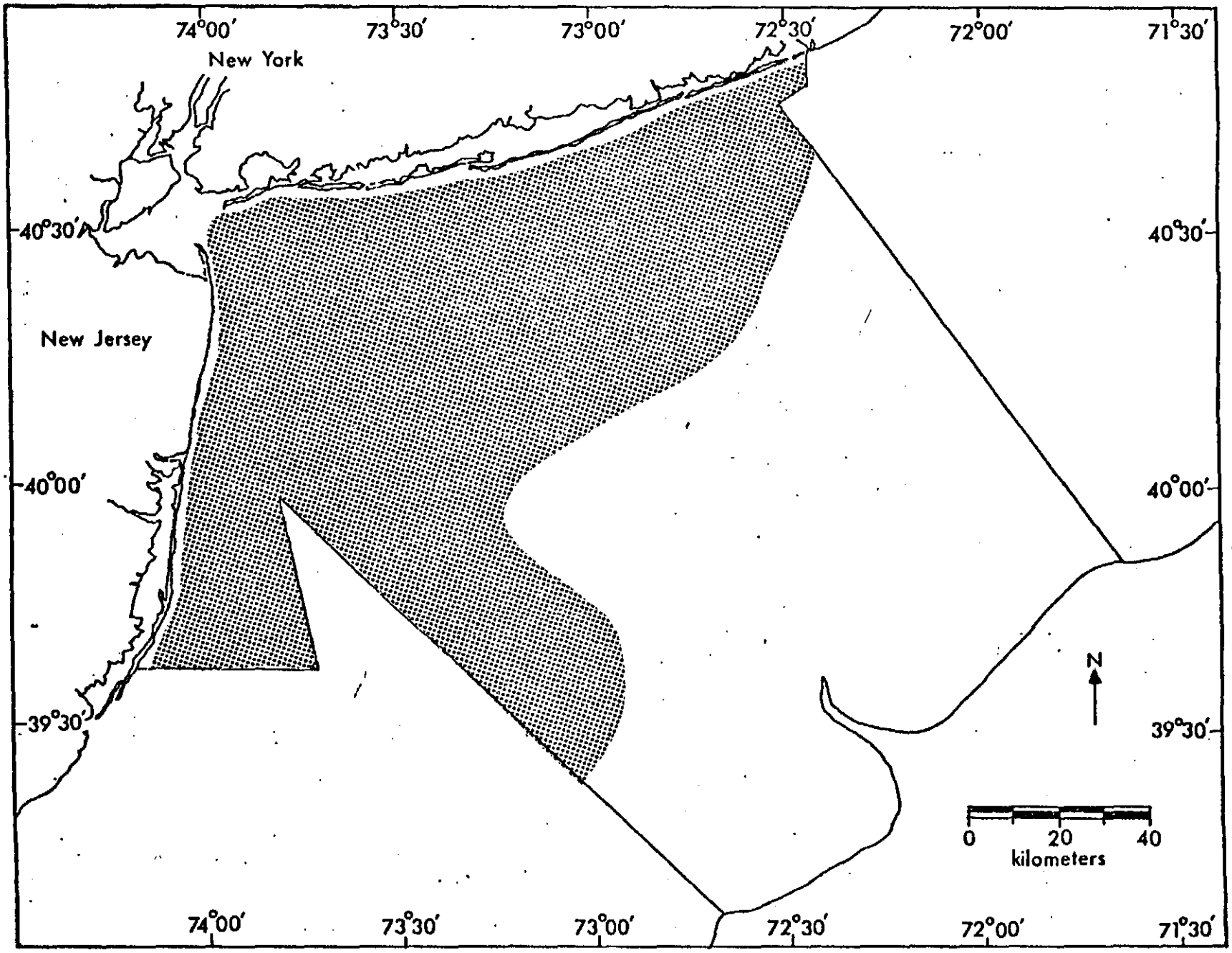

FIGURE 183.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, May 1975.

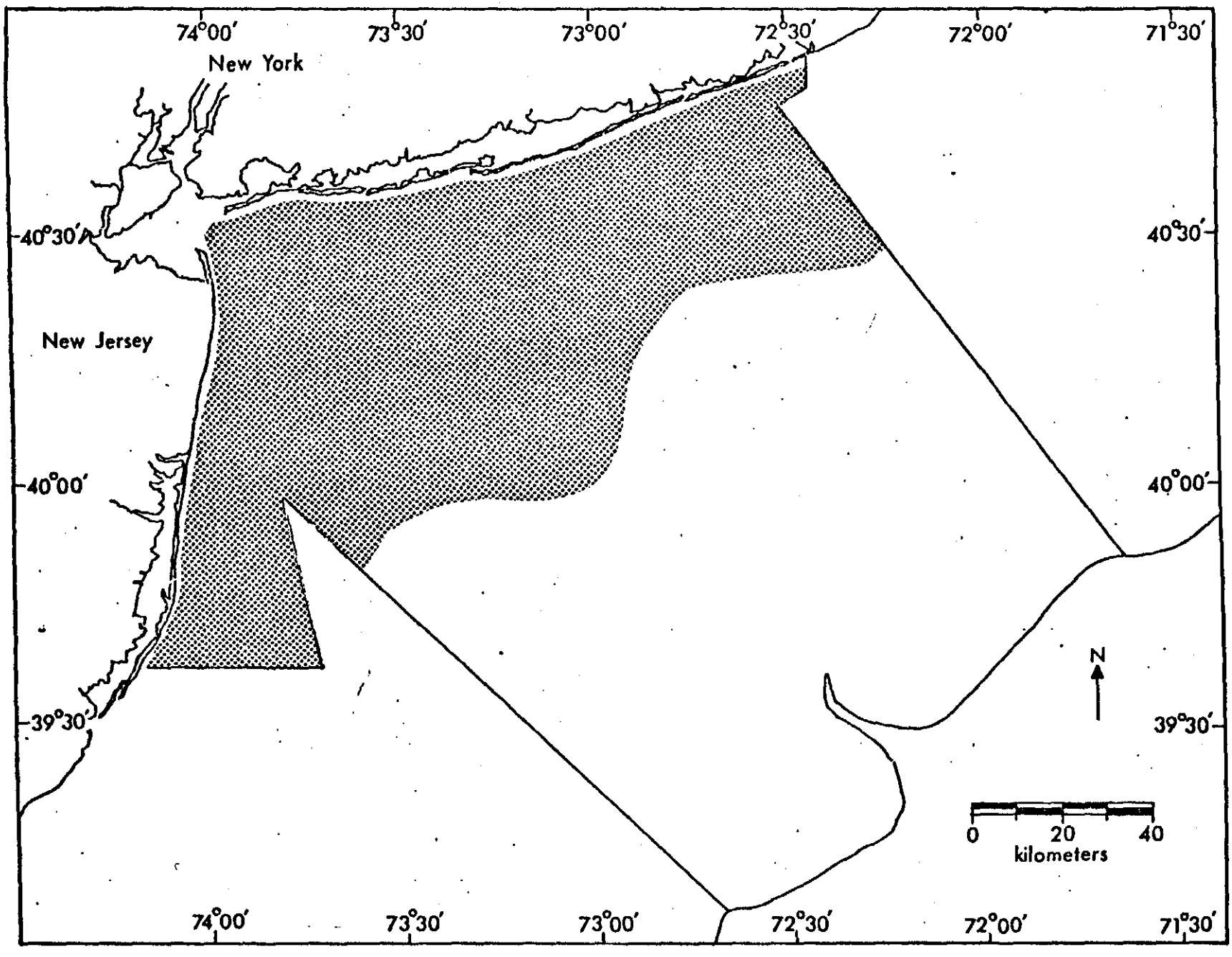

FIGURE 184.--Distribution of windowpane (Scophthalmus aquosus) collected in New York Bight, June 1975.

YELLOWTAIL FLOUNDER

(*Limanda ferruginea*)

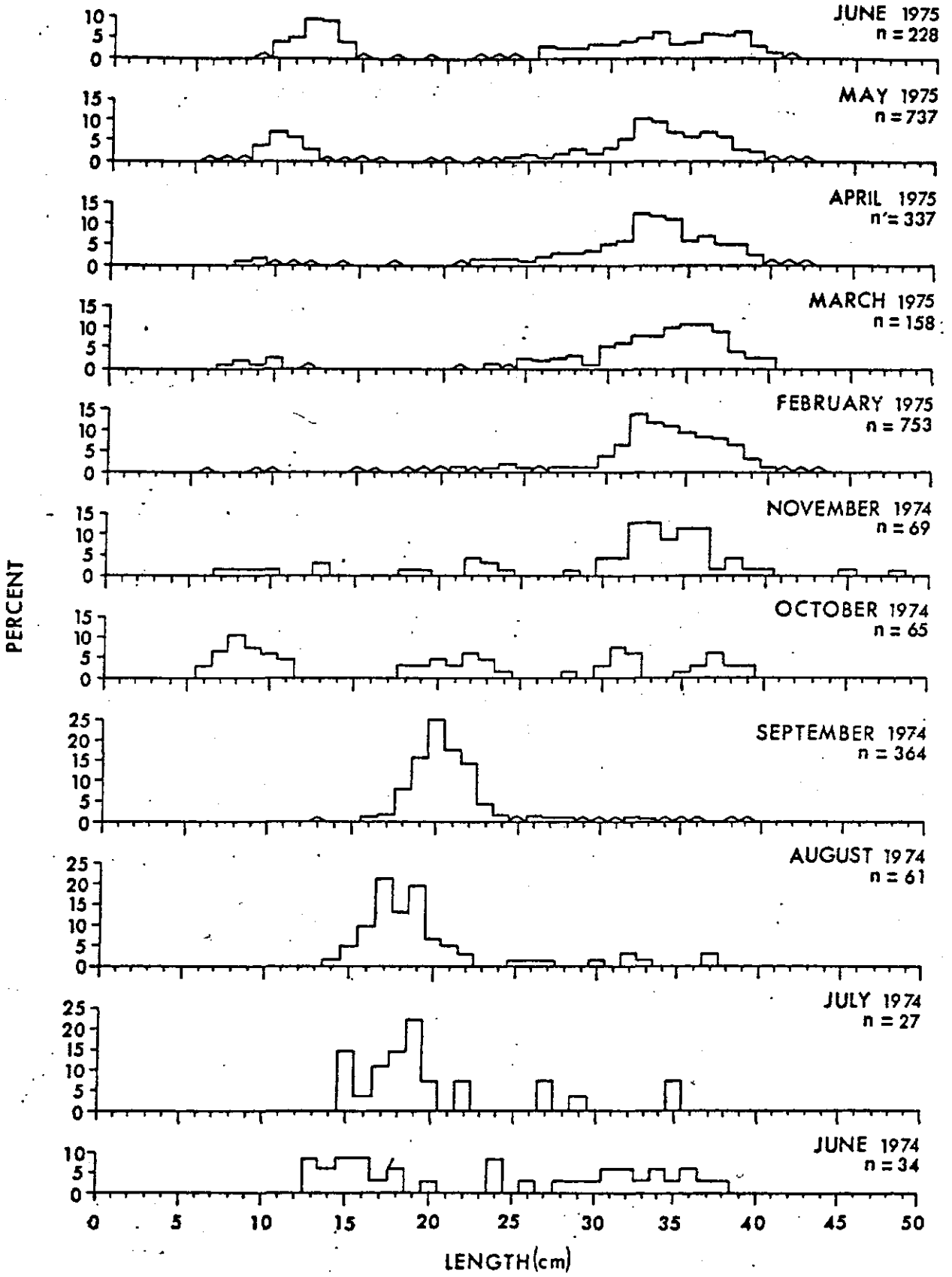

FIGURE 185.--Monthly length-frequency distributions of yellowtail flounder (Limanda ferruginea) collected in New York Bight, June 1974 to June 1975. (Δ indicates <0.5%).

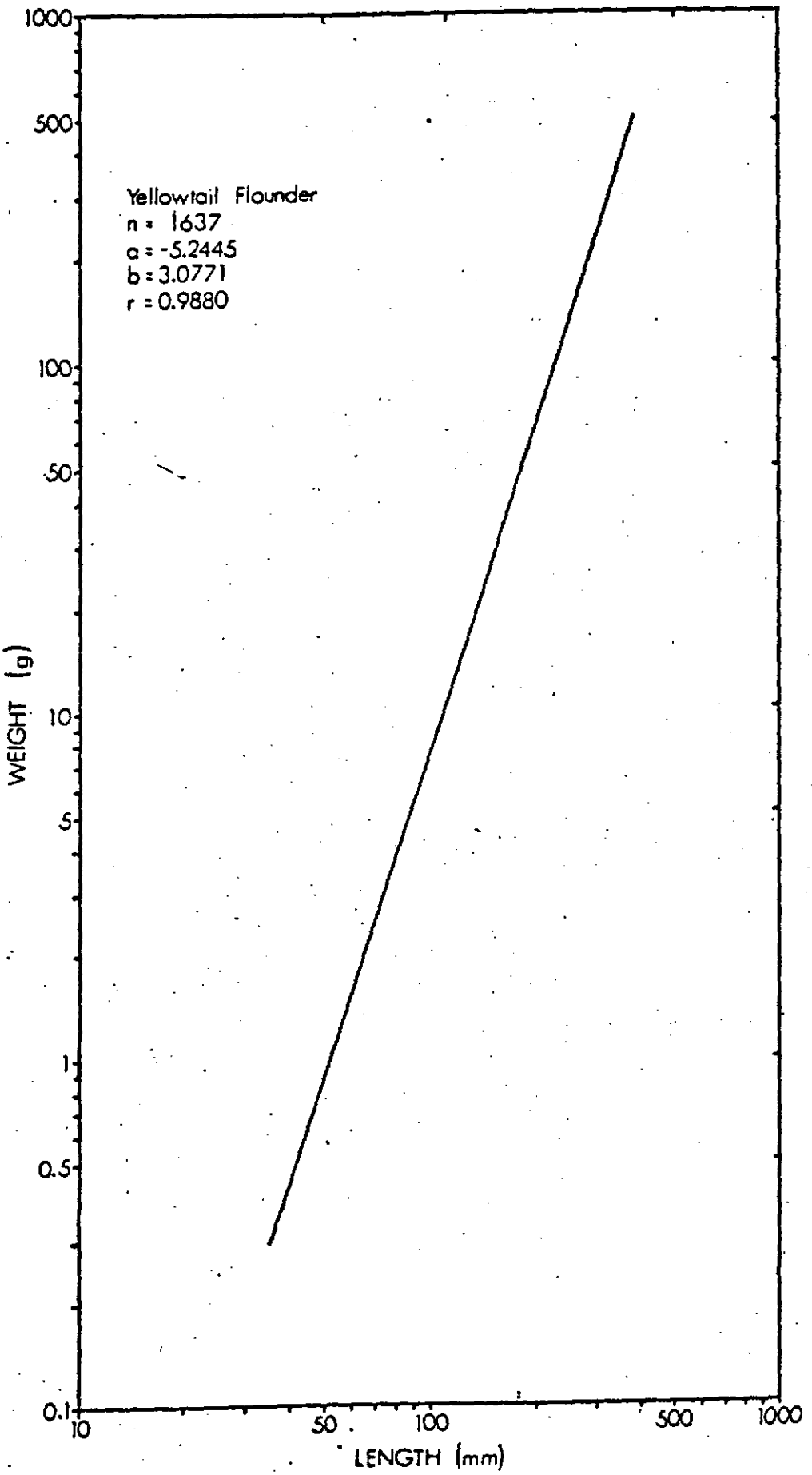

FIGURE 186.--Weight-length relationship of yellowtail flounder (Limanda ferruginea) collected in New York Bight, June 1974 to June 1975.

TABLE 14.--Monthly sex ratios of yellowtail flounder (Limanda ferruginea) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	36	4	11.1	11	30.6	21	58.3
July	30	9	30.0	3	10.0	18	60.0
August	41	4	9.8	6	14.6	31	75.6
September	113	31	27.4	21	18.6	61	54.0
October	48	15	31.3	12	25.0	21	43.7
November	59	15	25.4	38	64.4	6	10.2
January 1/	-	-	-	-	-	-	-
February	422	172	40.8	228	54.0	22	5.2
March	138	54	39.1	70	50.7	14	10.2
April	292	122	41.8	140	47.9	30	10.3
May	299	117	39.1	133	44.5	49	16.4
June	160	49	30.6	54	33.8	57	35.6
TOTAL	1638	592	36.1	716	43.7	330	20.2

1/ Bay stations only.

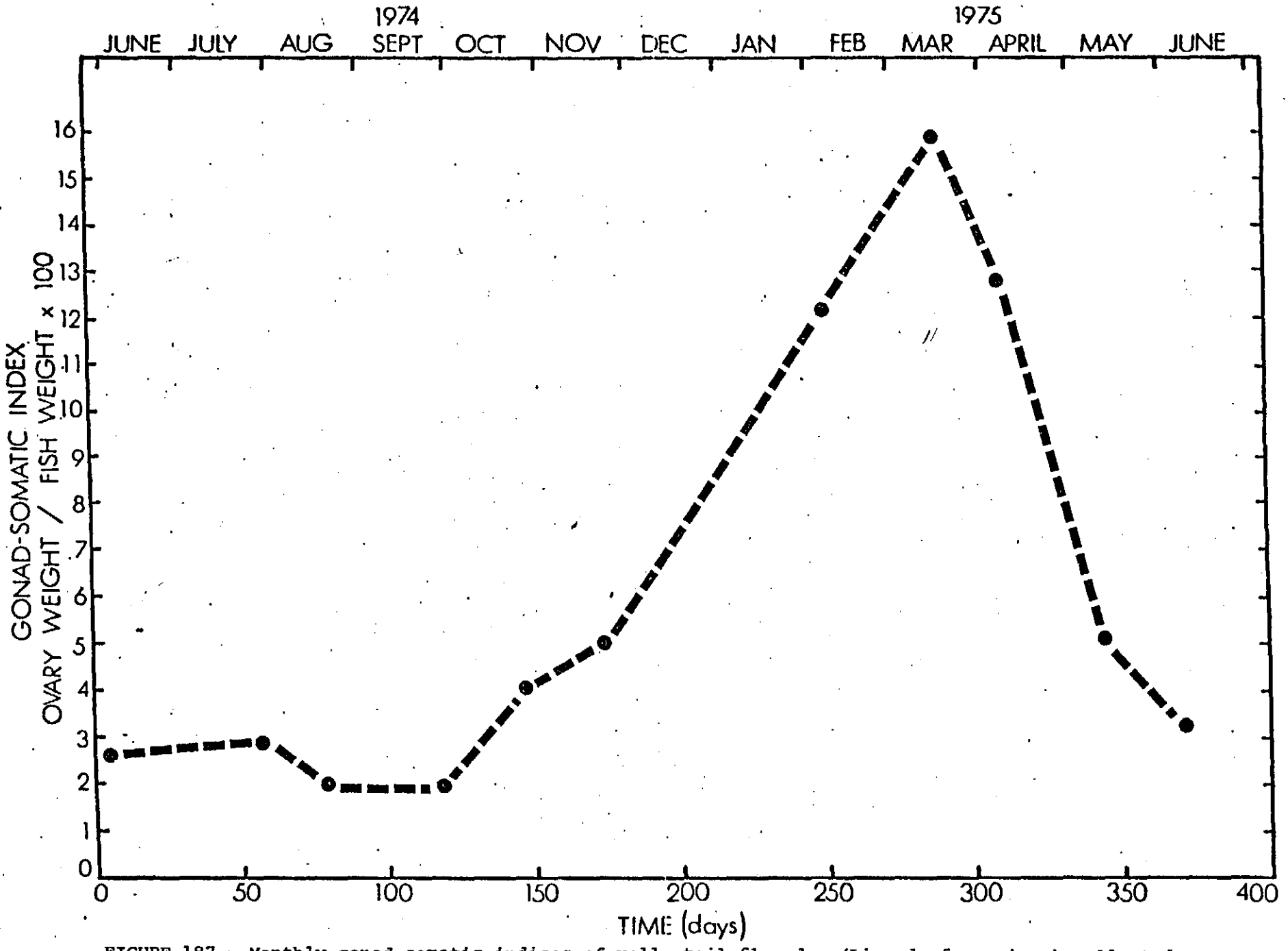

FIGURE 187.--Monthly gonad-somatic indices of yellowtail flounder (Limanda ferruginea) collected in New York Bight, June 1974 to June 1975.

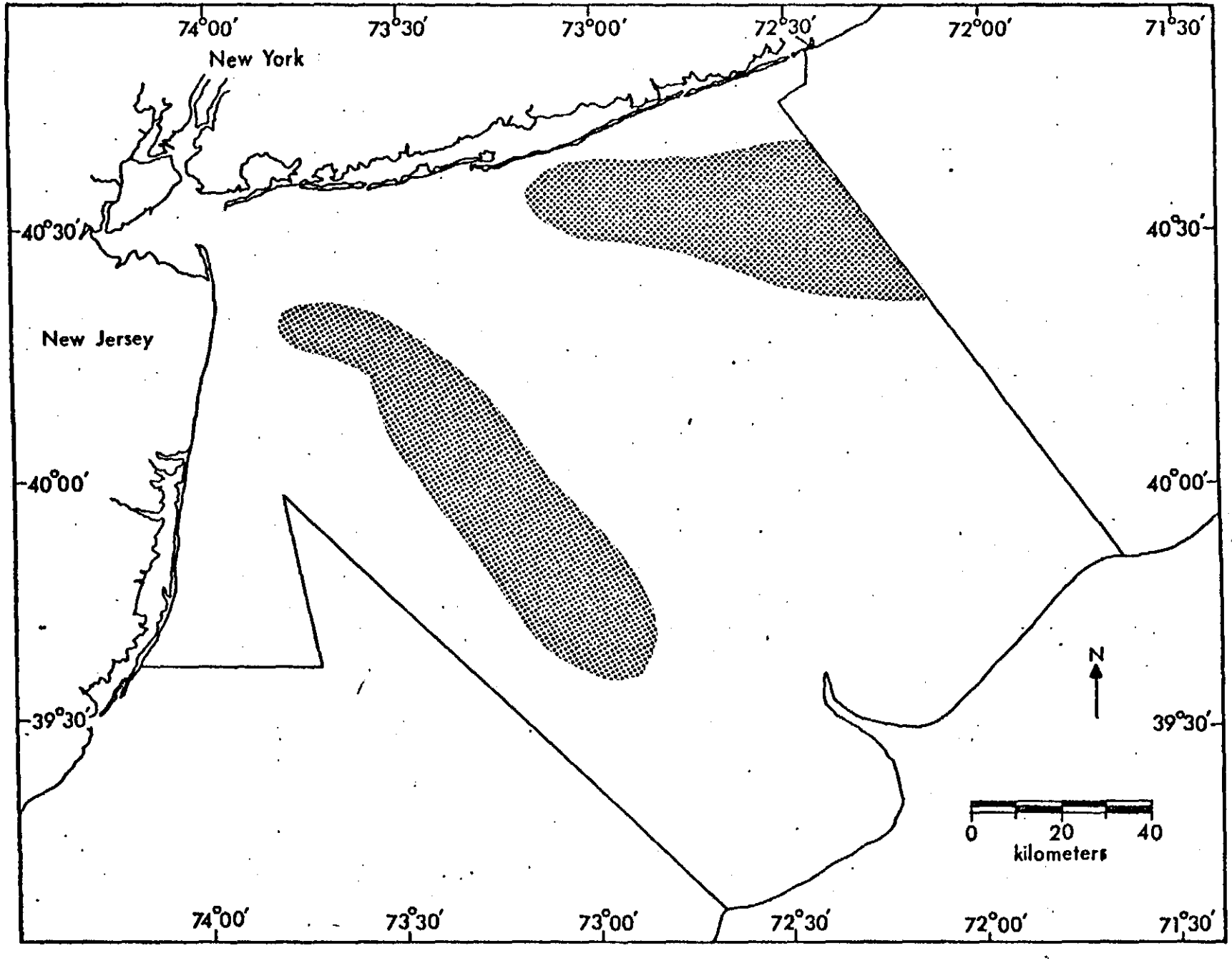

FIGURE 188.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, June 1974.

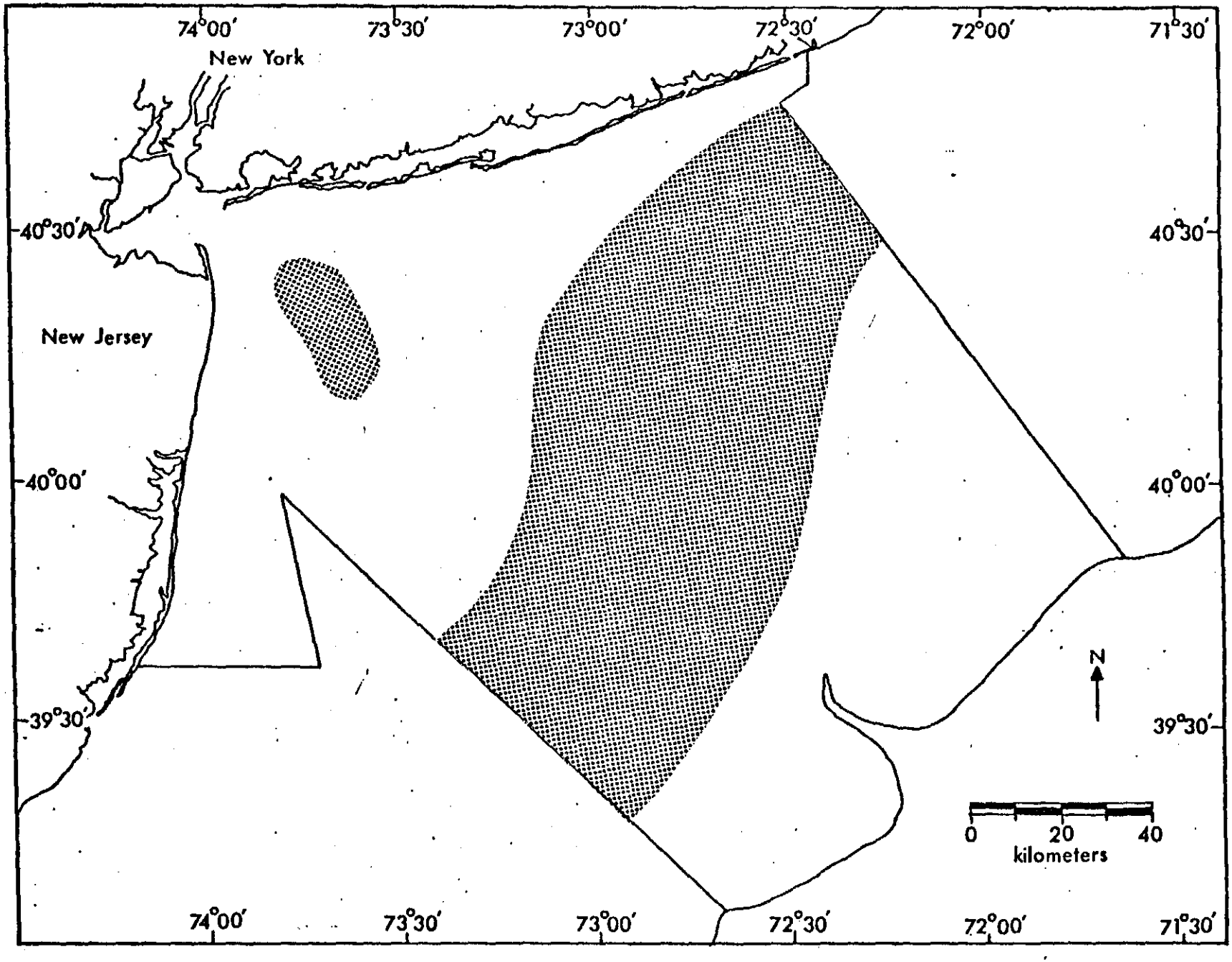

FIGURE 189.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, July 1974.

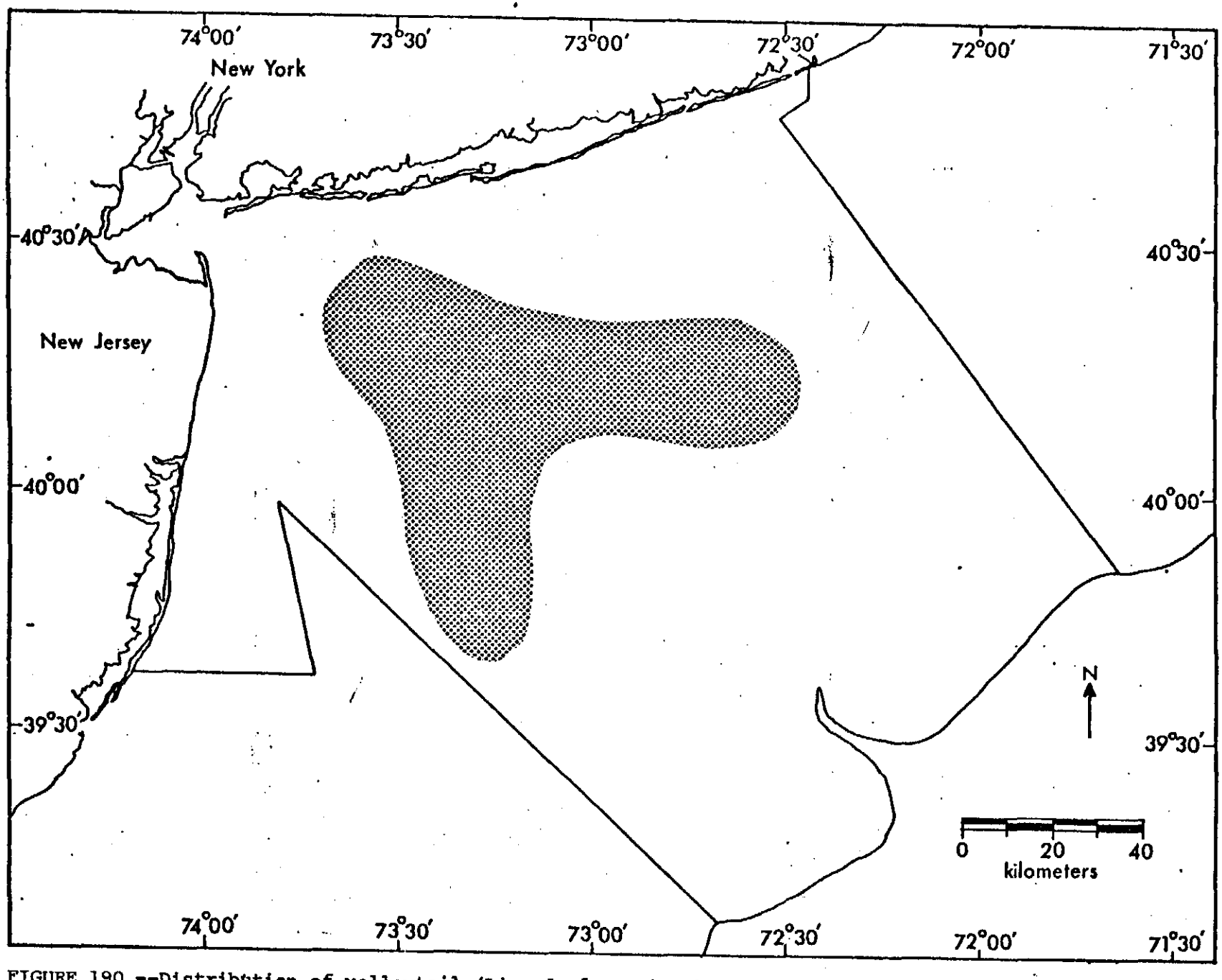

FIGURE 190.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, August 1974.

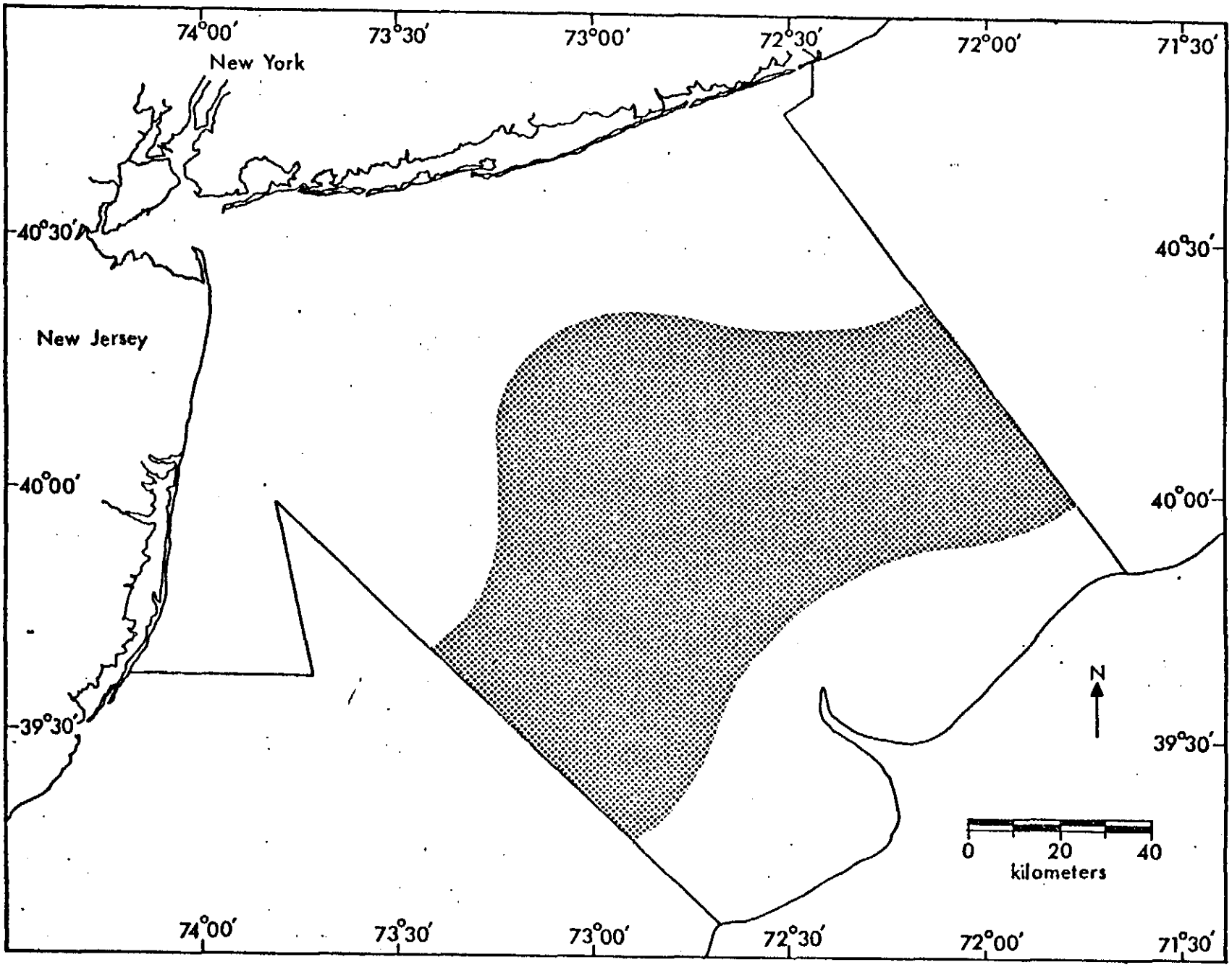

FIGURE 191.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, September 1974.

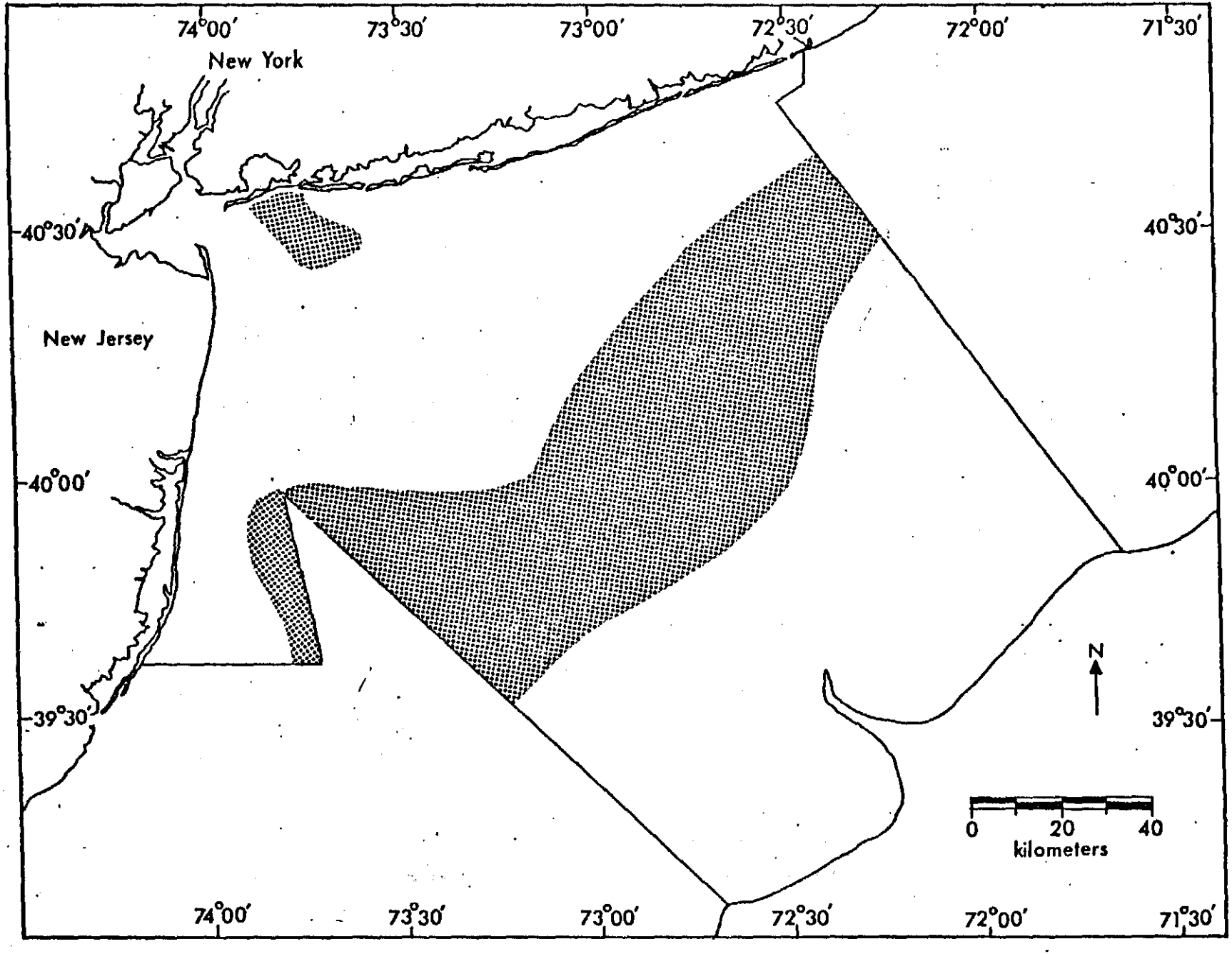

FIGURE 192.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, October 1974.

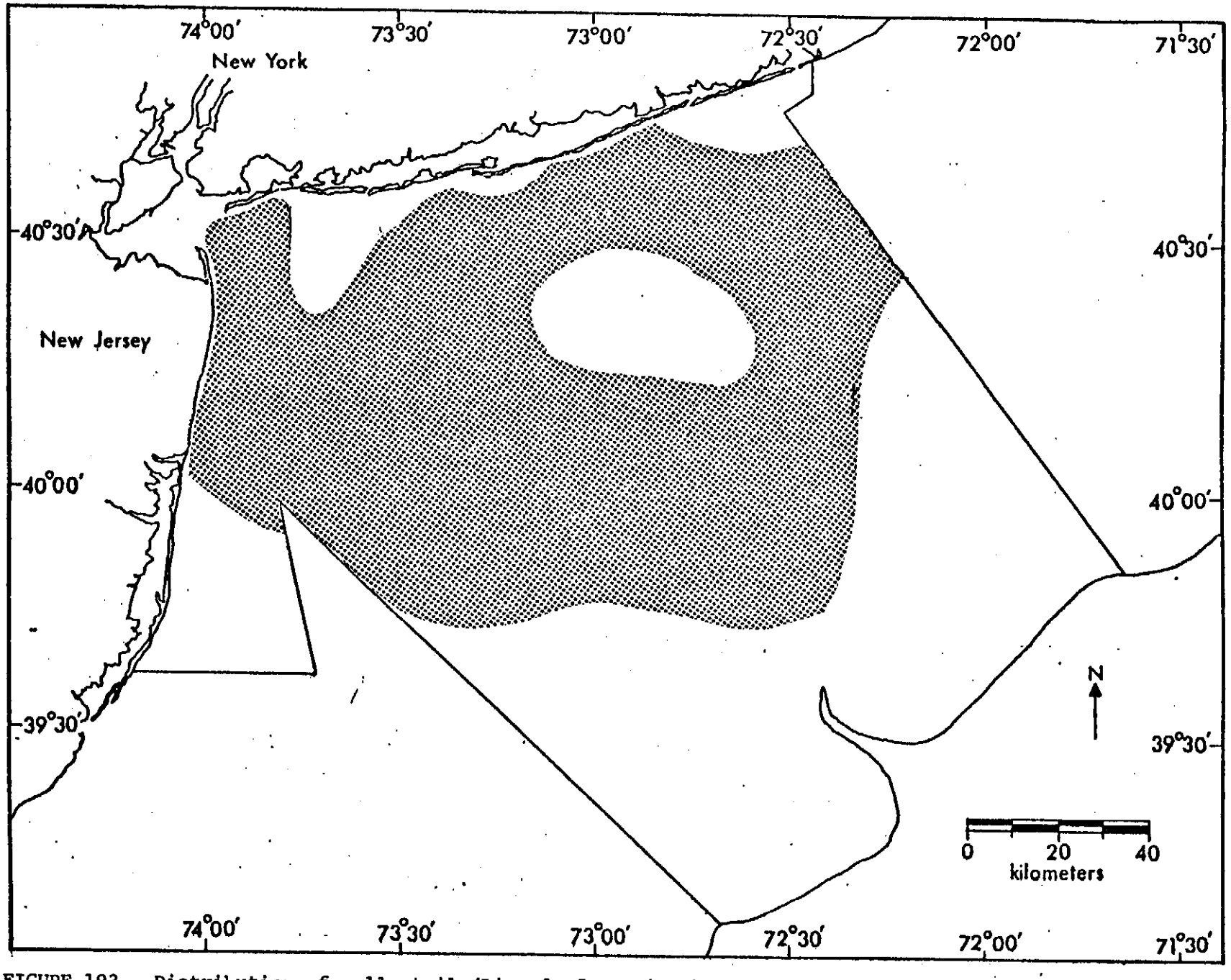

FIGURE 193.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, November 1974.

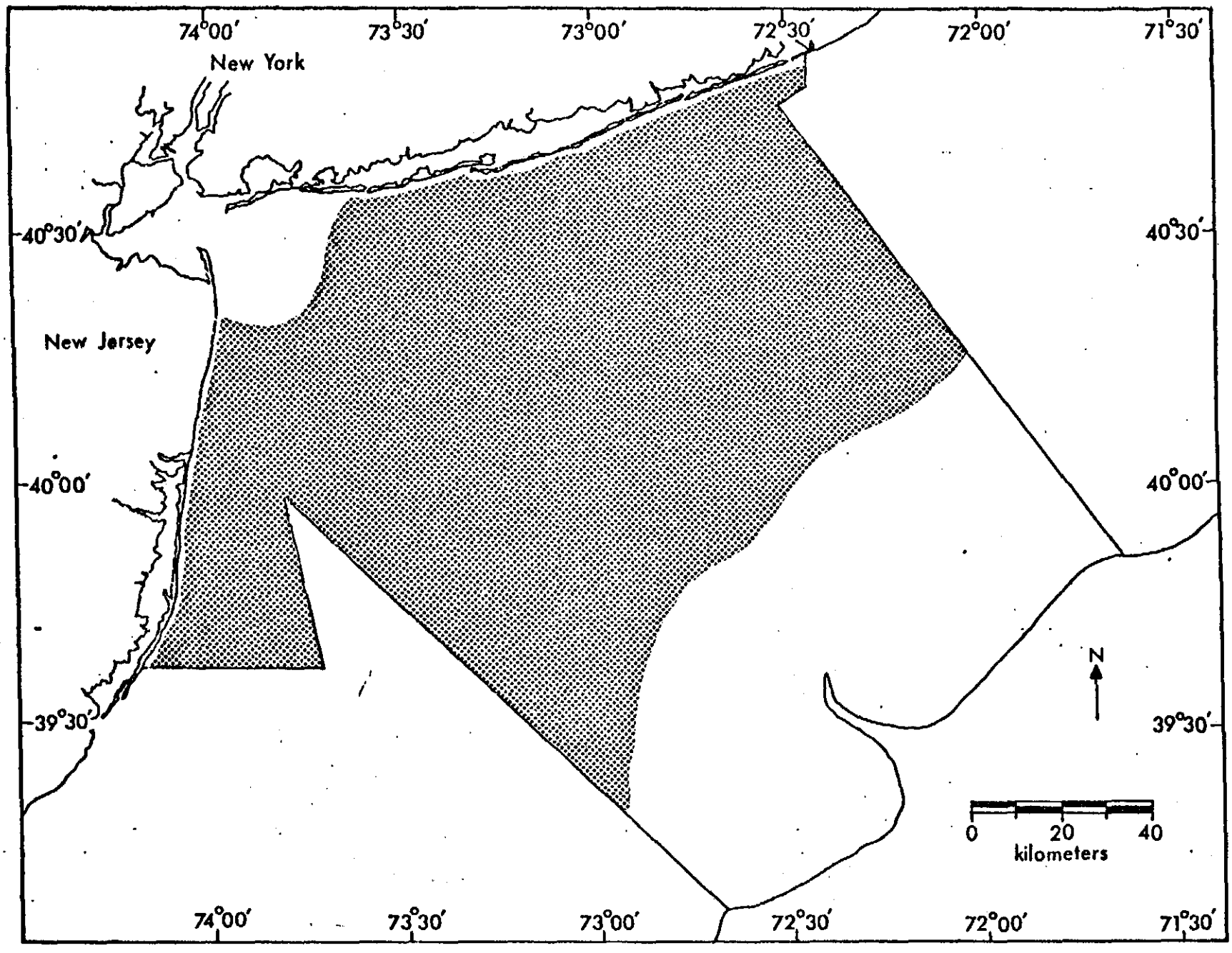

FIGURE 194.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, February 1975.

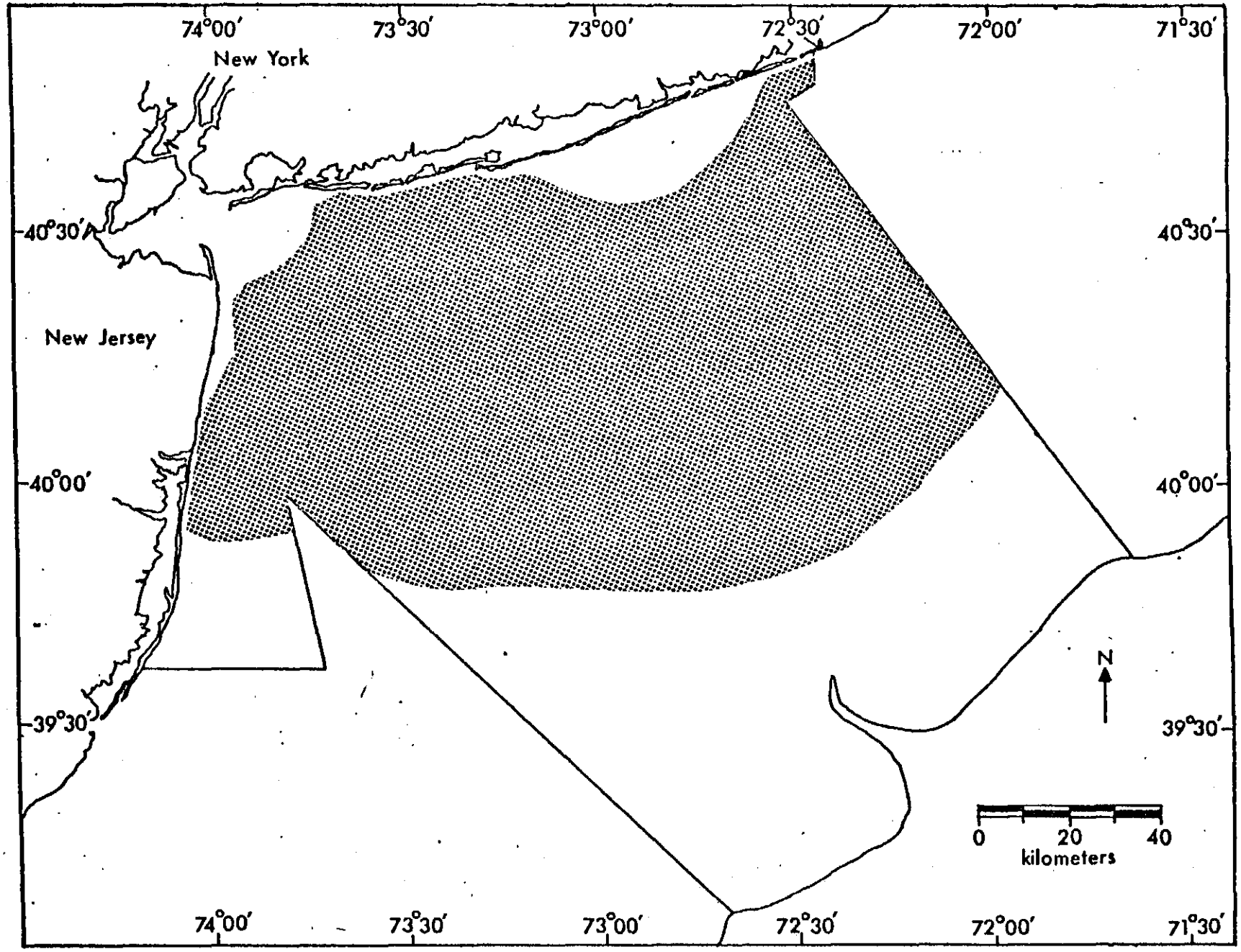

FIGURE 195.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, March 1975.

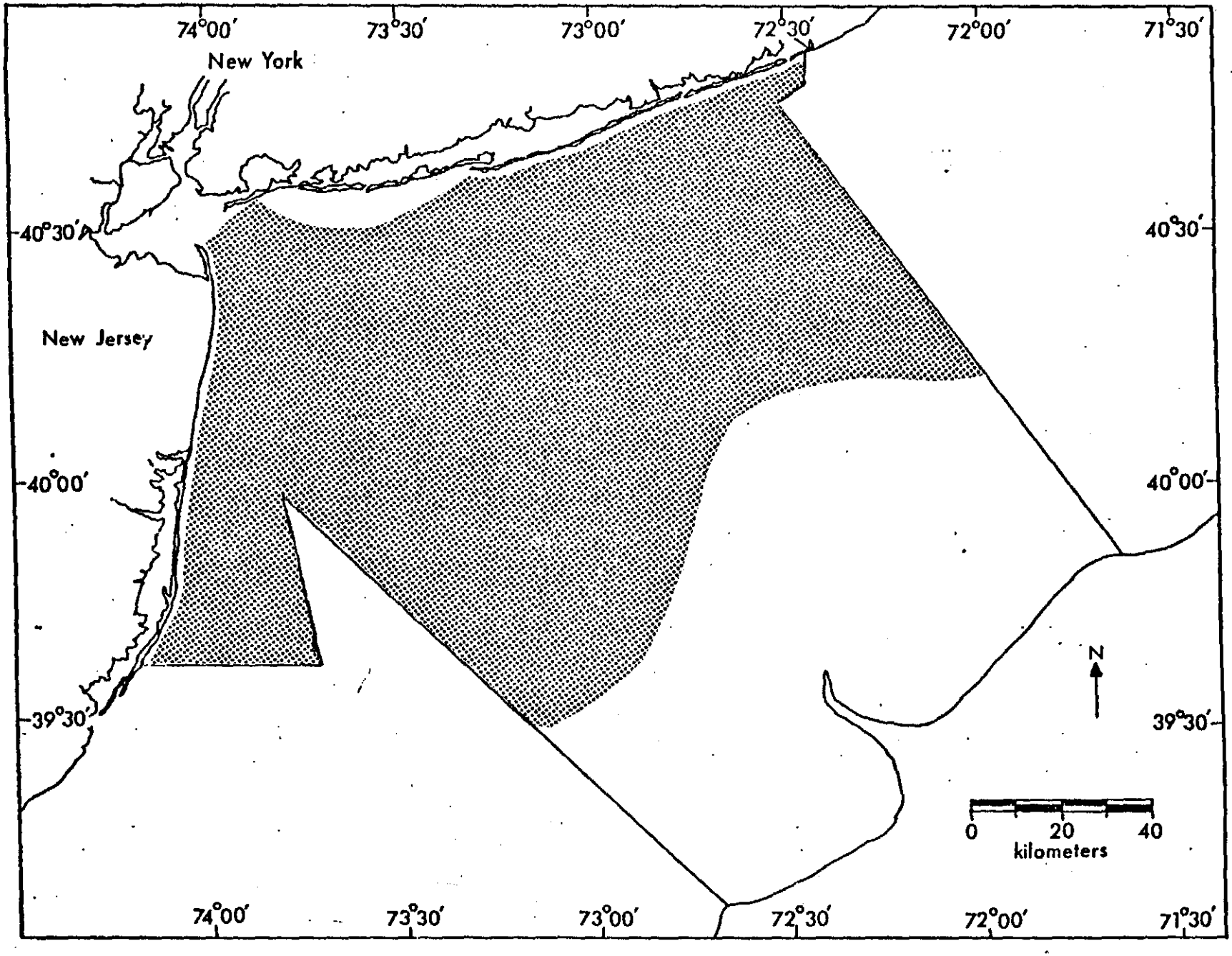

FIGURE 196.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, April 1975.

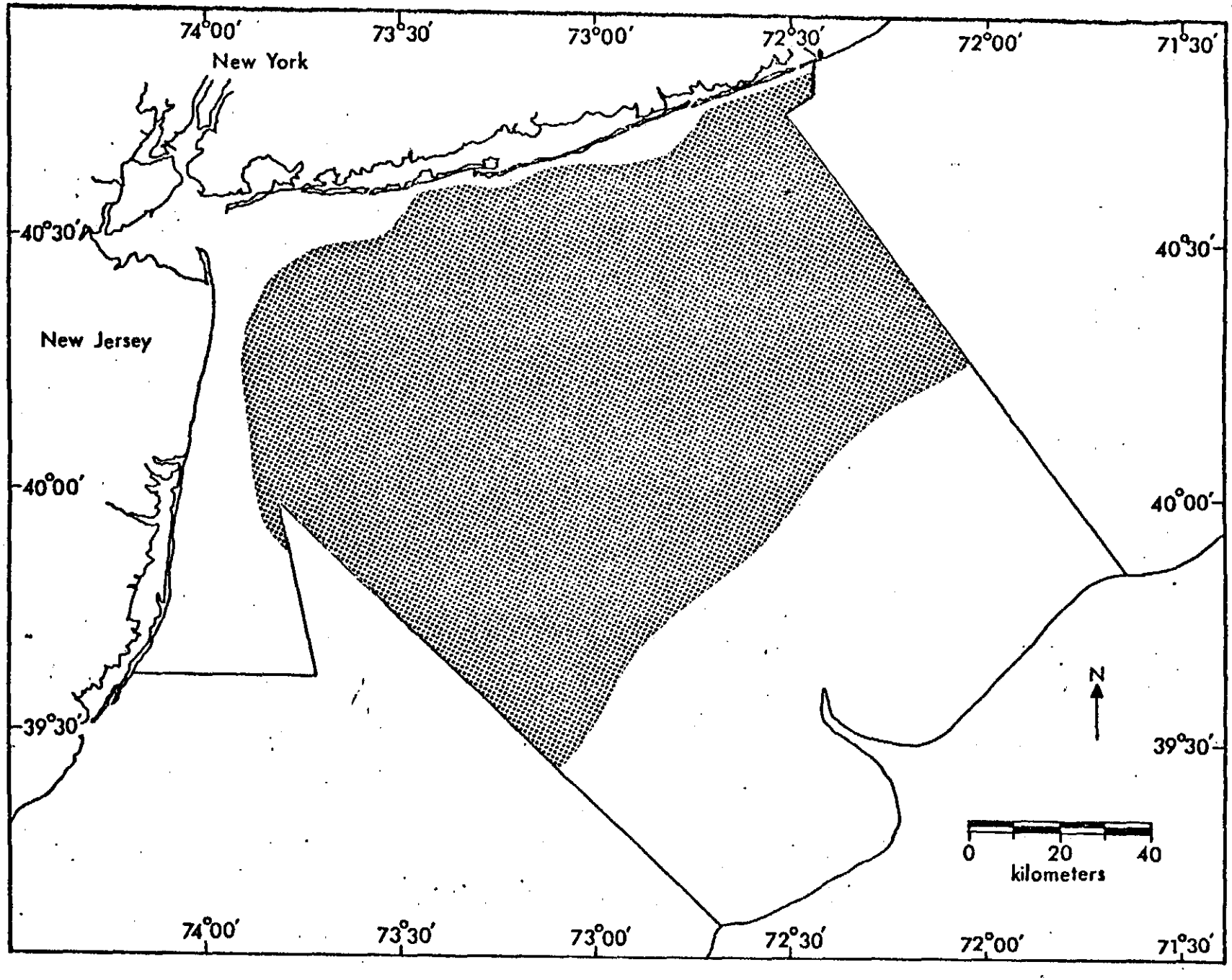

FIGURE 197.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, May 1975.

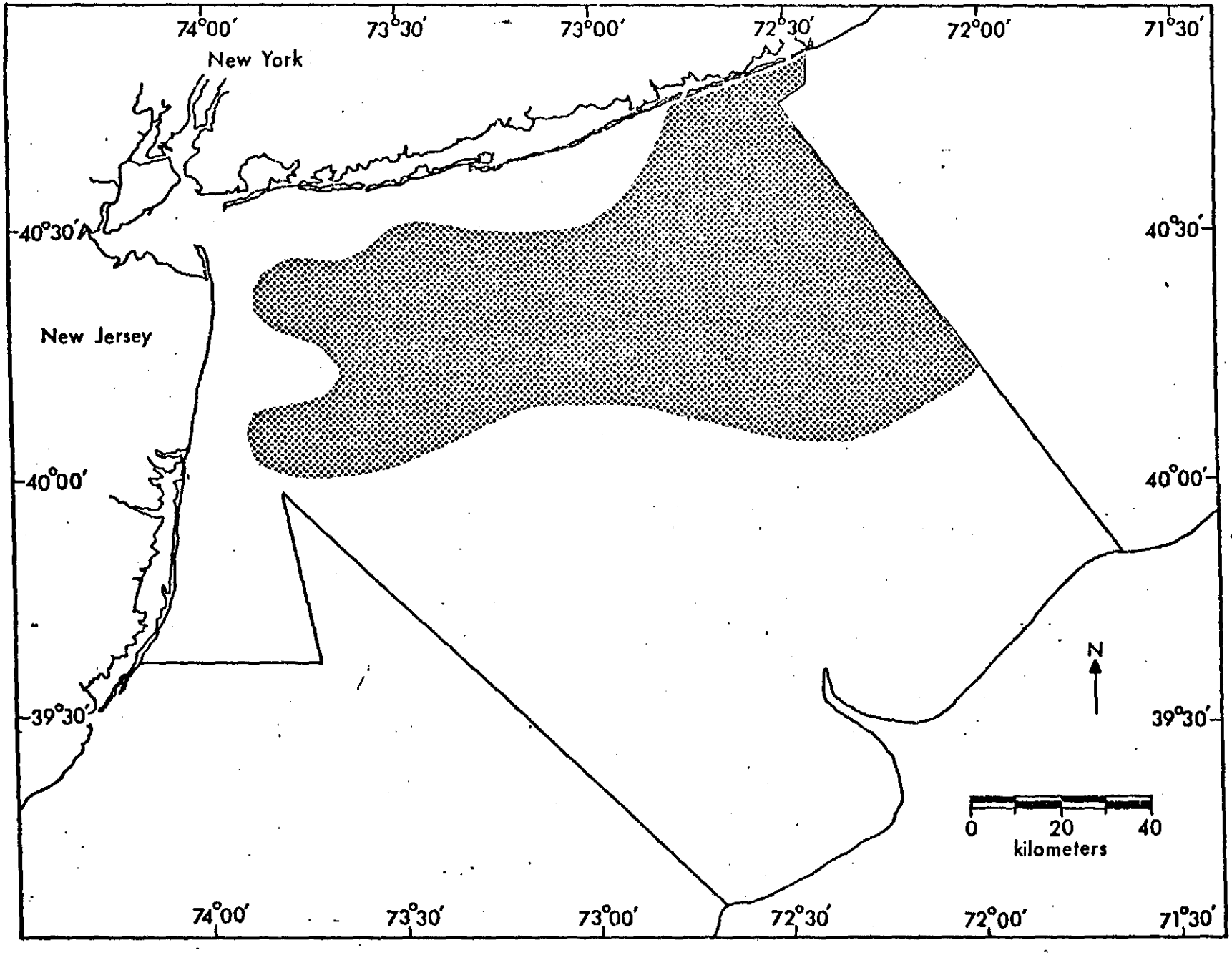

FIGURE 198.--Distribution of yellowtail (Limanda ferruginea) collected in New York Bight, June 1975.

WINTER FLOUNDER

(Pseudopleuronectes americanus)

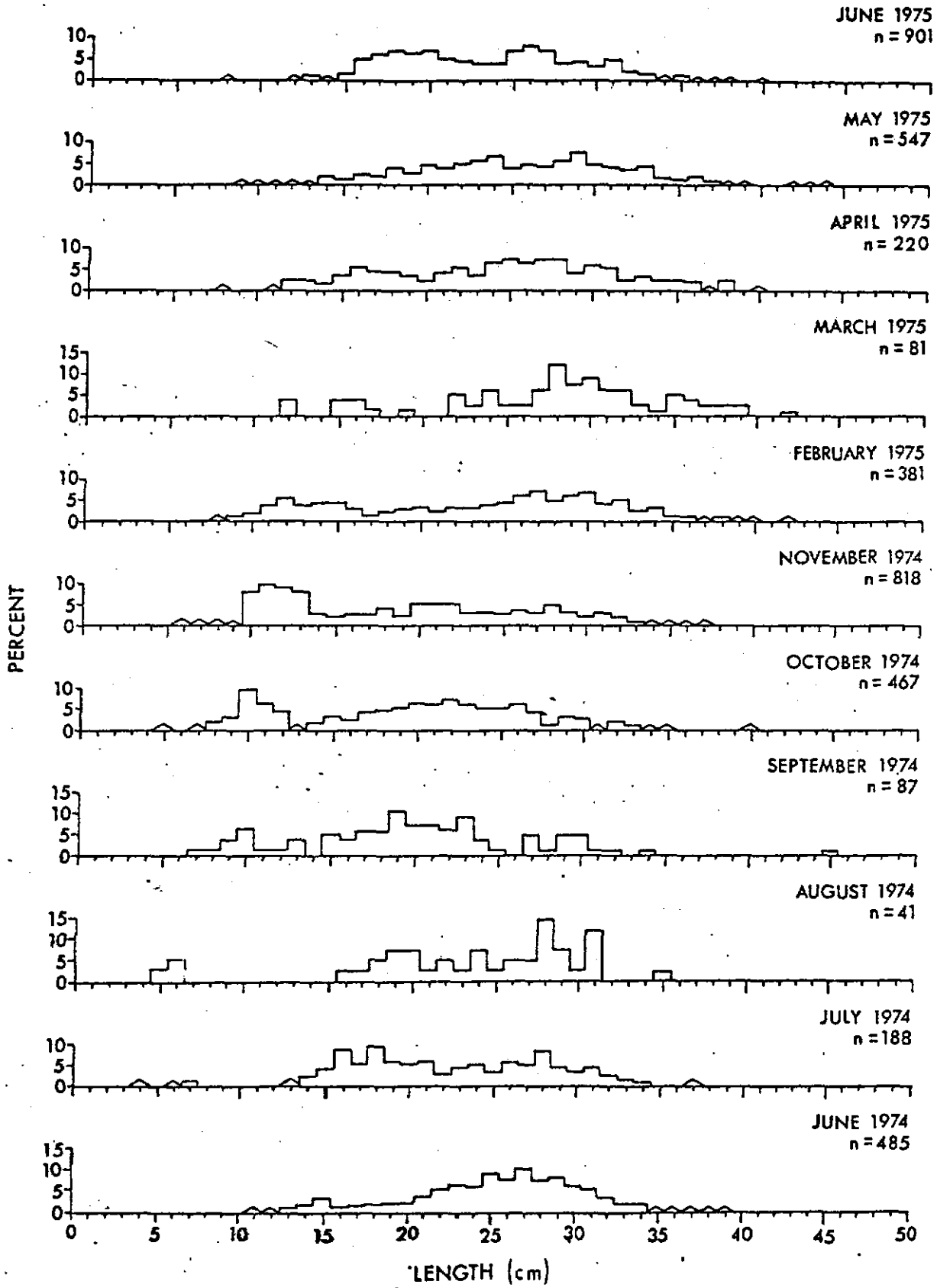

FIGURE 199.--Monthly length-frequency distributions of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, June 1974 to June 1975. (Δ indicates < 0.5%).

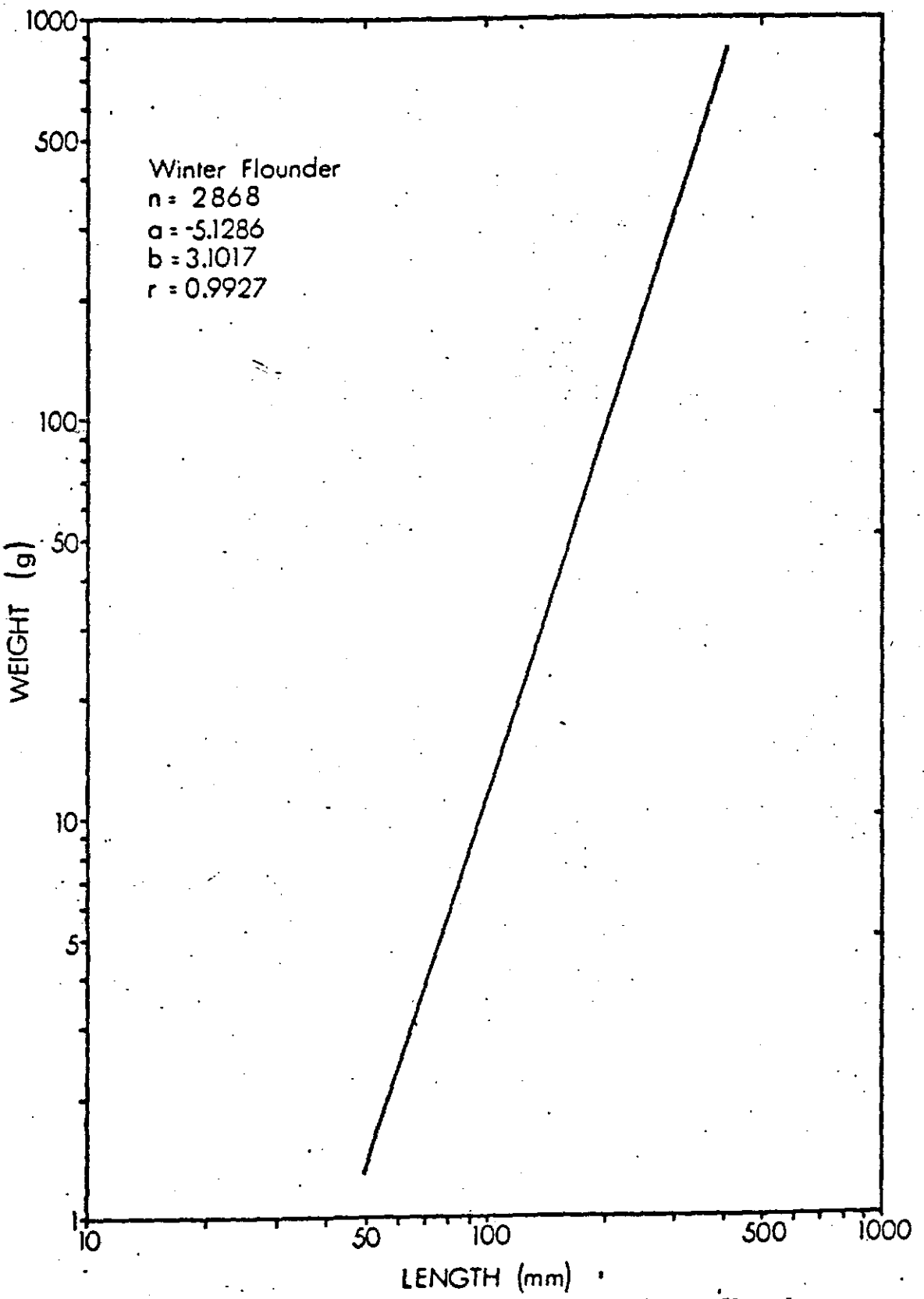

FIGURE 200.--Weight-length relationship of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, June 1974 to June 1975.

TABLE 15.--Monthly sex ratios of winter flounder (Pseudopleuronectes americanus) collected in the New York Bight, June 1974 - June 1975.

MONTH	SAMPLE SIZE	MALES		FEMALES		UNSEXED	
		NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
June	300	54	18.0	136	45.3	110	36.7
July	159	27	17.0	76	47.8	56	35.2
August	38	14	36.9	17	44.7	7	18.4
September	85	20	23.5	22	25.9	43	50.6
October	303	77	25.4	114	37.6	112	37.0
November	466	144	30.9	183	39.3	139	29.8
January 1/	18	1	5.6	5	27.8	12	66.7
February	361	98	27.1	140	38.8	123	34.1
March	74	25	33.8	40	54.1	9	12.2
April	212	56	26.4	116	54.7	40	18.9
May	405	132	32.6	205	50.6	68	16.8
June	458	150	32.8	215	46.9	93	20.3
TOTAL	2879	798	27.7	1269	44.1	812	28.2

1/ Bay stations only.

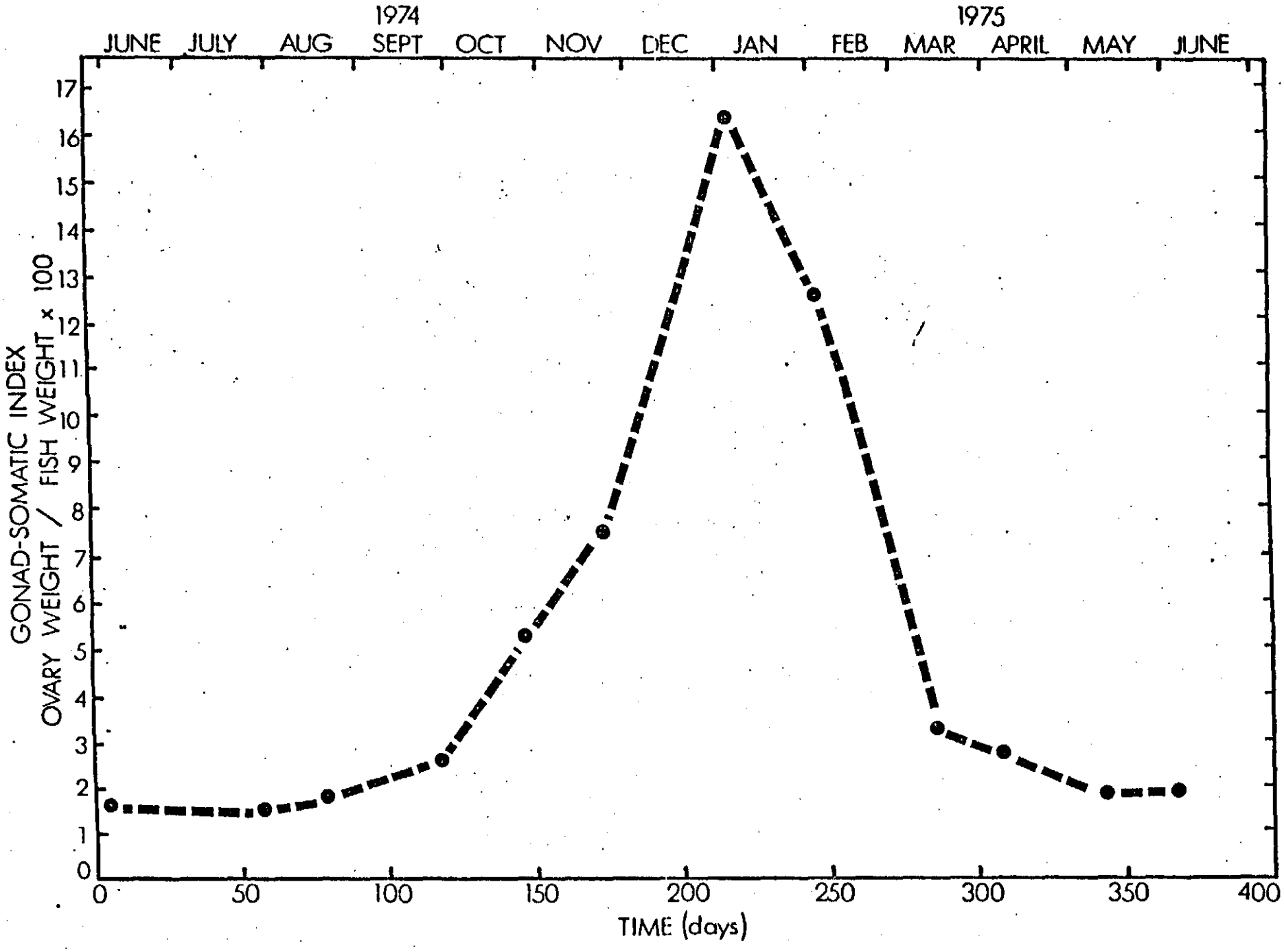

FIGURE 201.--Monthly gonad-somatic indices of winter flounder (Pseudopleuronectes americanus) collected New York Bight, June 1974 to June 1975.

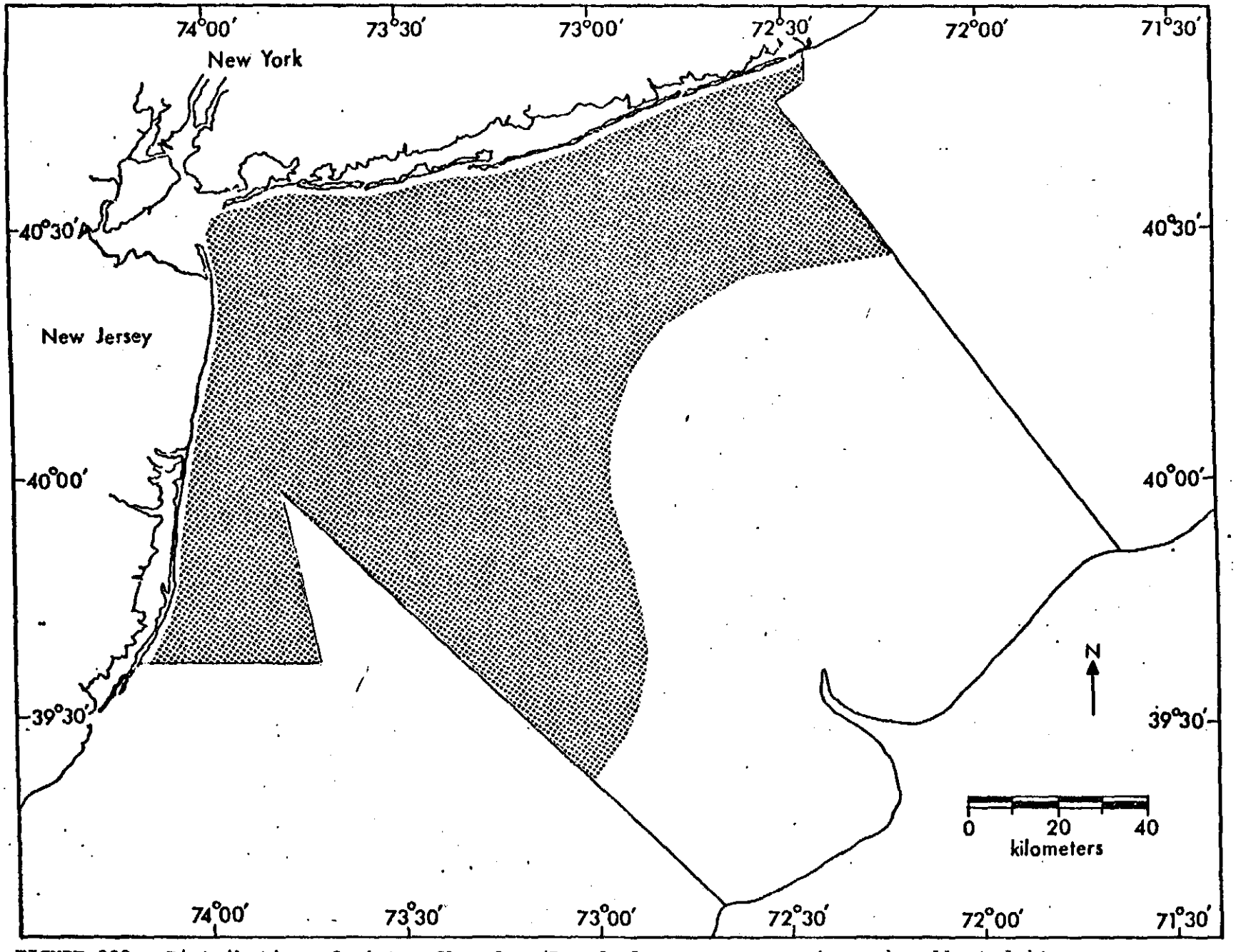

FIGURE 202.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, June 1974.

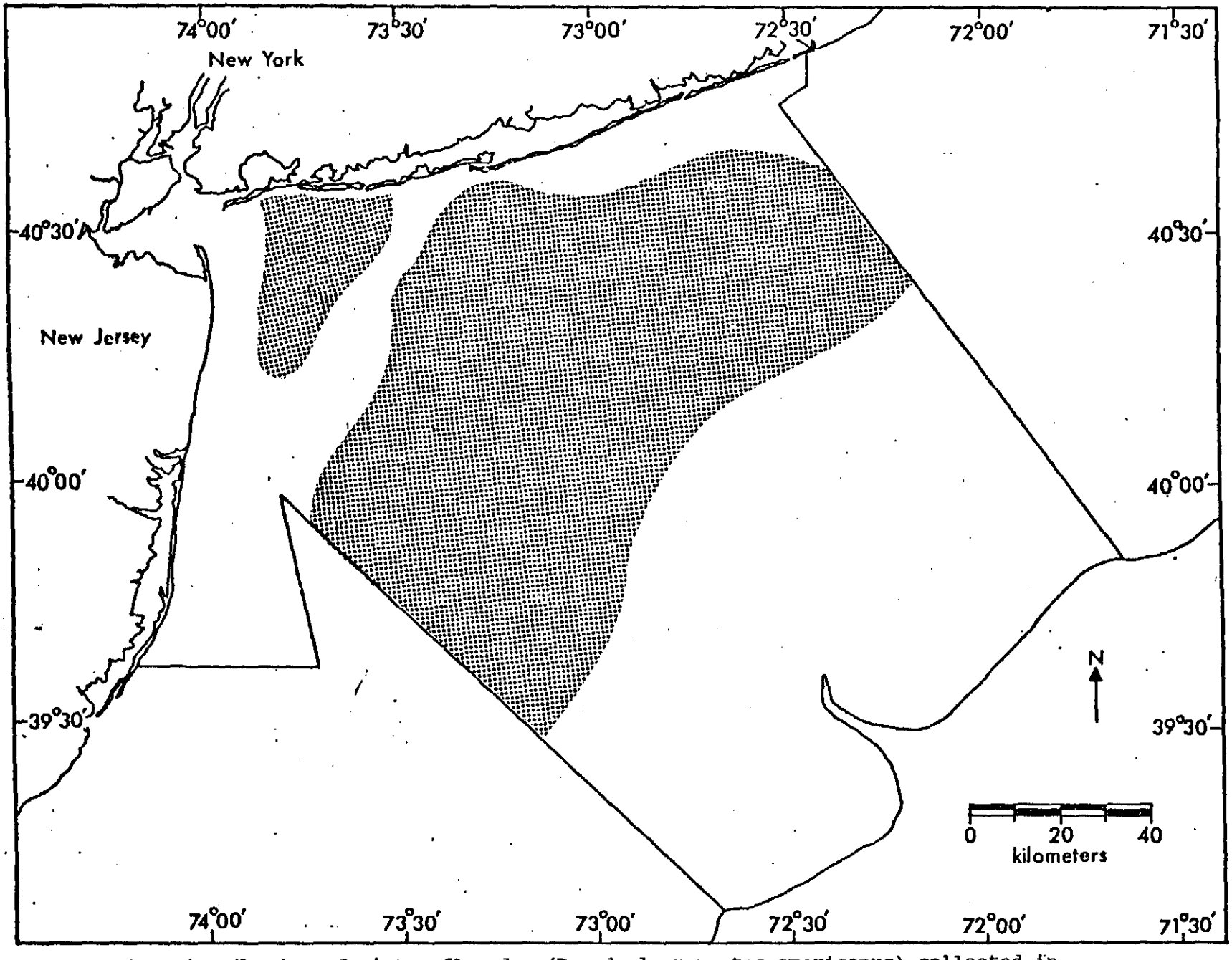

FIGURE 203.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, July 1974.

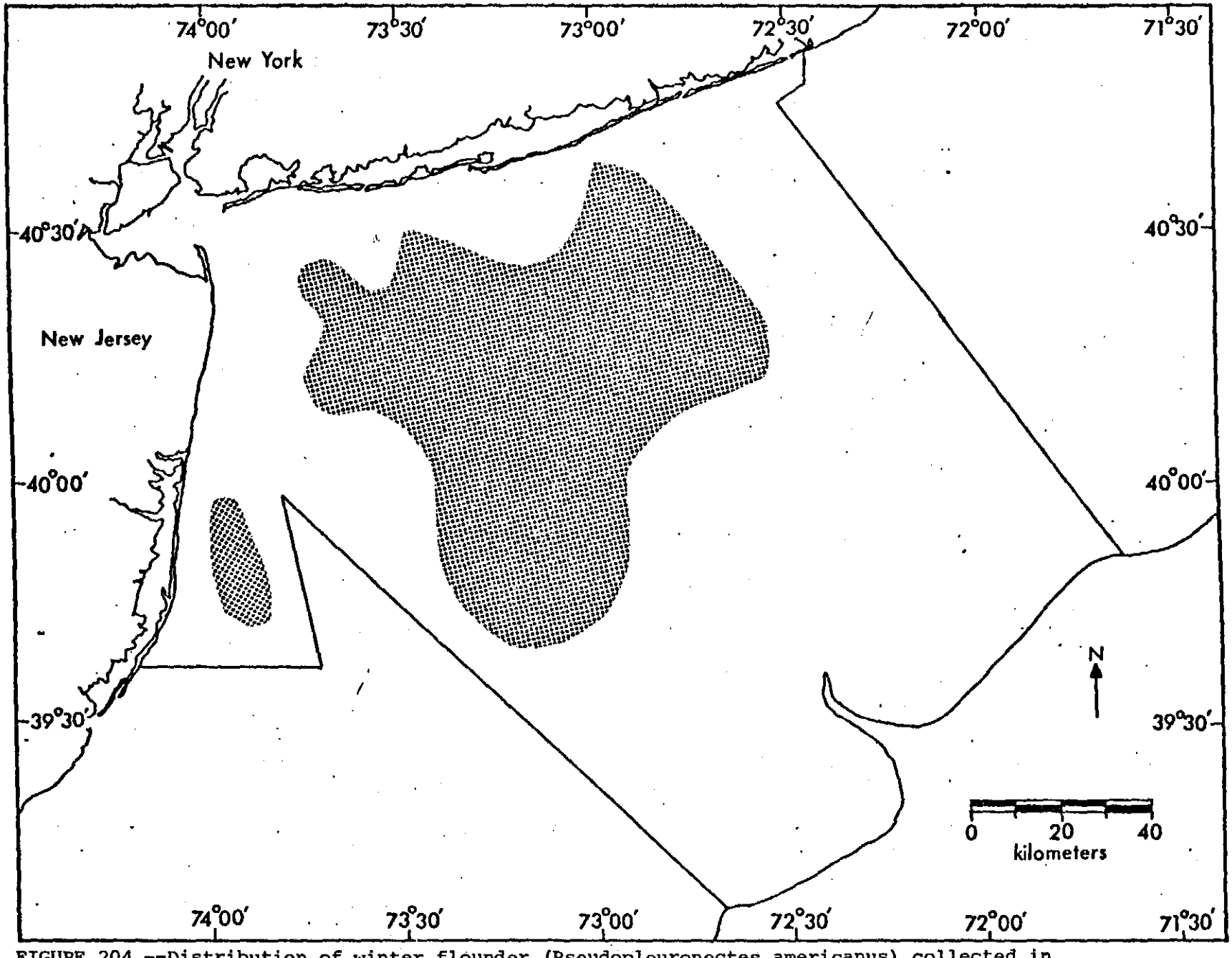

FIGURE 204.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, August 1974.

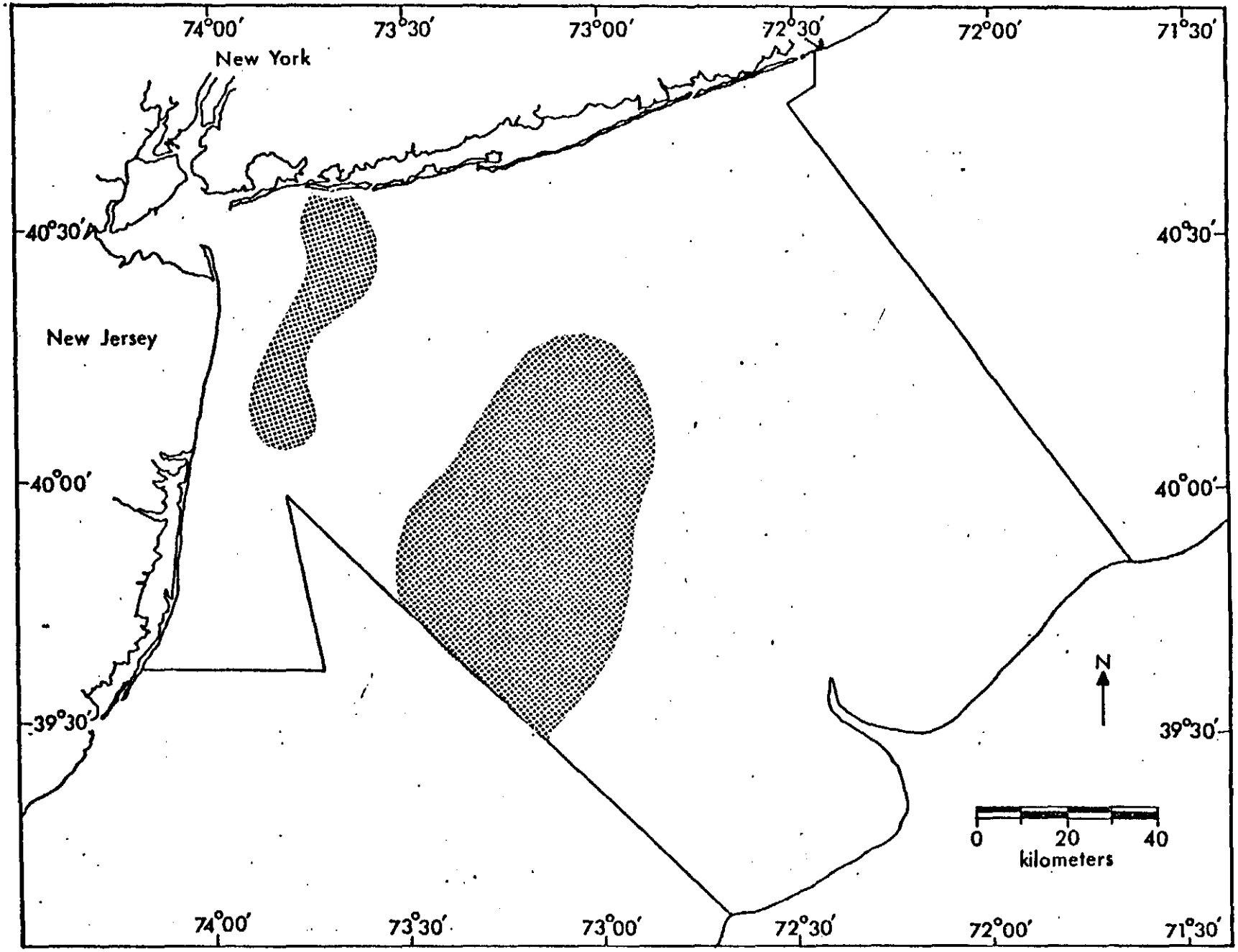

FIGURE 205.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, September 1974.

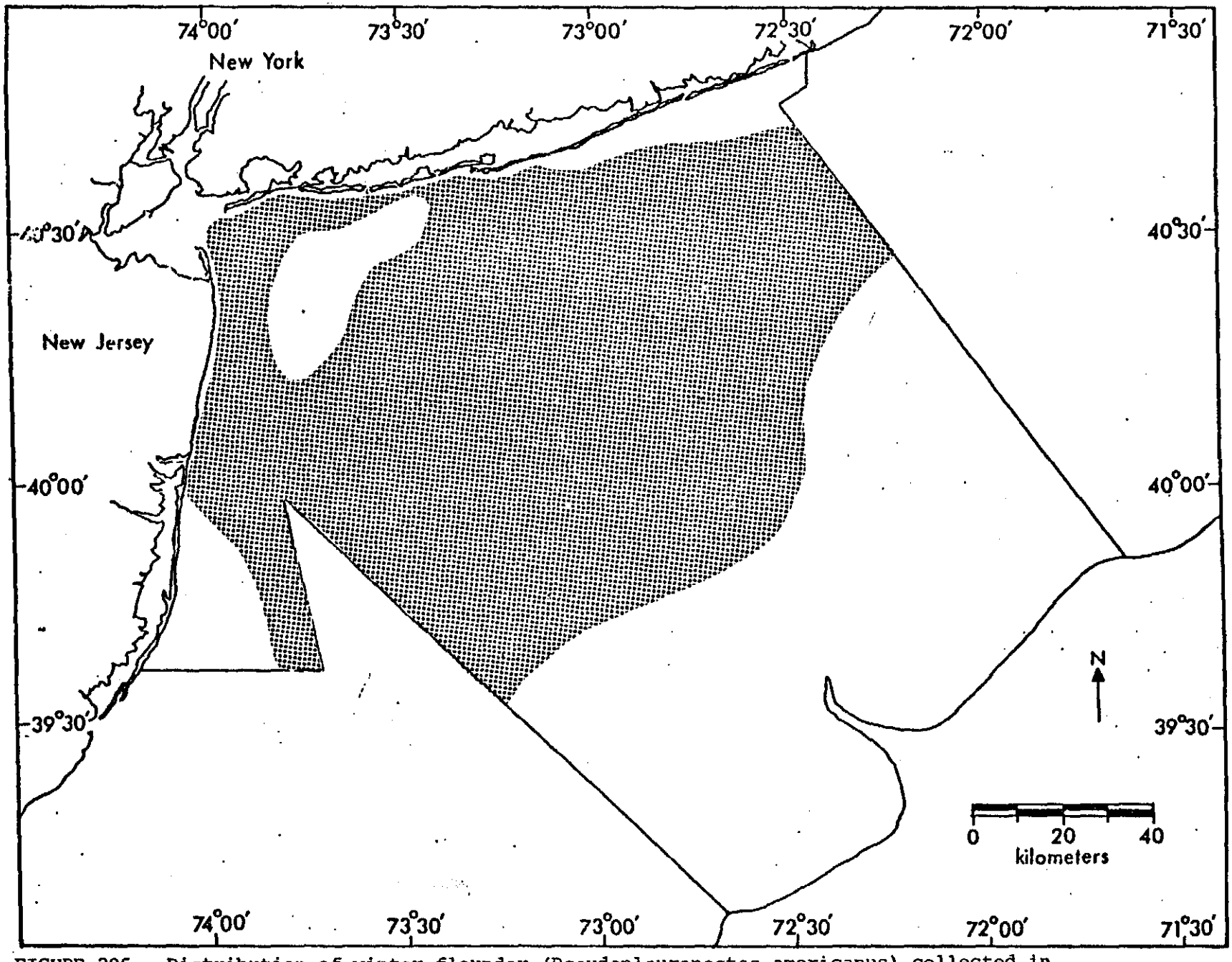

FIGURE 206.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, October 1974.

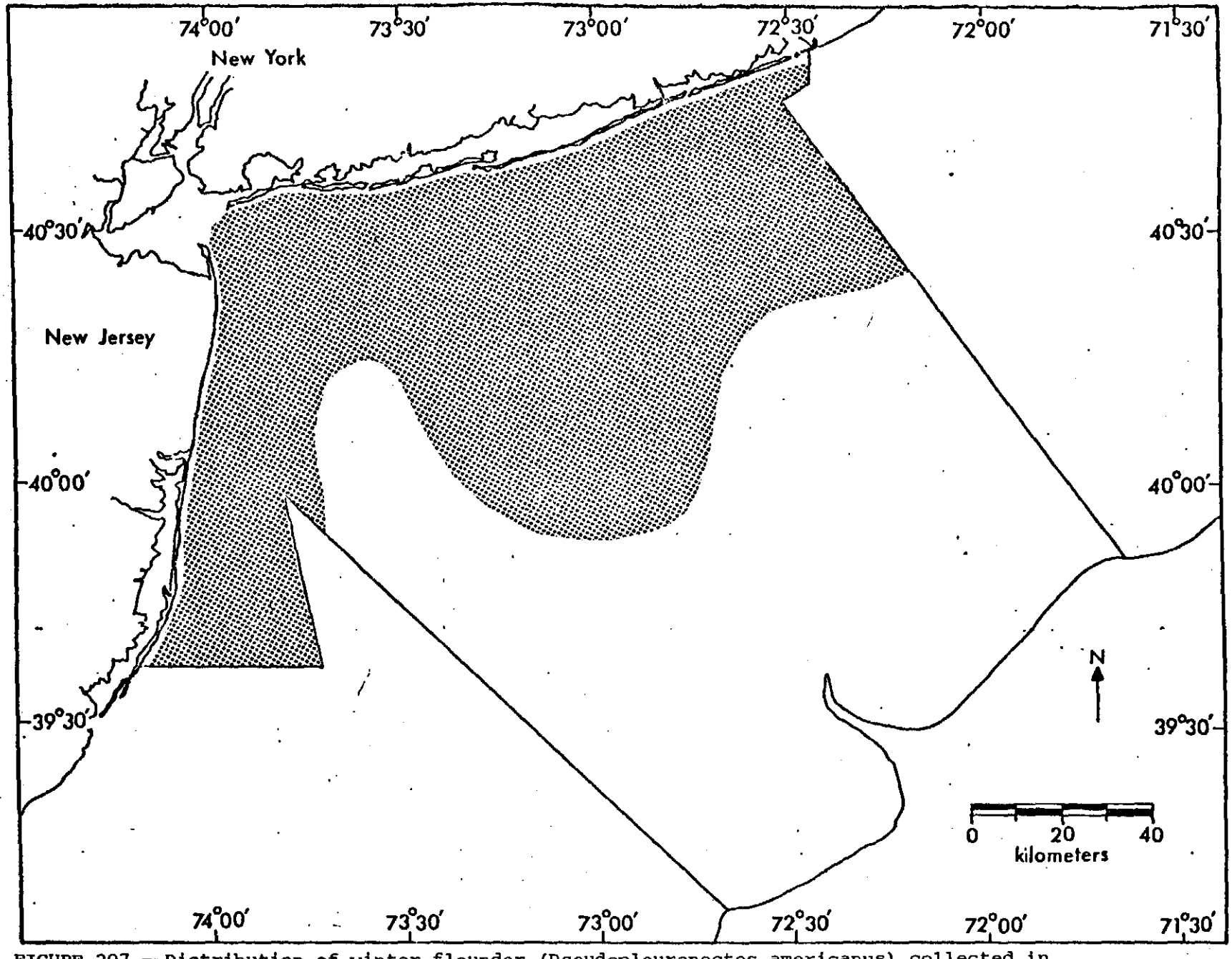

FIGURE 207.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, November 1974.

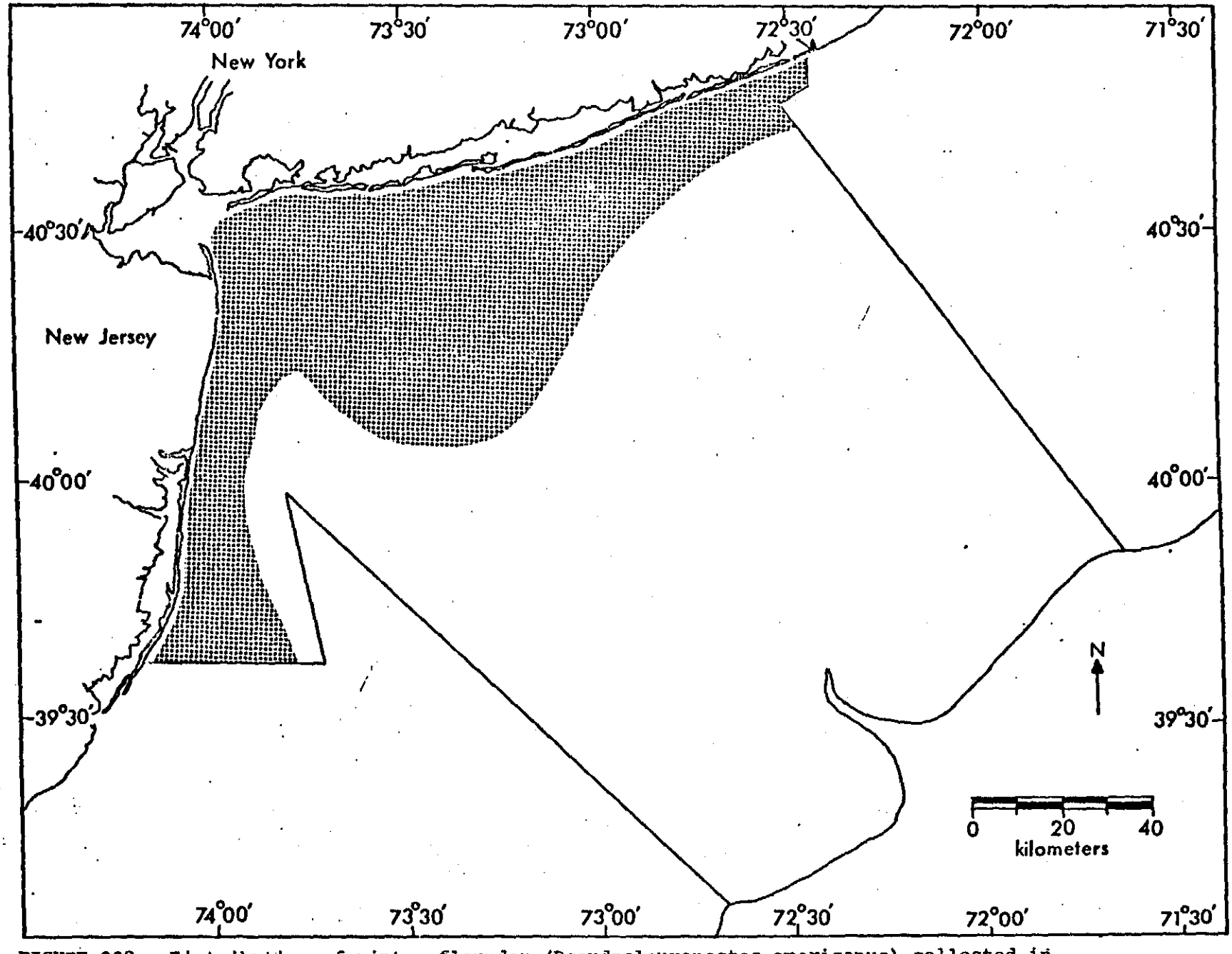

FIGURE 208.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, February 1975.

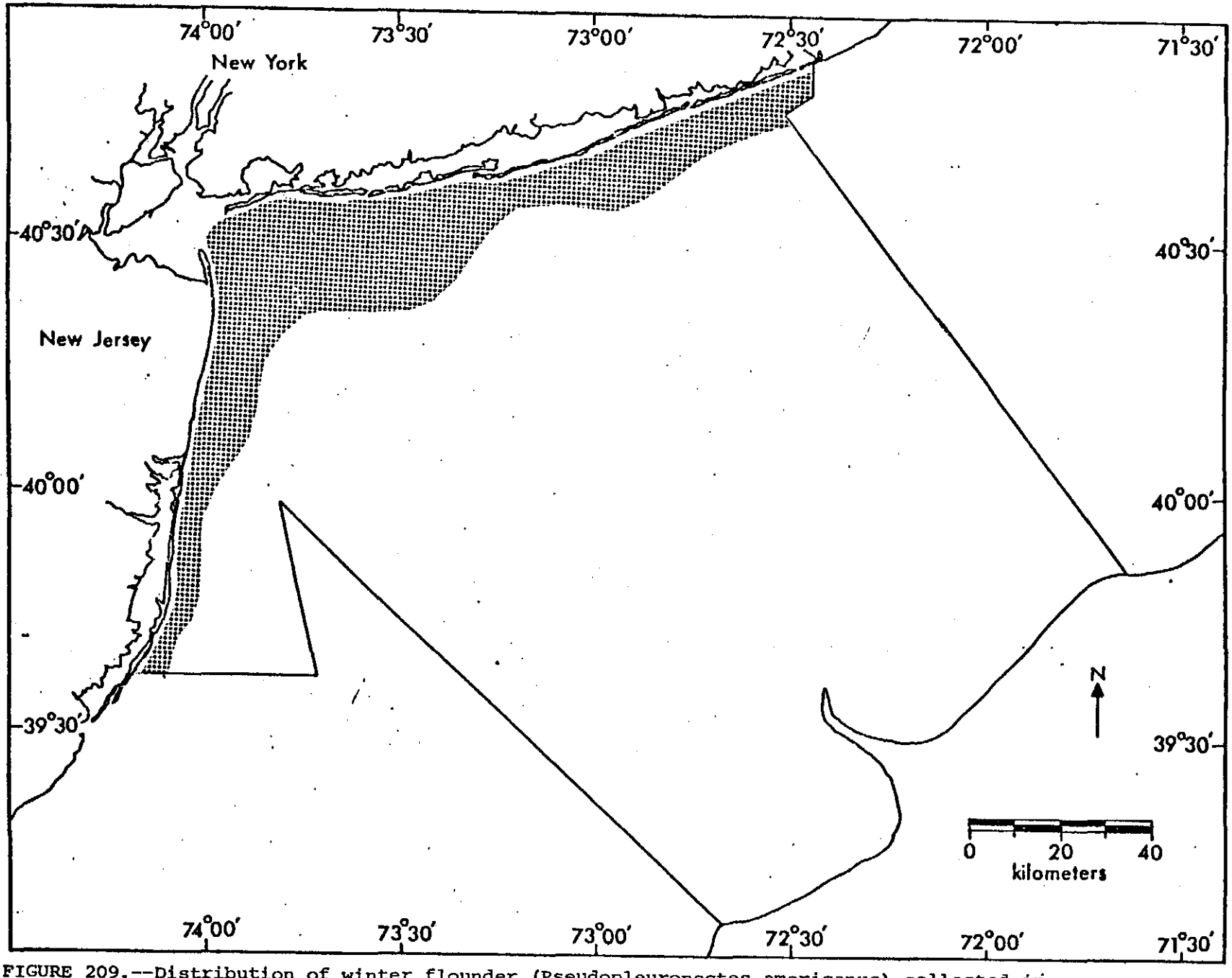

FIGURE 209.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, March 1975.

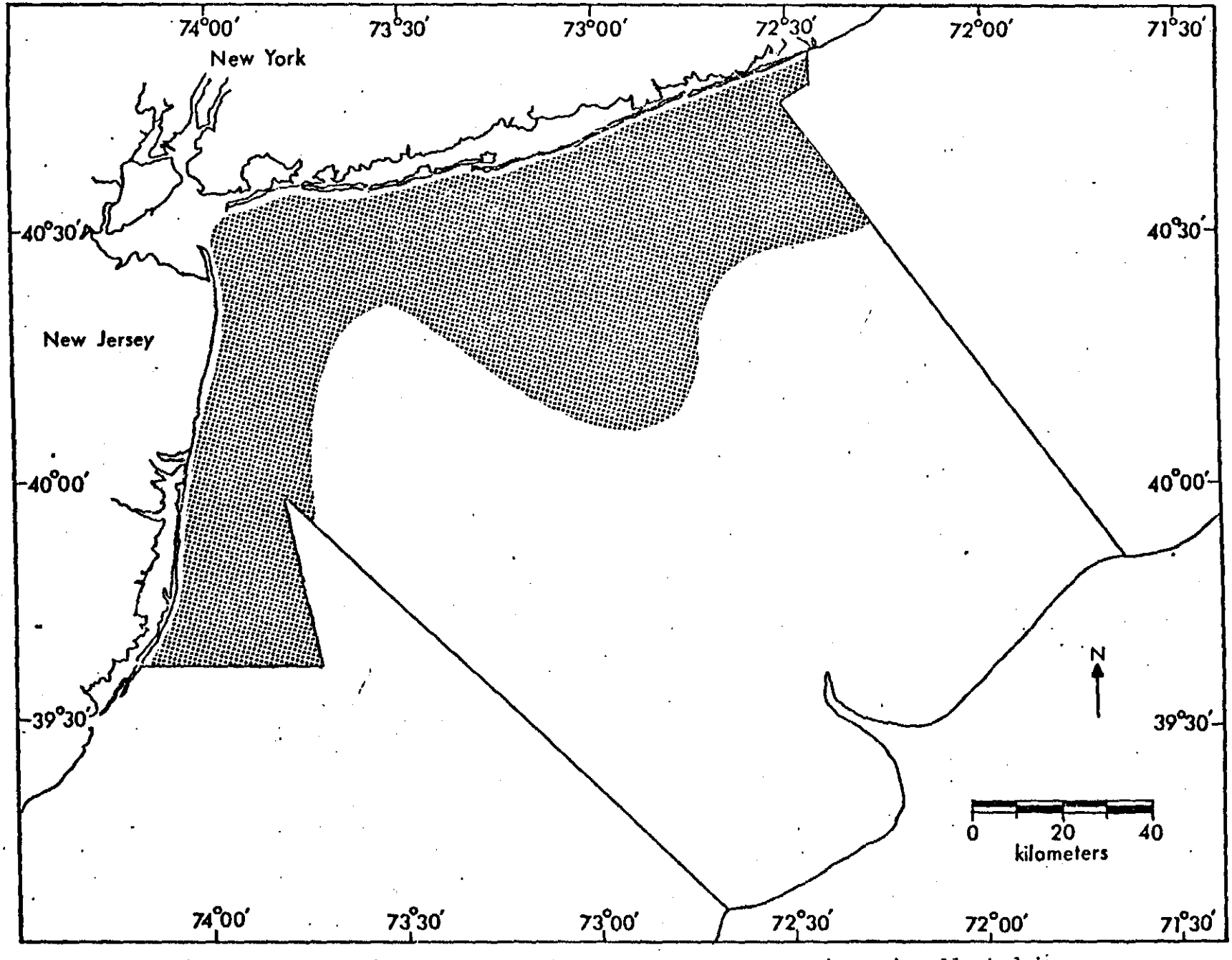

FIGURE 210.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, April 1975.

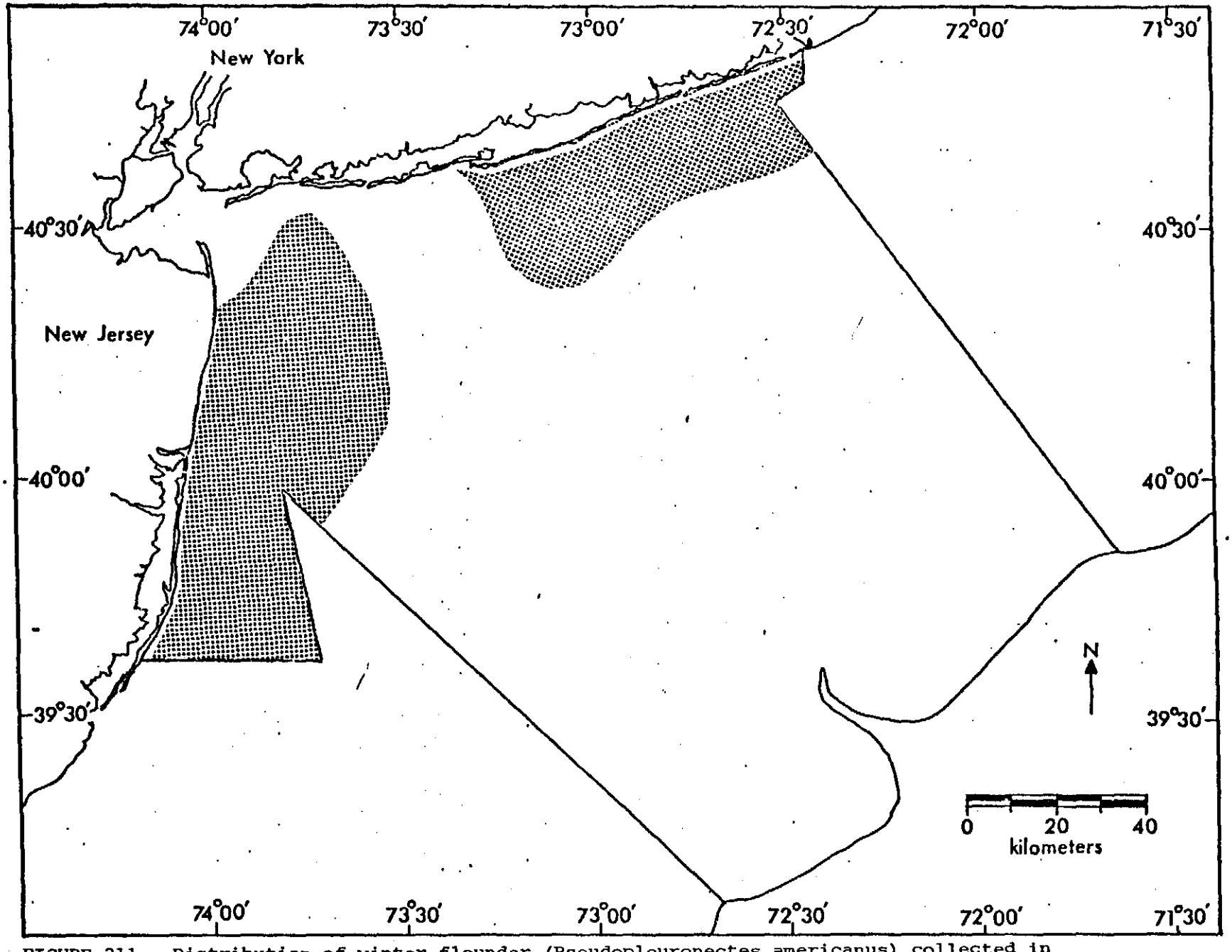

FIGURE 211.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, May 1975.

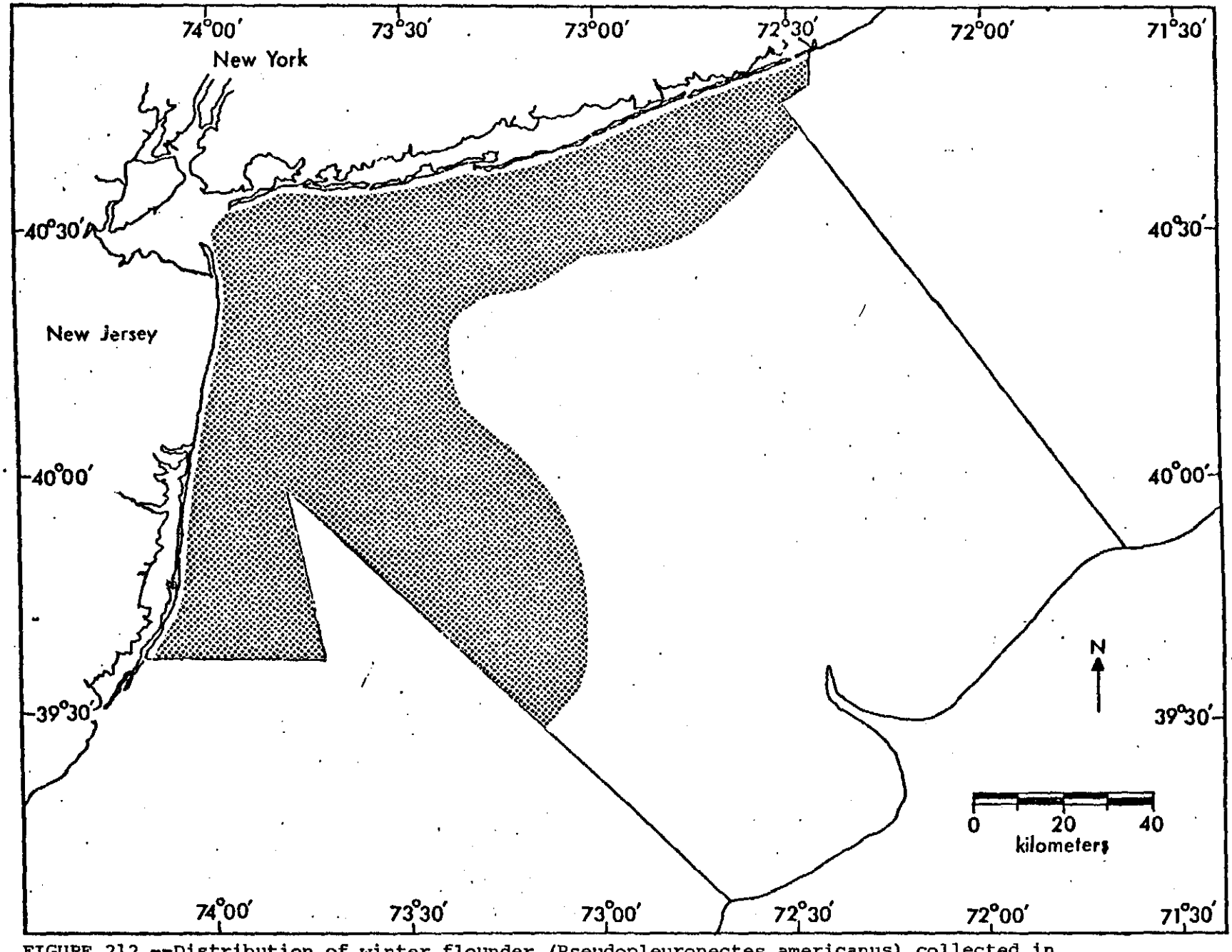

FIGURE 212.--Distribution of winter flounder (Pseudopleuronectes americanus) collected in New York Bight, June 1975.

APPENDIX

APPENDIX TABLE I.--Phylogenetic list of fishes collected in New York Bight, June to November, 1974; including monthly summaries of numbers of specimens examined and their size range.

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
ANGUILLIDAE												
Anguilla rostrata												
American eel	-	-	-	-	-	-	-	-	-	-	2	569-673
CLUPEIDAE												
Alosa aestivalis												
Blueback herring	46	71-251	-	-	2	110-162	-	-	22	68-152	16	54-128
Alosa mediocris												
Hickory shad	2	176-317	-	-	-	-	-	-	-	-	-	-
Alosa pseudoharengus												
Alewife	21	81-255	-	-	-	-	-	-	19	72-181	233	68-236
Alosa sapidissima												
American shad	8	144-437	-	-	-	-	-	-	15	90-209	20	87-201
Brevoortia tyrannus												
Atlantic menhaden	50	172-244	1	229	-	-	-	-	2	225-277	40	112-296
Clupea harengus harengus												
Atlantic herring	19	235-299	-	-	-	-	-	-	-	-	-	-
Etrumeus teres												
Round herring	-	-	4	105-119	112	98-160	84	101-137	22	112-138	13	118-134
ENGRAULIDAE												
Anchoa hepsetus												
Striped anchovy	-	-	-	-	4	75-103	-	-	50	64- 89	-	-
Anchoa mitchilli												
Bay anchovy	21	54- 87	60	56- 93	153	35- 92	191	31- 84	146	26- 90	177	41- 93
Engraulis eurystole												
Silver anchovy	37	57- 91	-	-	54	60-116	44	71-113	25	94-120	-	-

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
SYNODONTIDAE												
Synodus foetens Inshore lizardfish	-	-	-	-	-	-	4	203-257	6	168-236	3	170-265
Trachinocephalus myops Snakefish	-	-	-	-	-	-	12	63- 88	12	53- 84	-	-
CHLOROPHTHALMIDAE												
Chlorophthalmus agassizi Shortnose greeneye	10	57-100	6	102-121	33	53-125	51	53-125	4	93-108	-	-
LOPHIIDAE												
Lophius americanus Goosefish	38	247-970	46	146-832	67	110-960	62	160-850	58	60-973	214	110-114
OGCOCEPHALIDAE												
Dibranchus atlanticus Atlantic batfish	-	-	9	105-167	1	130	-	-	2	113-178	-	-
GADIDAE												
Enchelyopus cimbrius Fourbeard rockling	1	180	1	162	4	105-177	1	227	10	144-266	-	-
Gadus morhua Atlantic cod	-	-	8	40- 50	-	-	-	-	-	-	25	550-876
Melanogrammus aeglefinus Haddock	-	-	1	64	-	-	-	-	-	-	-	-
Merluccius albidus Offshore hake	7	126-379	42	134-483	24	202-393	47	117-352	52	165-540	26	269-504
Merluccius bilinearis Silver hake	204	55-455	140	30-420	211	40-374	134	43-356	190	43-463	451	41-508
Phycis chesteri Longfin hake	3	209-252	14	76-228	10	186-234	1	229	29	124-263	-	-
Urophycis chuss Red hake	114	102-409	150	97-453	266	31-431	247	34-407	268	52-506	377	41-484

APPENDIX TABLE I.--Continued

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
GADIDAE (Cont.)												
Urophycis regius Spotted hake	34	69-393	186	107-338	233	64-346	137	169-331	148	180-333	189	51-350
Urophycis tenuis White hake	2	274-329	-	-	-	-	-	-	6	429-535	11	182-696
OPHIDIIDAE												
Lepophidium cervinum Fawn cusk-eel	40	145-288	12	100-234	66	97-263	83	112-262	18	65-279	49	121-223
Rissola marginata Striped cusk-eel	-	-	-	-	3	254-270	7	203-265	6	167-277	6	125-272
ZOARCIDAE												
Macrozoarces americanus Ocean pout	6	224-596	28	121-373	40	107-409	28	117-548	5	236-329	11	228-466
MACROURIDAE												
Nezumia bairdi Marlin-spike	-	-	-	-	-	-	-	-	4	155-237	-	-
Coelorhynchus carminatus Longnosed grenadier	-	-	10	164-278	8	192-270	7	140-240	6	172-257	-	-
BELONIDAE												
Strongylura marina Atlantic needlefish	-	-	-	-	-	-	1	299	-	-	-	-
SCOMBERESOCIDAE												
Scomberesox saurus Atlantic saury	-	-	-	-	-	-	-	-	-	-	1	328
ATHERINIDAE												
Menidia menidia Atlantic silversides	-	-	-	-	-	-	-	-	9	75-108	73	75-119
FISTULARIIDAE												
Fistularia petinba Cornetfish	-	-	-	-	1	306	-	-	-	-	-	-

APPENDIX TABLE I.--Continued

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
SYNGNATHIDAE												
Hippocampus erectus Lined seahorse	-	-	-	-	1	55	4	60- 71	17	43-135	6	66-131
Syngnathus fuscus Northern pipefish	-	-	-	-	1	141	9	135-228	17	115-213	97	73-224
PERCICHTHYIDAE												
Morone americana White perch	-	-	-	-	-	-	-	-	-	-	1	58
Morone saxatilis Striped bass	9	480-553	2	381-500	-	-	-	-	1	443	1	722
SERRANIDAE												
Centropristis striata Black sea bass	5	231-438	23	204-403	34	192-447	111	33-409	97	40-371	21	47-452
PRIACANTHIDAE												
Pristigenys alta Short bigeye	-	-	1	33	-	-	-	-	1	36	-	-
BRANCHIOSTEGIDAE												
Lopholatilus chamaeleonticeps Tilefish	3	127-709	-	-	-	-	-	-	2	467-476	1	499
POMATOMIDAE												
Pomatomus saltatrix Bluefish	24	39-686	38	84-725	43	112-703	110	84-701	94	86-768	35	156-697
CARANGIDAE												
Decapterus punctatus Round scad	-	-	6	53- 92	51	48-104	36	53-109	17	77-132	-	-
Selar crumenophthalmus Bigeye scad	-	-	-	-	1	122	-	-	1	150	-	-
Seriola zonata Banded rudderfish	1	92	-	-	5	165-213	-	-	-	-	-	-

APPENDIX TABLE I.--Continued

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
CARANGIDAE (Cont.)												
Trachurus lathami Rough scad	-	-	3	60- 67	-	-	-	-	2	134-139	-	-
Vomer setapinnis Atlantic moonfish	-	-	-	-	-	-	15	43- 61	2	46- 95	-	-
SPARIDAE												
Stenotomus chrysops Scup	162	92-213	50	42-282	90	27-235	385	42-234	467	59-306	309	60-38(
SCIAENIDAE												
Bairdiella chrysura Silver perch	-	-	-	-	-	-	-	-	10	76-102	4	73-103
Cynoscion regalis Weakfish	1	595	48	323-768	15	72-670	255	59-680	117	75-611	232	65-725
Larimus fasciatus Banded drum	-	-	-	-	-	-	-	-	-	-	1	106
Leiostomus xanthurus Spot	-	-	-	-	-	-	17	172-188	3	145-167	1	122
Menticirrhus saxatilis Northern kingfish	-	-	-	-	-	-	25	60-250	56	124-402	29	51-265
Micropogan undulatus Atlantic croaker	-	-	-	-	-	-	3	73-351	-	-	2	107-136
MULLIDAE												
Mullus auratus Red goatfish	-	-	1	85	1	53	-	-	-	-	-	-
CHAETODONTIDAE												
Chaetodon ocellatus Spotfin butterflyfish	-	-	-	-	-	-	1	35	-	-	1	51

APPENDIX TABLE I.--Continued

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
SCORPAENIDAE												
Helicolenus dactylopterus												
Blackbelly rosefish	148	26-198	57	35-180	61	44-207	36	48-235	32	49-215	12	48-16
Scorpaena plumieri												
Spotted scorpionfish	1	157	-	-	-	-	-	-	2	50- 57	-	-
TRIGLIDAE												
Peristedion miniatum												
Armored searobin	-	-	2	214-235	9	228-267	33	210-349	5	241-266	30	135-344
Prionotus carolinus												
Northern searobin	25	198-275	68	153-278	74	26-318	184	45-297	159	41-341	74	42-382
Prionotus evolans												
Striped searobin	19	187-383	67	110-364	46	95-355	128	65-414	103	47-403	69	48-398
COTTIDAE												
Hemitripterus americanus												
Sea raven	26	185-380	2	202-210	4	205-300	-	-	-	-	4	243-306
Myoxocephalus aenaeus												
Grubby	-	-	2	85- 95	-	-	3	89-102	-	-	26	69-149
Myoxocephalus octodecemspinosus												
Longhorn sculpin	10	200-300	11	116-210	36	110-310	4	146-274	4	113-240	7	80-338
Myoxocephalus scorpius												
Shorthorn sculpin	-	-	1	260	-	-	1	105	-	-	-	-
BOTHIDAE												
Citharichthys arctifrons												
Gulf Stream flounder	4	76-122	9	83-132	152	58-177	80	55-125	71	47-170	60	48-147
Paralichthys dentatus												
Summer flounder	115	303-692	99	257-650	74	323-537	225	227-730	195	115-714	163	130-716
Paralichthys oblongus												
Fourspot flounder	82	114-355	228	41-341	236	26-347	285	52-374	307	68-374	330	91-386

APPENDIX TABLE I.--Continued

IDENTIFICATION	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
BOTHIDAE (Cont.)												
Scophthalmus aquosus Windowpane	207	155-336	235	44-355	279	51-323	391	47-356	412	62-340	599	47-341
PLEURONECTIDAE												
Glyptocephalus cynoglossus Witch flounder	-	-	15	193-258	13	197-487	2	304-481	37	208-435	24	274-554
Limanda ferruginea Yellowtail flounder	36	126-368	30	35-346	41	150-364	113	126-381	48	56-382	59	75-390
Pseudopleuronectes americanus Winter flounder	300	113-375	159	65-362	38	49-344	85	73-346	303	72-397	466	56-393
CYNOGLOSSIDAE												
Symphurus plagiusa Blackcheek tonguefish	-	-	-	-	-	-	--	-	-	-	1	64
BALISTIDAE												
Monacanthus hispidus Planehead filefish	-	-	4	63-100	39	64-130	64	83-229	73	55-161	29	91-154
TETRAODONTIDAE												
Sphoeroides maculatus Northern puffer	-	-	-	-	29	60- 91	98	67-122	27	37-170	12	43- 65

APPENDIX TABLE II.--Phylogenetic list of fishes collected in New York Bight, January - June, 1975; including monthly summaries of numbers of specimens examined and their size range.

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
ANGUILLIDAE												
Anguilla rostrata American eel	-	-	-	-	-	-	1	597	1	460	-	-
CLUPEIDAE												
Alosa aestivalis Blueback herring	98	53-204	208	57-271	3	85-277	92	77-274	97	74-269	16	91-261
Alosa mediocris Hickory shad	-	-	-	-	-	-	-	-	-	-	-	-
Alosa pseudoharengus Alewife	115	68-199	345	80-345	35	142-298	137	85-363	307	82-289	39	76-273
Alosa sapidissima American shad	80	77-198	97	84-463	7	247-312	5	222-330	76	98-390	11	155-394
Brevoortia tyrannus Atlantic menhaden	-	-	2	220-241	1	303	-	-	6	198-260	17	190-243
Clupea harengus harengus Atlantic herring	28	257-313	77	247-325	1	301	22	158-320	102	151-336	30	136-254
Etrumeus teres Round herring	-	-	-	-	-	-	-	-	-	-	-	-
ENGRAULIDAE												
Anchoa hepsetus Striped anchovy	-	-	-	-	-	-	-	-	40	59- 88	65	45- 86
Anchoa mitchilli Bay anchovy	-	-	1	72	-	-	-	-	45	57- 98		
Engraulis eurystole Silver anchovy	-	-	-	-	-	-	-	-	-	-	-	-

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
ARGENTINIDAE												
Argentina silus Atlantic argentine	-	-	-	-	-	-	4	104-136	8	117-135	1	133
CHLOROPHTHALMIDAE												
Chlorophthalmus agassizi Shortnose greeneye	-	-	-	-	1	68	14	60-109	15	88-127	-	-
LOPHIIDAE												
Lophius americanus Goosefish	-	-	122	137-1020	38	172-957	42	265-970	154	188-1350	172	135-1100
OGCOCEPHALIDAE												
Dibranchus atlanticus Atlantic batfish	-	-	2	74-153	-	-	-	-	2	48-135	-	-
GADIDAE												
Enchelyopus cimbrius Fourbeard rockling	-	-	-	-	-	-	-	-	6	173-285	-	-
Gadus morhua Atlantic cod	-	-	96	474-1333	48	578-1680	45	520-981	8	592-872	1	580
Melanogrammus aeglefinus Haddock	-	-	-	-	-	-	-	-	-	-	-	-
Merluccius albidus Offshore hake	-	-	66	189-529	16	129-575	49	115-495	38	261-452	17	209-522
Merluccius bilinearis Silver hake	13	88-235	941	59-556	661	51-497	423	70-590	858	77-562	487	64-507
Microgadus tomcod Atlantic tomcod	-	-	-	-	-	-	-	-	1	159	23	56- 76
Phycis chesteri Longfin hake	-	-	-	-	-	-	26	132-307	25	169-382	-	-
Physiculus fulvus Hakeling	-	-	-	-	-	-	1	140	-	-	-	-

APPENDIX TABLE 11.-- Continued

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
GADIDAE - Continued												
Pollachius virens Pollock	-	-	1	459	-	-	1	1301	-	-	-	-
Uraleptus maraldi	-	-	-	-	-	-	1	162	-	-	-	-
Urophycis chuss Red hake	8	65-102	695	65-533	586	68-476	473	76-529	1069	82-550	456	75-505
Urophycis regius Spotted hake	2	69- 74	30	75-355	4	100-333	11	93-386	52	49-368	32	65-367
Urophycis tenuis White hake	-	-	19	264-664	16	326-841	7	135-435	23	182-854	2	436-474
OPHIDIIDAE												
Lepophidium cervinum Fawn cusk-eel	-	-	16	148-236	54	142-264	4	165-275	24	97-346	6	83-226
Rissola marginata Striped cusk-eel	-	-	2	143-280	-	-	-	-	3	68-306	-	-
ZOARCIDAE												
Macrozoarces americanus Ocean pout	-	-	227	144-729	55	92-670	159	170-704	218	180-659	54	78-558
Melanstigma atlanticum Atlantic soft pout	-	-	-	-	-	-	10	77-158	-	-	-	-
MACROURIDAE												
Nezumia bairdi Marlin - spike	-	-	22	67-306	-	-	12	125-258	9	157-316	-	-
Nezumia berglax Rough headed grenadier	-	-	-	-	-	-	2	225-259	7	125-260	1	259
Coelorhynchus carminatus Longnosed grenadier	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX TABLE II.--Continued

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
ATHERINIDAE												
Menidia menidia												
Atlantic silversides	6	77- 96	46	74-107	2	88-115	11	82-108	46	51- 87	-	-
POLYMIXIIDAE												
Polymixia lowei												
Beardfish	-	-	-	-	-	-	1	70	-	-	-	-
GASTEROSTEIDAE												
Gasterosteus aculeatus												
Threespine stickleback	-	-	-	-	-	-	1	52	-	-	-	-
SYNGNATHIDAE												
Hippocampus erectus												
Lined seahorse	-	-	1	70	4	73- 92	2	68-146	1	72	-	-
Syngnathus fuscus												
Northern pipefish	-	-	17	125-234	45	110-235	12	112-207	10	121-210	-	-
PERCICHTHYIDAE												
Morone americana												
White perch	-	-	-	-	-	-	-	-	-	-	-	-
Morone saxatilis												
Striped bass	-	-	-	-	-	-	-	-	3	492-646	-	-
SERRANIDAE												
Centropristis striata												
Black sea bass	-	-	12	65-349	1	58	1	243	45	72-556	145	78-411
BRANCHIOSTEGIDAE												
Lopholatilus chamaeleonticeps												
Tilefish	-	-	-	-	1	213	-	-	-	-	3	247-252
POMATOMIDAE												
Pomatomus saltatrix												
Bluefish	-	-	-	-	-	-	-	-	-	-	1	500
SPARIDAE												
Stenotomus chrysops												
Scup	-	-	3	103-240	-	-	24	113-289	397	87-340	357	78-257

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
SCIAENIDAE												
Bairdiella chrysura Silver perch	-	-	-	-	-	-	-	-	-	-	-	-
Cynoscion regalis Weakfish	-	-	-	-	-	-	-	-	2	442-503	-	-
Larimus fasciatus Banded drum	-	-	-	-	-	-	-	-	-	-	-	-
Leiostomus xanthurus Spot	-	-	-	-	-	-	-	-	-	-	-	-
Menticirrhus saxatilis Northern kingfish	-	-	-	-	-	-	-	-	-	-	-	-
Micropogon undulatus Atlantic croaker	-	-	-	-	-	-	-	-	-	-	-	-
LABRIDAE												
Tautoga onitis Tautog	-	-	4	90-288	2	289-325	1	335	20	183-588	1	348
Tautogolabrus adspersus Cunner	-	-	67	116-258	1	78	34	115-349	59	118-277	28	134-267
STICHAEIDAE												
Ulvaria subbifurcata Radiated shanny	-	-	-	-	-	-	1	88	-	-	-	-
PHOLIDAE												
Pholis gunnellus Rock gunnel	-	-	9	79-120	-	-	-	-	6	97-171	-	-
AMMODYTIDAE												
Ammodytes americanus American sand lance	30	94-163	74	102-213	7	129-154	69	123-221	27	62-205	48	82-227
SCOMBRIDAE												
Scomber scombrus Atlantic mackerel	-	-	33	159-349	67	158-377	4	158-296	37	163-447	-	-

APPENDIX TABLE II.--Continued

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
STROMATEIDAE												
Ariomma bondi Silver-rag	-	-	-	-	-	-	-	-	-	-	-	-
Peprilus triacanthus Butterfish	-	-	42	85-202	81	98-242	117	93-223	219	98-230	271	48-215
SCORPAENIDAE												
Helicolenus dactylopterus Blackbelly rosefish	-	-	9	97-153	3	53- 64	58	28-197	63	72-203	47	63-242
Scorpaena plumieri Spotted scorpionfish	-	-	-	-	-	-	-	-	-	-	-	-
TRIGLIDAE												
Peristedion miniatum Armored searobin	-	-	25	193-334	13	237-318	22	214-320	19	160-370	8	266-308
Prionotus carolinus Northern searobin	-	-	56	88-344	8	78-340	21	65-321	53	74-337	148	83-299
Prionotus evolans Striped searobin	-	-	1	130	-	-	-	-	9	294-352	31	240-382
COTTIDAE												
Hemitripterus americanus Sea raven	-	-	8	264-383	1	340	8	252-370	4	300-343	3	192-325
Myoxocephalus aenaeus Grubby	1	118	12	54-136	1	142	1	123	-	-	-	-
Myoxocephalus octodecemspinosus Longhorn sculpin	-	-	51	55-328	9	241-307	37	190-395	72	67-325	3	84-262
Myoxocephalus scorpius Shorthorn sculpin	-	-	-	-	1	93	-	-	-	-	-	-

APPENDIX TABLE II.--Continued

IDENTIFICATION	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm	NO.	SIZE RANGE mm
BOTHIDAE												
Citharichthys arctifrons												
Gulf Stream flounder	-	-	50	67-182	12	40-151	21	45-162	66	66-174	114	55-152
Monolene sessilicauda												
Deepwater flounder	-	-	-	-	-	-	-	-	4	140-180	-	-
Paralichthys dentatus												
Summer flounder	-	-	47	138-540	27	204-630	34	161-699	145	186-594	317	209-651
Paralichthys oblongus												
Fourspot flounder	-	-	177	70-381	127	137-405	122	150-395	338	80-419	359	159-383
Scophthalmus aquosus												
Windowpane flounder	2	240-282	663	51-357	295	60-406	405	55-385	517	86-387	428	90-397
PLEURONECTIDAE												
Glyptocephalus cynoglossus												
Witch flounder	-	-	44	211-511	4	254-301	18	140-377	34	180-444	14	228-510
Limanda ferruginea												
Yellowtail flounder	-	-	422	70-422	138	63-401	292	68-420	299	65-418	160	87-397
Pseudopleuronectes americanus												
Winter flounder	18	86-316	361	80-416	74	110-399	212	81-474	405	90-404	459	114-432
CYNOGLOSSIDAE												
Symphurus plagiusa												
Blackcheek tonguefish	-	-	-	-	-	-	1	61	-	-	-	-