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Scallop Survey in NAFO Division 3Ps
(including Green, St. Pierre and Burgeo Banks)

by

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Abstract

Results of a random-stratified scallop survey of NAFO Division 3Ps, including St. Pierre Bank, are presented. Two species of scallops are found in this area sometimes occurring coextensively. Their distribution and preliminary estimates of biomass are reported upon.

Résumé

L'article qui suit contient les résultats d'un relevé par échantillonnage stratifié aléatoire des pétoncles de la division 3Ps de l'OPANO, y compris le banc St-Pierre. On rencontre deux espèces de pétoncles dans cette région, les deux se trouvant parfois ensemble. On donne leur distribution et des estimations de biomasse préliminaires.

Introduction

Interest in scallop stocks in St. Pierre Bank coupled with record prices for the shellfish in 1979 prompted a six-week survey of the area to determine the distribution and abundance of the two species of scallops and to assess the prospects of a sustained fishery in the area. The survey was conducted jointly by Fisheries Research Branch, Department of Fisheries and Oceans and the Development Branch, Department of Fisheries, Government of Newfoundland and Labrador.

Materials and Methods

The 80 ft M.V. Beothic Venture was chartered for the period 28 May-11 July 1979 to conduct the survey. The vessel was powered with a 550 hp engine with a fixed propeller nozzle. Scientific staff included a research biologist, two scallop technicians and one observer from the Provincial Department of Fisheries. Operations were conducted on a 12-hr per day basis, commencing at 0800 hr and usually terminating around 2000 hr. A random stratified survey design similar to the scheme used by Groundfish Program of the Fisheries Research Branch (Pitt 1976) was employed but fishing was confined to depths below 150 fm. Twenty-one strata covering approximately 11,800 sq n miles were covered. The number of stations within each stratum was proportional to the area of the stratum. The position of each station was randomly assigned using random number tables.

Upon arrival at each station the crew would be responsible for shooting the gear, ensuring that the correct amount of warp was set. All tows were made with a New Bedford standard 8 ft (2.4 m) offshore dredge with 3 in (7.6 cm) diameter rings and a 1 in (2.5 cm) mesh, nylon net liner. The liner was used to improve retention of smaller scallops and was frequently inspected, and repaired as and when necessary, to ensure no rips were present. Tow duration was 10 min with a warp-depth ratio of 3:1. At the end of each tow the drag would be hauled up and emptied on deck. Crew and scientific staff would then sort the catch by species.

Live scallops were picked out and weighed whole and depending on the size of the catch, either the whole catch or a subsample of the catch (minimum one bushel) was set aside for individual shell-height measurements to the nearest millimeter. Cluckers (empty scallop shells with both valves attached at the hinge) were also counted and measured to give some estimate of natural mortality.

Individual meat and shell samples were obtained for the two species of scallops so that shell-height, meat-weight relationships could be later determined in the laboratory.

Temperature profiles using XBTs (expendable bathythermographs) were recorded at every fifth station. A total of 38 hydrographic stations were occupied. A Simrad depth-sounder operated continuously while the drag was out

and the approximate depth was averaged for each tow and recorded along with Loran positions at the start and finish of each tow.

The use of the liner often led to tedious and time-consuming sorting operations but on the whole, once the work routine had been established, everything proceeded smoothly without major interruption. Eight days were lost because of inclement weather and port calls for provision and supplies. The design of the cruise track was probably the most serious drawback in the overall survey. Since fishing stations were preselected in a completely random manner, and since distribution of scallop beds was patchy, areas of moderate to intense scallop densities were probably completely overlooked. To offset this inadequacy, additional survey and search stations were occupied in areas where scallop concentrations were likely to occur and in areas where fishing activity had previously occurred, particularly for the giant scallop. A total of 76 supplementary stations were completed in this manner bringing the total number of survey stations to 274 (Fig. 1).

Results

The giant or sea scallop, Placopecten magellanicus, is towards the northern limit of its distribution range, and in the survey area, confined to waters less than 30 fm. Consequently, giant scallops were expected to occur only on St. Pierre Bank proper. It is apparent from the survey that sea scallops are restricted to shallow areas of the bank (<30 fm) in Strata 314 and

320 (Table 1). Although no significant concentrations of the species were encountered along the cruise track (Table 1), supplementary sets in and around areas where scallops were known to occur pointed to two beds or concentrations, one in each of Stratum 314 and 320 (Fig. 2).

The smaller Iceland scallop, Chlamys islandica, was found to be widely distributed in depths ranging from 25 to 100 fm. Of the three depth strata surveyed, the 31-50 fm strata produced most of the catches, the better catches coming from 40 to 50 fm (Table 1). They were least abundant on Burgeo Bank where only one of twenty-one sets yielded scallops (15 lb at 46°57.7'N, 57°58.1'W in 49-51 fm). Elsewhere catches varied greatly (Fig. 3). Mean size of scallops increased westwards from 65.0 mm on NE Green Bank to 82.1 mm on the NW slope of St. Pierre Bank proper. A total of 1,642 lb were taken from preselected stations, unscheduled stations yielding an additional 1,673 lb. Moderate to good catches of Iceland scallops were obtained at 45°31.2'N, 54°56.6'W and 46°18.8'N, 54°40'W and 45°40.8'N, 56°5.8'W and 45°41.5'N, 55°55.5'W and 46°41.6'N, 57°15'W and 46°41'N, 57°15.7'W.

One hundred and seventy-three (173) sets out of a total of 274 (63%) produced scallop catches. Of these 26 sets (15%) were exclusively of giants, 107 sets (62%) were of Iceland scallops only and 40 sets (23%) produced mixed catches of varying proportions (Table 1).

An accumulation of sea scallop year-classes was evident in the north (Stratum 314), with the majority (83%) of animals greater than 135 mm representing scallops > 12+ years (Fig. 4A). There was a marked paucity of

younger age groups. A broader range of shell heights (Fig. 4A) and a greater number of age cohorts were represented in the sea scallop concentrations further south (Stratum 320). An accumulation of older year-classes was again evident (Fig. 5).

Shell-heights of Iceland scallops in both strata were more or less normally distributed (Fig. 4B). The presence of several consecutive year-classes of Iceland scallops over the Banks, points to relative stability in recruitment of this species over a wide area of St. Pierre Bank (Fig. 5).

Preliminary estimates of total biomass of the two species of scallops in NAFO Div. 3Ps were attempted (Table 2). Extreme care should be exercised in interpreting the computed values reported herein. As standard groundfish stratification was employed, extrapolation for each stratum is for total stratum area. This has serious drawbacks for a contiguously distributed species.

Species-specific density approximations were attempted employing restricted areal expansion within each stratum to encompass only those units providing scallop catches (Table 3). These, too, should be interpreted in the relative rather than the absolute sense.

By-Catches

In addition to the two species of scallops, records were also kept on the

principal species in the incidental catch. These included starfish, sea cucumbers and whelks.

Starfish (various species) were abundant throughout the area with a record catch of 177 lb at 46°21.1'N, 56°25.8'W. A total of 1,011 lbs was taken from preselected stations on Green and St. Pierre Banks.

Sea cucumbers (Cucumaria frondosa) were taken frequently from waters less than 50 fm. A total of 3,200 lb was taken in 38 sets. Whelks (Buccinum spp.) were also encountered, particularly in the shallower-water strata (Strata 314 and 320).

Temperature

Bottom temperature in the survey area varied from a low of -0.8°C at 82 fm (June 22 and 26, 1979) to a high of 7.9°C at 110 fm (June 9, 1979).

Reference

Pitt, T. K. 1976. Contributions to a manual on ICNAF groundfish survey.
INCAF Res. Doc. 76/VI/119, 14 p.

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic scallop)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
A	29/05/79	1	165	45°48.6'N	54°36.5'W	48	10-060°	fine gravel	423		Not recorded
A	29/05/79	2	173	45°49.4'N	54°25.9'W	46-47	10-230°	fine gravel	777		Not recorded
A	30/05/79	3	175	45°43.4'N	54°25.1'W	48	10-215°	sand	26		Not recorded
A	30/05/79	4	174	45°40.6'N	54°28.3'W	44-45	11-220°	fine gravel	262		Starfish (34.0)
A	30/05/79	5	169	45°32.6'N	54°35.6'W	45	10-215°	sand	134		Starfish (58.0)
A	30/05/79	6	166	45°35.2'N	54°43.4'W	43	10-205°	sand	83		Starfish (28.0)
A	30/05/79	7	168	45°28.7'N	54°42.7'W	45-46	10-185°	sand	98		Starfish (7.0)
A	30/05/79	8	161	45°21.7'N	54°42.7'W	49-50	10-212°	sand	162		Starfish (26.0)
D	30/05/79	9	058	45°14.8'N	54°32.8'W	63-65	10-205°	rocks	5		Starfish (2.0)
D	30/05/79	10	066	45°09.1'N	54°41.8'W	75-77	10-228°	sand/shells			Starfish (41.0)
D	31/05/79	11	060	45°10.5'N	54°50.3'W	56	10-198°	sand	7		Starfish (0.5)
D	31/05/79	12	068	45°6.3'N	54°51.4'W	120-134	10-195°	sandy mud			Not recorded
D	31/05/79	13	197	45°2.9'N	54°55.5'W	135-140	10-025°	rocks			Not recorded
D	31/05/79	14	056	45°14.0'N	55°0.8'W	78-80	10-345°	fine gravel			Starfish (0.5)
D	31/05/79	15	054	45°16.3'N	55°11.4'W	102-103	10-225°				Not recorded
D	31/05/79	16	055	45°2.2'N	55°17.7'W	90-101	10-200°	rocks			Not recorded
D	31/05/79	17	064	45°12.4'N	55°27.0'W	78-80	10-185°	coarse gravel			Not recorded
D	31/05/79	18	053	45°14.6'N	55°22.9'W	86-87	12-220°	rocks			Not recorded
D	01/06/79	19	063	45°17.9'N	55°26.6'W	75-77	10-020°		4		Not recorded
D	01/06/79	20	059	45°23.8'N	55°26.9'W	75-82	10-030°		32		Starfish (1.0)
B	01/06/79	21	046	45°27.9'N	55°33.2'W	33-35	10-025°				Not recorded
B	01/06/79	22	041	45°31.6'N	55°26.5'W	45-47	10	fine gravel	17		Starfish (3.0)
D	01/06/79	23	067	45°21.5'N	55°11.8'W	91	10-195°	sandy mud	1		Starfish (0.5)
D	01/06/79	24	065	44°22.5'N	55°7.6'W	87-88	10-050°	rocks			Not recorded
D	01/06/79	25	061	45°21.7'N	55°0.6'W	69-72	10-050°	rocks	10		Starfish (0.5)
D	01/06/79	26	062	45°21.0'N	54°55.5'W	58	10-198°				Starfish (0.5)
A	01/06/79	27	170	45°26.0'N	54°53.9'W	48-49	10-045°	fine gravel	41		Starfish (0.5)
A	02/06/79	28	160	45°30.9'N	54°56.9'W	45	10-040°	fine gravel	1198		Starfish (26.0)
A	02/06/79	29	162	45°40.0'N	54°53.9'W	35-36	10-045°				Starfish (0.5)

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
A	02/06/79	30	159	45°44.5'N	54°39.1'W	45	10-045°	fine gravel	542		Starfish (2.0)
A	02/06/79	31	157	45°47.9'N	54°43.8'W	43-46	10-045°	sand/shell	8		Starfish (11.0)
A	02/06/79	32	163	45°44.4'N	55°0.6'W	42	10-195°	fine gravel	555		Starfish (12.0)
D	02/06/79	33	138	45°38.1'N	55°21.8'W	78-82	10-050°		12		Starfish (0.5)
B	02/06/79	34	108	45°39.0'N	55°24.2'W	42-44	10-205°	fine gravel	338		Starfish (3.0)
B	03/06/79	35	110	45°46.2'N	55°26.8'W	39	10-060°	fine gravel	12		Starfish (8.0)
D	03/06/79	36	142	45°48.2'N	55°23.4'W	55-63	10-060°	fine gravel	105		Starfish (1.0)
D	03/06/79	37	144	45°55.1'N	55°19.6'W	85-88	10-200°		1		Not recorded
D	03/06/79	38	148	45°55.2'N	55°11.0'W	92-95	10-065°	fine gravel			Not recorded
D	03/06/79	39	139	45°50.4'N	55°7.7'W	87-97	10-020°	sandy mud			Not recorded
A	03/06/79	40	141	45°53.1'N	54°58.9'W	50-56	10-205°	fine gravel	12		Starfish (8.0)
A	03/06/79	41	172	45°53.2'N	54°57.2'W	39-42	10-030°	fine gravel	465		Starfish (44.0)
A	04/06/79	42	167	45°54.0'N	54°39.9'W	44-49	10-015°	fine gravel	64		Starfish (3.0)
A	04/06/79	43	158	45°59.4'N	54°35.5'W	47-49	10-215°	fine gravel	574		Starfish (11.0)
D	04/06/79	44	154	46°12.6'N	54°29.8'W	67-68	10-028°	coarse gravel	22		Starfish (4.0)
D	04/06/79	45	151	46°8.7'N	54°33.5'W	59-60	10-210°	sand	51		Starfish (5.0)
A	04/06/79	46	171	46°6.9'N	54°43.2'W	45-49	10-060°		15		Starfish (10.0)
A	04/06/79	47	164	46°4.8'N	54°45.8'W	49-49	10-030°	coarse gravel	77		Starfish (11.0)
D	04/06/79	48	146	45°59.7'N	54°57.7'W	67-68	10-220°	sand			Starfish (1.0)
D	04/06/79	49	143	46°1.7'N	55°3.6'W	98	10-030°				Not recorded
D	04/06/79	50	140	46°6.4'N	55°2.0'W	101-102	10-030°				Not recorded
D	05/06/79	51	145	46°7.7'N	55°8.0'W	85-87	10-212°	sandy mud			Not recorded
D	05/06/79	52	137	46°3.5'N	55°17.8'W	79-80	10-212°	sandy mud			Not recorded
D	05/06/79	53	147	46°7.0'N	55°15.4'W	70-72	10-045°	sandy mud			Not recorded
D	05/06/79	54	119	46°18.6'N	55°7.6'W	102	10-045°	coarse gravel			Not recorded
D	05/06/79	55	155	46°14.4'N	54°54.9'W	93	10-205°				Not recorded
D	05/06/79	56	150	46°17.2'N	54°53.2'W	97-99	10-212°	rocks			Not recorded
D	05/06/79	57	156	46°18.7'N	54°39.7'W	56-60	10-050°	sand/shells	1737		Starfish (8.0)
D	05/06/79	58	153	46°23.8'N	54°40.3'W	95-110	10-050°	fine gravel	26		Starfish (7.0)
D	05/06/79	59	149	46°23.8'N	54°37.4'W	57-60	10-040°	sand/shells	120		Starfish (7.0)

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Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration and direction (Min)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				B	I	
D	06/06/79	60	152	46°37.4'N	54°37.3'W	75-77	10-225°	fine gravel	90		Starfish (2.0)
D	06/06/79	61	114	46°27.2'N	55°0.9'W	99	10-230°	rocks	2		Not recorded
D	06/06/79	62	126	46°25.3'N	55°3.3'W	98	10-235°	rocks	2		Starfish (0.5)
D	06/06/79	63	118	46°23.4'N	55°10.3'W	85-86	10-230°	rocks			Starfish (0.5)
D	08/06/79	64	136	46°32.2'N	55°14.3'W	77-79	10-210°	coarse gravel	37		Starfish (2.0)
D	08/06/79	65	116	46°25.6'N	55°12.5'W	88-90	10-050°	coarse gravel	2		Starfish (0.5)
D	08/06/79	66	112	46°24.1'N	55°26.3'W	88-90	10-220°	coarse gravel			Not recorded
D	08/06/79	67	132	46°14.1'N	55°37.1'W	43-48	10-215°	coarse gravel	649		Starfish (8.0)
D	08/06/79	68	124	46°13.2'N	55°26.8'W	53-61	10-200°	sand/shells	14		Starfish (0.5)
B	08/06/79	69	099	46°9.2'N	55°30.1'W	34-35	10-225°	rocks	9		Starfish (14.0)
B	08/06/79	70	107	45°58.9'N	55°28.5'W	43-46	10-055°		1		Not recorded
B	09/06/79	71	049	45°13.0'N	55°40.2'W	48-49	10-050°	sand			Sea cucumbers (275.0) Starfish (1.0)
B	09/06/79	72	057	45°2.9'N	55°38.3'W	59-60	10-050°	fine gravel	2		Starfish (3.0)
B	09/06/79	73	040	45°4.0'N	55°50.1'W	52-55	10-210°	sand			Sea cucumbers (85.0) Starfish (0.5)
B	09/06/79	74	043	45°1.3'N	55°52.6'W	61-70	10-018°	sand			Sea cucumbers (3.0) Starfish (1.0)
B	09/06/79	75	198	44°54.0'N	55°54.0'W	120-133	10-060°	sand/shells			Sea cucumbers (0.5)
B	09/06/79	76	195	45°3.6'N	56°12.8'W	133-135	10-320°	rocks			Not recorded
B	09/06/79	77	052	45°6.6'N	56°8.7'W	52-53	10-140°	fine gravel	70		Sea cucumbers (64.0) Starfish (4.0)
B	09/06/79	78	039	45°7.6'N	56°5.0'W	49-50	10-225°	fine gravel	28		Sea cucumbers (19.0) Starfish (20.0)
B	09/06/79	79	036	45°10.5'N	56°5.1'W	46	10-320°	sand/shells	5		Sea cucumbers (16.0) Starfish (10.0)

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Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	10/06/79	80	044	45°13.4'N	56°0.9'W	42	10-140°	sand/shells			Starfish (2.0), sea cucumbers (88.0), sponges (162.0)
B	10/06/79	81	048	45°10.8'N	55°49.3'W	42-45	10-200°	sand/shells	1		Starfish (0.5), sea cucumbers (108.0)
B	10/06/79	82	071	45°24.8'N	55°43.4'W	28-31	10-320°	sand/shells	2		Starfish (0.5), sea cucumbers (103.0), whelks (14.0)
B	10/06/79	83	089	45°25.9'N	55°55.7'W	25-28	10-320°	sand/shells	3		Sea cucumbers (8.0), whelks (24.0)
B	10/06/79	84	083	45°31.3'N	55°52.7'W	25-26	10-040°	sand/shells	4		Sea cucumbers (223.0), whelks (10.0)
B	10/06/79	85	075	45°31.6'N	55°58.3'W	26	10-325°	sand/shells	2		Sea cucumbers (451.0), whelks (1.0)
B	10/06/79	86	080	45°28.7'N	56°0.9'W	27-29	10-220°	sand/shells	3		Starfish (0.5), sea cucumbers (211.0), whelks (13.0)
B	10/06/79	87	037	45°21.2'N	56°15.3'W	43	10-060°	coarse gravel	1		Starfish (23.0)
B	11/06/79	88	050	45°29.0'N	55°58.3'W	65-79	10-230°	fine gravel	60		Starfish (2.0)
B	11/06/79	89	194	45°18.9'N	56°22.6'W	130-136	10-030°	sandy mud			Not recorded
B	11/06/79	90	042	45°22.6'N	56°20.5'W	46	10-325°	sand/shells	480		Starfish (43.0)
B	11/06/79	91	073	45°29.6'N	56°14.0'W	29-30	10-040°	coarse gravel	24		Starfish (6.0), sea cucumbers (4.0)
B	11/06/79	92	047	45°34.4'N	56°20.4'W	31-32	10-245°	coarse gravel	39		Starfish (4.0)
B	11/06/79	93	038	45°34.9'N	56°24.3'W	31-32	10-325°	coarse gravel	24		Starfish (12.0)
B	11/06/79	94	076	45°39.0'N	56°16.4'W	25	10-140°	fine gravel			Starfish (1.0), sea cucumbers (43.0)
B	11/06/79	95	090	45°41.8'N	56°15.4'W	23-24	10-320°	coarse gravel			Starfish (1.5), sea cucumbers (77.0)

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Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	11/06/79	96	079	45°41.8'N	56°4.3'W	26-27	10-125°	fine gravel	9		Starfish (0.5), sea cucumbers (12.0)
B	12/06/79	97	088	45°39.8'N	56°1.0'W	26-27	10-215°	fine gravel	2		Starfish (2.0), sea cucumbers (292.0), whelks (3.0)
B	12/06/79	98	085	45°39.0'N	55°53.8'W	25	10-060°	fine gravel	15	19	Starfish (31.0), sea cucumbers (210.0)
B	13/06/79	99	082	45°46.6'N	55°53.1'W	27-29	10-060°	fine gravel	32	36	Starfish (6.0), sea cucumbers (0.5)
B	13/06/79	100	092	45°50.0'N	55°43.1'W	32-33	10-205°	rocks		12	Starfish (2.0), sea cucumbers (1.0)
B	13/06/79	101	098	45°43.3'N	55°38.4'W	33-34	10-230°	fine gravel		7	Starfish (4.0), sea cucumbers (16.0)
B	13/06/79	102	078	45°43.9'N	55°45.5'W	30	10-230°	fine gravel	4	22	Starfish (2.0), sea cucumbers (58.0)
B	13/06/79	103	070	45°41.5'N	55°53.5'W	27	10-325°	fine gravel	44	13	Starfish (21.0), sea cucumbers (44.0)
B	13/06/79	104	086	45°46.5'N	56°1.1'W	28	10-230°	fine gravel	33	15	Starfish (8.0), sea cucumbers (3.0)
B	13/06/79	105	109	45°54.3'N	56°4.9'W	30	10-245°	coarse gravel		3	Starfish (1.0)
B	13/06/79	106	072	45°53.1'N	56°7.9'W	30-31	10-230°	coarse gravel	2	52	Starfish (4.0)
B	13/06/79	107	069	45°49.0'N	56°9.7'W	28-30	10-225°	sand		1	Not recorded
B	14/06/79	108	077	45°50.0'N	56°30.4'W	29-30	10-315°	fine gravel	3	1	Starfish (5.0) sea cucumbers (254.0)

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	14/06/79	109	196	45°47.1'N	56°48.0'W	135-140	10-150°	sandy mud			Not recorded
B	14/06/79	110	045	45°51.5'N	56°46.4'W	32-34	10-335°	sand/shells			Not recorded
B	14/06/79	111	084	45°52.3'N	56°38.4'W	31-32	10-023°	fine gravel			Starfish (2.0), sea cucumbers (264.0), whelks (5.0)
B	14/06/79	112	081	45°58.1'N	56°30.7'W	28-29	10-335°	-- sand/shells	7		Not recorded
B	15/06/79	113	074	45°58.1'N	56°48.0'W	27-28	10-340°	rocks			Not recorded
B	15/06/79	114	051	46°0.1'N	56°56.6'W	61-70	10-340°	sand/shells	1		Starfish (2.0)
B	15/06/79	115	023	46°8.0'N	56°48.9'W	24-26	10-	fine gravel			Starfish (9.0), sea cucumbers (22.0)
B	15/06/79	116	025	46°15.2'N	56°36.1'W	32	10-335°	sand	1		Starfish (1.0), sea cucumbers (0.5)
B	15/06/79	117	029	46°17.7'N	56°40.8'W	30-32	10-132°	coarse gravel	73		Starfish (6.0), sea cucumbers (7.0), whelks (2.0)
B	15/06/79	118	028	46°20.3'N	56°35.2'W	30-32	10-130°	coarse gravel	402		Starfish (8.0)
B	15/06/79	119	097	46°21.3'N	56°29.0'W	37-38	10-320°	sand	1		Not recorded
B	15/06/79	120	091	46°21.1'N	56°25.9'W	36-43	10-130°	fine gravel	17		Starfish (177.0)
D	16/06/79	121	122	46°36.6'N	55°29.6'W	78-82	10-057°	coarse gravel	3		Not recorded
D	16/06/79	122	135	46°39.2'N	55°22.8'W	78-80	10-230°	coarse gravel	3		Starfish (1.0)
D	18/06/79	123	190	47°7.6'N	56°42.3'W	133-134	10-280°	fine gravel			Not recorded
D	18/06/79	124	012	46°59.7'N	56°44.0'W	67-71	10-080°	coarse gravel	1		Starfish (2.0)
D	18/06/79	125	189	47°0.6'N	56°59.5'W	137-140	10-150°	fine gravel			Starfish (0.5)
D	18/06/79	126	188	46°58.9'N	57°5.2'W	141-145	10-140°	fine gravel			Starfish (0.5)
D	18/06/79	127	013	46°53.9'N	56°58.1'W	68-72	10-310°	coarse gravel	3		Starfish (1.0)
B	18/06/79	128	017	46°48.2'N	56°55.3'W	48-53	14-090°	coarse gravel	1517		Starfish (1.0)
B	18/06/79	129	019	46°47.3'N	56°58.8'W	53-55	10-	coarse gravel	211		Starfish (0.5)

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Catch (No)		Incidental catch (lbs)	
				Lat.	Long.			Bottom type	G		
B	18/06/79	130	016	46° 43.1'N	57° 0.8'W	40-43	10-135°	fine gravel	913	Starfish (0.5), sea cucumbers (7.0)	
B	19/06/79	131	020	46° 38.8'N	57° 17.8'W	28-31	10-125°	coarse gravel	6	Starfish (1.5), sea cucumbers (3.0)	
B	19/06/79	132	010	46° 38.5'N	57° 23.9'W	86-88	10-040°	sand		Starfish (1.5)	
B	19/06/79	133	018	46° 35.0'N	57° 21.8'W	38-45	10-135°	fine gravel	652	Starfish (10.0)	
B	19/06/79	134	022	46° 31.5'N	57° 17.0'W	27-29	10-140°	rock	2	Starfish (1.0)	
B	19/06/79	135	024	46° 33.7'N	57° 4.1'W	21-25	10-175°	rock	1	Starfish (5.0), sea cucumbers (43.0)	
B	19/06/79	136	021	46° 35.1'N	56° 55.6'W	25-27	10-310°	rock		Starfish (4.0), sea cucumbers (49.0)	
B	19/06/79	137	031	46° 39.5'N	56° 53.4'W	27-29	12-170°	rock		Starfish (5.0), sea cucumbers (52.0)	
D	19/06/79	138	127	46° 48.2'N	56° 41.6'W	62-67	10-150°	sand	288	Starfish (2.0)	
D	20/06/79	139	113	46° 44.1'N	56° 35.1'W	58-63	10-	fine gravel	228	Starfish (4.0)	
B	20/06/79	140	134	46° 37.8'N	56° 24.2'W	61-64	10-125°	fine gravel	431	Starfish (4.0)	
B	20/06/79	141	101	46° 33.5'N	56° 27.9'W	50-53	10	coarse gravel	131	Starfish (5.0)	
B	20/06/79	142	100	46° 29.9'N	56° 32.9'W	30-34	10-088°	fine gravel	5	Starfish (3.0), sea cucumbers (13.0)	
B	20/06/79	143	033	46° 28.3'N	56° 51.5'W	25-29	10-320°	sand		Starfish (1.0), sea cucumbers (2.0)	
B	20/06/79	144	030	46° 25.8'N	57° 1.3'W	24-25	10-265°	fine gravel	1	1	Starfish (4.0), sea cucumbers (68.0)
B	20/06/79	145	035	46° 26.9'N	57° 6.3'W	23-24	10-320°	coarse gravel	3	2	Starfish (1.0), sea cucumbers (16.0)

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic Scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration and direction (Min)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	20/06/79	146	032	46°26.3'N	57°19.5'W	32-35	10-210°	sand			Starfish (1.0), whelks (3.9)
B	20/06/79	147	191	46°24.4'N	57°24.1'W	128-140	10-150°	fine gravel			Not recorded
B	21/06/79	148	011	46°22.8'N	57°18.7'W	65-70	10-170°	sandy mud			Starfish (0.5)
B	21/06/79	149	193	46°10.4'N	57°15.1'W	146-149	10-160°	sand			Not recorded
B	21/06/79	150	015	46°14.6'N	57°8.2'W	33-35	10-315°	-- rock	29		Starfish (11.0)
B	21/06/79	151	192	46°9.9'N	57°11.3'W	123-125	10-140°	sand			Not recorded
B	21/06/79	152	014	46°6.8'N	57°2.5'W	42-60	10-160°	fine gravel			Starfish (5.0), sea cucumbers (1.0)
B	21/06/79	153	026	46°17.7'N	56°56.5'W	21-22	10-135°	sand			Not recorded
B	21/06/79	154	027	46°15.3'N	56°26.4'W	32	10-142°	rock	30		Starfish (5.0)
B	21/06/79	155	034	46°15.9'N	56°23.1'W	34-35	10-140°	coarse gravel	41		Starfish (6.0)
D	22/06/79	156	129	46°17.3'N	56°6.4'W	50-59	10-045°	fine gravel	1201		Starfish (1.0)
D	22/06/79	157	130	46°19.9'N	56°0.0'W	78-79	10-090°	sandy mud	3		Not recorded
D	22/06/79	158	120	46°22.5'N	56°8.5'W	72-73	10-030°	sandy mud	1		Not recorded
D	22/06/79	159	117	46°27.0'N	56°4.1'W	84-92	10-090°				Not recorded
D	22/06/79	160	125	46°34.0'N	55°52.3'W	78-82	10-075°	sandy mud			Not recorded
D	22/06/79	161	121	46°37.7'N	55°42.2'W	67-73	10-090°	sandy mud	8		Starfish (0.5)
D	25/06/79	162	133	46°32.4'N	55°37.3'W	76-80	10-205°	rock	3		Not recorded
D	26/06/79	163	131	46°25.4'N	55°43.3'W	80-83	10-240°	rock	1		Starfish (0.5)
D	26/06/79	164	123	46°22.7'N	55°45.5'W	81-83	10-190°	coarse gravel			Not recorded
D	26/06/79	165	128	46°24.5'N	55°53.2'W	82-83	10-220°		12		Not recorded
D	26/06/79	166	111	46°19.6'N	55°50.4'W	60-65	10-260°	rock	36		Starfish (2.0)
D	26/06/79	167	115	46°17.4'N	55°42.5'W	54-70	10-225°	rock	15		Starfish (1.0)
B	26/06/79	168	094	46°11.7'N	55°39.2'W	33-35	10-165°	rock			Starfish (21.0)
B	26/06/79	169	096	46°7.6'N	55°40.1'W	34-35	10-130°	rock	2		Starfish (29.0)
B	27/06/79	170	102	46°0.2'N	55°42.2'W	38	10-310°	rock	25		Starfish (2.0)
B	27/06/79	171	106	45°59.6'N	55°52.3'W	38-39	10-135°	coarse gravel	566		Starfish (3.0)

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	27/06/79	172	104	46°6.6'N	55°51.8'W	39	10-308°	coarse gravel	130	Starfish (10.0)	
B	27/06/79	173	105	46°5.7'N	55°59.1'W	39	10-280°	coarse gravel	147	Starfish (3.0)	
B	27/06/79	174	095	46°5.2'N	56°10.7'W	32-35	10-325°	fine gravel	5	Starfish (3.0)	
B	27/06/79	175	093	46°9.2'N	56°11.1'W	35-37	10-305°	coarse gravel	23	Starfish (3.0)	
B	27/06/79	176	103	46°10.0'N	56°18.1'W	35-36	10-220°	sand	18	Starfish (7.0)	
B	27/06/79	177	087	46°1.0'N	56°21.0'W	28-30	10-225°	rock	11	Starfish (2.0), sea cucumbers (4.0)	
B	28/06/79	178		45°41.4'N	56°13.7'W	24-25	20-240°	rock		Not recorded	
B	28/06/79	179		45°40.3'N	56°15.0'W	25	20-240°	rock		Not recorded	
B	28/06/79	180		45°37.9'N	56°17.6'W	26	20-240°	rock		Not recorded	
B	28/06/79	181		45°35.6'N	56°20.1'W	28-30	20-230°	rock		Not recorded	
B	28/06/79	182		45°32.0'N	56°19.1'W	31-32	20-045°	rock		Not recorded	
B	28/06/79	183		45°34.6'N	56°16.4'W	27-28	20-045°	rock		Not recorded	
B	28/06/79	184		45°37.1'N	56°13.7'W	25-26	20-045°	rock	1	Not recorded	
B	28/06/79	185		45°39.5'N	56°11.1'W	24-25	20-045°	rock	34	Not recorded	
B	28/06/79	186		45°40.8'N	56°5.2'W	26	20-235°	coarse gravel	32	894	Not recorded
B	28/06/79	187		45°38.0'N	56°8.1'W	26	20-240°	coarse gravel	77	66	Not recorded
B	29/06/79	188		45°35.3'N	56°10.8'W	26	20-240°	coarse gravel	14	13	Not recorded
B	29/06/79	189		45°32.4'N	56°13.9'W	27-30	20-240°	coarse gravel	1		Not recorded
B	29/06/79	190		45°32.4'N	56°9.2'W	28	20-040°	coarse gravel	8	3	Not recorded
B	29/06/79	191		45°35.1'N	56°6.5'W	26-27	20-045°	coarse gravel	28	6	Not recorded
B	29/06/79	192		45°37.7'N	56°3.8'W	26	20-045°	coarse gravel	7	10	Not recorded
B	29/06/79	193		45°40.4'N	56°1.0'W	27	20-045°	coarse gravel	21	147	Not recorded
B	29/06/79	194		45°41.9'N	55°55.2'W	27	20-240°	coarse gravel	97	1969	Not recorded
B	29/06/79	195		45°39.4'N	55°57.6'W	26-27	20-240°	coarse gravel	10	2	Not recorded
B	29/06/79	196		45°37.0'N	55°59.8'W	27	20-240°	coarse gravel	37	7	Not recorded
B	29/06/79	197		45°34.2'N	56°2.5'W	27	20-240°	coarse gravel	18		Not recorded
B	30/06/79	198		45°33.4'N	55°59.1'W	27	20-045°	coarse gravel	8		Not recorded
B	30/06/79	199		45°36.0'N	55°56.6'W	25	20-045°	coarse gravel	5		Not recorded

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank, and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	30/06/79	200		45° 38.4'N	55° 54.1'W	25	20-040°	coarse gravel	12		Not recorded
B	30/06/79	201		45° 40.9'N	55° 51.7'W	25-30	20-045°	coarse gravel	48	517	Not recorded
B	01/07/79	202		45° 43.3'N	55° 53.8'W	29	10-045°	coarse gravel	18	825	Starfish (18.0)
B	01/07/79	203		45° 45.6'N	55° 51.5'W	29	10-045°	coarse gravel	9	97	Starfish (10.0)
B	01/07/79	204		45° 47.9'N	55° 49.2'W	30-31	10-045°	coarse gravel		35	Starfish (10.0)
B	01/07/79	205		45° 41.6'N	55° 55.0'W	27	10-290°	coarse gravel	148	440	Starfish (38.0)
B	01/07/79	206		45° 41.5'N	55° 55.4'W	27	10-295°		69	17	Not recorded
B	01/07/79	207		45° 42.5'N	55° 58.9'W	27	10-040°	fine gravel	22	12	Starfish (3.0)
B	01/07/79	208		45° 45.8'N	55° 55.4'W	29	10-045°	coarse gravel	7	12	Starfish (5.0)
B	01/07/79	209		45° 47.7'N	55° 57.7'W	28-29	10-240°	coarse gravel	4	1	Starfish (12.0)
B	01/07/79	210		45° 45.9'N	55° 59.9'W	26-27	10-220°	coarse gravel	14	99	Starfish (20.0)
B	01/07/79	211		45° 45.0'N	56° 5.3'W	26-27	10-230°	rock	8		Starfish (5.0)
B	02/07/79	212		46° 33.5'N	56° 54.1'W	26-28	20-310°	rock	8		Not recorded
B	02/07/79	213		46° 34.4'N	56° 57.3'W	25-28	20-330°	rock	4		Not recorded
B	02/07/79	214		46° 34.0'N	57° 0.3'W	26-27	20-140°	rock	2		Not recorded
B	02/07/79	215		46° 33.0'N	56° 57.2'W	24-27	20-140°	fine gravel	1		Not recorded
B	02/07/79	216		46° 32.3'N	56° 55.0'W	20-22	20-145°				Not recorded
B	02/07/79	217		46° 31.4'N	56° 56.7'W	26-27	20-300°	rocks			Not recorded
B	02/07/79	218		46° 32.3'N	56° 59.3'W	26-27	20-300°	rocks			Not recorded
B	02/07/79	219		46° 33.0'N	57° 1.5'W	24-26	20-300°	rocks			Not recorded
B	02/07/79	220		46° 26.6'N	56° 55.8'W	26-27	20-305°	coarse gravel	6		Not recorded
B	02/07/79	221		46° 27.4'N	56° 57.9'W	25-27	20-305°	coarse gravel	20		Not recorded
B	02/07/79	222		46° 28.1'N	57° 0.1'W	22-25	20-320°	rock			Not recorded
B	03/07/79	223		46° 27.1'N	57° 1.1'W	21-25	20-140°	coarse gravel	4		Not recorded
B	03/07/79	224		46° 26.2'N	56° 58.6'W	22-25	20-140°	coarse gravel	2		Not recorded
B	03/07/79	225		46° 25.6'N	56° 56.9'W	22-26	20-140°	rock			Not recorded
B	03/07/79	226		46° 27.7'N	56° 54.6'W	23-25	20-340°	sand			Not recorded
B	03/07/79	227		46° 28.2'N	56° 55.9'W	25-27	20-	coarse gravel	33		Not recorded

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
B	03/07/79	228		46°29.1'N	56°58.6'W	24-25	20-330°	coarse gravel	3		Not recorded
B	03/07/79	229		46°41.7'N	57°15.4'W	35-54	20-300°	coarse gravel		1756	Not recorded
B	03/07/79	230		46°42.8'N	57°14.7'W	30-34	20	coarse gravel		33	Not recorded
B	03/07/79	231		46°41.9'N	57°16.2'W	32-33	20-090°	coarse gravel	1	59	Not recorded
B	03/07/79	232		46°41.9'N	57°16.2'W	33	20-270°	coarse gravel		30	Not recorded
B	04/07/79	233		46°41.4'N	57°13.7'W	30-32	20-315°	coarse gravel	1	170	Not recorded
B	04/07/79	234		46°41.8'N	57°15.8'W	29-32	20-180°	coarse gravel		80	Not recorded
B	04/07/79	235		46°40.9'N	57°15.9'W	31-32	20-045°	coarse gravel	1	1419	Not recorded
B	04/07/79	236		46°41.9'N	57°16.6'W	32-45	20-045°	coarse gravel	1	516	Not recorded
D	07/07/79	237	187	47°13.7'N	57°9.5'W	150-152	10-110°				Not recorded
D	07/07/79	238	187	47°13.8'N	57°8.6'W	150-151	10-295°				Not recorded
D	07/07/79	239	186	47°16.0'N	57°3.9'W	150-155	10-310°				Not recorded
C	07/07/79	240	009	47°17.5'N	57°21.2'W	104-105	10-325°	rock			Not recorded
C	07/07/79	241	185	47°20.3'N	57°22.4'W	105-107	10-325°	rock			Not recorded
C	07/07/79	242	182	47°25.9'N	57°26.4'W	87-95	10-325°	rock			Not recorded
C	08/07/79	243	179	47°28.2'N	57°37.5'W	92-122	10-310°	rock			Not recorded
C	08/07/79	244	181	47°19.8'N	57°50.0'W	120-122	10-180°				Not recorded
C	08/07/79	245	180	47°14.4'N	57°54.3'W	120-122	10-295°	rock			Not recorded
C	08/07/79	246	177	47°12.6'N	58°6.7'W	127	10-310°	rock			Not recorded
C	08/07/79	247	178	47°9.1'N	58°8.7'W	117-120	10-290°	rock			Not recorded
C	08/07/79	248	176	47°7.7'N	58°15.3'W	140-148	10-140°				Not recorded
C	08/07/79	249	006	46°57.8'N	57°57.9'W	49-51	10	sand			Not recorded
C	08/07/79	250	001	47°5.5'N	57°54.5'W	40-42	10-275°	rock			Not recorded
C	08/07/79	251	008	47°9.8'N	57°53.5'W	57-61	10-102°				Not recorded
C	09/07/79	252	002	47°10.1'N	57°46.5'W	40-51	10	rock			Not recorded
C	09/07/79	253	004	47°6.1'N	57°40.0'W	69-80	10-110°	rock			Not recorded
C	09/07/79	254	007	47°13.2'N	57°30.7'W	83-85	10-286°	rock			Not recorded
C	09/07/79	255	003	47°13.7'N	57°24.8'W	98-102	10-135°	rock			Not recorded
C	09/07/79	256	184	47°2.7'N	57°29.3'W	157-160	10-140°				Not recorded
C	09/07/79	257	183	46°58.0'N	57°36.2'W	155-160	15-150°				Not recorded

Table 1. Scallop survey of St. Pierre Banks, 28 May-11 July 1979: A. Green Bank, B. St. Pierre Bank proper, C. Burgeo Bank and D. Channel areas. (G = Giant scallop, I = Icelandic scallop) (Continued)

Area	Date	Set #	Stn #	Position (start)		Depth range (fms)	Tow duration (Min) and direction (M)	Bottom type	Catch (No)		Incidental catch (lbs)
				Lat.	Long.				G	I	
C	09/07/79	258	005	46° 54.4'N	57° 48.9'W	95-97	10-270°	rock			Not recorded
B	12/06/79	259	A	45° 39.3'N	56° 10.2'W	25-26	10-140°	fine gravel	30	2	Starfish (3.0), sea cucumbers (47.0)
B	12/06/79	260	B	45° 38.3'N	56° 10.1'W	25-27	10-140°	fine gravel	31		Starfish (3.0), sea cucumbers (50.0)
B	12/06/79	261	C	45° 39.4'N	56° 10.7'W	26	10-140°	coarse gravel	21	2	Starfish (1.0), sea cucumbers (93.0)
B	12/06/79	262	D	45° 38.2'N	56° 10.8'W	25-26	10-140°	coarse gravel	23	5	Starfish (6.0), sea cucumbers (102.0)
B	12/06/79	263	E	45° 37.4'N	56° 11.0'W	25-26	20-150°	rock	14	77	Not recorded
B	12/06/79	264	F	45° 37.4'N	56° 8.4'W	26	20-075°	coarse gravel	124	100	Not recorded
B	12/06/79	265	G	45° 37.9'N	56° 7.0'W	25-26	20-125°	fine gravel	26		Not recorded
B	12/06/79	266	H	45° 36.0'N	56° 2.8'W	25	20-140°	coarse gravel	31	3	Not recorded
B	12/06/79	267	I	45° 35.8'N	56° 1.9'W	26	20-165°	fine gravel	36	4	Not recorded
B	12/06/79	268	J	45° 35.8'N	56° 0.1'W	26-27	20-135°	coarse gravel	34	1	Not recorded
B	13/06/79	269	K	45° 47.5'N	56° 13.4'W	25-26	10-250°	fine gravel	2		Starfish (1.0), sea cucumbers (154.0)
B	14/06/79	270	L	45° 48.9'N	56° 21.3'W	23-25	10-240°	fine gravel			Starfish (24.0), sea cucumbers (0.5)
B	14/06/79	271	M	45° 51.8'N	56° 43.8'W	32-35	10°	sand/shells			Not recorded
B	14/06/79	272	N	45° 52.1'N	56° 41.6'W	28-31	10-325°	sand/shells			Starfish (0.5), sea cucumbers (0.5)
B	14/06/79	273	O	45° 59.5'N	56° 41.3'W	25	10-275°	rocks		0	Starfish (0.5), sea cucumbers (6.0)
B	15/06/79	274	P	46° 7.7'N	56° 29.6'W	32-36	10-108°	sand/shells		2	Starfish (20.0), sea cucumbers (192.0)

Table 2. Summary of biomass of two scallop species on St. Pierre Bank; strata 306-326 (G-Giant scallops; I-Iceland scallops). Data from Beothic Venture scallop survey, May-July, 1979.

Stratum	Area nautical ² sq miles)	Depth range (fm)	No. sets	Weight (kg)		Set average (kg)		Total weight (kg)	
				G	I	G	I	Units	G
306	419	101-150	7	0	0	0	0	530751	0
307	395	51-100	7	0	6.8	0	0.97	500350	0
308	112	31-50	2	0	0	0	0	141871	0
309	296	101-150	5	0	0	0	0	374946	0
310	170	101-150	3	0	0	0	0	215340	0
311	317	51-100	4	0	0.2	0	0.05	401547	0
312	272	31-50	5	0	113.5	0	22.7	344545	0
313	165	101-150	4	0	0	0	0	209007	0
314	974	0-30	17	0.9	28.1	0.05	1.65	1233773	66043
315	827	31-50	15	0	22.9	0	1.53	1047568	0
316	189	101-150	3	0	0	0	0	239408	0
317	193	51-100	3	0	4.6	0	1.54	244475	0
318	123	101-150	2	0	0	0	0	155805	0
319	984	51-500	16	0	1.8	0	0.11	1246441	0
320	1320	0-30	41	160.3	130.9	3.91	3.19	1672055	6538541
321	1189	31-50	19	0	86.7	0	4.56	1506116	0
322	1567	51-100	26	0	90.5	0	3.48	1984932	0
323	696	51-100	12	0	4.6	0	0.39	881629	0
324	494	51-100	8	0	95.7	0	11.96	625754	0
325	944	31-50	16	0	222.5	0	13.90	1195772	0
326	166	31-50	3	0	48.1	0	16.03	210274	0

	Giant			Iceland		
	Lower	Upper	Mean	Lower	Upper	Mean
Set average	0.19	0.70	0.45	2.48	5.29	3.89
MDB (MT, round)	2837	10372	6605	36840	78553	57696
Biomass (MT, round)	16681	60989	38835	216620	461891	339255

Table 3. Density (no./sq. meter) of giant and Iceland scallops by depth strata in 3Ps (< 100 fms) (Data from Beothic Venture scallop survey, 1979).

Depth range (fm)	Stratum	Estimated area containing scallops (sq. nautical mi)		Relative abundance (no./sq. meter)	
		Giants	Icelandics	Giants	Icelandics
0-50	314	7	38	0.07	1.82
	320	98	78	0.41	1.56
Totals		105	116	<u>0.38</u>	<u>1.65</u>
31-50	312	-	17	-	3.47
	326	-	10	-	12.83
	325	-	51	-	1.91
	321	-	63	-	3.12
	315	-	28	-	2.58
Totals			169		<u>7.80</u>
51-100	324	-	21	-	12.94
	322	-	70	-	5.52
	307	-	4	-	2.35
	317	-	12	-	1.58
	323	-	14	-	1.18
	319	-	25	-	0.33
	311	-	7	-	0.10
Totals			153		<u>4.69</u>

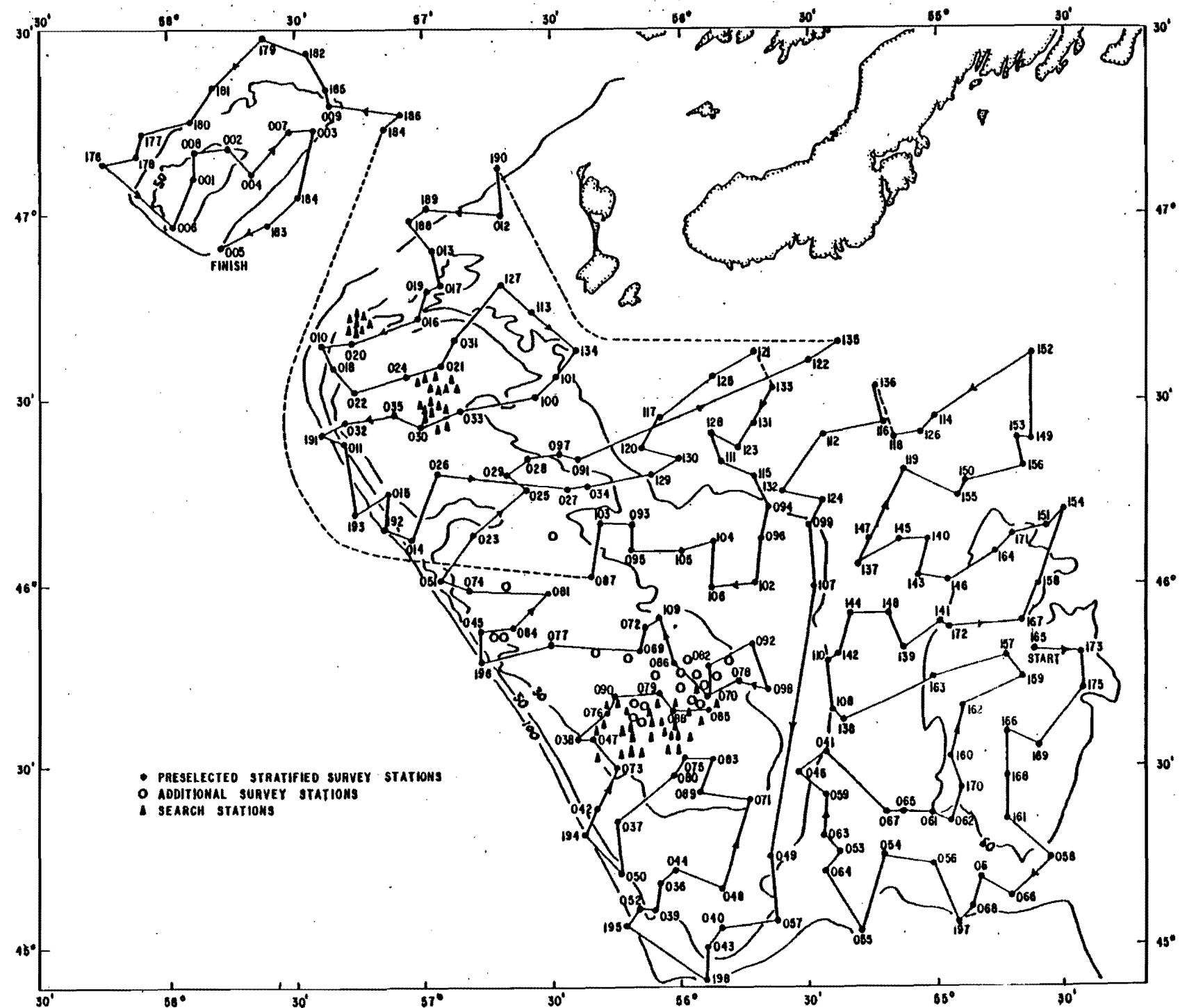


Fig. 1. Cruise track and distribution of survey stations.

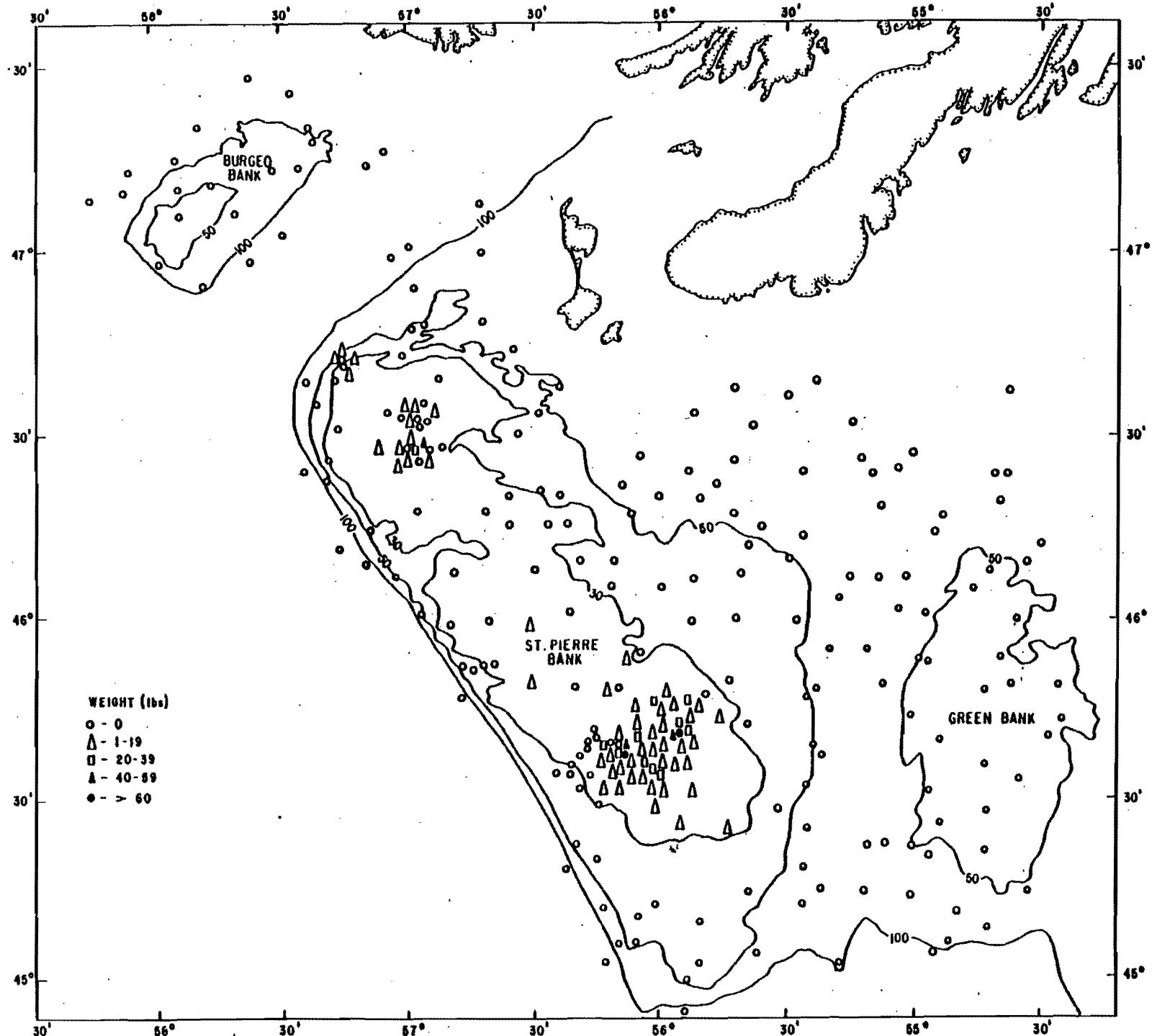


Fig. 2. Distribution and abundance of Giant scallops on St. Pierre Bank (based on 10 min tows).

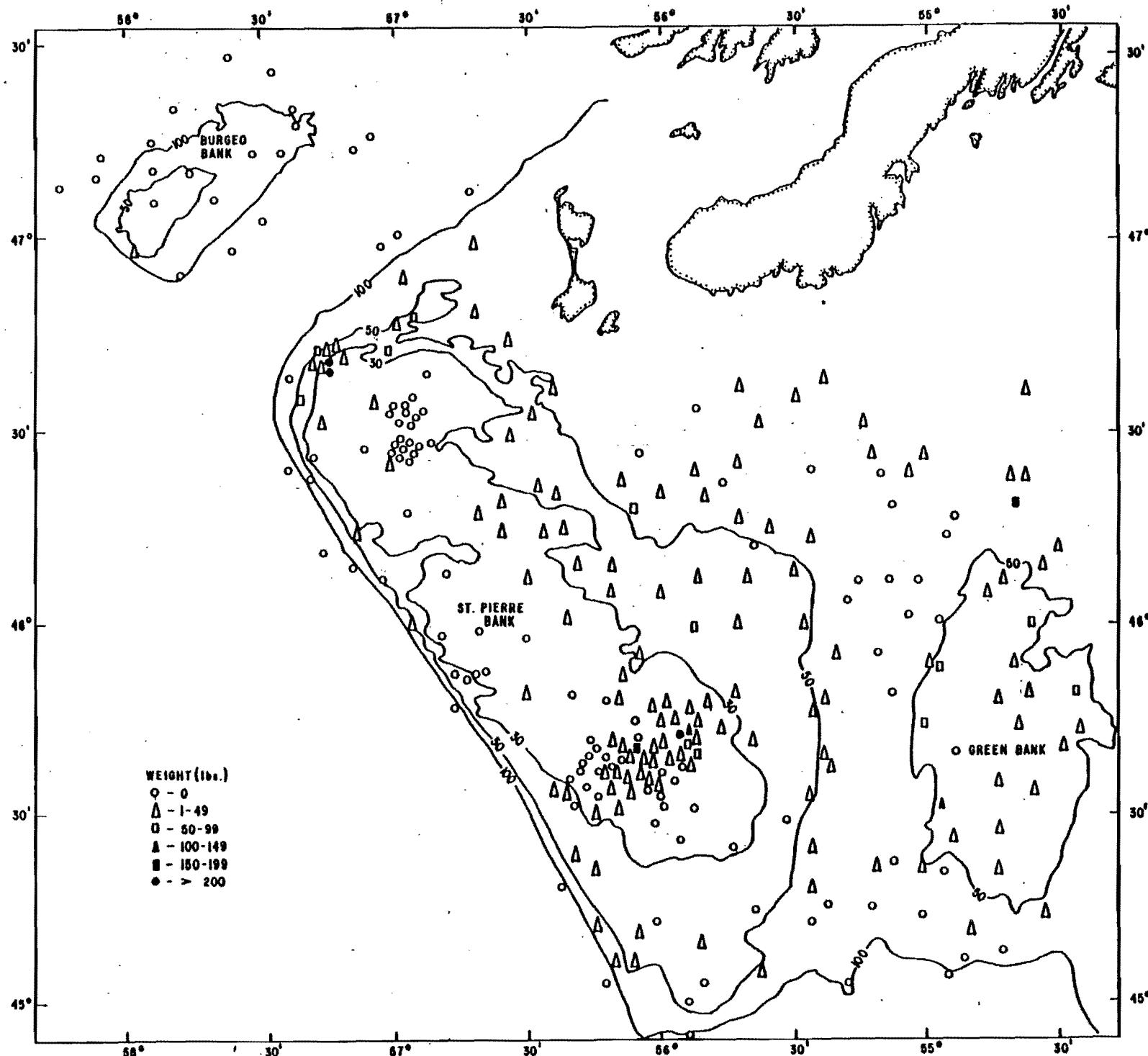


Fig. 3. Distribution and abundance of Iceland scallops on St. Pierre Bank (based on 10 min tows).

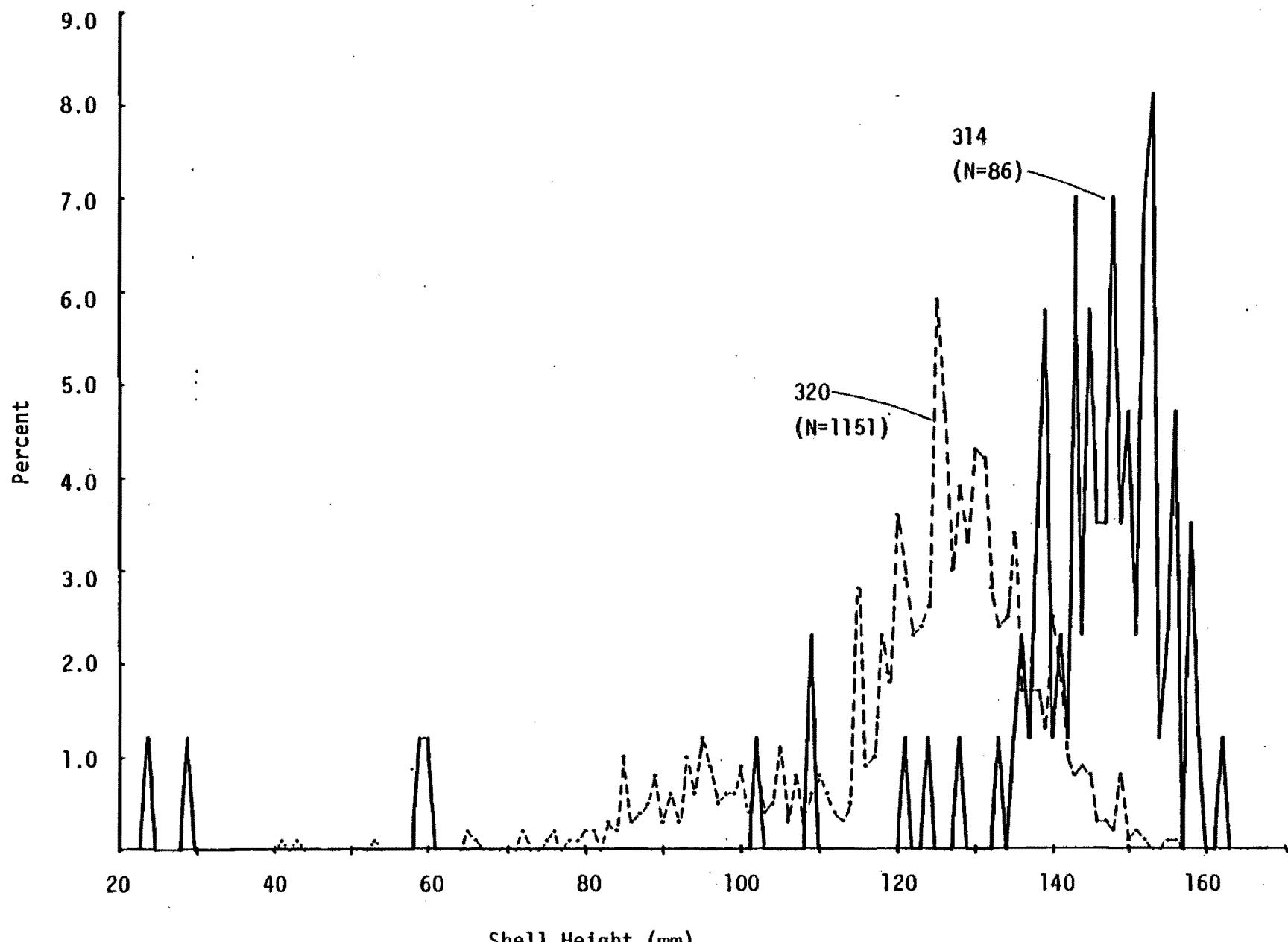


Fig. 4a. Shell-height frequency distribution of giant scallops from Stratum 314 and 320 (St. Pierre Bank; Beothic Venture).

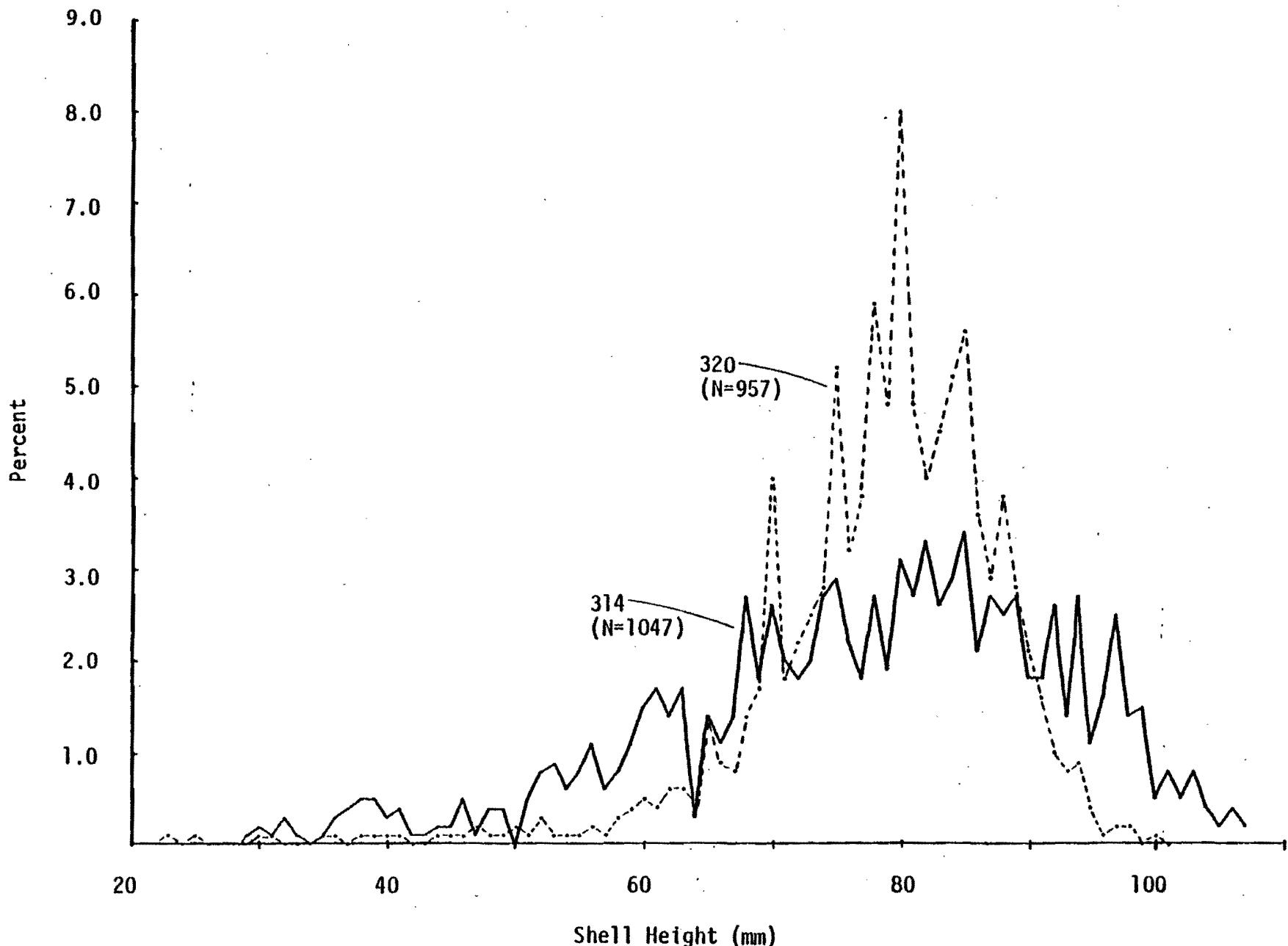


Fig. 4b. Shell-height frequency distribution of Iceland scallops from Stratum 314 and 320 (St. Pierre Bank; Beothic Venture).

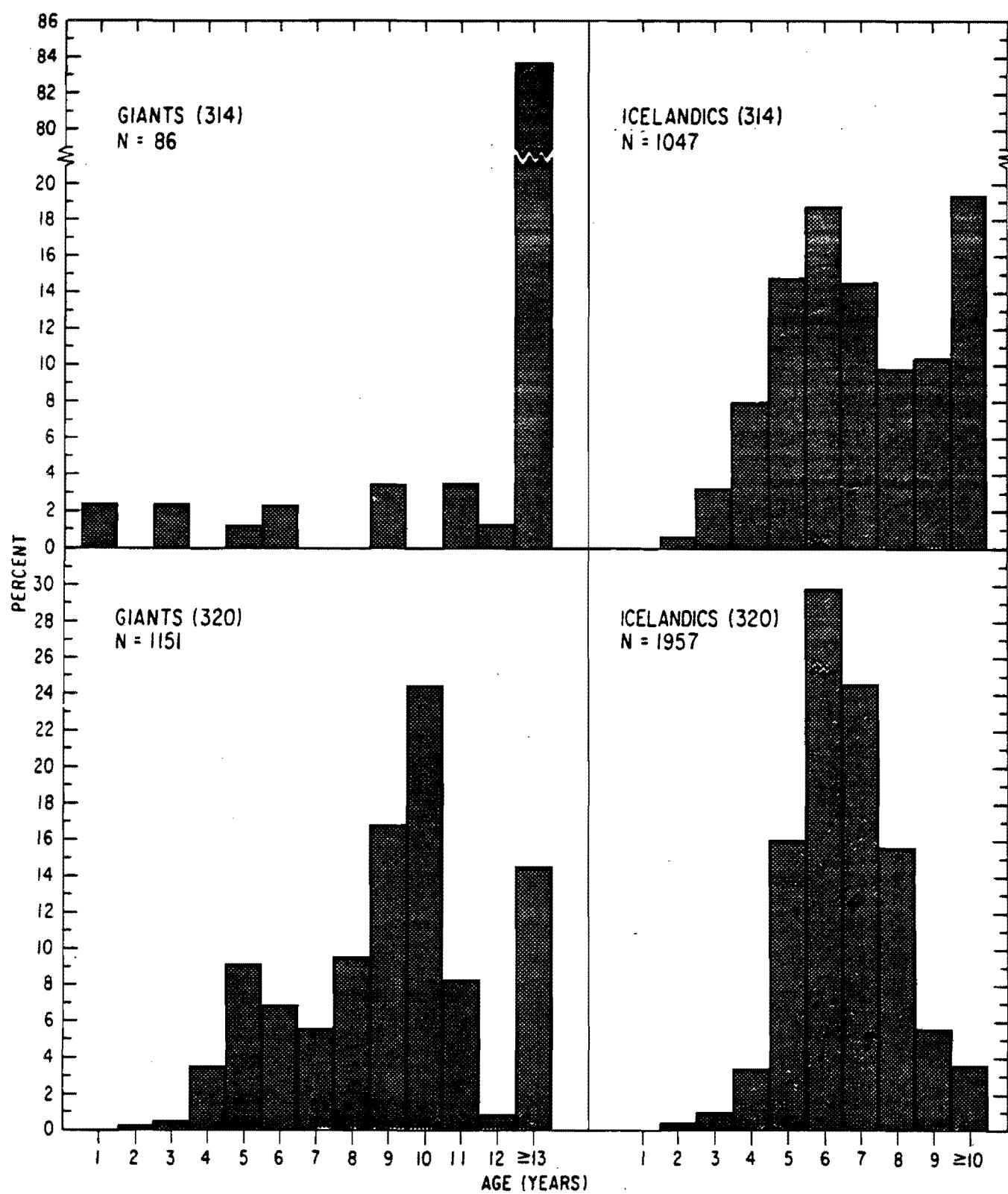


Fig. 5. Age frequencies of sea and Iceland scallops from two target strata.