The Scotia-Fundy Region Groundfish Hook and Line Fisheries: a Digest of Quantities and Sizes Landed, and Comparisons with Other Gear Types

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Errata:

The Mean Weights (Kg) in figures 44, 47 and 49 should be divided by 10.

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ABSTRACT

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In the period 1987-91, about 100,000 t of groundfish were landed annually in Atlantic Canada from boats fishing with hook and line gear. Most of this (60%) was landed by Scotia-Fundy Region fleets. Landings by Scotia-Fundy hook and line boats are compared with those of other Regions and the size compositions of Atlantic cod, haddock and Atlantic halibut landings by these boats are compared to those by other gears and among areas of capture. For cod, age compositions are also compared. It was found that boats using hook and line gears usually land larger fish on average than do mobile gear boats when fishing occurs in the same general area and season.

RÉSUMÉ

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Au cours de la période 1987-1991, environ 100 000 t de poisson de fond ont été débarquées chaque année au Canada atlantique par des bateaux qui pêchaient à l'hameçon et à la ligne, la plus grande partie de ces débarquements (60%) provenant des flottilles de la région de Scotia-Fundy. On compare les prises à l'hameçon et à la ligne dans la région de Scotia-Fundy à celles des autres régions et on compare également la composition des débarquements de morue de l'Atlantique, d'aiglefin et de flétan de l'Atlantique selon la taille à celle des prises obtenues au moyen d'autres engins et en fonction des endroits où elles ont été capturées. Dans le cas de la morue, on procède aussi à des comparaisons selon l'âge. On a constaté que les bateaux qui pêchent à l'hameçon et à la ligne débarquent en moyenne des poissons plus gros que ceux des bateaux qui pêchent aux engins mobiles dan la même zone générale et durant la même saison.

INTRODUCTION

In 1989 the Scotia-Fundy Groundfish Task Force (Haché 1989) recommended an evaluation of "...the biological and economic effects of a longliner allowance fishery including examination of fish selectivity in relation to hook size, type and bait." The Task Force had received many representations to the effect that longline fishing should be deregulated but concluded "although it is known that longline gear catches larger fish on average than other methods of fishing, it is not clear why this is the case and if it will remain so in future. More study is required before implementing change." The caution shown by the Task Force reflected the fact that little research has been directed towards hook and line fishing[1] for many years.

A research programme on longline fishing was funded in 1990-92 under the Atlantic Fisheries Adjustment Programme as a result of the Task Force recommendation. A survey of fishing practices in the Regional longline fishery was conducted (Kenchington and Halliday 1994) and so too were size selection experiments to determine how size composition of catches varied with gear configuration (Halliday and Kenchington 1993).

The present Report provides a digest of Canadian Atlantic coast groundfish landings. This is used to make comparisons which demonstrate the Regional importance of hook and line fishing for each species. Comparisons are made of the size compositions of Atlantic cod, haddock and Atlantic halibut landings, in the period 1987-91, among areas and gears. Age compositions are also examined for cod. This five year period was chosen to illustrate recent conditions centering on the time period chosen for the survey of fishing practices (Kenchington and Halliday 1994). The objective of the Report is to provide a statistical record which complements the results of Kenchington and Halliday (1994) and to examine the contention of the Task Force that longline gear catches larger fish on average than other methods of fishing.

METHODS

A distinction is maintained between catches and landings. Statistics compiled by the Northwest Atlantic Fisheries Organization (NAFO) and its predecessor, the International Commission for Northwest Atlantic Fisheries (ICNAF) are labelled "nominal catches". Nominal

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[1]The terms hook and line fishing or simply hook fishing are used in this Report to mean all types of fishing using hooks, i.e. are inclusive of longline, handline and jig fishing.

catches are the live round weight equivalent of fish which are retained aboard fishing boats in some form and subsequently landed. These statistics are referred to here as landings. Actual catches include all fish removed from the water, whether kept and landed or discarded. As comprehensive, reliable statistics on discards are not maintained, catches are generally not known. The distinction between catches and landings is of practical importance in this Report in discussion of size compositions, estimates based on shore samples being of landings whereas those based on at-sea samples being of catches.

The intention is to characterize the activities of the Scotia-Fundy Region hook and line fleet in comparison to other fleets in this and other Atlantic Department of Fisheries and Oceans (DFO) Regions. However, some approximations are required. Landings statistics by DFO administrative Region, for the study period 1987-91, were obtained from Zonal Interchange Files (ZIF - a consolidation of all Atlantic zone commercial landings using the same format). These statistics contain landings by all boats in a particular Region whether or not the boats are registered to home ports in, and licensed by, that Region. However, cross-Regional groundfish landings represent only a small fraction of the total. The ZIF data are not available prior to 1985, thus NAFO/ICNAF landings data from 1961-91 are used to put the conditions in the 1987-91 study period in longer-term perspective. These statistics, from 1979, have, as a minimum "political" breakdown, statistics for Canada (M = Maritimes). Thus, landings by Gulf Region boats based in northern New Brunswick, northern Nova Scotia and Prince Edward Island are included. Prior to 1979, these statistics also included Quebec landings, i.e. were for Canada (M & Q). This is not a significant problem either because Quebec and Gulf Region boats seldom fished for groundfish outside the Gulf of St. Lawrence. Thus, Canada (M) and (M & Q) landings from waters other than the Gulf of St. Lawrence can be considered as attributable to boats fishing from what is now the Scotia-Fundy Region without serious error. Conversely, Scotia-Fundy hook and line boats did little fishing in the Gulf of St. Lawrence during 1961-91. In all pertinent tables and figures the data are labelled as representing Canada (M). Also, in these tables and figures, landings data for Div. 5Y are combined with those from Div. 4X. Canadian groundfish landings from Div. 5Y have been small and extensive misreporting has occurred between these Divisions. Thus, there is little to be gained by treating Div. 5Y separately.

Statistics on landings extracted from NAFO computer files and from DFO ZIF data, and among extractions from ZIF data based on various criteria, cannot be expected to agree exactly. Errors due to rounding, or missing or erroneous data in particular fields, can produce discrepancies of 10s of tons, and do not necessarily reflect errors in data extraction procedures.

Tables 1-20, 31-34, 44-45, 56-58, 68-70 and 81-83 are derived from ZIF data. Tables 21-30, 35-43, 46-55, 59-67, 71-80 and 84-93 are derived from NAFO data.

Size and age compositions of landings were compiled, again for the years 1987-91, from samples obtained through the Marine Fish Division port sampling programme for fisheries in NAFO Statistical Divisions and Subdivisions within the Scotia-Fundy Region (Fig. 1). In addition, size compositions for catches from Subarea 3 fisheries and for Atlantic halibut in Div. 4VWX and Subarea 5 were obtained through the Scotia-Fundy at-sea observer programme. Observer data are for 1988-91, as 1988 was the first year of observer coverage on longliners.

Comparisons of biological parameters of landings from port samples were based on those samples which originated from the same Division or Subdivision in the same season. (Seasons used are defined below.) Two or more samples (each of about 200 fish) were required for a particular gear in a Division(Subdivision)/season/year category to be included in the comparisons. When only longline samples were available in a category, the data are presented from cases where there were three or more samples. Sampling of longline landings was sufficiently intensive to allow these criteria to be met only for cod and haddock. The criteria were relaxed for halibut to provide a single comparison between longline and otter trawl for the whole Region in the entire study period so that some indication of size composition differences could be given for this important species. There were insufficient port samples of landings from waters outside Scotia-Fundy Region to provide comparisons for any species. This was true also for Div. 5Y. All sample data presented for Subarea 5 are representative of Subdiv. 5Ze. (Indeed, as Canadian boats were restricted to fishing only on the Canadian part of Subdiv. 5Ze during the study period, sample data originated from 5Zc.)

Weights of cod and haddock in port samples of landings were estimated from the equation: $W = aL^b$, where W is fish weight (g) and L is fish length (cm) and a and b are constants. The constants used were derived from July research vessel survey data from Div. 4VWX and are as follows:

Species	a	b
cod	0.009600	2.9863
haddock	0.007706	3.0726

These weights were used to calculate total sample weights which in turn were used, when amalgamating port samples, to weight samples by vessel landing weighouts (using the computer programme ALSYS).

Length-frequency samples of catches obtained through the observer programme contained a highly variable number of fish, in contrast to port samples. Observer samples were grouped to obtain at least 200 longline-caught fish in each area/time category. Comparisons were again based on individual Divisions/Subdivisions and seasons for cod and haddock, but Divisions/Subdivisions had to be combined and calendar years used for halibut to obtain adequate numbers of measurements for comparison. Criteria were further relaxed to provide a comparison of halibut catches in Div. 4VWX+5 based on less than 200 fish measured. No weightings were applied when amalgamating observer samples.

Standard vessel size classes established for regulatory purposes are used for data summaries by boat size. These classes are under 35 feet, 35 feet to under 45 feet, 45 feet to under 65 feet, and 65 feet and larger. For convenience these classes are referred to as under 35 feet, 35-45 feet, 45-65 feet, and over 65 feet. The following abbreviations are used in tables to designate gear types:

DS	-	Danish seine	GN	-	bottom gillnet
OT	-	otter trawl	HL	-	handline and jig
PT	-	pair trawl	LL	-	longline

Species common names are used throughout. A crossreference with their scientific names follows:

Cod (Atlantic)	*Gadus morhua*
Haddock	*Melanogrammus aeglefinus*
Pollock	*Pollachius virens*
White hake	*Urophycis tenuis*
Red hake	*Urophycis chuss*
Cusk	*Brosme brosme*
Halibut (Atlantic)	*Hippoglossus hippoglossus*
American plaice	*Hippoglossoides platessoides*
Winter flounder	*Pseudopleuronectes americanus*
Yellowtail flounder	*Limanda ferruginea*
Witch flounder	*Glyptocephalus cynoglossus*
Turbot	*Reinhardtius hippoglossoides*

Wolffish	*Anarhichas lupus*
Redfish	*Sebastes* spp.

RESULTS

Landings

Hook Fisheries - All Regions

Hook fisheries are important to the Canadian Atlantic coast fishing industry, about 100,000 t of groundfish being landed per year by boats using these gear types (Table 1). In the base period 1987-91, 13 species were recorded as landed by hook and line boats. The predominant species by tonnage were the gadoids Atlantic cod, haddock, white hake, cusk and pollock, but Atlantic halibut, American plaice, and wolffish tonnages were also significant. The remaining five species, redfish and various flatfishes, were of little significance in hook and line landings. The high value of Atlantic halibut makes it a prime target of hook fishing and thus the three species halibut, cod and haddock are the most important to the hook and line fisheries.

Most hook and line landings were of cod (73%) but, despite this, only 18% of Canadian cod landings were taken by hook. However the vast majority of halibut and cusk landed were taken by hook (80% and 95% respectively), as were most of the white hake (54%) and important proportions of haddock and wolffish landings (28% and 26%). Hook and line landings were a minor component only of other species landings.

The Scotia-Fundy Region has a larger and more diverse hook fishery than the other DFO Regions (Table 1). Over 50% of the hook and line landings are made in this Region and this dominance is reflected in the landings of all of the species important to hook fishing. The hook fisheries in other Regions are almost exclusively for cod, except for some white hake fishing in the southern Gulf of St. Lawrence. Even so, Scotia-Fundy Region landed 45% of the cod taken by hook.

Cod: Most cod are taken by otter trawlers (53%) but hook gears are second in importance (18%) followed by gillnets (14%), traps (11%) and seines (4%) (Table 2). Hook gears were more important to Scotia-Fundy Region cod fishing (29% of landings) than in other Regions. Most of these Scotia-Fundy hook landings were taken by longline, handlines and jigs being of minor importance. In contrast, handline and jig caught cod were as important as longline caught cod in Newfoundland Region.

Hook fisheries are conducted predominantly by small boats, restricted as to area of fishing not only by sea-worthiness and range but by Sector Management Policy[2]. It is not surprising therefore that most hook and line cod landings have their origin in the statistical Divisions adjacent to the Region of landing (Table 3). The Scotia-Fundy Region is the exception, with 14% of cod landings originating from outside of Regional waters. This Region has a number of offshore longliners (11 over 65 feet in 1990) as well as a few under 65 feet vessels with sector overlap privileges.

Haddock: Otter trawling is more predominant in the haddock fishery (67% of landings) than in the cod fishery (Table 4). It is only in the Scotia-Fundy Region that hook gear is a significant component of the haddock fishery, accounting for 32% of landings. This is almost exclusively taken by longline, handline and jig being unimportant. Almost all of the haddock landed in the Scotia-Fundy Region were taken in Regional waters (Table 5). Less than 2% originated from other areas.

Halibut: Most halibut are taken by hook gears (81%) (Table 6). Scotia-Fundy Region accounted for the great majority of total landings (77%) and in this Region hook gears, almost exclusively longline, were particularly important, accounting for 89% of landings. Quite a high proportion (35%) of these Scotia-Fundy Region hook and line landings originated in waters outside the Region (Table 7).

Pollock: Otter trawl and gillnet gears account for most (92%) of the pollock landed (Table 8), hook gears accounting for 8%. In contrast to other species, most hook caught pollock are taken by handline and jig. The pollock fishery is based almost exclusively in the Scotia-Fundy Region. The hook and line component is no exception, 95% of the pollock taken by these gears being landed in Scotia-Fundy. Virtually all of this hook and line catch is taken in local waters (Table 9).

White hake: Hook and line gears account for 54% of white hake landings (Table 10). Most landings (60%) are in Scotia-Fundy Region where the importance of the hook gear landings, almost entirely by longline, is particularly high (75%). An important white hake fishery also

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[2]Sector Management Policy required vessels under 65 feet to fish in NAFO Divisions within Regional boundaries (although Quebec and Gulf Regions were combined for the purposes of this policy). Div. 3MNO were excluded from the policy in that all vessels had access to these Divisions regardless of size or origin.

occurs in Gulf of St. Lawrence regions where gillnets are the predominant gear (37%) and hook and line landings equal those by seines at 24%. The proportion of Scotia-Fundy Region hook and line landings which originate beyond regional waters (Table 11) is high (36%), comparable to halibut (Table 7).

Cusk: All cusk are landed in the Scotia-Fundy Region and hook and line gears, almost entirely longline, account for 95% of the landings (Table 12). Essentially all the cusk landed originate from Scotia-Fundy waters (Table 13).

Hook Fisheries - Scotia-Fundy Fleet

The Scotia-Fundy hook fishing boats range in size from small coastal open boats to wide-ranging boats as large as 135 feet. Boats under 35 feet are largely restricted to fishing on "inside grounds" close to home ports whereas boats of 35-45 feet also fish the adjacent offshore banks (Kenchington and Halliday 1994). The 45-65 foot boats fish offshore in the "bank fishery" and as far east as the "distant-grounds" on the Grand Bank. Boats over 65 feet concentrate their effort on the distant-ground fishery. Thus these vessel length categories, utilized by DFO in policy and regulation, do not correspond to distinctly different fisheries; there is a gradation from inside to bank to distant ground fishing with increase in boat size.

Landings by vessel size class by Division of capture in part reflect such a gradation (Table 14). These statistics do not allow inside and bank fisheries to be distinguished but do illustrate a progressive increase in the importance of eastern Divisions with increase in boat size. Only 1% of landings by 35-45 feet boats originated east of the Laurentian Channel whereas 45-65 feet and over 65 feet boats reported 24% and 79% of their landings respectively as originating from distant grounds. Most of the landings (75%) were by boats less than 45 feet and thus, overall, 13% of landings came from east of the Laurentian Channel. Handline and jig landings were essentially all from small boats under 45 feet fishing within Scotia-Fundy waters, primarily Div. 4X (Table 15). Thus, distant ground fisheries were conducted entirely by longline (Table 16).

Cod: Most hook caught cod (about 60%) landed in the Scotia-Fundy Region are taken by boats 35-45 feet in length (Table 17). The rest is shared more or less equally by under 35 feet, 45-65 feet and over 65 feet vessel classes. Handlining and jigging accounted for 38% of hook caught cod by boats under 35 feet and 15% by 35-45 feet boats (Table 18). Most was from Div. 4X but handline and jig was also important is Subdiv. 4Vn for the smallest boat category. Longline

fishing extended further afield with increase in boat size (Table 19). The 45-65 feet class obtained 19% of its cod landings from extra-Regional waters whereas for vessels greater than 65 feet this rose to 73%.

There is a strong seasonality in the Regional hook fisheries for cod, landings being concentrated in May to October (Table 20). The seasonality of the handline and jig fishery is particularly marked, almost no fishing by these gears being conducted between November and May. The pattern of fishing over months by longline is similar in distant and home water fisheries although March and April landings are relatively more important in the distant water component.

The recent situation in the Scotia-Fundy hook and line cod fishery, represented by 1987-91 statistics, can be put in the historical context using NAFO statistical data. However, the histories of the intra-regional fishery and the distant-ground fishery are rather different and are treated separately. A reasonable approximation of landings from the distant-ground fishery are given by NAFO statistics on landings for Canada (M) from Subarea 3. The within-region fishery is approximated using Canada (M) statistics for Div. 4VWX + Subarea 5.

Cod landings by the Scotia-Fundy fleet from home waters (Div. 4VWX + Subarea 5) reached a peak of about 70,000 t in the mid 1960s, declined to about 40,000 t in the mid-1970s, but increased after extension of jurisdiction to a peak of 120,000 t in 1982 (Table 21, Fig. 2). There was a subsequent decline to about 80,000 t by 1990. The pattern of hook and line landings followed that of total landings, with the result that the share of the total landings attributable to hook gears fluctuated around the average value for the 1961-91 period of 35%. The range over these years, excluding 1964-66 for which designation of landings among fixed gears is dubious, was 26-46% (Fig. 3). However, there were trends in the relative importance of handline and jig versus longline gear. In the early 1960s, handline and jig accounted for about 45% of hook gear landings, but by the 1970s the percentage dropped to about 22% and in the 1980s to about 16% (Table 21). The data for the Region as a whole in Table 21 and in Fig. 2 and 3 are provided on a Divisional/Subdivisional basis in Tables 22-26 and in Fig. 4 and 5, and Tables 27-29 provide landings data by Division/Subdivision and year for hook and line gears only. The primary area for hook fishing for cod has consistently been Div. 4X with Subdiv. 4Vn and Div. 4W also supporting substantial hook fisheries throughout the period. Hook fishing on Georges Bank (Subdiv. 5Ze) did not become significant until the mid 1960s however and on Banquereau (Subdiv. 4Vs) not until the beginning of the 1980s. These hook fisheries on Georges and

Banquereau banks were initially by longline although small fisheries by handline and jig developed on these banks in the mid 1980s (Table 29).

The traditional distant water hook fishery by Scotia-Fundy vessels was conducted almost exclusively by dory schooners and as late as 1956 these vessels were landing over 10,000 t of cod from Subarea 3 annually. However, after 1962, when 700 t were landed, no further fishing was conducted by dory schooners. (The rather smaller dory schooner fishery in Subarea 4 terminated in 1960.) Only small quantities of cod were caught by longline in Subarea 3 in the 1950s and in subsequent years until 1981 when landings first exceeded 1,000 t (Table 30).

Haddock: Most landings (about 70%) were by boats in the 35-45 feet class (Table 31). Handline and jig fishing was restricted almost exclusively to Div. 4X where 35-45 feet and under 35 feet boats landed equal amounts (Table 32). As handline and jig accounted for less than 5% of hook landings, longline landings (Table 33) have a similar distribution over boat category and area as total landings.

The hook fishery for haddock in Scotia-Fundy waters has a summer peak lasting from July to October but, unlike cod, has an important winter longlining component in January - February (Table 34). Handlining and jigging are summer activities only.

Historical landings for haddock are available from NAFO statistics as for cod but in the case of haddock, landings from home waters only are summarized since haddock landings by hook gears from Subarea 3 prior to 1987-91 were only a few tons annually. Total haddock landings by the Scotia-Fundy fleet from Div. 4VWX + Subarea 5 reached a peak of almost 60,000 t in the mid 1960s but declined to less than 20,000 t in the mid 1970s. After extension of jurisdiction landings increased again to a peak of about 50,000 t in 1980 but declined, again to less than 20,000 t, by 1989 (Table 35, Fig. 6). In contrast, hook and line landings increased fairly steadily from the early 1960s to about 10,000 t in the early 1980s, dipping in the late 1980s but recovering again to about 10,000 t in 1991. The percentage share of hook and line gears was the inverse of total landings, peaking at 50% in 1974 and again in 1991 (Fig. 7). On average in 1961-91, hook gears accounted for about 20% of haddock landings. The contribution of handline and jig to hook gear landings declined from 20-30% prior to 1969 to less than 10% except for a brief period in the late 1970s (Table 35). The data for the Region as a whole in Table 35 and in Fig. 6 and 7 are provided on a Divisional basis in Tables 36-40 and Fig. 8 and 9, and Tables 41-43 provide landings data by Division and year for hook and line gears only. The primary

hook fishery for haddock has consistently been in Div. 4X with other areas being of relatively low importance. The Div. 4W hook fishery increased for a brief period in the late 1970s-early 1980s but a particularly important increase occurred in the early 1990s when landings approached 3,000 t and accounted for over 80% of total landings. This latter increase corresponded with the closure of Western Bank to mobile gear fishing which had the effect of creating an area reserved for fixed gear and this encouraged more longline fishing (Kenchington *et al.* 1994). Haddock landings by hook gears from Georges Bank expanded in the early 1960s and from Banquereau in the 1980s in a pattern similar to that shown by hook landings of cod.

Halibut: Boats over 65 feet caught 86% of their halibut outside Regional waters and for 45-65 feet boats this percentage was 35% (Table 44). Indeed, as much as 4% of landings by 35-45 feet boats came from outside the Region. This dependence on distant ground fishing resulted in larger boats landing a larger proportion of the total catch, roughly 50% being landed by vessels over 45 feet, in contrast to cod (26%) and haddock (16%). Handline and jig fishing for halibut was insignificant accounting for less than 1% of landings, virtually all of which was from Div. 4X.

Most halibut were landed between March and September (Table 45). The distant water fishery picked up in February, after the winter lull, whereas in home waters this occurred in April and May. However, the distant water fishery peaked in April-June. In home waters the fishery peaked in June-July. The earlier decline in the distant fishery is likely a reflection of the relatively greater interest of the large boats, which predominate in this fishery, in the summer and autumn swordfish fishery whereas in home waters, fished mainly by smaller boats, the start of the groundfish fishing season is delayed by weather, particularly in the northeast, and by lobster fishing, the season for which extends until the end of May in Div. 4X (Kenchington and Halliday 1994).

Halibut landings from Scotia-Fundy Region home waters declined from 1,600 t in the early 1960s to about 700 t in the mid 1970s but increased again to about 2,000 t in the mid 1980s (Table 46, Fig. 10) (coincident with circle hooks gaining widespread use in the halibut fishery). Subsequently, landings declined and were about 1,000 t in 1991. The great majority of halibut are landed from longline vessels (almost 80% on average in 1961-91). The proportion taken by longline increased to about 90% after 1983 (Fig. 11). From 1988, mobile gears were prohibited from conducting a directed fishery for halibut. The data for the Region as a whole in Table 46 and Fig. 10 and 11 are provided on a Divisional basis in Tables 47-51, and Tables 52-54 provide landings data by Division and year for hook and line gears only. The halibut fishery is widely

distributed along the edge of the Scotian Shelf although Div. 4X was consistently the most important Division in the period.

The distant water fishery for halibut in Subarea 3 by dory schooners died out in the mid 1950s and was replaced by longline boats which caught over 1,000 t per year in 1957-59. By 1961 this fishery also was in decline and landings were as low as 50 t per annum in the late 1970s - early 1980s (Table 55). A renewed interest in the fishery occurred after 1983 in conjunction with the rejuvenated cod fishery. The most important grounds were on southern Grand Bank (Div. 3N0), and St. Pierre Bank (Div. 3P) was also important.

Pollock: About 95% of hook landings, whether by longline or handline and jig, are by boats under 45 feet (Tables 56-58). Pollock landings by all gears from home waters declined from about 30,000 t in the early 1960s to about 10,000 t in 1970 but increased fairly steadily thereafter (Table 59, Fig. 12). Hook landings were almost 10,000 t in the early 1960s, about one third of the catch, but decreased to 1,000-2,000 t in the later 1960s and remained about that level through the 1970s. There was some increase in hook landings as total landings increased in the 1980s and as a result the proportion taken by hooks fluctuated around 8% of the total after 1966 (Fig. 13). Pollock landings by gear are provided for each Division in Tables 60-64 and Tables 65-67 provide landings by Division and year for hook and line gears only. There is no distant water component to the hook fisheries for pollock only 64 t in total being recorded as caught by hook gears in Subarea 3 in the 1961-91 period.

White hake: The white hake fishery by hook gears has home and distant water components. In home waters boats less than 45 feet predominate (85% of home waters catch) whereas the distant fishery is conducted almost exclusively (96%) by boats over 45 feet (Table 68). Boats in the 45-65 feet category take 60% of their white hake catch in distant waters. Handline and jig gear accounts for less than 2% of hook landings, most being taken in Div. 4X by 35-45 feet boats (Table 69), thus longline (Table 70) and total hook landings have almost identical distributions by boat category and area.

White hake landings by all gears from home waters were about 2,000 t in the early 1960s (Table 71, Fig. 14). Landings increased to about 4,000 t in the 1970s and again to about 6,000 t in the 1980s. Hook gears predominated throughout the period although there was some decrease in their relative importance over time (Fig. 15). In the 1970s hook gears accounted for about three quarters of white hake landings whereas in the 1980s their share dropped to two thirds.

The data in Table 71 are provided by Division in Tables 72-76, and Tables 77-79 provide landings by Division and year for hook and line gears only.

A caution is required concerning the extent to which the statistics in Tables 71-79 are attributable to white hake; some small proportion of landings from Div. 4W and west were likely of red hake. In 1967 ICNAF decided to separate hakes of the genus *Urophycis* in landings according to the following criteria:

1) any hake reported for Subareas 1, 2 and 3, and Div. 4R, 4S, 4T, 4Vn, and 4Vs should be designated as white hake;
2) any hake taken by hook and line from Div. 4W, 4X, Subarea 5 and Statistical Area 6 be designated as white hake; and,
3) for those areas listed in (2) above, hake caught other than by hook and line be designated as red hake.

In 1970, criterion (2) was modified by adding that any hake greater than 55 cm standard length, regardless of how caught, should also be designated as white hake. (See ICNAF Statistical Bulletins Vol. 16, p. 11 and Vol. 19, p. 7, which provide references to original decisions and background documents.) In the period prior to 1965, Canada (M) reported hake landings as species unspecified but in 1965 all were reported as red hake. In 1966 and 1967, Canada (M) followed the ICNAF criteria and as a result recorded most hake landed as being white hake but a few hundred tons in each year caught in Div. 4W and west were listed as red hake. In 1968 the ICNAF criteria were obviously abandoned as in that and all subsequent years only white hake were recorded by Canada (M). In Tables 71-79 Canada (M) landings for 1961-64 are assigned entirely to white hake. (Although ICNAF Stat. Bulls. show these landings as species not specified, a subsequent revision in NAFO computer files now designates these as white hake.) Landings for 1968-91 are also entirely attributed to white hake. In 1965-67, the assignments to white and red hake are footnoted.

The distant water fishery in Subarea 3 by longline for white hake became significant in the early 1970s but declined in the late 1970s (Table 80). It picked up again, however, in the mid 1980s. The fishery was primarily in Div. 30 and Div. 3P, with moderate catches occurring in Div. 3N also in the late 1980s.

Cusk: Boats under 45 feet account for almost 85% of longline landings and 100% of handline and jig landings (Tables 81-83). Total cusk landings from home waters by all gears cycled between 2,000 t and 6,000 t in 1961-91 (Table 84, Fig. 16). After the mid 1960s the great

majority of the landings (over 90%) are attributable to longline gear (Fig. 17). The data in Table 84 are provided by Division in Tables 85-89 and Tables 90-92 provide landings by Division and year for hook and line gears only. Cusk landings from Subarea 3 by longline fluctuated in the same pattern as hake landings but were an order of magnitude smaller (Table 93).

Length and Age Compositions

The number of port samples used for comparing biostatistics of landings originating in home waters are given in Tables 94 and 95 for cod and haddock respectively. So too are the seasons used in comparisons. The number of fish involved in comparisons can be approximated by multiplying the number of samples by 200, the usual number of fish in a sample. The number of observer samples is not a particularly useful statistic because of the high variabiltiy in the number of fish in each. Thus, the number measured is given, along with area, season and year, in the tables which compare mean lengths of fish in catches for each species (see below).

Cod

Subdiv. 4Vn: In 13 comparisons between length compositions of landings by longliners and otter trawlers, otter trawlers landed smaller fish on average in all cases (Table 96, Fig. 18). Modal length of landings lay between 40 and 60 cm for both gears and were quite similar between gears and sometimes identical. However, otter trawlers landed few fish greater than 70 cm whereas fish up to 80 cm and sometimes larger were significant components of longline landings. In the four comparisons involving handline and jig samples, in two cases length compositions were intermediate between those of otter trawl and longline and in one case they were of larger and one case they were of smaller fish than either of the other gears. Thus, no firm conclusions can be drawn. There were four comparisons involving Danish seine landings also. In three of these, landings were of smaller fish than landings by otter trawlers and in the remaining case seine landings were larger, but in all four cases seine landings were of fish smaller than in longline landings. Subdiv. 4Vn was the only area in which Danish seine landing compositions could be compared. All comparisons indicate that cod larger than 70 cm are not important to landings by this gear (Fig. 18).

Fish of ages 4-10 account for most of the cod landings by both otter trawl and longliners (Fig. 19) although the mean age in otter trawl landings is usually the lower (Table 96). Handline and jig caught fish, in the two comparisons possible, had a mean age similar to that in otter trawl

landings. In three comparisons the mean age was higher in Danish seine than in otter trawl landings but about the same as in longline landings in two cases and lower in the third.

Longline landings in May-June were of longer, heavier and older cod than landings later in the year (Fig. 20-22). There was a tendency for landings by all gears to become smaller and younger over time (Fig. 22).

Subdiv. 4Vs: As in Subdiv. 4Vn, otter trawlers landed smaller cod than longliners in all cases in the nine comparisons available for this Subdivision (Table 97, Fig. 23). Modal lengths lay between 50 and 60 cm for longline landings and 40-60 cm for otter trawl landings. Cod over 80 cm were important to longline landings in most cases, but fish greater than 70 cm seldom contributed much to otter trawl landings. One handline and jig comparison showed landings to be of bigger fish than either longline or otter trawl landings but, in a second, size was similar to that in otter trawl landings. The one gillnet comparison showed this gear landed larger fish than the other gears.

Longline cod were predominantly aged 5-12 whereas otter trawl cod were more likely to be 4-10 year old fish (Fig. 24). Gillnet cod were predominantly 8-12 year old fish. Handline and jig cod ranged from 4-12 years old.

Longline landings in April-July tended to be of rather larger and older fish than those in August-October (three of four cases) but differences were not great (Fig. 25 and 26). There was a trend over years for longline caught cod to be smaller and younger on average, and this applied to otter trawl caught cod in August to October but not in the April-July period (Fig. 27).

Div. 4W: Four comparisons between longline and otter trawl landings were possible and, in three cases, cod were smaller in otter trawl landings (Table 98, Fig, 28). Longline landings contained few cod over 70 cm and otter trawl landings had few over 60 cm. Four comparisons with pair trawl landings were also possible. In 1990, pair trawl landings were similar to those by otter trawl in composition whereas in 1991 they were generally of larger fish than taken by otter trawl and longline. A single gillnet comparison showed that landings were of substantially larger fish than those by other gears.

Longline landings of cod were predominantly of ages 4-10 in 1987-90 but were 4-8 years old in 1991 (Fig. 29). Otter trawl landings were mainly 3-6 years old, as were pair trawl

landings. Gillnet cod were 6-9 years old. There was a decreasing trend in mean size and age of longline cod over the study period mainly as a result of fewer large fish (larger than about 70 cm) being caught (Fig. 30-32), although in 1991 the modal lengths also moved toward smaller sizes. No such trends were observed in otter trawl landings (Fig. 32).

Div. 4X: Fifteen comparisons between size compositions of landings by longliners and otter trawlers were possible (Table 99, Fig. 33). In eight cases the longline cod were larger, in six the otter trawl cod were larger, and in one case the mean length was identical. Five handline and jig comparisons show two cases with a mean length higher than that of longline landings, one identical and two intermediate between the means of longliners and otter trawlers. Gillnet landings were, in six of seven comparisons, of larger fish than landings by longliners and otter trawlers.

Cod as young as age 2 contributed to longline landings in this Division (Fig. 34), particularly in the latter half of the year, and 3 year old cod made a consistent contribution. Cod age 9-11 were of significance in longline landings in 1987-88 but in more recent years the last age of some importance varied between four and eight. In otter trawl landings, age 2 fish were of persistent occurrence, age 3 fish were important and the oldest age of significant contribution was usually age 6 or younger. Handline and jig cod were mainly ages 3-7, and gillnet fish were primarily ages 3-8.

Trends in size and age compositions of longline and other gear landings over years (Fig. 35-37) were complex and do not lend themselves to ready description.

Subdiv. 5Ze: In seven comparisons between otter trawl and longline landings, cod were larger in longline landings on six occasions (Table 100, Fig. 38). In the June-October period, when most of the fishery occurs by both gear types, otter trawl cod were distinctly smaller than longline cod. In January to May, longline landings typically ranged from 50 to 120 cm. In the latter part of the year their size range was much the same although in 1990 and 1991 cod over 100 cm were less common. In this latter period, otter trawl landings ranged from 40-90 cm. A single pair trawl comparison showed a size composition intermediate between otter trawl and longline. Gillnet landings were consistently of cod larger than those in otter trawl landings in five comparisons. In 1987 and 1988, gillnet landings were bimodal and contained large proportions of cod in the 50-70 cm range. As a result, they had an average size slightly smaller than those of longline caught cod. In 1989-91, gillnet landings were unimodal, and ranged in

length from 60-100 cm. This caused gillnet landings to be of a larger average size than longline landings in 1990-91.

In January to May, longline landings were predominantly of cod ages 3-9, while in the latter part of the year most were ages 2-7 (Fig. 39). In the case of otter trawlers, landings in January-February were mainly ages 4-9, but in June to October they were ages 2-5. Gillnet landings were predominantly ages 3-7.

There were no trends in the size or age compositions of longline landings over years but there was a tendency for cod taken in the March-May period to be larger than in other seasons (Fig. 40 and 41). The size and age of otter trawl cod showed some increase from 1987 to 1991, and gillnet cod showed a clear increase over this period in both size and age (Table 100).

Subarea 3: Only four comparisons were possible for Subarea 3 Divisions between longline and otter trawl caught cod and in all cases longline fish were larger (Table 101, Fig. 42). In Div. 3N and 3O there was little overlap in the length compositions of catches by the two gears, with longline catches being of particularly large cod of 90-130 cm, although the longline samples from Div. 3O in the second half of 1989 had a higher proportion of cod in the 80-90 cm range than earlier in that year. In Div. 3L in 1988, length frequencies of the two gears overlapped but longline catches had a much higher proportion of fish larger than 75 cm. Length frequencies of the two gears were most similar in the Subdiv. 3Ps samples for 1990 but again longline samples contained fish in the 100-130 cm range whereas cod of these sizes were absent from otter trawl catches.

Summary of inter-gear comparisons: Hook and line landings from home waters (Div. 4VWX + Subarea 5) had a size composition of a shape distinctly different than those of other gears. From the smallest size caught, longline length frequencies increased quite rapidly to a modal value which typically lay in the range 50-60 cm, and then tailed off gradually with fish larger than 80 cm, and sometimes larger than 100 cm, being well represented. Otter and pair trawlers and Danish seiners did not land fish that were distinctly below the lower limit of the size range landed by hook and line boats on a consistent basis. Indeed, the minimum size landed was quite similar in most cases. Modal lengths were often similar also. The most marked difference lay in the right side of the frequencies; trawler and seiner length frequencies tailed off more steeply and fish over 80 cm seldom composed an important component of the landings. As a result, in 48 comparisons between the mean length of cod landed by otter trawlers and longliners, the mean

length of longline cod was larger in 39 (81%) of the cases. Gillnet landings, in contrast, did not contain cod less than 50 cm to any extent and had a modal value usually greater than 60 cm. Cod of 80-100 cm were often an important component of landings but cod larger than 100 cm were less common than in longline landings. The mean size of cod in gillnet landings was almost always greater than in otter trawl landings (13 of 14 comparisons) and usually greater than in longline landings (11 of 14 comparisons). Handline and jig landings had length frequencies of similar shape to those of longline landings. Mean lengths were also similar, with those of handline and jig exceeding those of longline in five comparisons but being exceeded in six.

In distant water fisheries (Subarea 3), the length compositions of longline caught cod had a different shape, those from Div. 3LNO being roughly normal, i.e. bell shaped, rather than skewed towards smaller sized cod, although that for Subdiv. 3Ps was intermediate in shape between these and home water length frequencies. The differences in mean length between longline and otter trawl catches was much more pronounced than in home waters, with longline catches being of larger fish.

Interdivisional comparisons: Larger cod were taken in Div. 3N and 3O than elsewhere and Div. 3L and Subdiv. 3Ps catches were also of larger fish than those in landings from home waters. Within the Scotia-Fundy Region longline landings from Subdiv. 5Ze were consistently of larger fish than those from other Divisions; mean lengths invariably exceeded 70 cm. At the other end of the scale, longline cod from Div. 4W were almost invariably smaller than those from other Divisions, on some occasions having a mean length below 50 cm. Longline cod from Subdiv. 4Vs were usually larger than those in areas other than Subdiv. 5Ze, followed by those from Div. 4X and then those from Subdiv. 4Vn.

Fewer comparisons are possible for handline and jig caught cod. They did, however, follow a similar pattern to longline caught fish with the largest cod deriving from Subdiv. 4Vs followed by Div. 4X and then Subdiv. 4Vn.

Gillnet caught cod from Subdiv. 5Ze were larger than those from Div. 4X. There were insufficient samples from other areas to reach firm conclusions but those samples which were available from Div. 4W and Subdiv. 4Vs were similar in length composition to those from Div. 4X.

Bottom pair trawl samples almost all came from Div. 4W. The one comparison possible

with pair trawl landings from Subdiv. 5Ze indicated that larger fish were taken by this gear in Subdiv. 5Ze.

No comparisons are provided for otter trawl length compositions among Divisions as those presented here are based on a subset of available samples selected only to provide intergear comparisons.

Haddock

Subdiv. 4Vs: Three comparisons of size compositions indicated that otter trawlers landed haddock that were on average smaller than those landed by longliners (Table 102, Fig. 43). Otter trawl landings ranged between 40 and 60 cm while longline landings were mainly between 40 and 70 cm. There was a tendency for sizes landed by both gears to increase over the study period (Fig. 44).

Div. 4W: In three of four comparisons for haddock of Div. 4W origin, otter trawlers landed smaller fish than longliners (Table 103, Fig. 45). Landings by both gears were largely restricted to the 40-60 cm range except in 1991 when otter trawlers in particular landed substantial numbers of 30-40 cm fish. There was a tendency for sizes landed by both gears to decrease over the study period (Fig. 44).

Div. 4X: Longliners landed haddock which were larger than those landed by otter trawlers from Div. 4X in eight of ten comparisons (Table 104, Fig. 46). In January-March landings by otter trawlers became progressively larger between 1987 and 1991, whereas the sizes landed by longliners changed little, and as a result otter trawlers were landing larger haddock than longliners by 1991 (Fig. 47). In contrast, in the May-December period no trends were evident and longliners consistently landed larger fish. Both gears landed fish primarily in the 40-70 cm range although otter trawlers sometimes landed greater numbers of haddock between 30 and 40 cm, particularly in 1990. One gillnet comparison showed landings to be substantially larger than those of the other gears, ranging between 50 and 70 cm with a mode at about 65 cm.

Subdiv. 5Ze: Longliners landed substantially larger fish from this area than did otter trawlers in all of seven comparisons (Table 105, Fig. 48). This was more marked in the last half of the year (June-December) than at the beginning of the year (January-February). Haddock of 40-80 cm were landed by longline whereas otter trawl haddock did not usually exceed 70 cm and on

two occasions contained fish in the 30-40 cm range. There was a tendency for both gears to land larger haddock in 1990 and 1991 than in the previous three years (Fig. 49).

Subarea 3: Observer data for Subarea 3 haddock catches are scant but three comparisons are possible which indicate that, in all cases, longliners caught larger haddock than did otter trawlers (Table 106, Fig. 50). Trawler catches were predominantly of fish 40-70 cm whereas longliner catches were mainly in the 50-80 cm range.

Summary of inter-gear comparisons: In 24 of 27 comparisons, longliners landed larger haddock than did otter trawlers. The shape of the length frequency curves for longline haddock were quite similar to a normal, bell-shaped, curve, and thus quite different from the shape of longline cod length-frequencies but similar to those for otter trawl haddock. Gillnet haddock were larger than those landed by other gears, as was the case for cod, but only one comparison was possible.

Interdivisional comparisons: The largest haddock landed by longline were from Subarea 3 and Subdiv. 5Ze in all years. These were the only areas where haddock of 70-80 cm were caught. Mean length was 57 cm or higher in samples from these areas. In contrast, landings from Div. 4W did not contain fish greater than 60 cm and the mean lengths of 46-49 cm were the lowest for any area. In Subdiv. 4Vs and Div. 4X size compositions were quite comparable and mean length in landings was within the range 51-55 cm in both areas. Thus, inter-divisional differences in size compositions of longline haddock landings had a pattern similar to that observed for longline cod.

Halibut

One comparison for halibut in Div. 3L is possible by combining observer samples from 1988-91 and this shows that longline caught fish were in the range of 100-200 cm with a mean of 141 cm, substantially larger than otter trawl caught fish (Table 107, Fig. 51). When data from Div. 3NOPs, which are all part of the same management area, were combined, these were adequate to produce annual length-frequencies of longline catches in 1988 to 1991, but for otter trawlers it was necessary to combine over years as well. Halibut catches in this area were of rather smaller fish ranging from 75-175 cm with mean lengths which decreased chronologically from 124 cm to 107 cm (Table 107, Fig. 52). The combined otter trawl samples, in contrast, contained halibut ranging mainly between 50 cm and 125 cm, with a mean of 97 cm.

Observer samples obtained from Div. 4VWX+5 in 1988 are presented in Table 107 and Fig. 53. The numbers of fish sampled are too few to give adequate length frequencies but the data indicate that again longline caught fish were rather larger than those taken by otter trawlers. The few port samples of halibut from Div. 4VWX+5 in the 1987-91 period were in agreement with observer data that otter trawl landings are of fish substantially smaller than those in longline landings (Table 107, Fig. 54).

SUMMARY AND DISCUSSION

In 1987-91, about 100,000 t of groundfish were landed annually in Atlantic Canada by hook and line gears, about 15% of the total groundfish landed. Hook and line boats based in the Scotia-Fundy Region took most of this catch (over 50%) and had the most diverse fisheries in terms of species and areas fished. Cod, haddock, white hake, cusk, pollock and halibut were the species of greatest importance to Regional hook fisheries. Longline was by far the more important of the hook gears, landings by handline and jig accounting for only a small portion except in the case of pollock where two thirds of the landings were by handline and jig. Almost all Regional hook landings of haddock, pollock and cusk originated from home waters whereas important components of halibut (35%), hake (36%) and cod (14%) landings originated from distant waters in Subarea 3. It was the larger boats, of course, which were most dependent on distant grounds, particularly those over 65 feet (77% of landings) but boats of 45-65 feet also had an important interest (22% of landings). Boats under 45 feet were essentially restricted to home waters.

The Scotia-Fundy Groundfish Task Force contention that "longline gear catches larger fish on average than other methods of fishing" is not universally true. In 1987-91, longliners landed cod which were larger than those landed by otter trawlers in 43 (83%) of 52 comparisons and, for haddock, in 24 (89%) of 27 comparisons. The exceptions for both species were concentrated in Div. 4X where, for the two species combined, longline fish were larger in only 16 (64%) of 25 cases. In the few comparisons between longliner and Danish seiner landings, longliners invariably landed larger cod (Subdiv. 4Vn - four comparisons). Pair trawlers in Div. 4W, however, landed larger cod than longliners in three of four comparisons whereas one Subdiv. 5Ze comparison showed longline cod to be larger. Thus, in the great majority of comparisons with mobile gear landings, longliners do indeed land cod and haddock which are on average larger. Comparisons with gillnet cod, however, showed gillnet fish to be larger than longline fish in 11 of 14 cases, and this was also the situation in the one comparison for haddock. Cod landed by

handline and jig boats were comparable in size to those landed by longliners. Thus, for cod and haddock, a more accurate summary of the situation would be that "boats using hook and line gears usually land larger fish on average than do mobile gear boats when fishing occurs in the same general area and season." The limited comparisons possible for Atlantic halibut indicate that an at least equally strong statement can be made for that species, although the data are scant and aggregated over large areas and time periods. Sampling is inadequate to reach conclusions about the other species important to hook and line landings.

Why hook gears tend to land larger fish than mobile gears cannot be diagnosed from the present analysis. The scale for comparisons of NAFO Division/Subdivision and month (more usually groups of months) was the smallest which could be used with present data if there were to be sufficient samples in each category and sufficient comparisons in total to test the original hypothesis. There are, however, many different fishing grounds within each Division, and even small differences in the position of fishing could result in fishing gear being located among fish of quite different size composition. Fish movements could also, within the timeframe of a month, result in changes in the composition of fish on particular grounds. There is, furthermore, a tendency for fixed and mobile gear fishermen to fish rather separate grounds to avoid gear entanglements. Thus, the temporal/spatial distribution of fishing by the mobile and hook gear boats sampled was likely quite different, even though fishing was in the same Division and month, and thus the size compositions of the populations being fished was almost certainly different. The size composition of catches by both mobile and hook gears varies also depending on gear specifications, particularly on codend mesh size and hook/bait sizes respectively (Halliday and Kenchington 1993). Thus, gear selection no doubt contributed to the differences observed as well. There are insufficient data on the gear specifications for sampled boats, and on the selection characteristics of hook gears, to draw conclusions on the extent to which gear differences could be responsible for differences in size compositions of landings. Finally, most of the comparisons are based on samples of landings not catches, thus discarding practices could have introduced biases. Anecdotal information suggests that discarding of small fish is more prevalent among mobile gear than fixed gear boats. If this were so, then the differences between size compositions of catches is underestimated by comparisons based on landings.

Although the data collected through current fishery monitoring programmes, and analysed here, do not provide an explanation as to why hook gears tend to land larger fish than mobile gears, this remains an important question to answer. Proposals, such as that of the 1989 Task Force to deregulate fixed gear fishing, and to restrict otter trawl fishing, are made to, and

considered by, management fora on a regular basis. There are technical analyses which indicate that such an approach would be feasible and provide biological, social and economical benefits (O'Boyle *et al.* 1991, Sinclair 1986). It is recognized by these authors, however, than an assumption critical to their results is that the partial recruitment patterns of the stocks to the two gear types remain the same despite such regulatory changes. This could only happen if there were some inherent characteristics of hook gears which accounted for the size composition of catches. However, it has already been established that size selection of hook gear can be modified readily (Halliday and Kenchington 1993) and that longline fishermen adapt to using new fishing grounds on an opportunistic basis (Kenchington *et al.* 1994). Thus, the assumption would appear to be untenable, and further research on the factors causing the differences in size composition of landings between gears is necessary if the effects of changing drastically the gear mix in the fishery is to be reliably predicted.

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Table 1. Mean annual landings (t) by species, 1987-91, in DFO Regions in the groundfish hook and line fishery and in total. (Figures in parenthesis are percentages of species hook and line total catch landed in each Region.)

Species	Hook and Line							All Gears Total[1]	H&L as % of Total
	Gulf/Quebec		Newfoundland		Scotia-Fundy		Total		
Cod	11671	(16)	28080	(39)	32463	(45)	72214	406604	18
Haddock	15	(+)	58	(1)	7187	(99)	7260	25694	28
Halibut	227	(12)	53	(3)	1591	(85)	1871	2330	80
White hake	1244	(16)	126	(1)	6480	(83)	7850	14478	54
Cusk	-		-		3479	(100)	3479	3643	95
Pollock	19	(1)	149	(4)	3158	(95)	3326	43429	8
American plaice	609	(39)	279	(18)	680	(43)	1568	43182	4
Wolffish	154	(29)	46	(9)	333	(62)	533	2031	26
Redfish	24	(10)	163	(68)	54	(22)	241	79166	+
Turbot	61	(29)	128	(61)	20	(10)	209	19988	1
Winter flounder	86	(63)	13	(10)	37	(27)	136	4820	3
Yellowtail flounder	5	(4)	-		135	(96)	140	10301	1
Witch flounder	7	(23)	4	(13)	20	(64)	31	10522	+
Total - all species	14122	(14)	29099	(30)	55637	(56)	98858		

Table 2. COD: mean annual landings (t), 1987-91, in DFO Regions by major gear types. (Percentages of landings by gear type within Region (lower figures) and by Region for each gear type (side figures) are also shown.)

Gear type		Gulf/ Quebec	(%)	Newfound- land	(%)	Scotia- Fundy	(%)	Totals
Otter trawls[1]	t	43535	(20)	101112	(47)	71458	(33)	216105
	%	54		47		65		53
Seines	t	11829	(81)	732	(5)	1961	(14)	14522
	%	15		+		2		4
Set gillnets	t	9596	(17)	43288	(76)	3927	(7)	56811
	%	12		20		4		14
Longlines	t	9323	(18)	14051	(28)	27520	(54)	50894
	%	12		7		25		13
Handlines & jigs	t	2348	(11)	14029	(66)	4943	(23)	21320
	%	3		6		4		5
Traps	t	1168	(3)	42673	(97)	41	(+)	43882
	%	1		20		+		11
Miscellaneous	t	2421	(79)	109	(3)	539	(18)	3069
	%	3		+		+		1
Totals	t	80220	(20)	215994	(53)	110389	(27)	406603

[1] Includes pair trawls

Table 3. COD: mean annual landings (t) using hook and line gears, 1987-91, in DFO Regions by Sector and NAFO Division or Subdivision of origin. (Landings from unlisted Divisions were zero.)

Sector	Division/ Subdivision	Gulf/ Quebec	Newfound- land	Scotia- Fundy	Totals
1. Newfoundland	2H	-	+	-	+
	2J	14	1521	-	1535
	3K	1	5768	25	5794
	3L	-	9200	1369	10569
	3Ps	57	10832	1055[1]	11944
Outside Policy Area	3N	-	155	863	1018
	3O	-	445	912	1357
2. Gulf/Quebec	3Pn	2657	100	1[1]	2758
	4R	3444	1	11	3456
	4S	1486	-	-	1486
	4T	4007	-	274	4281
3. Scotia-Fundy	4Vn	5	42	4465[1]	4512
	4Vs	-	16	5234[1]	5250
	4W	-	-	3075	3075
	4X	-	-	10535	10535
	5Y	-	-	40	40
	5Ze	-	-	4604	4604
Totals		11671	28080	32463	72214
% outside sector		1	3	14	

[1] Includes landings of unknown subdivision, assigned *pro rata*.

Table 4. HADDOCK: mean annual landings (t), 1987-91, in DFO Regions by major gear types. (Percentages of landings by gear type within Region (lower figures) and by Region for each gear type (side figures) are also shown.)

Gear Type		Gulf/ Quebec	(%)	Newfound- land	(%)	Scotia- Fundy	(%)	Totals
Otter trawls[1]	t	109	(1)	2764	(16)	14461	(83)	17334
	%	31		94		65		67
Seines	t	197	(29)	71	(11)	402	(60)	670
	%	57		2		2		3
Set gillnets	t	24	(6)	62	(16)	301	(78)	387
	%	7		2		1		2
Longlines	t	15	(+)	58	(1)	6858	(99)	6931
	%	4		2		31		27
Handlines	t	-		-		329	(100)	329
& jigs	%					1		1
Traps	t	-		-		3	(100)	3
	%					+		+
Miscellaneous	t	2	(5)		-	39	(95)	41
	%	1		+		+		+
Totals	t	347	(1)	2955	(12)	22393	(87)	25695

[1] Includes pair trawls

Table 5. HADDOCK: mean annual landings (t) using hook and line gears, 1987-91, in DFO Regions by Sector and NAFO Division or Subdivision of origin. (Landings from unlisted Divisions were zero.)

Sector	Division/ Subdivision	Gulf/ Quebec	Newfound- land	Scotia- Fundy	Totals
1. Newfoundland	3L	-	-	5	5
	3Ps	-	51	26[1]	77
Outside Policy Area	3N	-	-	36	36
	3O	-	6	49	55
2. Gulf/Quebec	3Pn	10	-	-	10
	4T	5	-	1	6
3. Scotia-Fundy	4Vn	5	-	98[1]	98
	4Vs	-	-	272[1]	272
	4W	-	-	1739	1739
	4X	-	-	3979	3979
	5Y	-	-	8	8
	5Ze	-	-	975	975
Totals		15	57	7188	7260
% outside sector		-	11	2	

[1] Includes landings of unknown subdivision, assigned *pro rata*.

Table 6. HALIBUT: mean annual landings (t), 1987-91, in DFO Regions by major gear types. (Percentages of landings by gear type within Region (lower figures) and by Region for each gear type (side figures) are also shown.)

Gear Type		Gulf/ Quebec	(%)	Newfound- land	(%)	Scotia- Fundy	(%)	Totals
Otter trawls[1]	t	32	(10)	128	(38)	172	(52)	332
	%	9		64		10		14
Seines	t	2	(29)	1	(14)	4	(57)	7
	%	1		1		+		+
Set gillnets	t	52	(64)	16	(20)	13	(16)	81
	%	15		8		1		3
Longlines	t	204	(11)	53	(3)	1574	(86)	1831
	%	58		27		88		79
Handlines & jigs	t	23	(57)	-	(+)	17	(43)	40
	%	7		+		1		2
Traps	t	-	(+)	-	(+)	-	(+)	-
	%	+		+		+		+
Miscellaneous	t	36	(95)	-	(+)	2	(5)	38
	%	10		+		+		2
Totals	t	349	(15)	198	(8)	1782	(77)	2329

[1] Includes pair trawls

Table 7. HALIBUT: mean annual landings (t) using hook and line gears, 1987-91, in DFO Regions by Sector and NAFO Division or Subdivision of origin. (Landings from unlisted Divisions were zero.)

Sector	Division/ Subdivision	Gulf/ Quebec	Newfound- land	Scotia- Fundy	Totals
1. Newfoundland	3K	-	-	3	3
	3L	-	11	49	60
	3Ps	-	14	78	92
Outside Policy Area	3M	-	-	12	12
	3N	-	7	251	258
	3O	-	20	160	180
2. Gulf/Quebec	3Pn	39	-	-	39
	4R	85	-	3	88
	4S	38	-	3	41
	4T	66	-	1	67
3. Scotia-Fundy	4Vn	-	1	30	31
	4Vs	-	-	215	215
	4W	-	-	357	357
	4X	-	-	382	382
	5Y	-	-	1	1
	5Ze	-	-	46	46
Totals		228	53	1591	1872
% outside sector		-	53	35	

Table 8. POLLOCK: mean annual landings (t), 1987-91, in DFO Regions by major gear types. (Percentages of landings by gear type within Region (lower figures) and by Region for each gear type (side figures) are also shown.)

Gear Type		Gulf/ Quebec	(%)	Newfound- land	(%)	Scotia- Fundy	(%)	Totals
Otter trawls[1]	t	366	(1)	1575	(6)	27060	(93)	29001
	%	81		59		67		67
Seines	t	17	(21)	1	(1)	63	(78)	81
	%	4		+		+		+
Set gillnets	t	45	(+)	846	(8)	9893	(92)	10784
	%	10		32		24		25
Longlines	t	18	(1)	142	(12)	1041	(87)	1201
	%	4		5		3		3
Handlines	t	1	(-)	7	(+)	2117	(100)	2125
& jigs	%	-		+		5		5
Traps	t	-	(-)	91	(80)	23	(20)	114
	%	-		4		+		0
Miscellaneous	t	4	(3)	3	(3)	116	(94)	123
	%	1		+		1		1
Totals	t	451	(1)	2665	(6)	40313	(93)	43429

[1] Includes pair trawls

Table 9. POLLOCK: mean annual landings (t) using hook and line gears, 1987-91, in DFO Regions by Sector and NAFO Division or Subdivision of origin. (Landings from unlisted Divisions were zero.)

Sector	Division/ Subdivision	Gulf/ Quebec	Newfound- land	Scotia- Fundy	Totals
1. Newfoundland	3Ps	-	147	1	148
Outside Policy Area	3O	-	1	-	1
2. Gulf/Quebec	3Pn	13	1	-	14
	4R	1	-	-	1
	4T	6	-	-	6
3. Scotia-Fundy	4Vn	-	-	28	28
	4Vs	-	-	340	340
	4W	-	-	332	332
	4X	-	-	2346	2346
	5Y	-	-	21	21
	5Ze	-	-	89	89
Totals		20	149	3157	3326
% outside sector		-	1	-	

Table 10. WHITE HAKE: mean annual landings (t), 1987-91, in DFO Regions by major gear types. (Percentages of landings by gear type within Region (lower figures) and by Region for each gear type (side figures) are also shown.)

Gear Type		Gulf/ Quebec	(%)	Newfound- land	(%)	Scotia- Fundy	(%)	Totals
Otter trawls[1]	t	781	(37)	83	(4)	1242	(59)	2106
	%	15		12		14		15
Seines	t	1203	(90)	2	(+)	127	(10)	1332
	%	24		+		2		9
Set gillnets	t	1873	(60)	495	(16)	753	(24)	3121
	%	37		70		9		22
Longlines	t	1123	(15)	125	(2)	6388	(83)	7636
	%	22		18		74		53
Handlines	t	121	(57)	1	(+)	92	(43)	214
& jigs	%	2		+		1		1
Traps	t	16	(100)	-	(+)	-	(+)	16
	%	+		+		+		+
Miscellaneous	t	10	(19)	-	(+)	43	(81)	54
	%	+		+		+		+
Totals	t	5127	(35)	706	(5)	8645	(60)	14479

[1] Includes pair trawls

Table 11. WHITE HAKE: mean annual landings (t) using hook and line gears, 1987-91, in DFO Regions by Sector and NAFO Division or Subdivision of origin. (Landings from unlisted Divisions were zero.)

Sector	Division/ Subdivision	Gulf/ Quebec	Newfound- land	Scotia- Fundy	Totals
1. Newfoundland	3L	-	11	51	62
	3Ps	1	82	520	603
Outside Policy Area	3N	-	-	767	767
	3O	-	33	962	995
2. Gulf/Quebec	3Pn	20	-	-	20
	4R	25	-	-	25
	4S	45	-	-	45
	4T	1153	-	10	1163
3. Scotia-Fundy	4Vn	-	-	110	110
	4Vs	-	-	391	391
	4W	-	-	986	986
	4X	-	-	2213	2213
	5Y	-	-	3	3
	5Ze	-	-	465	465
Totals		1244	126	6478	7848
% outside sector		+	26	36	

Table 12. CUSK: mean annual landings (t), 1987-91, in DFO Regions by major gear types. (Percentages of landings by gear type within Region (lower figures) and by Region for each gear type (side figures) are also shown.)

Gear Type		Gulf/ Quebec	(%)	Newfound-land	(%)	Scotia-Fundy	(%)	Totals
Otter trawls[1]	t	-		-		69	(100)	69
	%					2		2
Seines	t	-		-		-	(+)	-
	%					+		+
Set gillnets	t	-		-		66	(100)	66
	%					2		2
Longlines	t	-		-		3386	(100)	3386
	%					93		93
Handlines	t	-		-		63	(100)	63
& jigs	%					2		2
Traps	t	-		-		18	(100)	18
	%					+		+
Miscellaneous	t	-		-		41	(100)	41
	%					1		1
Totals	t	-		-		3643	(100)	3643

[1] Includes pair trawls

Table 13. CUSK: mean annual landings (t) using hook and line gears, 1987-91, in DFO Regions by Sector and NAFO Division or Subdivision of origin. (Landings from unlisted Divisions were zero.)

Sector	Division/ Subdivision	Gulf/ Quebec	Newfound-land	Scotia-Fundy	Totals
1. Newfoundland	3Ps	-	-	4	4
Outside Policy Area	3N	-	-	10	10
	3O	-	-	3	3
3. Scotia-Fundy	4Vn	-	-	3	3
	4Vs	-	-	102	102
	4W	-	-	371	371
	4X	-	-	2495	2495
	5Y	-	-	4	4
	5Ze	-	-	458	458
Totals		-	-	3450	3450
% outside sector		-	-	+	

Table 14. ALL FISH SPECIES: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3K	-	-	-	28	28
3L	-	-	59	1442	1501
3M	-	-	-	16	16
3N	-	84	874	1017	1975
3O	-	92	440	1592	2124
3P	7	229	369	1144	1749
4R	-	4	11	-	15
4S	-	-	1	4	5
4T	77	127	86	8	298
4Vn	2078	2865	145	57	5145
4Vs	39	3936	1704	1194	6873
4W	1963	4363	672	29	7027
4X	3643	16431	1963	60	22097
5Y	2	74	3	-	79
5Ze	53	5468	1076	79	6676
NK	4	-	-	-	4
Total	7866	33673	7403	6670	55612

Table 15. ALL FISH SPECIES: mean annual landings (t) in Scotia-Fundy Region by boats using handline and jig. 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3P	-	-	1	-	1
4R	-	1	-	-	1
4T	-	1	-	-	1
4Vn	433	228	-	-	661
4Vs	3	290	152	-	445
4W	252	131	35	-	418
4X	1914	3857	20	-	5791
5Y	1	28	-	-	29
5Ze	10	277	-	-	287
NK	4	-	-	-	4
Total	2617	4813	208	-	7638

Table 16. ALL FISH SPECIES: mean annual landings (t) in Scotia-Fundy Region by boats using longlines, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3K	-	-	-	28	28
3L	-	-	59	1442	1501
3M	-	-	-	16	16
3N	-	84	874	1017	1975
3O	-	92	440	1592	2124
3P	7	229	368	1144	1748
4R	-	3	11	-	14
4S	-	-	1	4	5
4T	77	126	86	8	297
4Vn	1645	2637	145	57	4484
4Vs	36	3646	1552	1194	6428
4W	1711	4232	637	29	6609
4X	1729	12574	1943	60	16306
5Y	1	46	3	-	50
5Ze	43	5191	1076	79	6389
Total	5249	28860	7195	6670	47974

Table 17. COD: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3K	-	-	-	25	25
3L	-	-	58	1311	1369
3N	-	31	238	594	863
3O	-	30	108	774	912
3P	6	197	279	574	1056
4R	-	1	10	-	11
4T	68	118	82	5	273
4Vn	1822	2452	129	57	4460
4Vs	17	3096	1077	1047	5237
4W	963	1801	289	24	3077
4X	1987	7668	823	57	10535
5Y	-	38	1	-	39
5Ze	38	3841	679	51	4609
Total	4901	19273	3773	4519	32466

Table 18. COD: mean annual landings (t) in Scotia-Fundy Region by boats using handline and jig. 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3P	-	-	1	-	1
4R	-	1	-	-	1
4T	-	1	-	-	1
4Vn	422	212	-	-	634
4Vs	2	188	91	-	281
4W	218	87	14	-	319
4X	1230	2192	10	-	3432
5Y	-	7	-	-	7
5Ze	9	255	-	-	264
Total	1881	2943	116	-	4940

Table 19. COD: mean annual landings (t) in Scotia-Fundy Region by boats using longlines, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3K	-	-	-	25	25
3L	-	-	58	1311	1369
3N	-	31	238	594	863
3O	-	30	108	774	912
3P	6	197	278	574	1055
4R	-	-	10	-	10
4T	68	117	82	5	272
4Vn	1400	2240	129	57	3826
4Vs	15	2908	986	1047	4956
4W	745	1714	275	24	2758
4X	757	5476	813	57	7103
5Y	-	31	1	-	32
5Ze	29	3586	679	51	4345
Total	3020	16330	3657	4519	27526

Table 20. COD: mean annual landings (t), 1987-91, in Scotia-Fundy Region by hook and line gear type and month. (% - percentage over months within category. Distant waters - Subarea 3 and Division 4R. Home waters - Division 4TVWX and Subarea 5. Handline and jig landings all assigned to home waters.)

	Longline				Handline and Jig			
Month	Distant Waters		Home Waters				Totals	
	t	%	t	%	t	%	t	%
January	90	2	1133	5	11	+	1234	4
February	155	4	1210	5	9	+	1374	4
March	423	10	748	3	9	+	1180	4
April	331	8	944	4	8	+	1283	4
May	548	13	1717	8	236	5	2501	8
June	506	12	2879	12	1208	24	4593	14
July	584	14	3754	16	1367	28	5705	17
August	529	13	3484	15	968	20	4981	15
September	444	10	2771	12	593	12	3808	12
October	295	7	2474	11	389	8	3158	10
November	143	3	1412	6	116	2	1671	5
December	189	4	750	3	32	1	971	3
Totals	4237	100	23276	100	4946	100	32459	100

Table 21. COD: Canada (M) landings (t), 1961-91, from Div. 4VWX + Subarea 5 by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	17251	207	1237	7423	7173	99	3377	36767
62	23219	233	1054	8339	6914	169	3890	43818
63	25011	237	1298	8991	7313	403	2914	46167
64	29708	161	-	3388	-	-	20237	53494
65	45250	329	991	11858	77	199	10960	69664
66	47239	183	1138	12545	-	127	11338	72570
67	38178	440	51	9518	7555	172	7541	63455
68	44943	332	2365	10656	7769	464	5244	71773
69	32067	150	15	11936	6214	85	5821	56288
70	21952	205	952	12730	4716	175	4028	44758
71	26259	238	1251	16785	5763	64	3260	53620
72	27422	224	2166	16490	3857	80	3146	53385
73	20195	225	1808	16682	4652	110	3237	46909
74	15733	171	3794	14219	4275	117	3372	41681
75	18732	134	2856	12625	3512	1444	1836	41139
76	21383	132	3595	10336	3801	94	3058	42399
77	23068	693	2972	14497	3905	142	2358	47635
78	37359	1232	3426	18683	2756	130	4116	67702
79	43174	3820	3972	22562	5028	266	3783	82605
80	54385	4385	3159	29138	6578	254	1876	99775
81	52818	3331	3826	41109	6483	251	501	108319
82	65287	3563	4094	39738	6438	196	260	119576
83	64639	3857	3074	28877	5304	239	174	106164
84	62058	4302	1945	24819	4588	237	91	98040
85	65539	3279	2946	22735	4781	138	194	99612
86	57283	2486	2932	23788	4182	85	209	90965
87	49809	2381	3664	24114	4041	65	226	84300
88	45071	2488	2804	24094	5009	30	307	79803
89	43993	2009	3504	22183	4776	15	204	76684
90	45111	1395	3961	22738	6149	23	250	79627
91	44588	1133	5274	22267	4788	31	256	78337
Total	1208724	43955	76124	565863	148397	5904	108064	2157031

Table 22. COD: Canada (M) landings (t), 1961-91, from Subdiv. 4Vn by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	1346	62	16	1578	912	41	479	4434
62	4541	114	34	2509	960	29	1027	9214
63	4488	102	110	3432	945	26	343	9446
64	6560	71	-	804	-	-	3607	11042
65	7838	148	110	3993	-	10	1326	13425
66	9500	131	105	4057	-	17	2041	15851
67	3917	222	-	2488	1398	44	1676	9745
68	5771	197	110	2599	960	163	555	10355
69	6834	112	-	3776	848	7	776	12353
70	7167	88	75	3536	495	99	1054	12514
71	8622	131	43	3972	696	2	745	14211
72	8253	178	248	3273	286	4	636	12878
73	6425	183	649	2018	404	14	1140	10833
74	7434	148	751	1390	568	1	2308	12600
75	7569	102	604	691	360	-	736	10062
76	12217	97	314	629	310	8	1188	14763
77	6447	560	199	1789	595	-	263	9853
78	6578	326	7	3049	466	9	686	11121
79	5067	420	5	4775	640	4	553	11464
80	8558	568	7	6738	1822	8	204	17905
81	5979	624	3	11103	741	13	46	18509
82	8473	772	168	7628	1360	5	4	18410
83	8017	1045	49	5389	924	11	15	15450
84	9674	1179	2	4976	1112	35	8	16986
85	9709	1162	-	4824	1409	16	4	17124
86	8935	1468	1	5944	1182	9	17	17556
87	5417	1296	14	6492	848	3	63	14133
88	5860	1404	15	5726	626	3	65	13699
89	9679	1179	29	3633	718	3	24	15265
90	7790	646	4	2033	591	4	25	11093
91	6127	46	55	1334	390	7	42	8416
Total	220792	15196	3727	116178	22566	595	21656	400710

Table 23. COD: Canada (M) landings (t), 1961-91, from Subdiv. 4Vs by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	1131	10	-	126	-	-	-	1267
62	1484	2	-	91	-	-	-	1577
63	1229	5	-	39	-	-	-	1273
64	1978	2	-	42	-	-	-	2022
65	5535	22	-	84	-	-	-	5641
66	5270	14	-	143	-	-	-	5427
67	5669	27	-	96	-	-	-	5792
68	6142	18	-	48	-	-	-	6208
69	3175	7	-	43	-	-	-	3225
70	2877	1	-	21	-	-	-	2899
71	4943	-	-	40	-	-	-	4983
72	7026	4	-	115	-	-	296	7441
73	2857	3	-	74	-	-	532	3466
74	2556	-	-	56	-	-	57	2669
75	1528	-	-	63	-	-	9	1600
76	3002	-	-	42	-	-	255	3399
77	2473	4	-	50	-	-	7	2534
78	8242	19	-	290	-	-	866	9417
79	13434	86	-	438	-	-	56	14014
80	23440	321	-	2116	-	-	-	25877
81	25532	171	-	3726	-	-	-	29429
82	27083	794	-	7069	-	-	-	34946
83	25777	671	-	4475	-	-	-	30023
84	35394	879	-	4120	-	-	1	40394
85	33205	718	-	7383	-	-	44	41350
86	28951	237	-	8157	120	-	93	37558
87	27033	311	11	6228	48	-	16	33647
88	22068	612	56	5377	649	-	50	28812
89	19682	400	40	5874	450	-	23	26469
90	18504	224	4	3704	95	-	53	22584
91	16565	229	-	3677	161	-	102	20734
Total	383885	5791	111	63807	1523	-	2460	457577

Table 24. COD: Canada (M) landings (t), 1961-91, from Div. 4W by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	12871	135	701	1348	1600	9	1738	18402
62	11762	117	375	1053	1383	31	1270	15991
63	7760	130	440	1260	951	29	1253	11823
64	7324	88	-	708	-	-	4110	12230
65	10289	159	116	1339	77	19	3632	15631
66	6602	38	182	1472	-	24	2829	11147
67	6433	71	51	1453	952	67	2549	11576
68	8291	89	401	1928	1042	236	3265	15252
69	4695	13	-	2647	920	781	2245	0598
70	3602	62	225	3039	778	10	1026	8742
71	4718	26	663	4173	646	-	921	11147
72	4709	7	732	3350	443	22	726	9989
73	4563	20	481	3173	575	-	508	9320
74	1247	5	1099	2512	457	3	590	5913
75	3555	11	742	2558	627	2	556	8051
76	919	14	703	2289	624	2	1204	5755
77	1853	68	642	3121	366	8	1027	7085
78	7280	839	758	4321	231	6	1230	14665
79	12320	3245	323	5577	248	7	740	22460
80	6047	3440	410	6032	556	5	702	17192
81	8733	2433	839	7660	569	15	282	20531
82	6291	1943	560	5877	778	2	53	15504
83	10855	1936	592	4451	601	1	74	18510
84	3519	2144	439	3067	445	1	33	9648
85	3746	1229	853	2758	628	-	30	9244
86	2724	600	1047	2704	371	-	23	7469
87	1741	538	714	2432	234	7	20	5686
88	1124	382	819	1708	455	2	21	4511
89	3282	323	598	2653	330	-	11	7197
90	2839	509	445	3762	318	3	25	7901
91	3563	371	582	3419	256	-	2	8193
Total	175257	20985	16532	93844	17461	589	32695	357363

Table 25. COD: Canada (M) landings (t), 1961-91, from Div. 4X and 5Y by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	1683	-	520	4368	4661	49	1160	12441
62	3038	-	645	4676	4571	109	1593	14632
63	3710	-	748	4258	5417	348	1312	15793
64	6747	-	-	1829	-	-	12516	21092
65	12541	-	765	4931	-	170	5962	24369
66	13049	-	851	4948	-	86	5614	24548
67	15120	95	-	4340	5205	61	3289	28110
68	16898	28	1854	4818	5767	65	1401	30831
69	12118	18	15	4750	4446	-	2768	24115
70	6425	54	652	5451	3443	66	1929	18020
71	5903	81	545	7736	4421	62	1552	20300
72	6696	35	1186	7974	3128	54	1459	20532
73	4444	19	678	10127	3673	96	1033	20070
74	4020	18	1944	9364	3250	113	416	19125
75	5153	21	1510	8393	2525	1442	535	19579
76	3720	21	2578	6473	2867	84	411	16154
77	6766	61	2131	8894	2944	134	1060	21990
78	7496	48	2661	10292	2059	115	1051	23722
79	7714	69	3644	10434	4140	255	2432	28688
80	10915	56	2742	11618	4200	241	963	30735
81	8603	91	2984	14096	5173	223	172	31342
82	11103	54	3366	13674	4300	189	203	32889
83	13085	205	2413	9390	3751	227	79	29150
84	12735	100	1467	7713	3007	201	28	25251
85	11325	170	2066	4961	2738	122	70	21452
86	10561	181	1655	4973	2489	76	36	19971
87	7998	236	2221	5747	2678	55	41	18976
88	8550	90	1298	6983	2994	25	98	20038
89	9362	72	1725	5705	2940	12	40	19856
90	8054	14	2599	8031	4887	16	81	23682
91	11719	24	2714	9100	3755	24	28	27364
Total	267251	1861	50177	226047	105429	4720	49332	704817

Table 26. COD: Canada (M) landings (t), 1961-91, from Div. 5Z by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	220	-	-	3	-	-	-	223
62	2394	-	-	10	-	-	-	2404
63	7824	-	-	2	-	-	6	7832
64	7099	-	-	5	-	-	4	7108
65	9047	-	-	1511	-	-	40	10598
66	12818	-	-	1925	-	-	854	15597
67	7039	25	-	1141	-	-	27	8232
68	7841	-	-	1263	-	-	23	9127
69	5245	-	-	720	-	-	32	5997
70	1881	-	-	683	-	-	19	2583
71	2073	-	-	864	-	-	42	2979
72	738	-	-	1778	-	-	29	2545
73	1906	-	-	1290	-	-	24	3220
74	476	-	-	897	-	-	1	1374
75	927	-	-	920	-	-	-	1847
76	1425	-	-	903	-	-	-	2328
77	5529	-	-	643	-	-	1	6173
78	7763	-	-	731	-	-	283	8777
79	4639	-	-	1338	-	-	2	5979
80	5425	-	-	2634	-	-	7	8066
81	3971	12	-	4524	-	-	1	8508
82	12337	-	-	5490	-	-	-	1782
83	6905	-	20	5172	28	-	6	1213
84	736	-	37	4943	24	-	21	576
85	7554	-	27	2809	6	-	46	1044
86	6112	-	229	2010	20	-	40	841
87	7620	-	704	3215	233	-	86	1185
88	7469	-	616	4300	285	-	73	1274
89	1988	35	1112	4318	338	-	106	789
90	7924	2	909	5208	258	-	66	1436
91	6614	48	1923	4737	226	-	82	13630
Total	161539	122	5577	65987	1418	-	1921	236564

Table 27. COD: Canada (M) landings (t), 1961-91, by hook and line gears by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	2490	126	2948	9029	3	14596
62	3469	91	2436	9247	10	15253
63	4377	39	2211	9675	2	16304
64	804	42	708	1829	5	3388
65	3993	84	1416	4931	1511	11935
66	4057	143	1472	4948	1925	12545
67	3886	96	2405	9545	1141	17073
68	3559	48	2970	10585	1263	18425
69	4624	43	3567	9196	720	18150
70	4031	21	3817	8894	683	17446
71	4668	40	4819	12157	864	22548
72	3559	115	3793	11102	1778	20347
73	2422	74	3748	13800	1290	21334
74	1958	56	2969	12614	897	18494
75	1051	63	3185	10918	920	16137
76	939	42	2913	9340	903	14137
77	2384	50	3487	11838	643	18402
78	3515	290	4552	12351	731	21439
79	5415	438	5825	14574	1338	27590
80	8560	2116	6588	15818	2634	35716
81	11844	3726	8229	19269	4524	47592
82	8988	7069	6655	17974	5490	46176
83	6313	4475	5052	13141	5200	34181
84	6088	4120	3512	10720	4967	29407
85	6233	7383	3386	7699	2815	27516
86	7126	8277	3075	7462	2030	27970
87	7340	6276	2666	8425	3448	28155
88	6352	6026	2163	9977	4585	29103
89	4351	6324	2983	8645	4656	26959
90	2624	3799	4080	12918	5466	28887
91	1724	3838	3675	12855	4963	27055
Total	138744	65330	11305	331476	67405	714260

Table 28. COD: Canada (M) landings (t), 1961-91, by longline by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	1578	126	1348	4368	3	7423
62	2509	91	1053	4676	10	8339
63	3432	39	1260	4258	2	8991
64	804	42	708	1829	5	3388
65	3993	84	1339	4931	1511	11858
66	4057	143	1472	4948	1925	12545
67	2488	96	1453	4340	1141	9518
68	2599	48	1928	4818	1263	10656
69	3776	43	2647	4750	720	11936
70	3536	21	3039	5451	683	12730
71	3972	40	4173	7736	864	16785
72	3273	115	3350	7974	1778	16490
73	2018	74	3173	10127	1290	16682
74	1390	56	2152	9364	897	14219
75	691	63	2558	8393	920	12625
76	629	42	2289	6473	903	10336
77	1789	50	3121	8894	643	14497
78	3049	290	4321	10292	731	18683
79	4775	438	5577	10434	1338	22562
80	6738	2116	6032	11618	2634	29138
81	11103	3726	7660	14096	4524	41109
82	7628	7069	5877	13674	5490	39738
83	5389	4475	4451	9390	5172	28877
84	4976	4120	3067	7713	4943	24819
85	4824	7383	2758	4961	2809	22735
86	5944	8157	2704	4973	2010	23788
87	6492	6228	2432	5747	3215	24114
88	5726	5377	1708	6983	4300	24094
89	3633	5874	2653	5705	4318	22183
90	2033	3704	3762	8031	5208	22738
91	1334	3677	3419	9100	4737	22267
Total	116178	63807	93844	226047	65987	565863

Table 29. COD: Canada (M) landings (t), 1961-91, by handline and jig by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X &	5Z	Total
61	912	-	1600	4661	-	7173
62	960	-	1383	4571	-	6914
63	945	-	951	5417	-	7313
64	-	-	-	-	-	-
65	-	-	77	-	-	77
66	-	-	-	-	-	-
67	1398	-	952	5205	-	7555
68	960	-	1042	5767	-	7769
69	848	-	920	4446	-	6214
70	495	-	778	3443	-	4716
71	696	-	646	4421	-	5763
72	286	-	443	3128	-	3857
73	404	-	575	3673	-	4652
74	568	-	457	3250	-	4275
75	360	-	627	2525	-	3512
76	310	-	624	2867	-	3801
77	595	-	366	2944	-	3905
78	466	-	231	2059	-	2756
79	640	-	248	4140	-	5028
80	1822	-	556	4200	-	6578
81	741	-	569	5173	-	6483
82	1360	-	778	4300	-	6438
83	924	-	601	3751	28	5304
84	1112	-	445	3007	24	4588
85	1409	-	628	2738	6	4781
86	1182	120	371	2489	20	4182
87	848	48	234	2678	233	4041
88	626	649	455	2994	285	5009
89	718	450	330	2940	338	4776
90	591	95	318	4887	258	6149
91	390	161	256	3755	226	4788
Total	22566	1523	17461	105429	1418	148397

Table 30. COD: Canada (M) landings (t) by longline, 1961-91, from Divisions of Subarea 3.

Year	3K	3L	3M	3N	3O	3P	Total
61	-	-	-	19	107	120	246
62	-	-	-	29	150	15	194
63	-	-	-	35	62	10	107
64	-	-	-	3	48	15	66
65	-	-	-	23	13	1	37
66	-	-	-	5	14	10	29
67	19	6	-	7	15	9	56
68	-	-	-	6	3	15	24
69	-	-	-	-	-	10	10
70	-	-	-	19	31	-	50
71	-	-	-	26	51	240	317
72	-	-	3	8	40	63	114
73	-	-	-	3	32	17	52
74	-	-	-	-	17	6	23
75	-	-	-	6	7	18	31
76	-	-	-	15	14	14	43
77	-	-	-	3	14	10	27
78	-	-	-	7	15	82	104
79	7	-	-	7	277	170	461
80	-	-	-	67	23	19	109
81	-	6	-	3	14	1572	1595
82	-	11	-	-	60	2078	2149
83	2	2	-	-	233	1134	1371
84	-	-	-	36	110	205	351
85	-	-	-	646	1591	334	2571
86	-	-	-	705	710	594	2009
87	108	1188	-	1340	798	935	4369
88	-	1302	-	1300	1385	787	4774
89	-	1768	-	568	680	1141	4157
90	16	2337	1	706	746	1363	5169
91	-	133	2	359	899	1048	2441
Total	152	6753	6	5951	8159	12035	33056

Table 31. HADDOCK: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet) < 35	35-45	45-65	> 65	Total
3L	-	-	-	5	5
3N	-	2	24	10	36
3O	-	6	8	36	50
3P	-	2	13	11	26
4Vn	26	49	5	-	80
4Vs	12	187	81	9	289
4W	378	1198	167	-	1743
4X	494	2892	591	2	3979
5Y	-	7	1	-	8
5Ze	6	766	183	22	977
Total	916	5109	1073	95	7193

Table 32. HADDOCK: mean annual landings (t) in Scotia-Fundy Region by boats using handline and jig, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
4Vn	1	1	-	-	2
4Vs	-	1	-	-	1
4W	7	3	-	-	10
4X	156	157	-	-	313
5Ze	-	1	-	-	1
Total	164	163	-	-	327

Table 33. HADDOCK: mean annual landings (t) in Scotia-Fundy Region by boats using longlines, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3L	-	-	-	5	5
3N	-	2	24	10	36
3O	-	6	8	36	50
3P	-	2	13	11	26
4Vn	25	48	5	-	78
4Vs	12	186	81	9	288
4W	371	1195	167	-	1733
4X	338	2735	591	2	3666
5Y	-	7	1	-	8
5Ze	6	765	183	22	976
Total	752	4946	1073	95	6866

Table 34. HADDOCK: mean annual landings (t), 1987-91, in Scotia-Fundy Region by hook and line gear type and month. (% - percentage over months within category.)

Month	Longline		Handline and Jig		Totals	
	t	%	t	%	t	%
January	735	11	-	-	735	10
February	805	12	-	-	805	11
March	457	7	-	-	457	6
April	289	4	-	-	289	4
May	180	2	2	1	182	2
June	423	6	58	18	481	7
July	815	12	96	29	911	13
August	947	14	87	26	1034	14
September	928	13	57	17	985	14
October	694	10	24	7	718	10
November	325	5	5	2	330	5
December	259	4	1	+	260	4
Totals	6857	100	330	100	7187	100

Table 35. HADDOCK: Canada (M) landings (t), 1961-91, from Div. 4VWX + Subarea 5 by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	26487	52	212	3183	1414	855	448	32651
62	27705	76	138	2995	988	434	522	32858
63	32405	147	353	3327	1316	283	503	38334
64	40304	62	-	1221	-	-	7618	49205
65	40946	66	264	3442	-	143	1349	46210
66	54308	19	251	2825	-	114	985	58502
67	49805	286	2	2329	603	87	545	53657
68	43794	208	268	2439	636	80	437	47862
69	36814	366	2	2739	482	-	873	41276
70	18761	329	115	3516	564	15	471	23771
71	22433	302	93	3973	481	4	247	27533
72	10195	157	97	4771	505	3	327	16055
73	10025	80	268	6625	383	3	223	17607
74	6785	81	220	6791	259	8	146	14290
75	12475	35	195	5938	279	7	128	19057
76	12166	24	436	5591	719	6	134	19076
77	19468	102	381	4889	413	12	387	25652
78	30070	318	631	7312	874	35	1189	40429
79	25498	214	454	5852	857	14	120	33009
80	41560	330	899	7210	1305	19	317	51640
81	38826	591	936	9360	934	10	37	50694
82	32359	1039	957	9040	912	5	36	44348
83	26777	589	799	9853	819	12	70	38919
84	20426	458	210	8052	510	6	0	29662
85	23540	432	127	5477	369	11	29	29985
86	25416	956	152	6557	497	6	142	33726
87	13900	354	294	6376	300	2	44	21270
88	14786	402	189	5163	134	5	51	20730
89	10002	477	221	5751	235	4	52	16742
90	8683	394	355	7381	406	-	63	17282
91	9748	109	385	9121	550	-	25	19938
Total	768647	9055	9904	169099	17744	2183	17518	1011970

Table 36. HADDOCK: Canada (M) landings (t), 1961-91, from Subdiv. 4Vn by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gilnet	Longline	Handline and Jig	Trap	Misc.	Total
61	256	19	-	300	58	359	58	1050
62	347	18	3	412	56	20	97	953
63	535	50	10	411	24	52	95	1177
64	750	1	-	-	-	-	-	751
65	125	14	8	89	-	-	10	246
66	59	4	7	41	-	-	10	121
67	58	16	-	39	15	22	23	173
68	35	12	3	29	10	1	15	105
69	61	51	-	86	6	-	17	221
70	141	9	13	131	14	2	62	372
71	202	19	5	152	13	-	42	433
72	134	78	34	80	4	-	25	355
73	75	6	120	42	1	-	21	265
74	54	12	45	25	1	-	12	149
75	39	4	9	12	-	-	2	66
76	26	3	1	5	-	-	3	38
77	132	11	2	4	-	-	-	149
78	99	13	-	-	-	-	1	113
79	118	46	-	4	1	-	6	175
80	91	68	-	19	6	-	-	184
81	38	53	-	15	1	-	3	110
82	92	53	7	10	3	-	-	165
83	100	54	1	20	8	-	-	183
84	154	84	-	34	2	2	-	276
85	255	165	-	60	15	-	-	495
86	327	326	-	157	4	-	2	816
87	124	199	-	121	3	-	-	447
88	146	148	-	182	1	-	3	480
89	238	111	1	47	3	-	-	400
90	51	18	-	19	-	-	-	88
91	15	4	10	18	-	-	-	47
Total	4877	1669	279	2564	249	458	507	10603

Table 37. HADDOCK: Canada (M) landings (t), 1961-91, from Subdiv. 4Vs by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	838	4	-	1	-	-	-	843
62	1231	1	-	2	-	-	-	1234
63	1039	-	-	-	-	-	-	1039
64	416	12	-	17	-	-	205	650
65	1179	3	-	8	-	-	-	1190
66	1445	2	-	-	-	-	-	1447
67	849	3	-	-	-	-	-	852
68	1084	1	-	-	-	-	-	1085
69	661	-	-	1	-	-	-	662
70	617	-	-	-	-	-	-	617
71	1050	-	-	1	-	-	-	1051
72	399	1	-	2	-	-	-	402
73	220	-	-	-	-	-	-	220
74	139	-	-	2	-	-	-	141
75	98	-	-	4	-	-	-	102
76	49	-	-	1	-	-	-	50
77	128	-	-	2	-	-	-	130
78	321	-	-	7	-	-	26	354
79	616	-	-	11	-	-	1	628
80	1663	4	-	1	-	-	-	1668
81	1480	8	-	18	-	-	-	1506
82	1944	160	-	116	-	-	-	2220
83	1305	72	-	101	-	-	-	1478
84	2902	15	-	141	-	-	-	3058
85	6858	5	-	176	-	-	-	7039
86	7622	17	-	211	2	-	30	7882
87	1109	55	-	182	-	-	1	1347
88	1466	103	-	312	2	-	8	
89	2378	115	1	396	2	-	15	2907
90	1856	125	-	275	1	-	9	2266
91	635	30	-	284	-	-	9	958
Total	43597	736	1	2272	7	-	304	46917

Table 38. HADDOCK: Canada (M) landings (t), 1961-91, from Div. 4W by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	21077	29	73	191	184	396	63	22013
62	14729	57	28	245	139	328	40	15566
63	10425	97	16	100	75	146	114	10973
64	9246	49	-	54	-	-	429	9778
65	6544	49	13	251	-	12	117	6986
66	7812	13	19	192	-	4	89	8129
67	6747	55	2	84	26	2	121	7037
68	7781	110	42	267	27	13	152	8392
69	7774	113	-	202	20	-	161	8270
70	4258	105	14	348	11	1	17	4754
71	7360	85	9	439	12	-	25	7930
72	1589	20	4	443	3	3	34	2096
73	2098	35	5	627	5	-	60	2830
74	332	16	9	466	-	-	83	906
75	445	9	10	867	4	-	58	1393
76	303	9	31	789	5	-	61	1198
77	1904	17	42	757	2	1	122	2845
78	2485	54	58	1062	9	1	289	3958
79	921	18	55	1214	18	-	63	2289
80	9705	151	102	877	18	-	105	10958
81	10735	400	80	1289	10	2	25	12541
82	9942	704	117	1441	34	-	10	12248
83	5486	410	127	1132	25	1	25	7206
84	2817	348	25	732	16	-	-	3938
85	2002	247	16	586	10	-	1	2862
86	4768	467	55	717	20	-	78	6105
87	421	68	42	446	11	-	5	993
88	345	120	77	626	6	-	2	1176
89	1488	184	35	1863	8	-	1	3579
90	892	242	40	2847	9	-	47	3077
91	726	53	46	2968	13	-	-	3806
Total	163157	4334	1192	24122	720	910	2397	195832

Table 39. HADDOCK: Canada (M) landings (t), 1961-91, from Div. 4X and 5Y by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	4183	-	139	2691	1172	100	327	8612
62	7937	-	107	2336	793	86	385	11644
63	12031	-	327	2816	1217	85	290	16766
64	18268	-	-	1150	-	-	6983	26401
65	18236	-	243	3073	-	131	1216	22899
66	27220	-	225	2529	-	109	562	30645
67	29228	211	-	2110	562	63	381	32555
68	25693	85	223	2032	599	66	259	28957
69	24363	202	2	2428	456	-	682	28133
70	11845	215	88	2961	539	12	390	16050
71	12346	198	79	3227	456	4	179	16489
72	7662	58	59	4048	498	-	268	12593
73	6171	39	143	5854	377	3	142	12729
74	5886	53	166	6211	258	8	50	12632
75	10646	22	176	4944	275	7	68	16138
76	10596	12	389	4642	714	6	70	16429
77	14490	74	337	4032	411	11	264	19619
78	17660	251	573	6072	865	34	581	26036
79	19038	150	399	4349	838	14	49	24837
80	20669	107	797	5723	1281	19	211	28807
81	21929	130	856	7023	923	8	9	30878
82	16218	122	833	6764	875	5	26	24843
83	17494	53	668	7787	786	11	45	26844
84	13929	11	184	6307	492	4	-	20927
85	11583	15	110	4028	336	11	22	16105
86	9912	146	87	4877	469	6	11	15508
87	8665	32	215	4582	284	2	-	13780
88	7629	31	77	3350	125	5	23	11240
89	3888	44	152	2465	219	4	23	6795
90	3445	3	277	3388	396	-	-	7509
91	4335	10	238	4536	537	-	7	9663
Total	423195	2274	8169	128335	16753	814	13523	593063

Table 40. HADDOCK: Canada (M) landings (t), 1961-91, from Div. 5Z by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	133	-	-	-	-	-	-	133
62	3461	-	-	-	-	-	-	3461
63	8375	-	-	-	-	-	4	8379
64	11624	-	-	-	-	-	1	11625
65	14862	-	-	21	-	-	6	14889
66	17772	-	-	63	-	-	324	18159
67	12923	1	-	96	-	-	20	13040
68	9201	-	-	111	-	-	11	9323
69	3955	-	-	22	-	-	13	3990
70	1900	-	-	76	-	-	2	1978
71	1475	-	-	154	-	-	1	1630
72	411	-	-	198	-	-	-	609
73	1461	-	-	102	-	-	-	1563
74	374	-	-	87	-	-	1	462
75	1247	-	-	111	-	-	-	1358
76	1192	-	15	154	-	-	-	1361
77	2814	-	-	94	-	-	1	2909
78	9505	-	-	171	-	-	292	9968
79	4805	-	-	274	-	-	1	5080
80	9432	-	-	590	-	-	1	10023
81	4644	-	-	1015	-	-	-	5659
82	4163	-	-	709	-	-	-	4872
83	2392	-	3	813	-	-	-	3208
84	624	-	1	838	-	-	-	1463
85	2842	-	1	627	8	-	6	3484
86	2787	-	10	595	2	-	21	3415
87	3581	-	37	1045	2	-	38	4703
88	5200	-	35	693	-	-	15	5943
89	2010	23	32	980	3	-	13	3061
90	2439	6	38	852	-	-	7	3342
91	4037	12	91	1315	-	-	9	5464
Total	151641	42	263	11806	15	-	787	164554

Table 41. HADDOCK: Canada (M) landings (t), 1961-91, by hook and line gears by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	358	1	375	3863	-	4597
62	468	2	384	3129	-	3983
63	435	-	175	4033	-	4643
64	-	17	54	1150	-	1221
65	89	8	251	3073	21	3442
66	41	-	192	2529	63	2825
67	54	-	110	2672	96	2932
68	39	-	294	2631	111	3075
69	92	1	222	2884	22	3221
70	145	-	359	3500	76	4080
71	165	1	451	3683	154	4454
72	84	2	446	4546	198	5276
73	43	-	632	6231	102	7008
74	26	2	466	6469	87	7050
75	12	4	871	5219	111	6217
76	5	1	794	5356	154	6310
77	4	2	759	4443	94	5302
78	-	7	1071	6937	171	8186
79	5	11	1232	5187	274	6709
80	25	1	895	7004	590	8515
81	16	18	1299	7946	1015	10294
82	13	116	1475	7639	709	9952
83	28	101	1157	8573	813	10672
84	36	141	748	6799	838	8562
85	75	176	596	4364	635	5846
86	161	213	737	5346	597	7054
87	124	182	457	4866	1047	6676
88	183	314	632	3475	693	5297
89	50	398	1871	2684	983	5986
90	19	276	2856	3784	852	7787
91	18	284	2981	5073	1315	9671
Total	2813	2279	24842	145088	11821	186843

Table 42. HADDOCK: Canada (M) landings (t), 1961-91, by longline by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	300	1	191	2691	-	3183
62	412	2	245	2336	-	2995
63	411	-	100	2816	-	3327
64	-	17	54	1150	-	1221
65	89	8	251	3073	21	3442
66	41	-	192	2529	63	2825
67	39	-	84	2110	96	2329
68	29	-	267	2032	111	2439
69	86	1	202	2428	22	2739
70	131	-	348	2961	76	3516
71	152	1	439	3227	154	3973
72	80	2	443	4048	198	4771
73	42	-	627	5854	102	6625
74	25	2	466	6211	87	6791
75	12	4	867	4944	111	5538
76	5	1	789	4642	154	5591
77	4	2	757	4032	94	4889
78	-	7	1062	6072	171	7312
79	4	11	1214	4349	274	5852
80	19	1	877	5723	590	7210
81	15	18	1289	7023	1015	9360
82	10	116	1441	6764	709	9040
83	20	101	1132	7787	813	9853
84	34	141	732	6307	838	8052
85	60	176	586	4028	627	5477
86	157	211	717	4877	595	6557
87	121	182	446	4582	1045	6376
88	182	312	626	3350	693	5163
89	47	396	1863	2465	980	5751
90	19	275	2847	3388	852	7381
91	18	284	2968	4536	1315	9121
Total	2564	2272	24122	128335	11806	169099

Table 43. HADDOCK: Canada (M) landings (t), 1961-91, by longline by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	58	-	184	1172	-	1414
62	56	-	139	793	-	988
63	24	-	75	1217	-	1316
64	-	-	-	-	-	-
65	-	-	-	-	-	-
66	-	-	-	-	-	-
67	15	-	26	562	-	603
68	10	-	27	599	-	636
69	6	-	20	456	-	482
70	14	-	11	539	-	564
71	13	-	12	456	-	481
72	4	-	3	498	-	505
73	1	-	5	377	-	383
74	1	-	-	258	-	259
75	-	-	4	275	-	279
76	-	-	5	714	-	719
77	-	-	2	411	-	413
78	-	-	9	865	-	874
79	1	-	18	838	-	857
80	6	-	18	1281	-	1305
81	1	-	10	923	-	934
82	3	-	34	875	-	912
83	8	-	25	786	-	819
84	2	-	16	492	-	510
85	15	-	10	336	8	369
86	4	2	20	469	2	497
87	3	-	11	284	2	300
88	1	2	6	125	-	134
89	3	2	8	219	3	235
90	-	1	9	396	-	406
91	-	-	13	537	-	550
Total	249	7	720	16753	15	17744

Table 44. HALIBUT: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision. (Tonnages taken by handline and jig given in parentheses, balance was taken by longline.)

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3K	-	-	-	3	3
3L	-	-	-	48	48
3M	-	-	-	11	11
3N	-	13	78	159	250
3O	-	7	35	112	154
3P	-	3	3	66	72
4R	-	1	1	-	2
4S	-	-	-	3	3
4T	1	-	-	-	1
4Vn	13	15	1	-	29
4Vs	2	56	88	65	211
4W	52 (1)	217	75	1	345 (1)
4X	37 (5)	291 (6)	44	-	372 (11)
5Y	-	1	-	-	1
5Ze	-	35	9	-	44
Total	105 (6)	639 (6)	334	468	1546 (12)

Table 45. HALIBUT: mean annual landings (t), 1987-91, in Scotia-Fundy Region by hook and line gear type and month (% - percentage over months within category. Distant waters - Subarea 3 and Division 4R. Home waters - Division 4TVWX and Subarea 5. Handline and jig landings all assigned to home waters.)

	Longline				Handline and Jig			
Month	Distant Waters		Home Waters				Totals	
	t	%	t	%	t	%	t	%
January	10	2	53	5	-	-	63	4
February	33	6	51	5	-	-	84	5
March	64	12	53	5	-	-	117	7
April	76	14	75	7	-	-	151	10
May	84	15	116	12	1	6	201	13
June	80	14	184	18	4	23	268	17
July	65	12	190	19	4	23	259	16
August	68	12	129	13	4	23	201	13
September	28	5	88	9	3	19	119	7
October	22	4	51	5	1	6	74	5
November	17	3	14	1	-	-	31	2
December	6	1	9	1	-	-	15	1
Totals	553	100	1013	100	17	100	1583	100

Table 46. HALIBUT: Canada (M) landings (t), 1961-1991, from Div. 4VWX + Subarea 5 by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	307	-	5	1105	62	-	23	1502
62	426	2	5	1139	70	2	47	1691
63	416	6	1	1006	66	1	38	1534
64	558	6	-	737	-	-	262	1563
65	544	6	-	1051	5	1	90	1697
66	74	-	-	980	-	-	39	1093
67	328	3	-	1213	24	1	33	1602
68	355	2	1	884	60	-	32	1334
69	263	3	-	776	33	-	32	1107
70	230	1	1	603	30	-	16	881
71	301	2	-	619	30	-	17	969
72	111	1	1	670	25	-	40	848
73	101	3	-	675	12	-	8	799
74	52	1	2	560	14	-	32	661
75	114	3	1	528	9	-	5	660
76	153	1	4	548	14	-	10	730
77	172	1	12	491	14	-	38	728
78	239	6	12	684	27	-	122	1090
79	285	5	16	834	47	26	17	1230
80	377	2	16	1036	39	3	22	1495
81	292	2	19	1088	52	-	15	1468
82	314	-	16	1400	61	-	4	1795
83	270	-	33	1581	53	2	2	1941
84	150	-	14	1787	50	-	1	2002
85	166	5	16	1756	30	-	-	1973
86	92	-	52	1451	19	2	-	1616
87	52	5	14	1067	23	-	-	1161
88	99	3	8	1214	9	-	-	1333
89	62	2	8	1131	9	-	-	1212
90	123	-	5	1017	12	-	-	1157
91	115	-	7	880	11	-	-	1013
Total	7141	71	269	30511	910	38	945	39885

Table 47. HALIBUT: Canada (M) landings (t), 1961-1991, from Div. 4Vn by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	5	-	-	8	4	-	3	20
62	19	-	-	31	4	-	2	56
63	8	-	-	29	5	-	2	44
64	29	-	-	9	-	-	37	75
65	29	-	-	37	-	-	2	68
66	1	-	-	7	-	-	-	8
67	9	-	-	14	-	-	1	24
68	4	-	-	4	1	-	-	9
69	5	1	-	9	-	-	1	16
70	11	-	-	8	-	-	-	19
71	4	-	-	5	-	-	-	9
72	6	-	-	6	-	-	-	12
73	3	-	-	-	-	-	-	3
74	5	-	1	-	-	-	5	11
75	5	-	-	-	-	-	-	5
76	3	-	-	2	-	-	-	5
77	11	-	-	1	-	-	-	12
78	10	-	-	-	-	-	3	13
79	7	-	-	3	-	-	-	10
80	6	-	-	5	-	-	-	11
81	4	-	-	14	-	-	-	18
82	4	-	-	7	4	-	-	15
83	3	-	-	12	-	-	-	15
84	-	-	-	12	-	-	-	12
85	1	-	-	11	2	-	-	14
86	1	-	-	39	-	1	-	41
87	-	-	-	41	-	-	-	41
88	1	-	-	43	-	-	-	44
89	1	-	-	26	-	-	-	27
90	5	-	-	33	-	-	-	38
91	7	-	-	15	-	-	-	22
Total	207	1	1	431	20	1	56	717

Table 48. HALIBUT: Canada (M) landings (t), 1961-1991, from Div. 4Vs by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	17	-	-	366	-	-	-	383
62	36	-	-	194	-	-	-	230
63	30	-	-	127	-	-	-	157
64	29	-	-	186	-	-	-	215
65	55	-	-	327	-	-	-	382
66	25	-	-	419	-	-	-	444
67	19	-	-	315	-	-	-	334
68	36	-	-	133	-	-	-	169
69	15	-	-	109	-	-	-	124
70	16	-	-	69	-	-	-	85
71	31	-	-	163	-	-	-	194
72	14	-	-	138	-	-	-	152
73	4	-	-	132	-	-	-	136
74	13	-	-	85	-	-	-	98
75	14	-	-	75	-	-	-	89
76	33	-	-	92	-	-	1	126
77	24	-	-	40	-	-	-	64
78	76	-	-	69	-	-	57	202
79	76	-	-	130	-	-	-	206
80	107	-	-	190	-	-	-	297
81	73	-	-	139	-	-	-	212
82	126	-	-	166	-	-	-	292
83	86	-	-	301	-	-	-	387
84	62	-	-	369	-	-	1	432
85	117	-	-	438	-	-	-	555
86	60	-	-	411	-	-	-	471
87	20	-	-	244	-	-	-	264
88	4	-	-	236	-	-	-	240
89	7	-	-	255	-	-	-	262
90	25	-	-	206	-	-	-	231
91	25	-	-	173	-	-	-	198
Total	1275	-	-	6297	-	-	59	7631

Table 49. HALIBUT: Canada (M) landings (t), 1961-1991, from Div. 4W by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	285	-	5	194	13	-	13	510
62	330	2	3	234	6	-	21	596
63	248	6	-	161	4	-	-	419
64	204	6	-	60	-	-	47	317
65	181	6	-	218	5	-	24	434
66	21	-	-	194	-	-	8	223
67	98	2	-	211	3	-	6	320
68	138	2	-	209	7	-	6	362
69	101	2	-	314	4	-	10	431
70	100	-	1	241	4	-	1	347
71	140	1	-	171	-	-	2	314
72	43	1	-	136	-	-	13	193
73	38	3	-	179	1	-	4	225
74	5	1	-	108	-	-	13	127
75	17	3	-	136	1	-	-	157
76	6	1	-	138	-	-	2	147
77	33	1	-	131	-	-	11	176
78	55	5	1	179	-	-	24	264
79	44	5	6	296	-	-	5	356
80	100	2	1	245	-	-	6	354
81	84	2	4	261	5	-	-	356
82	63	-	1	399	5	-	1	469
83	64	-	6	460	14	-	-	544
84	16	-	6	548	2	-	-	572
85	4	-	2	590	10	-	-	606
86	2	-	18	550	2	-	-	572
87	2	1	2	343	1	-	-	349
88	9	3	2	346	-	-	-	360
89	5	2	7	400	1	-	-	415
90	-	-	2	363	1	-	-	366
91	1	-	2	362	-	-	-	365
Total	2437	57	69	8377	89	-	217	11246

Table 50. HALIBUT: Canada (M) landings (t), 1961-1991, from Div. 4X and 5Y by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	-	-	-	532	45	-	7	584
62	11	-	2	675	60	2	24	774
63	48	-	1	684	57	1	35	826
64	183	-	-	475	-	-	178	836
65	169	-	-	426	-	1	64	660
66	17	-	-	261	-	-	31	309
67	111	1	-	378	21	1	26	538
68	120	-	1	409	52	-	26	608
69	113	-	-	277	29	-	21	440
70	86	1	-	235	26	-	15	363
71	109	1	-	260	30	-	15	415
72	47	-	1	354	25	-	27	454
73	50	-	-	332	11	-	4	397
74	24	-	1	343	14	-	14	396
75	69	-	1	295	8	-	5	378
76	95	-	4	299	14	-	7	419
77	87	-	12	305	14	-	27	445
78	70	1	11	414	27	-	38	561
79	139	-	10	396	47	26	12	630
80	130	-	15	542	39	3	16	745
81	106	-	15	583	47	-	15	766
82	95	-	15	742	52	-	3	907
83	103	-	27	709	39	2	2	882
84	70	-	8	810	48	-	-	936
85	37	5	14	668	18	-	-	742
86	25	-	34	425	17	1	-	502
87	27	4	12	420	21	-	-	484
88	60	-	6	533	9	-	-	608
89	48	-	1	386	8	-	-	443
90	74	-	3	365	11	-	-	453
91	76	-	5	278	11	-	-	370
Total	2399	13	199	13811	800	37	612	17871

Table 51. HALIBUT: Canada (M) landings (t), 1961-91, from Div. 5Z by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	-	-	-	5	-	-	-	5
62	30	-	-	5	-	-	-	35
63	82	-	-	5	-	-	1	88
64	113	-	-	7	-	-	-	120
65	110	-	-	43	-	-	-	153
66	10	-	-	99	-	-	-	109
67	91	-	-	295	-	-	-	386
68	57	-	-	129	-	-	-	186
69	29	-	-	67	-	-	-	96
70	17	-	-	50	-	-	-	67
71	17	-	-	20	-	-	-	37
72	1	-	-	36	-	-	-	37
73	6	-	-	32	-	-	-	38
74	5	-	-	24	-	-	-	29
75	9	-	-	22	-	-	-	31
76	16	-	-	17	-	-	-	33
77	17	-	-	14	-	-	-	31
78	28	-	-	22	-	-	-	50
79	19	-	-	9	-	-	-	28
80	34	-	-	54	-	-	-	88
81	25	-	-	91	-	-	-	116
82	26	-	-	86	-	-	-	112
83	14	-	-	99	-	-	-	113
84	2	-	-	48	-	-	-	50
85	7	-	-	49	-	-	-	56
86	4	-	-	26	-	-	-	30
87	3	-	-	19	1	-	-	23
88	25	-	-	56	-	-	-	81
89	1	-	-	64	-	-	-	65
90	19	-	-	50	-	-	-	69
91	6	-	-	52	-	-	-	58
Total	823	-	-	1595	1	-	1	2420

Table 52. HALIBUT: Canada (M) landings (t), 1961-91, by hook and line gears by Subdivision/Division.

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	12	366	207	577	5	1167
62	35	194	240	735	5	1209
63	34	127	165	741	5	1072
64	9	186	60	475	7	737
65	37	327	223	426	43	1056
66	7	419	194	261	99	980
67	14	315	214	399	295	1237
68	5	133	216	461	129	944
69	9	109	318	306	67	809
70	8	69	245	261	50	633
71	5	163	171	290	20	649
72	6	138	136	379	36	695
73	-	132	180	343	32	687
74	-	85	108	357	24	574
75	-	75	137	303	22	537
76	1	92	138	313	17	561
77	1	40	131	319	14	505
78	-	69	179	441	22	711
79	3	130	296	443	9	881
80	5	190	245	581	54	1075
81	14	139	266	630	91	1140
82	11	166	404	794	86	1461
83	12	301	474	748	99	1634
84	12	369	550	858	48	1837
85	13	438	600	686	49	1786
86	39	411	552	442	26	1470
87	41	244	344	441	20	1090
88	43	236	346	542	56	1223
89	26	255	401	394	64	1140
90	33	206	364	376	50	1029
91	15	173	362	289	52	891
Total	450	6297	8466	14611	1596	31420

Table 53. HALIBUT: Canada (M) landings (t), 1961-91, by longline by Subdivision/Division.

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	8	366	194	532	5	1105
62	31	194	234	675	5	1139
63	29	127	161	684	5	1006
64	9	186	60	475	7	737
65	37	327	218	426	43	1051
66	7	419	194	261	99	980
67	14	315	211	378	295	1213
68	4	133	209	409	129	884
69	9	109	314	277	67	776
70	8	69	241	235	50	603
71	5	163	171	260	20	619
72	6	138	136	354	36	670
73	-	132	179	332	32	675
74	-	85	108	343	24	560
75	-	75	136	295	22	528
76	1	92	138	299	17	547
77	1	40	131	305	14	491
78	-	69	179	414	22	684
79	3	130	296	396	9	834
80	5	190	245	542	54	1036
81	14	139	261	583	91	1088
82	7	166	399	742	86	1400
83	12	301	460	709	99	1581
84	12	369	548	810	48	1787
85	11	438	590	668	49	1756
86	39	411	550	425	26	1451
87	41	244	343	420	19	1067
88	43	236	346	533	56	1214
89	26	255	400	386	64	1131
90	33	206	363	365	50	1071
91	15	173	362	278	52	880
Total	430	6297	8377	13811	1595	30510

Table 54. HALIBUT: Canada (M) landings (t), 1961-91, by handline and jig by Subdivision/Division.

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	4	-	13	45	-	62
62	4	-	6	60	-	70
63	5	-	4	57	-	66
64	-	-	-	-	-	-
65	-	-	5	-	-	5
66	-	-	-	-	-	-
67	-	-	3	21	-	24
68	1	-	7	52	-	60
69	-	-	4	29	-	33
70	-	-	4	26	-	30
71	-	-	-	30	-	30
72	-	-	-	25	-	25
73	-	-	1	11	-	12
74	-	-	-	14	-	14
75	-	-	1	8	-	9
76	-	-	-	14	-	14
77	-	-	-	14	-	14
78	-	-	-	27	-	27
79	-	-	-	47	-	47
80	-	-	.	39	-	39
81	-	-	5	47	-	52
82	4	-	5	52	-	61
83	-	-	14	39	-	53
84	-	-	2	48	-	50
85	2	-	10	18	-	30
86	-	-	2	17	-	19
87	-	-	1	21	1	23
88	-	-	-	9	-	9
89	-	-	1	8	-	9
90	-	-	1	11	-	12
91	-	-	-	11	-	11
Total	20	-	89	800	1	910

Table 55. HALIBUT: Canada (M) landings (t) by longline, 1961-91, from Divisions of Subarea 3.

Year	3K	3L	3M	3N	3O	3P	Total
61	-	-	-	136	386	318	840
62	-	-	-	52	286	79	417
63	-	-	-	114	218	58	390
64	-	-	-	26	146	12	184
65	-	-	-	35	43	9	87
66	-	-	-	31	88	51	170
67	-	-	-	64	66	47	177
68	-	-	-	48	107	39	194
69	-	-	-	-	-	36	36
70	-	-	-	106	120	11	237
71	-	-	-	110	126	69	305
72	-	-	3	22	78	68	171
73	-	-	-	33	119	48	200
74	-	-	-	-	90	52	142
75	-	-	-	32	81	34	147
76	-	-	-	39	55	13	107
77	-	-	-	11	50	24	85
78	-	-	-	18	28	25	71
79	-	-	-	14	28	10	52
80	-	-	-	18	27	16	61
81	-	-	-	8	23	18	49
82	-	-	-	1	23	35	59
83	-	-	-	16	44	45	105
84	-	1	2	189	227	115	534
85	-	-	-	201	292	160	653
86	-	-	-	145	290	113	548
87	16	25	2	300	117	59	519
88	-	64	20	395	178	55	712
89	-	75	28	274	149	101	627
90	-	26	9	198	241	120	594
91	-	53	4	80	124	62	323
Total	16	244	68	2716	3850	1902	8796

Table 56. POLLOCK: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
4Vn	5	22	1	-	28
4Vs	3	241	93	3	340
4W	87	219	27	-	333
4X	602	1715	27	-	2344
5Y	-	21	-	-	21
5Ze	1	82	7	-	90
Total	698	2300	155	3	3156

Table 57. POLLOCK: mean annual landings (t) in Scotia-Fundy Region by boats using handline and jig, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
4Vn	2	9	-	-	11
4Vs	1	99	57	-	157
4W	19	34	20	-	73
4X	469	1359	8	-	1836
5Y	-	20	-	-	20
5Ze	1	19	-	-	20
Total	492	1540	85	-	2117

Table 58. POLLOCK: mean annual landings (t) in Scotia-Fundy Region by boats using longlines, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
4Vn	3	13	1	-	17
4Vs	2	142	36	3	183
4W	68	185	7	-	260
4X	133	356	19	-	508
5Y	-	1	-	-	1
5Ze	-	63	7	-	70
Total	206	760	70	3	1039

Table 59. POLLOCK: Canada (M) landings (t), 1961-91, from Div. 4VWX + Subarea 5 by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	13993	35	459	4199	4218	1273	2115	26292
62	19658	55	1442	2519	5297	628	2181	31780
63	17259	40	324	4464	5080	517	1298	28982
64	21761	35	-	2286	-	-	5906	29988
65	24174	-	74	172	-	304	2549	27273
66	15872	-	52	140	-	109	2045	18218
67	15719	2	-	64	1193	107	442	17527
68	15246	-	183	143	1701	39	711	18023
69	12540	1	3	205	1934	33	1231	15947
70	9018	3	258	103	1061	18	289	10750
71	10029	13	270	197	992	60	183	11744
72	15943	-	484	383	803	64	336	18013
73	23184	-	501	881	1997	60	344	26967
74	20427	-	2211	393	1770	31	118	24950
75	20184	-	4146	348	1176	9	652	26515
76	15869	-	5060	798	1474	32	323	23556
77	19752	6	2866	584	790	83	551	24632
78	20482	4	4196	412	390	277	873	26634
79	21783	-	4840	692	1554	58	541	29468
80	26180	6	3709	2750	2086	30	770	35531
81	29667	7	7684	831	1171	39	97	39496
82	26392	11	8029	650	1950	153	181	37366
83	24303	4	6149	606	1413	74	12	32561
84	25930	5	4974	793	1218	56	35	33011
85	29780	3	8680	831	2120	60	40	41514
86	26831	35	8700	1273	4343	36	212	41430
87	29290	37	10230	1027	2849	21	60	43514
88	28665	72	9223	953	1864	84	90	40961
89	25924	59	10765	984	1650	3	28	39413
90	21385	85	10990	1014	2265	5	92	35836
91	25645	86	8339	1295	1955	2	79	37401
Total	652885	604	124851	31990	56314	4265	24384	895293

Table 60. POLLOCK: Canada (M) landings (t), 1961-91, from Subdiv. 4Vn by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	50	11	16	181	165	234	102	759
62	139	8	20	130	128	73	46	544
63	100	9	28	191	32	6	22	388
64	141	5	-	7	-	-	141	294
65	39	-	18	34	-	1	27	119
66	12	-	9	17	-	6	33	77
67	13	-	-	10	13	68	29	133
68	12	-	23	7	41	18	3	104
69	18	-	-	21	10	-	17	66
70	16	-	13	4	-	-	4	37
71	53	-	2	11	2	-	18	86
72	7	-	12	10	3	6	9	47
73	108	-	20	4	2	-	4	138
74	28	-	7	7	6	-	7	55
75	92	-	1	6	2	-	2	103
76	25	-	5	3	2	8	1	44
77	158	1	-	1	-	-	4	164
78	48	4	-	-	1	1	-	54
79	259	-	-	1	-	-	23	283
80	383	-	-	-	4	-	6	393
81	166	-	-	3	-	-	-	169
82	144	-	-	1	6	-	-	151
83	96	-	-	5	3	-	-	104
84	341	-	-	2	8	-	-	351
85	837	1	-	1	-	-	-	839
86	1331	2	-	11	3	-	33	1380
87	823	26	1	29	27	-	21	927
88	1396	14	5	15	15	-	18	1463
89	3419	45	10	18	5	-	2	3499
90	2000	27	7	13	1	-	3	2051
91	984	5	11	7	1	-	3	1011
Total	13238	158	208	750	480	421	578	15833

Table 61. POLLOCK: Canada (M) landings (t), 1961-91, from Subdiv. 4Vs by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	192	4	-	23	-	-	-	219
62	700	-	-	22	-	-	-	722
63	148	1	-	12	-	-	-	161
64	126	-	-	4	-	-	-	130
65	294	-	-	-	-	-	-	294
66	99	-	-	-	-	-	-	99
67	277	-	-	-	-	-	-	277
68	409	-	-	-	-	-	-	409
69	74	1	-	-	-	-	-	74
70	108	-	-	-	-	-	-	108
71	98	-	-	-	-	-	-	98
72	201	-	-	-	-	-	-	201
73	43	-	-	-	-	-	1	44
74	85	-	1	-	-	-	-	85
75	299	-	-	-	-	-	-	299
76	240	-	-	-	-	-	-	240
77	1155	-	-	-	-	-	7	1162
78	2344	-	-	-	-	-	233	2577
79	4371	-	-	3	-	-	-	4374
80	3175	-	-	1	-	-	-	3176
81	1957	-	-	4	-	-	-	1961
82	2342	1	-	35	-	-	-	2378
83	5217	-	-	10	-	-	-	5227
84	4699	-	-	2	-	-	1	4702
85	9262	-	-	120	-	-	-	9382
86	11652	-	-	162	41	-	80	11935
87	9511	2	60	278	95	-	37	9983
88	8771	24	89	246	362	-	47	9539
89	6561	3	184	162	262	-	19	7191
90	5253	10	4	216	61	-	9	5653
91	2602	2	-	74	3	-	22	2703
Total	82365	47	337	1374	824	-	456	85403

Table 62. POLLOCK: Canada (M) landings (t), 1961-91, from Div. 4W by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	9370	20	298	387	848	830	1188	12941
62	9848	47	168	407	624	315	478	11905
63	6553	30	151	396	389	311	539	8369
64	10515	30	-	123	-	-	777	11445
65	11510	-	3	10	-	29	246	11798
66	5218	-	11	20	-	33	138	5420
67	4182	-	-	8	52	23	94	4359
68	4883	-	9	19	103	28	322	5354
69	2075	1	-	56	278	33	603	3046
70	1754	2	4	23	90	8	122	2003
71	740	-	66	25	45	1	20	897
72	845	-	81	14	13	43	116	1112
73	3006	-	53	25	35	1	98	3218
74	2392	-	143	10	14	21	32	2612
75	3500	-	106	26	1	1	13	3647
76	1965	-	139	18	-	2	36	2160
77	5483	-	163	48	4	2	60	5760
78	3541	-	175	15	1	215	360	4307
79	3429	-	299	57	1	47	91	3924
80	6005	2	356	40	1	-	44	6448
81	11941	3	2583	121	-	-	53	14701
82	7620	1	1282	55	8	-	-	8966
83	3859	4	1243	116	51	-	6	5279
84	4678	5	891	184	37	-	17	5812
85	2023	-	626	161	34	-	-	2844
86	1982	32	727	232	94	-	12	3079
87	2509	-	1063	165	13	2	-	3752
88	2296	31	607	109	29	6	-	3078
89	2579	5	811	352	76	-	-	3823
90	2559	35	1005	244	202	-	-	4045
91	4844	10	1122	497	44	-	13	6530
Total	143704	258	14203	3963	3087	1941	5478	172634

Table 63. POLLOCK: Canada (M) landings (t), 1961-91, from Div. 4X and 5Y by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	4346	-	145	3608	3205	209	825	12338
62	8595	-	1236	1947	4545	240	1657	18220
63	9580	-	145	3853	4659	200	727	19164
64	9163	-	-	2148	-	-	4985	16296
65	10446	-	53	128	-	274	2276	13177
66	6605	-	32	103	-	70	1874	8684
67	6493	2	-	46	1128	16	319	8004
68	8276	-	151	117	1557	3	386	10490
69	7970	-	3	128	1646	-	611	10358
70	6316	1	241	75	971	10	163	7777
71	7583	13	202	160	945	59	145	9107
72	13671	-	391	359	787	15	211	15434
73	18566	-	428	847	1960	59	241	22101
74	15066	-	2061	373	1750	10	79	19339
75	11968	-	1039	312	1173	8	637	18137
76	11585	-	4916	772	1472	22	286	19053
77	9781	5	2703	534	786	81	480	14370
78	10178	-	4021	396	388	61	245	15289
79	11282	-	4541	618	1553	11	427	18432
80	11640	4	3353	2607	2081	30	720	20435
81	12357	4	5101	612	1171	39	44	19328
82	11928	9	6747	487	1936	153	181	21441
83	11939	-	4849	426	1356	74	6	18650
84	15132	-	4052	519	1171	56	17	20947
85	16927	2	7956	467	2086	60	40	27538
86	10601	1	7738	834	4202	36	87	23499
87	14859	9	8636	525	2706	19	2	26756
88	14424	3	7988	517	1442	78	25	24477
89	12515	1	9311	409	1269	3	7	23515
90	10134	13	9659	465	1990	5	80	22346
91	16052	67	6723	602	1883	2	41	25370
Total	345978	134	107421	24994	51818	1903	17824	550072

Table 64. POLLOCK: Canada (M) landings (t), 1961-91, from Div. 5Z by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	35	-	-	-	-	-	-	35
62	376	-	-	13	-	-	-	389
63	878	-	-	12	-	-	10	900
64	1816	-	-	4	-	-	3	1823
65	1885	-	-	-	-	-	-	1885
66	3938	-	-	-	-	-	-	3938
67	4754	-	-	-	-	-	-	4754
68	1666	-	-	-	-	-	-	1666
69	2403	-	-	-	-	-	-	2403
70	824	-	-	1	-	-	-	825
71	1555	-	-	1	-	-	-	1556
72	1219	-	-	-	-	-	-	1219
73	1461	-	-	5	-	-	-	1466
74	2856	-	-	3	-	-	-	2859
75	4325	-	-	4	-	-	-	4329
76	2054	-	-	5	-	-	-	2059
77	3175	-	-	1	-	-	-	3176
78	4371	-	-	1	-	-	35	4407
79	2442	-	-	13	-	-	-	2455
80	4977	-	-	102	-	-	-	5079
81	3246	-	-	91	-	-	-	3337
82	4358	-	-	72	-	-	-	4430
83	3192	-	57	49	3	-	-	3301
84	1080	-	31	86	2	-	-	1199
85	731	-	98	82	-	-	-	911
86	1265	-	235	34	3	-	-	1537
87	1588	-	470	30	8	-	-	2096
88	1778	-	544	66	16	-	-	2404
89	850	5	449	43	38	-	-	1385
90	1339	-	315	76	11	-	-	1741
91	1163	2	483	115	24	-	-	1787
Total	67600	7	2682	909	105	-	48	71351

Table 65. POLLOCK: Canada (M) landings (t), 1961-91, by hook and line gears by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	346	23	1235	3863	-	8417
62	258	22	1031	3129	13	7816
63	223	12	785	6813	12	9544
64	7	4	123	6492	4	2286
65	34	-	10	8512	-	172
66	17	-	20	2148	-	140
67	23	-	60	128	-	1257
68	48	-	122	103	-	1844
69	31	-	334	1774	-	2139
70	4	-	113	1046	1	1164
71	13	-	70	1105	1	1189
72	13	-	27	1146	-	1186
73	6	-	60	2807	5	2878
74	13	-	24	2123	3	2163
75	8	-	27	1485	4	1524
76	5	-	18	2244	5	2272
77	1	-	52	1320	1	1374
78	2	-	16	784	1	803
79	1	3	58	2171	13	2246
80	5	1	41	4688	102	4837
81	3	4	121	1783	91	2002
82	7	35	63	2423	72	2600
83	8	10	167	1782	52	2019
84	10	2	221	1690	88	2011
85	1	120	195	2553	82	2951
86	14	203	326	5036	37	5616
87	56	373	178	3231	38	3876
88	30	608	138	1959	82	2817
89	23	424	428	1678	81	2634
90	14	277	446	2455	87	3279
91	8	77	541	2485	139	3250
Total	1232	2198	7050	76812	1014	88306

Table 66. POLLOCK: Canada (M) landings (t), 1961-91, by longline by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	181	23	387	3608	-	4199
62	130	22	407	1947	13	2519
63	191	12	396	3853	12	4464
64	7	4	123	2148	4	2286
65	34	-	10	128	-	172
66	17	-	20	103	-	140
67	10	-	8	46	-	64
68	7	-	19	117	-	143
69	21	-	56	128	-	205
70	4	-	23	75	1	103
71	11	-	25	160	1	197
72	10	-	14	359	-	383
73	4	-	25	847	5	881
74	7	-	10	373	3	393
75	6	-	26	312	4	348
76	3	-	18	772	5	798
77	1	-	48	534	1	584
78	1	-	15	396	1	413
79	1	3	57	618	13	692
80	1	1	40	2607	102	2751
81	3	4	121	612	91	831
82	1	35	55	487	72	650
83	5	10	116	426	49	606
84	2	2	184	519	86	793
85	1	120	161	467	82	831
86	11	162	232	834	34	1273
87	29	278	165	525	30	1027
88	15	246	109	417	66	953
89	18	162	352	409	43	984
90	13	216	244	465	76	1014
91	7	74	497	602	115	1295
Total	752	1374	3963	24994	909	31992

Table 67. POLLOCK: Canada (M) landings (t), 1961-91, by handline and jig by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	165	-	848	3205	-	4218
62	128	-	624	4545	-	5297
63	32	-	389	4659	-	5080
64	-	-	-	-	-	-
65	-	-	-	-	-	-
66	-	-	-	-	-	-
67	13	-	52	1128	-	1193
68	41	-	103	1557	-	1701
69	10	-	278	1646	-	1934
70	-	-	90	971	-	1061
71	2	-	45	945	-	992
72	3	-	13	787	-	803
73	2	-	35	1960	-	1997
74	6	-	14	1750	-	1770
75	2	-	1	1173	-	1176
76	2	-	-	1472	-	1474
77	-	-	4	786	-	790
78	1	-	1	388	-	390
79	-	-	1	1553	-	1554
80	4	-	1	2081	-	2086
81	-	-	-	1171	-	1171
82	6	-	8	1936	-	1950
83	3	-	51	1356	3	1413
84	8	-	37	1171	2	1218
85	-	-	34	2086	-	2120
86	3	41	94	4202	3	4343
87	27	95	13	2706	8	2849
88	15	362	29	1442	16	1864
89	5	262	76	1269	38	1650
90	1	61	202	1990	11	2265
91	1	3	44	1883	24	1955
Total	480	824	3087	51818	105	56314

Table 68. WHITE HAKE: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet) < 35	35-45	45-65	> 65	Total
3L	-	-	-	51	51
3N	-	37	515	216	768
3O	-	47	277	638	962
3P	-	3	38	478	519
4T	5	4	1	-	10
4Vn	60	47	2	-	109
4Vs	2	82	246	62	392
4W	399	527	58	3	987
4X	295	1766	134	-	2195
5Y	-	2	-	-	2
5Ze	3	340	121	1	465
NK	4	-	-	-	4
Total	768	2855	1392	1449	6464

Table 69. WHITE HAKE: mean annual landings (t) in Scotia-Fundy Region by boats using handline and jig, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
4Vn	2	1	-	-	3
4Vs	-	1	3	-	4
4W	5	4	-	-	9
4X	9	63	1	-	73
NK	4	-	-	-	4
Total	20	69	4	-	93

Table 70. WHITE HAKE: mean annual landings (t) in Scotia-Fundy Region by boats using longlines, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3L	-	-	-	51	51
3N	-	37	515	216	768
3O	-	47	277	638	962
3P	-	3	38	478	519
4T	5	4	1	-	10
4Vn	58	46	2	-	106
4Vs	2	81	243	62	388
4W	394	523	58	3	978
4X	286	1703	133	-	2122
5Y	-	2	-	-	2
5Ze	3	340	121	1	465
Total	748	2786	1388	1449	6371

Table 71. WHITE HAKE: Canada (M) landings (t), 1961-91, from Div. 4VWX + Subarea 5 by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Long Line	Handline and Jig	Trap	Misc	Total
61	1127	4	52	997	761	64	203	3208
62	583	7	8	1685	48	3	39	2373
63	691	12	30	311	115	14	72	1245
64	692	9	-	188	-	-	2272	3161
65	-	-	-	-	-	-	-	2070[1]
66	231	4	1	1342	-	-	37	1615[2]
67	57	13	-	792	24	-	27	913[3]
68	297	16	7	1033	109	-	80	1542
69	502	32	1	1328	47	-	502	2412
70	462	28	60	1824	52	2	541	2969
71	776	41	48	3397	114	-	510	4886
72	477	25	24	4391	41	1	444	5403
73	602	41	58	4675	39	1	306	5722
74	554	30	94	4746	134	-	251	5809
75	422	24	90	3850	24	1	236	4647
76	397	29	124	2711	79	-	143	3483
77	385	90	260	2396	66	-	175	3372
78	559	78	600	2387	21	3	119	3767
79	654	50	154	2237	55	-	45	3195
80	635	127	160	2845	175	4	116	4062
81	624	256	90	2705	53	1	6	3735
82	1004	115	262	3876	52	-	2	5311
83	983	44	391	3028	25	3	-	4474
84	1987	9	383	2860	109	8	15	5371
85	1754	104	760	3268	43	9	5	5943
86	3584	110	615	3531	50	-	1	7891
87	2232	294	636	5399	56	-	43	8660
88	1537	105	568	3633	62	1	93	5999
89	369	177	1093	3920	104	-	9	5672
90	862	89	745	3993	174	-	12	5875
91	541	65	703	3534	51	-	10	4904
Total	25580	2028	8017	82882	2683	115	6314	127619

[1] Recorded as red hake
[2] Excludes 294 t recorded as red hake
[3] Excludes 354 t recorded as red hake

Table 72. WHITE HAKE: Canada (M) landings (t), 1961-91, from Subdiv. 4Vn by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc	Total
61	11	3	1	37	8	5	2	67
62	43	7	1	141	4	-	8	204
63	58	8	11	116	22	2	10	227
64	66	8	-	37	-	-	80	191
65	-	-	-	-	-	-	-	276[1]
66	228	4	1	76	-	-	37	346
67	40	12	-	41	6	-	26	125
68	39	8	-	55	16	-	18	136
69	32	2	-	68	10	-	25	137
70	50	8	5	71	22	-	24	180
71	224	4	5	64	47	-	25	369
72	49	7	19	70	7	-	15	167
73	108	23	51	40	15	-	5	242
74	99	13	40	15	13	-	14	194
75	77	19	24	22	11	-	8	161
76	184	14	17	9	4	-	3	231
77	74	71	5	79	23	-	15	267
78	26	60	-	48	3	-	7	144
79	142	42	-	72	10	-	4	270
80	152	117	2	122	107	-	22	522
81	59	209	-	226	10	-	6	510
82	22	103	24	196	33	-	-	378
83	38	40	26	268	6	-	-	378
84	15	7	-	199	11	-	-	232
85	17	104	1	196	13	-	-	331
86	7	101	-	252	6	-	-	366
87	62	282	-	198	9	-	24	575
88	10	95	1	123	2	-	89	320
89	23	174	-	88	4	-	3	292
90	14	86	3	83	1	-	-	187
91	27	65	12	56	1	-	-	161
Total	1996	1696	249	3068	424	7	470	7910

[1] Recorded as red hake

Table 73. WHITE HAKE: Canada (M) landings (t), 1961-91, from Subdiv. 4Vs by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	25	1	-	12	-	-	-	38
62	28	-	-	19	-	-	-	47
63	19	-	-	12	-	-	-	31
64	20	-	-	2	-	-	-	22
65	-	-	-	-	-	-	-	23[1]
66	3	-	-	6	-	-	-	9
67	15	-	-	9	-	-	-	24
68	12	-	-	19	-	-	-	31
69	10	-	-	28	-	-	-	38
70	25	-	-	22	-	-	-	47
71	16	-	-	36	-	-	-	52
72	49	-	-	34	-	-	-	83
73	63	-	-	38	-	-	-	101
74	44	-	-	40	-	-	-	84
75	69	-	-	59	-	-	-	128
76	25	-	-	111	-	-	1	137
77	47	2	-	85	-	-	-	134
78	107	2	-	91	-	-	1	201
79	97	-	-	69	-	-	-	166
80	108	1	-	237	-	-	-	346
81	61	-	-	124	-	-	-	185
82	45	3	-	148	-	-	-	196
83	31	-	-	281	-	-	-	312
84	31	1	-	262	-	-	1	295
85	33	-	-	473	-	-	-	506
86	42	3	-	449	-	-	-	494
87	64	-	-	670	-	-	-	734
88	31	-	7	327	10	-	-	375
89	9	-	45	413	8	-	-	475
90	11	-	-	297	1	-	-	309
91	12	-	-	285	-	-	3	300
Total	1152	13	52	4658	19	-	6	5900

[1] Recorded as red hake

Table 74. WHITE HAKE: Canada (M) landings (t), 1961-91, from Div. 4W by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	181	-	6	5	13	10	24	239
62	202	-	6	149	2	3	16	378
63	166	4	17	49	36	11	36	319
64	151	1	-	11	-	-	157	320
65	-	-	-	0	-	-	-	268[1]
66	-	-	-	433	-	-	-	433[2]
67	-	1	-	240	-	-	-	241[3]
68	45	8	-	234	-	-	38	325
69	88	27	-	278	2	-	148	543
70	92	12	1	370	-	-	243	718
71	103	14	3	1042	2	-	289	1453
72	73	15	-	804	5	1	304	1202
73	88	18	-	1135	3	-	200	1444
74	41	16	10	1042	4	-	216	1329
75	53	5	-	1211	3	-	64	1336
76	34	8	1	587	-	-	126	756
77	82	17	9	592	16	-	132	848
78	101	15	62	548	1	2	37	766
79	60	-	23	262	3	-	15	363
80	46	2	4	260	-	-	27	339
81	34	12	27	334	0	-	-	407
82	25	9	44	516	0	-	1	595
83	10	1	70	545	0	-	-	626
84	19	1	88	563	3	-	14	688
85	23	-	230	844	8	-	-	1105
86	49	1	148	1191	16	-	1	1406
87	67	11	83	1414	5	-	8	1588
88	15	9	40	714	10	1	-	789
89	21	1	106	800	9	-	1	938
90	24	1	146	1047	19	-	-	1237
91	9	-	80	955	-	-	-	1044
Total	1902	209	1204	18175	160	28	2097	23775

[1] Recorded as red hake
[2] Excludes 84 t recorded as red hake
[3] Excludes 91 t recorded as red hake

Table 75. WHITE HAKE: Canada (M) landings (t), 1961-91, from Div. 4X and 5Y by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	910	-	45	943	740	49	177	2864
62	302	-	1	1376	42	-	15	1736
63	438	-	2	133	57	1	26	657
64	429	-	-	138	-	-	2035	2602
65	-	-	-	-	-	-	-	1474[1]
66	-	-	-	827	-	-	-	827[2]
67	1	-	-	488	18	-	-	507[3]
68	183	-	7	663	93	-	24	970
69	357	3	1	939	35	-	329	1664
70	291	8	54	1331	30	2	274	1990
71	409	23	40	2197	65	-	196	2930
72	302	3	5	3455	29	-	125	3919
73	305	-	7	3400	21	1	101	3835
74	351	1	44	3472	117	-	21	4006
75	189	-	66	2463	10	1	164	2893
76	137	7	106	1826	75	-	13	2164
77	161	-	246	1492	27	-	27	1953
78	264	1	538	1630	17	1	72	2523
79	344	8	131	1697	42	-	26	2248
80	274	7	154	1992	68	4	67	2566
81	450	35	63	1608	43	1	-	2200
82	889	-	194	2627	19	-	1	3730
83	853	3	295	1616	19	3	-	2789
84	1793	-	295	1431	95	8	-	3622
85	1548	-	523	1393	22	9	5	3500
86	3139	5	461	1344	28	-	-	4977
87	1921	1	543	2696	41	-	6	5208
88	1377	1	488	2074	40	-	1	3981
89	306	2	902	2091	83	-	-	3384
90	768	2	583	2077	153	-	12	3595
91	467	-	597	1717	50	-	5	2836
Total	19158	110	6391	51136	2079	80	3722	82676

[1] Recorded as red hake
[2] Excludes 199 t recorded as red hake
[3] Excludes 286 t recorded as red hake

Table 76. WHITE HAKE: Canada (M) landings (t), 1961-91, from Div. 5Z by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	-	-	-	-	-	-	-	-
62	8	-	-	-	-	-	-	8
63	10	-	-	1	-	-	-	11
64	26	-	-	-	-	-	-	26
65	-	-	-	-	-	-	-	29[1]
66	-	-	-	-	-	-	-	-[2]
67	1	-	-	14	-	-	1	16[3]
68	18	-	-	62	-	-	-	80
69	15	-	-	15	-	-	-	30
70	4	-	-	30	-	-	-	34
71	24	-	-	58	-	-	-	82
72	4	-	-	28	-	-	-	32
73	38	-	-	62	-	-	-	100
74	19	-	-	177	-	-	-	196
75	34	-	-	95	-	-	-	129
76	17	-	-	178	-	-	-	195
77	21	-	-	148	-	-	1	170
78	61	-	-	70	-	-	2	133
79	11	-	-	137	-	-	-	148
80	55	-	-	234	-	-	-	289
81	20	-	-	413	-	-	-	433
82	23	-	-	389	-	-	-	412
83	51	-	-	318	-	-	-	369
84	129	-	-	405	-	-	-	534
85	133	-	6	362	-	-	-	501
86	347	-	6	295	-	-	-	648
87	118	-	10	421	1	-	5	555
88	104	-	32	395	-	-	3	534
89	10	-	40	528	-	-	5	583
90	45	-	13	489	-	-	-	547
91	26	-	14	521	-	-	2	563
Total	1372	-	121	5845	1	-	19	7358

[1] Recorded as red hake
[2] Excludes 11 t recorded as red hake
[3] Excludes 7 t recorded as red hake

Table 77. WHITE HAKE: Canada (M) landings (t), 1961-91, by hook and line gears by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	45	12	18	1683	-	1758
62	145	19	151	1418	-	1733
63	138	12	85	190	1	426
64	37	2	11	138	-	188
65	-	-	-	-	-	-[1]
66	76	6	433	827	-	1342
67	47	9	240	506	14	816
68	71	19	234	756	62	1142
69	78	28	280	974	15	1375
70	93	22	370	1361	30	1876
71	111	36	1044	2262	58	3511
72	77	34	809	3484	28	4432
73	55	38	1138	3421	62	4714
74	28	40	1046	3589	177	4880
75	33	59	1214	2473	95	3874
76	13	111	587	1901	178	2790
77	102	85	608	1519	148	2462
78	51	91	549	1647	70	2408
79	82	69	265	1739	137	2292
80	229	237	260	2060	234	3020
81	236	124	334	1651	413	2758
82	229	148	516	2646	389	3928
83	274	281	545	1635	318	3053
84	210	262	566	1526	405	2969
85	209	473	852	1415	362	3311
86	258	449	1207	1372	295	3581
87	207	670	1419	2737	422	5455
88	125	337	724	2114	395	3695
89	92	421	809	2174	528	4024
90	84	298	1066	2230	489	4167
91	57	285	955	1767	521	3585
Total	3492	4677	18335	53215	5846	85565

[1]All hake reported as red hake.

Table 78. WHITE HAKE: Canada (M) landings (t), 1961-91, by longline by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	37	12	5	943	-	997
62	141	19	149	1376	-	1685
63	116	12	49	133	1	311
64	37	2	11	138	-	188
65	-	-	-	-	-	-[1]
66	76	6	433	827	-	1342
67	41	9	240	488	14	792
68	55	19	234	663	62	1033
69	68	28	278	939	15	1328
70	71	22	370	1331	30	1824
71	64	36	1042	2197	58	3397
72	70	34	804	3455	28	4391
73	40	38	1135	3400	62	4675
74	15	40	1042	3472	177	4746
75	22	59	1211	2463	95	3850
76	9	111	587	1826	178	2711
77	79	85	592	1492	148	2396
78	48	91	548	1630	70	2387
79	72	69	262	1697	137	2237
80	122	237	260	1992	234	2845
81	226	124	334	1608	413	2705
82	196	148	516	2627	389	3876
83	268	281	545	1616	318	3028
84	199	262	563	1431	405	2860
85	196	473	844	1393	362	3268
86	252	449	1191	1344	295	3531
87	198	670	1414	2696	421	5399
88	123	327	714	2074	395	3633
89	88	413	800	2091	528	3920
90	83	297	1047	2077	489	3993
91	56	285	955	1717	521	3534
Total	3068	4658	18175	51136	5845	82882

[1]All hake reported as red hake.

Table 79. WHITE HAKE: Canada (M) landings (t), 1961-91, by handline and jig by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	8	-	13	740	-	761
62	4	-	2	42	-	48
63	22	-	36	57	-	115
64	-	-	-	-	-	-
65	-	-	-	-	-	-[1]
66	-	-	-	-	-	-
67	6	-	-	18	-	24
68	16	-	-	93	-	109
69	10	-	2	35	-	47
70	22	-	-	30	-	52
71	47	-	2	65	-	114
72	7	-	5	29	-	41
73	15	-	3	21	-	39
74	13	-	4	117	-	134
75	11	-	3	10	-	24
76	4	-	-	75	-	79
77	23	-	16	27	-	66
78	3	-	1	17	-	21
79	10	-	3	42	-	55
80	107	-	-	68	-	175
81	10	-	-	43	-	53
82	33	-	-	19	-	52
83	6	-	-	19	-	25
84	11	-	3	95	-	109
85	13	-	8	22	-	43
86	6	-	16	28	-	50
87	9	-	5	41	1	56
88	2	10	10	40	-	62
89	4	8	9	83	-	104
90	1	1	19	153	-	174
91	1	-	-	50	-	51
Total	424	19	160	2079	1	2683

[1]All hake reported as red hake.

Table 80. WHITE HAKE: Canada (M) landings (t) by longline, 1961-91, from Divisions of Subarea 3.

Year	3K	3L	3M	3N	3O	3P	Total
61	-	-	-	10	71	9	90
62	-	-	-	5	98	4	107
63	-	-	-	2	2	2	6
64	-	-	-	-	39	7	46
65	-	-	-	-	-	-	-
66	-	-	-	-	5	-	5
67	1	1	-	16	7	19	44
68	-	-	-	4	41	17	62
69	-	-	-	-	-	-	-
70	-	-	-	42	36	4	82
71	-	-	-	130	2561	684	3375
72	-	-	22	33	1781	1378	3214
73	-	-	-	41	2213	428	2682
74	-	-	-	-	2207	724	2931
75	-	-	-	34	1900	809	2743
76	-	-	-	199	1065	961	2225
77	-	-	-	15	846	831	1692
78	-	-	-	16	530	289	835
79	-	-	-	15	106	67	188
80	-	-	-	221	248	92	561
81	-	-	-	16	219	283	518
82	-	-	-	3	193	269	465
83	-	-	-	24	646	141	811
84	-	-	-	104	603	234	941
85	-	-	-	92	1447	598	2137
86	-	-	-	295	1649	343	2287
87	-	37	-	1305	1578	654	3574
88	-	88	-	822	837	354	2101
89	-	78	-	874	723	364	2039
90	-	52	-	817	864	910	2643
91	-	-	-	19	732	314	1065
Total	1	256	22	5154	23247	10789	39469

Table 81. CUSK: mean annual landings (t) in Scotia-Fundy Region by boats using hook and line gears, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3N	-	2	7	1	10
3O	-	1	1	2	4
3P	-	-	-	3	3
4Vn	-	3	1	-	4
4Vs	2	42	56	3	103
4W	34	343	50	2	429
4X	157	1941	337	-	2435
5Y	-	4	-	-	4
5Ze	4	379	71	4	458
Total	197	2715	523	15	3450

Table 82. CUSK: mean annual landings (t) in Scotia-Fundy Region by boats using handline and jig, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
4Vn	-	1	-	-	1
4W	-	1	-	-	1
4X	7	53	-	-	60
5Ze	-	1	-	-	1
Total	7	56	-	-	63

Table 83. CUSK: mean annual landings (t) in Scotia-Fundy Region by boats using longlines, 1987-91, by vessel length class and Division/Subdivision.

Division/ Subdivision	Vessel Length Category (feet)				
	< 35	35-45	45-65	> 65	Total
3N	-	2	7	1	10
3O	-	1	1	2	4
3P	-	-	-	3	3
4Vn	-	2	1	-	3
4Vs	2	41	56	3	102
4W	27	290	50	2	369
4X	157	1940	337	-	2434
5Y	-	4	-	-	4
5Ze	4	379	71	4	458
Total	190	2659	523	15	3387

Table 84. CUSK: Canada (M) landings (t), 1961-91, from Div. 4VWX + Subarea 5 by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	1064	-	48	1301	512	65	211	3201
62	1613	1	4	1790	131	2	70	3611
63	1175	1	9	380	181	12	59	1817
64	1647	-	-	537	-	-	2083	4267
65	371	-	-	3857	-	3	541	4772
66	383	-	16	5041	-	2	531	5973
67	526	9	-	5306	149	-	245	6235
68	351	-	9	3586	163	5	97	4211
69	376	4	3	2742	97	-	202	3424
70	176	1	4	3561	88	1	151	3982
71	313	5	15	4896	258	1	110	5598
72	251	-	9	5406	191	11	149	6017
73	215	-	2	5730	76	6	169	6198
74	93	-	11	5358	67	7	124	5660
75	167	-	41	5022	48	2	217	5497
76	109	8	45	2970	21	5	20	3178
77	81	-	64	2996	59	21	110	3331
78	201	2	140	4855	24	13	52	5287
79	130	3	41	4555	157	3	13	4902
80	145	-	93	4102	108	53	40	4541
81	116	17	63	5647	58	39	14	5954
82	54	-	50	6092	36	29	18	6279
83	40	-	83	4175	30	22	7	4357
84	25	-	21	3032	33	6	1	3118
85	29	-	26	2160	19	97	10	2341
86	24	-	46	1731	11	271	2	2085
87	87	-	112	3611	47	17	37	3911
88	76	-	32	2768	31	2	18	2927
89	36	-	71	3163	60	-	63	3393
90	34	-	82	3268	71	-	70	3525
91	26	1	31	4169	94	-	54	4375
Total	9934	52	1171	113807	2820	695	5488	133967

Table 85. CUSK: Canada (M) landings (t), 1961-91, from Subdiv. 4Vn by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	-	-	-	1	1	2	2	6
62	-	-	-	4	-	-	-	4
63	-	-	-	1	-	-	-	1
64	5	-	-	-	-	-	1	6
65	1	-	-	-	-	-	-	1
66	1	-	-	-	-	-	-	1
67	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-
69	-	-	-	-	-	-	-	-
70	1	-	-	-	-	-	-	1
71	1	-	-	-	-	-	-	1
72	1	-	-	-	-	-	-	1
73	1	-	-	-	-	-	-	1
74	-	-	-	-	-	-	1	1
75	-	-	-	1	-	-	-	1
76	-	-	-	-	-	-	-	-
77	3	-	-	-	-	-	-	3
78	-	-	-	-	-	-	2	2
79	-	-	-	2	-	-	-	2
80	1	-	-	2	-	-	-	3
81	-	-	-	2	-	-	-	2
82	1	-	-	2	-	-	-	3
83	-	-	-	4	-	-	-	4
84	-	-	-	1	-	-	-	1
85	-	-	-	1	-	-	-	1
86	-	-	-	4	-	-	-	4
87	-	-	-	2	-	-	-	2
88	-	-	-	1	3	-	-	4
89	-	-	-	-	-	-	-	-
90	-	-	-	2	-	-	-	2
91	-	-	-	8	-	-	-	8
Total	16	-	-	38	4	2	6	66

Table 86. CUSK: Canada (M) landings (t), 1961-91, from Subdiv. 4Vs by type of gear.

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	3	-	-	6	-	-	-	9
62	8	-	-	4	-	-	-	12
63	6	-	-	2	-	-	-	8
64	8	-	-	-	-	-	-	8
65	4	-	-	15	-	-	-	19
66	2	-	-	41	-	-	-	43
67	6	-	-	25	-	-	-	31
68	2	-	-	27	-	-	-	29
69	-	-	-	24	-	-	-	24
70	-	-	-	15	-	-	-	15
71	2	-	-	21	-	-	-	23
72	1	-	-	27	-	-	-	28
73	-	-	-	37	-	-	-	37
74	5	-	-	29	-	-	-	34
75	1	-	-	47	-	-	-	48
76	-	-	-	76	-	-	-	76
77	-	-	-	33	-	-	-	33
78	21	-	-	33	-	-	-	54
79	12	-	-	35	-	-	-	47
80	4	-	-	63	-	-	-	67
81	14	-	-	48	-	-	-	62
82	6	-	-	76	-	-	-	82
83	1	-	-	88	-	-	-	89
84	-	-	-	68	-	-	-	68
85	3	-	-	51	-	-	-	54
86	2	-	-	80	-	-	-	82
87	4	-	-	157	-	-	-	162
88	-	-	-	88	-	-	-	88
89	-	-	-	98	-	-	-	98
90	1	-	-	73	-	-	-	74
91	1	-	-	106	-	-	-	107
Total	117	-	-	1493	-	-	-	1611

Table 87. CUSK: Canada (M) landings (t), 1961-91, from Div. 4W by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Traps	Misc.	Total
61	187	-	5	7	5	6	13	223
62	365	1	-	106	-	-	1	473
63	199	1	3	14	9	5	17	248
64	180	-	-	11	-	-	57	248
65	164	-	-	493	-	-	12	669
66	120	-	-	480	-	-	-	600
67	85	7	-	405	-	-	-	497
68	80	-	-	425	-	-	-	505
69	94	3	-	232	-	-	6	335
70	69	-	-	227	-	-	75	371
71	112	-	-	180	-	-	-	292
72	35	-	-	196	-	-	-	231
73	57	-	-	399	-	-	18	474
74	21	-	-	493	-	-	8	522
75	27	-	-	498	-	-	1	526
76	9	-	-	498	-	-	1	508
77	14	-	-	215	-	-	26	255
78	17	-	-	371	-	-	13	401
79	10	-	1	380	-	-	-	391
80	12	-	1	168	-	-	-	181
81	17	-	8	334	-	-	-	359
82	3	-	-	604	-	-	-	607
83	1	-	3	439	1	-	-	444
84	1	-	-	180	-	-	-	181
85	8	-	-	159	-	-	-	167
86	2	-	16	217	-	-	-	235
87	6	-	11	305	-	-	-	322
88	2	-	2	181	1	-	-	186
89	2	-	3	332	1	-	-	338
90	-	-	19	514	1	-	-	534
91	1	-	4	543	-	-	-	548
Total	1900	12	76	9606	18	11	248	11871

Table 88. CUSK: Canada (M) landings (t), 1961-91, from Div. 4X and 5Y by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	874	-	43	1283	506	57	196	2959
62	1216	-	4	1675	131	2	69	3097
63	930	-	6	360	172	7	42	1517
64	1382	-	-	526	-	-	2025	3933
65	134	-	-	3214	-	3	529	3880
66	149	-	16	3962	-	2	162	4291
67	294	2	-	3315	149	-	245	4005
68	205	-	9	2106	163	5	97	2585
69	260	1	3	1783	97	-	196	2340
70	99	1	4	2514	88	1	76	2783
71	168	5	15	3693	258	1	110	4250
72	204	-	9	4435	191	11	139	4989
73	124	-	2	4747	76	6	151	5106
74	60	-	11	4351	67	7	94	4590
75	107	-	41	4084	48	2	200	4482
76	87	8	45	2157	21	5	19	2342
77	55	-	64	2551	59	21	84	2834
78	116	2	140	4084	24	13	35	4414
79	93	3	40	3644	157	3	13	3953
80	73	-	92	3261	108	53	40	3627
81	73	16	55	3293	58	39	14	3548
82	27	-	50	4269	36	29	18	4429
83	33	-	80	3048	29	22	7	3219
84	24	-	21	2306	33	6	1	2391
85	18	-	26	1651	19	97	10	1821
86	20	-	30	1305	11	271	2	1639
87	73	-	101	2892	46	17	36	3165
88	55	-	30	2170	27	2	18	2302
89	32	-	67	2090	55	-	63	2307
90	23	-	63	2223	70	-	70	2449
91	23	1	27	2898	94	-	54	3097
Total	7031	39	1094	85890	2793	682	4815	102344

Table 89. CUSK: Canada (M) landings (t), 1961-91, from Div. 5Z by type of gear. (Boxed numbers are considered unreliable.)

Year	Otter Trawl	Seine	Gillnet	Longline	Handline and Jig	Trap	Misc.	Total
61	-	-	-	4	-	-	-	4
62	24	-	-	1	-	-	-	25
63	40	-	-	3	-	-	-	43
64	72	-	-	0	-	-	-	72
65	68	-	-	135	-	-	-	203
66	111	-	-	558	-	-	369	1038
67	141	-	-	1561	-	-	-	1702
68	64	-	-	1028	-	-	-	1092
69	22	-	-	703	-	-	-	725
70	7	-	-	805	-	-	-	812
71	30	-	-	1002	-	-	-	1032
72	10	-	-	748	-	-	10	768
73	33	-	-	547	-	-	-	580
74	7	-	-	485	-	-	21	513
75	32	-	-	392	-	-	16	440
76	13	-	-	239	-	-	-	252
77	9	-	-	197	-	-	-	206
78	47	-	-	367	-	-	2	416
79	15	-	-	494	-	-	-	509
80	55	-	-	608	-	-	-	663
81	12	1	-	1970	-	-	-	1983
82	17	-	-	1141	-	-	-	1158
83	5	-	-	596	-	-	-	601
84	-	-	-	477	-	-	-	477
85	-	-	-	298	-	-	-	298
86	-	-	-	125	-	-	-	125
87	4	-	-	255	1	-	-	260
88	19	-	-	328	-	-	-	347
89	2	-	1	643	4	-	-	650
90	10	-	-	456	-	-	-	466
91	1	-	-	614	-	-	-	615
Total	870	1	1	16780	5	-	418	18075

Table 90. CUSK: Canada (M) landings (t), 1961-91, by hook and line gears by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	2	6	12	1789	4	1813
62	4	4	106	1806	1	1921
63	1	2	23	532	3	561
64	-	-	11	526	-	537
65	-	15	493	3214	135	3857
66	-	41	480	3962	558	5041
67	-	25	405	3464	1561	5455
68	-	27	425	2269	1028	3749
69	-	24	232	1880	703	2839
70	-	15	227	2602	805	3649
71	-	21	180	3951	1002	5154
72	-	27	196	4626	748	5597
73	-	37	399	4823	547	5806
74	-	29	493	4418	485	5425
75	1	47	498	4132	392	5070
76	-	76	498	2178	239	2991
77	-	33	215	2610	197	3055
78	-	33	371	4108	367	4879
79	2	35	380	3801	494	4712
80	2	63	168	3369	608	4210
81	2	48	334	3351	1970	5705
82	2	76	604	4305	1141	6128
83	4	88	440	3077	596	4205
84	1	68	180	2339	477	3065
85	1	51	159	1670	298	2179
86	4	80	217	1316	125	1742
87	2	157	305	2938	256	3658
88	4	88	182	2197	328	2799
89	-	98	333	2145	647	3223
90	2	73	515	2293	456	3339
91	8	106	543	2992	614	4263
Total	42	1493	9624	88683	16785	116627

Table 91. CUSK: Canada (M) landings (t), 1961-91, by longline by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	1	6	7	1283	4	1301
62	4	4	106	1675	1	1790
63	1	2	14	360	3	380
64	-	-	11	526	-	537
65	-	15	493	3214	135	3857
66	-	41	480	3962	558	5041
67	-	25	405	3315	1561	5306
68	-	27	425	2106	1028	3586
69	-	24	232	1783	703	2742
70	-	15	227	2514	805	3561
71	-	21	180	3693	1002	4896
72	-	27	196	4435	748	5406
73	-	37	399	4747	547	5730
74	-	29	493	4351	485	5358
75	1	47	498	4084	392	5022
76	-	76	498	2157	239	2970
77	-	33	215	2551	197	2996
78	-	33	371	4084	367	4855
79	2	35	380	3644	494	4555
80	2	63	168	3261	608	4102
81	2	48	334	3293	1970	5647
82	2	76	604	4269	1141	6092
83	4	88	439	3048	596	4175
84	1	68	180	2306	477	3032
85	1	51	159	1651	298	2160
86	4	80	217	1305	125	1731
87	2	157	305	2892	255	3611
88	1	88	181	2170	328	2768
89	-	98	332	2090	643	3163
90	2	73	514	2223	456	3268
91	8	106	543	2898	614	4169
Total	38	1493	9606	85890	16780	113807

Table 92. CUSK: Canada (M) landings (t), 1961-91, by handline and jig by Division/Subdivision. (Boxed numbers are considered unreliable.)

Year	4Vn	4Vs	4W	4X & 5Y	5Z	Total
61	1	-	5	506	-	512
62	-	-	-	131	-	131
63	-	-	9	172	-	181
64	-	-	-	-	-	-
65	-	-	-	-	-	-
66	-	-	-	-	-	-
67	-	-	-	149	-	149
68	-	-	-	163	-	163
69	-	-	-	97	-	97
70	-	-	-	88	-	88
71	-	-	-	258	-	258
72	-	-	-	191	-	191
73	-	-	-	76	-	76
74	-	-	-	67	-	67
75	-	-	-	48	-	48
76	-	-	-	21	-	21
77	-	-	-	59	-	59
78	-	-	-	24	-	24
79	-	-	-	157	-	157
80	-	-	-	108	-	108
81	-	-	-	58	-	58
82	-	-	-	36	-	36
83	-	-	1	29	-	30
84	-	-	-	33	-	33
85	-	-	-	19	-	19
86	-	-	-	11	-	11
87	-	-	-	46	1	47
88	3	-	1	27	-	31
89	-	-	1	55	4	60
90	-	-	1	70	-	71
91	-	-	-	94	-	94
Total	4	-	18	2793	5	2820

Table 93. CUSK: Canada (M) landings (t) by longline, 1961-91, from Divisions of Subarea 3.

Year	3K	3L	3M	3N	3O	3P	Total
61	-	-	-	-	-	22	22
62	-	-	-	-	-	1	1
63	-	-	-	-	-	1	1
64	-	-	-	-	-	-	-
65	-	-	-	2	3	-	5
66	-	-	-	-	-	-	-
67	-	-	-	-	9	-	9
68	-	-	-	1	1	-	2
69	-	-	-	-	-	-	-
70	-	-	-	2	7	1	10
71	-	-	-	13	12	6	31
72	-	-		-	8	14	22
73	-	-	-	-	9	4	13
74	-	-	-	-	4	7	11
75	-	-	-	13	4	8	25
76	-	-	-	-	8	-	8
77	-	-	-	-	1	10	11
78	-	-	-	-	1	11	12
79	-	-	-	-	1	1	2
80	-	-	-	1	1	-	2
81	-	-	-	-	2	3	5
82	-	-	-	-	1	1	2
83	-	-	-	-	2	5	7
84	-	-	-	1	-	3	4
85	-	-	-	1	7	24	32
86	-	-	-	-	11	5	16
87	-	1	-	30	5	5	41
88	-	-	-	7	3	1	11
89	-	-	-	6	1	2	9
90	-	-	-	3	5	8	16
91	-	-	-	-	3	2	5
Total	-	1	-	80	109	145	335

Table 94. COD: number of port samples utilized by Division and Subdivision, season and year in calculation of biostatistics by gear type.

Division/ Subdiv.	Season	1987						1988						1989						1990						1991					
		LL	OT	HL	DS	GN	PT	LL	OT	HL	DS	GN	PT	LL	OT	HL	DS	GN	PT	LL	OT	HL	DS	GN	PT	LL	OT	HL	DS	GN	PT
4Vn	May-June	6	-	-	-	-	-	6	3	-	6	-	-	-	-	-	-	-	-	7	3	-	2	-	-	4	6	4[1]	6[1]	-	-
	July-Oct.	11	2	3	-	-	-	9	2	-	-	-	-	12	2	-	-	-	-	14	2	2	2	-	-	11	8	4[2]	-	-	-
	Nov.-Dec.	6	4	-	-	-	-	2	3	-	-	-	-	4	6	-	-	-	-	3	7	-	-	-	-	8	13	-	-	-	-
4Vs	April-July	6	25	-	-	-	-	10	16	-	-	-	-	9	10	5[3]	-	-	-	14	6	5	-	-	-	6	3	-	-	2	-
	Aug.-Oct.	-	-	-	-	-	-	12	14	-	-	-	-	5	11	-	-	-	-	6	7	-	-	-	-	7	2	-	-	-	-
4W	April-July	Included with August to October 1987 - 1990 inclusive																								5	-	-	-	-	8
	Aug.-Oct.	3	-	-	-	-	-	5	2	-	-	5	-	7	8	-	-	-	-	7	3	-	-	-	3	10	-	-	-	-	10
	Nov.-Dec.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	3	-	-	-	3
4X	Jan.-March	6	9	-	-	-	-	8	16	-	-	-	-	8	27	-	-	-	-	10	18	-	-	-	-	8	18	-	-	-	-
	April-July	5	6	7	-	8[4]	-	5	10	-	-	-	-	-	14	-	-	-	-	6	13	6[3]	-	6	-	9	15	8	-	4	-
	Aug.-Nov.	6	4	5	-	-	-	5	7	-	-	6	-	5	5	9[5]		4[5]	-	9	10	-	-	4	-	11	10	-	-	5	-
	Dec.	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-
5Ze	Jan.-Feb.	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-
	March-May	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	-
	June-Oct.	9	17	-	-	2	-	12	20	-	-	4	-	5	9	-	-	10	-	7	20	-	-	4	3	10	14	-	-	6	-

[1] May-Jul.
[2] Aug.-Oct.
[3] Apr.-Aug.
[4] Jul.Aug.
[5] Apr.-Nov.

Table 95. HADDOCK: number of port samples utilized by Division and Subdivision, season and year in calculation of biostatistics by gear type.

Div./ Subdiv.	Season	1987			1988			1989			1990			1991		
		LL	OT	GN	LL	OT	GN	LL	OT	GN	LL	OT	GN	LL	OT	GN
4Vs	Apr.-Sept	-	-	-	4	22	-	4	19	-	-	-	-	7	5	-
4W	Jan.-Dec.	5	9	-	11	2	-	7	10	-	-	-	-	17	2	-
4X	Jan.-Mar.	8	28	-	7	21	-	2	22	-	12	20	-	15	14	-
	May-Dec.	10	25	11	15	28	-	9	4	-	16	17	-	19	32	-
5Ze	Jan.-Feb.	-	-	-	-	-	-	2	4	-	-	-	-	3	2	-
	Mar.-May	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-
	June-Dec.	5	24	-	2	21	-	10	13	-	6	24	-	13	21	-

Table 96. COD: mean length, weight and age of fish landed in Scotia-Fundy Region from Subdivision 4Vn (1987-91).

		Mean Length (cm)				Mean Weight (kg)				Mean Age (yr)			
Season	Year	LL	HL	OT	DS	LL	HL	OT	DS	LL	HL	OT	DS
May-Jun.	1987	65.6	-	-	-	3.1	-	-	-	7.9	-	-	-
	1988	64.6	-	52.8	56.7	2.9	-	1.4	1.8	8.2	-	6.8	7.1
	1989	-	-	-	-	-	-	-	-	-	-	-	-
	1990	60.5	-	56.3	55.7	2.3	-	1.8	1.8	7.1	-	6.4	7.0
	1991	68.7	59.0[1]	54.8	50.1[1]	3.6	2.2[1]	1.6	1.2[1]	7.8	-	6.2	-
Jul.-Oct.	1987	60.0	56.3	55.8	-	2.3	1.8	1.8	-	7.1	6.4	6.4	-
	1988	59.0	-	53.7	-	2.2	-	1.6	-	6.8	-	6.3	-
	1989	58.1	-	50.5	-	2.0	-	1.2	-	7.1	-	5.9	-
	1990	55.8	53.9	54.3	53.2	1.8	1.5	1.6	1.5	6.1	5.3	5.5	6.3
	1991	50.2	55.3[2]	49.6	-	1.3	1.7[2]	1.2	-	5.2	-	5.3	-
Nov.-Dec.	1987	59.4	-	53.6	-	2.3	-	1.5	-	7.0	-	7.4	-
	1988	55.4	-	45.7	-	1.7	-	0.9	-	7.1	-	6.4	-
	1989	53.2	-	46.5	-	1.5	-	1.0	-	7.3	-	6.1	-
	1990	53.3	-	47.2	-	1.5	-	1.0	-	5.9	-	5.1	-
	1991	52.5	-	48.5	-	1.4	-	1.1	-	6.1	-	5.5	-

[1]May to July (no ages)

[2]August to October (no ages)

Table 97. COD: mean length, weight and age of fish landed in Scotia-Fundy Region from Subdivision 4Vs (1987-91).

		Mean Length (cm)				Mean Weight (kg)				Mean Age (yr)			
Season	Year	LL	HL	OT	GN	LL	HL	OT	GN	LL	HL	OT	GN
Apr.-Jul.	1987	73.5	-	60.2	-	4.1	-	2.1	-	8.4	-	6.5	-
	1988	71.1	-	59.6	-	3.9	-	2.1	-	8.3	-	7.0	-
	1989	66.8	72.3[1]	56.3	-	3.1	3.8[1]	1.8	-	7.5	7.8[1]	6.8	-
	1990	68.8	63.3	62.0	-	3.6	2.6	2.4	-	7.9	6.3	7.0	-
	1991	62.6	-	59.7	68.6	2.6	-	2.3	3.2	7.4	-	7.0	9.2
Aug.-Oct.	1987	-	-	-	-	-	-	-	-	-	-	-	-
	1988	68.9	-	57.0	-	3.3	-	1.8	-	7.7	-	6.0	-
	1989	69.3	-	53.9	-	3.6	-	1.5	-	8.1	-	5.0	-
	1990	60.1	-	53.2	-	2.2	-	1.5	-	6.1	-	4.8	-
	1991	58.0	-	48.9	-	1.9	-	1.1	-	5.8	-	4.8	-

[1]April-August

Table 98. COD: mean length, weight and age of fish landed in Scotia-Fundy Region from Division 4W (1987-91).

		Mean Length (cm)				Mean Weight (kg)				Mean Age (yr)			
Season	Year	LL	OT	PT	GN	LL	OT	PT	GN	LL	OT	PT	GN
Apr.-Oct.	1987	60.0	-	-	-	2.2	-	-	-	7.2	-	-	-
	1988	55.9	42.9	-	71.4	1.7	0.8	-	3.5	7.0	3.7	-	7.4
	1989	56.1	50.7	-	-	1.7	1.3	-	-	6.4	5.0	-	-
	1990	53.4	50.0	49.8	-	1.5	1.2	1.2	-	5.6	4.8	4.7	-
Apr.-Jul.	1991	49.2	-	51.6	-	1.1	-	1.3	-	5.2	-	5.2	-
Aug-Oct.	1991	50.9	-	49.7	-	1.3	-	1.1	-	5.1	-	5.3	-
Nov.-Dec.	1991	46.9	48.5	53.1	-	1.0	1.1	1.4	-	4.9	4.6	5.3	-

Table 99. COD: mean length, weight and age of fish landed in Scotia-Fundy Region from Division 4X (1987-91).

		Mean Length (cm)				Mean Weight (kg)				Mean Age (yr)			
Season	Year	LL	HL	OT	GN	LL	HL	OT	GN	LL	HL	OT	GN
Jan.-Mar.	1987	73.3	-	66.3	-	4.5	-	3.0	-	6.2	-	5.6	-
	1988	58.3	-	63.3	-	2.1	-	2.9	-	4.8	-	5.0	-
	1989	60.3	-	59.4	-	2.3	-	2.1	-	4.5	-	4.3	-
	1990	56.6	-	62.1	-	1.8	-	2.4	-	4.2	-	4.4	-
	1991	55.9	-	65.5	-	1.8	-	2.7	-	4.2	-	4.7	-
Apr.-Jul.	1987	61.8	67.3	60.0	66.4[1]	2.8	3.2	2.2	2.9[1]	5.7	5.1	3.9	5.8[1]
	1988	68.7	-	53.4	-	4.0	-	1.6	-	5.4	-	3.7	-
	1989	-	-	55.4	-	-	-	1.7	-	-	-	3.8	-
	1990	68.0	63.4[2]	59.3	68.5	3.2	2.7[2]	2.1	3.1	4.9	4.9[2]	3.8	5.1
	1991	65.0	60.8	57.5	73.0	3.1	2.3	1.9	3.7	5.3	4.4	3.8	5.2
Aug.-Nov.	1987	59.6	59.7	51.8	-	2.5	2.3	1.5	-	4.2	4.1	2.8	-
	1988	61.3	-	52.4	69.6	2.6	-	1.4	3.3	4.3	-	3.3	5.4
	1989	60.3	65.7[3]	60.3	68.4[3]	2.3	3.1[3]	2.1	3.2[3]	4.0	4.3[3]	3.1	4.4[3]
	1990	59.6	-	61.8	68.0	2.2	-	2.3	3.1	4.1	-	3.8	4.8
	1991	56.1	-	67.1	66.1	1.8	-	3.0	2.9	4.2	-	4.3	4.7
December	1989	58.9	-	-	-	2.0	-	-	-	3.8	-	-	-
	1990	56.1	-	64.6	-	1.8	-	2.7	-	4.1	-	3.9	-

[1]July-August [2]April-August [3]April-November

Table 100. COD: mean length, weight and age of fish landed in Scotia-Fundy Region from Subdivision 5Z (1987-91).

		Mean Length (cm)				Mean Weight (kg)				Mean Age (yr)			
Season	Year	LL	OT	PT	GN	LL	OT	PT	GN	LL	OT	PT	GN
Jan.-Feb.	1987	-	-	-	-	-	-	-	-	-	-	-	-
	1988	-	-	-	-	-	-	-	-	-	-	-	-
	1989	74.1	73.8	-	-	4.2	4.1	-	-	4.9	5.0	-	-
	1990	-	-	-	-	-	-	-	-	-	-	-	-
	1991	72.4	79.0	-	-	3.9	5.0	-	-	4.8	5.8	-	-
Mar.-May	1987	-	-	-	-	-	-	-	-	-	-	-	-
	1988	75.9	-	-	-	4.7	-	-	-	5.0	-	-	-
	1989	86.1	-	-	-	6.4	-	-	-	6.2	-	-	-
	1990	78.5	-	-	-	5.0	-	-	-	4.9	-	-	-
	1991	85.6	-	-	-	6.4	-	-	-	6.2	-	-	-
Jun.-Oct.	1987	71.0	56.4	-	69.7	3.8	1.8	-	3.5	3.7	2.6	-	3.4
	1988	78.7	61.7	-	76.9	4.9	2.4	-	4.4	4.8	3.3	-	4.5
	1989	79.1	58.0	-	76.3	4.9	2.0	-	4.2	4.8	3.2	-	4.5
	1990	72.1	64.5	66.8	77.6	3.7	2.6	3.0	4.4	3.9	3.5	3.5	4.5
	1991	71.9	63.2	-	79.1	3.7	2.5	-	4.7	4.2	3.8	-	4.9

Table 101. COD: Comparisons of mean length in catches by Scotia-Fundy longliners and otter trawlers in Subarea 3 by Division and season, based on observer samples in the 1988-91 period.

Area	Year	Gear	Season	No. of Fish measured	Mean Length (cm)
3L	1988	LL	May	1211	92
		OT	May-June	548	71
3N	1990	LL	October	386	107
		OT	Sept-Oct	883	64
3O	1989	LL	February	403	105
		OT	Jan-Mar	1506	78
3O	1989	LL	Aug-Sept	420	109
3Ps	1990	LL	November	983	85
		OT	Oct-Dec	2029	68

Table 102. HADDOCK: mean length and weight of fish landed in Scotia-Fundy Region from Subdivision 4Vs (1987-91).

		Mean Length (cm)		Mean Weight (kg)	
Season	Year	LL	OT	LL	OT
Apr.-Sep.	1987	-	-	-	-
	1988	50.7	48.3	1.4	1.2
	1989	54.8	50.1	1.8	1.3
	1990	-	-	-	-
	1991	55.3	51.9	1.8	1.5

Table 103. HADDOCK: mean length and weight of fish landed in Scotia-Fundy Region from Division 4W (1987-91).

		Mean Length (cm)		Mean Weight (kg)	
Season	Year	LL	OT	LL	OT
Jan.-Dec.	1987	49.2	48.4	1.3	1.2
	1988	45.7	50.9	1.0	1.4
	1989	48.8	46.0	1.2	1.0
	1990	-	-	-	-
	1991	46.0	39.4	1.0	0.7

Table 104. HADDOCK: mean length and weight of fish landed in Scotia-Fundy Region from Division 4X (1987-91).

		Mean Length (cm)			Mean Weight (Kg)		
Season	Year	LL	OT	GN	LL	OT	GN
Jan.-Mar.	1987	52.7	49.3	-	1.6	1.3	-
	1988	54.0	51.7	-	1.7	1.5	-
	1989	51.6	52.2	-	1.5	1.5	-
	1990	54.4	53.1	-	1.8	1.7	-
	1991	53.7	56.2	-	1.7	1.9	-
May-Dec.	1987	53.0	47.9	56.5	1.6	1.2	1.9
	1988	53.4	50.6	-	1.6	1.4	-
	1989	52.8	52.3	-	1.6	1.6	-
	1990	54.5	48.0	-	1.7	1.3	-
	1991	54.4	52.0	-	1.7	1.5	-

Table 105. HADDOCK: mean length and weight of fish landed in Scotia-Fundy Region from Subdivision 5Ze (1987-91).

Season	Year	Mean Length (cm)		Mean Weight (kg)	
		LL	OT	LL	OT
Jan.-Feb.	1987	-	-	-	-
	1988	-	-	-	-
	1989	60.1	56.5	2.4	2.0
	1990	-	-	-	-
	1991	62.5	58.5	2.7	2.2
Mar.-May	1987	-	-	-	-
	1988	60.0	-	2.4	-
	1989	-	-	-	-
	1990	62.9	-	2.7	-
	1991	-	-	-	-
Jun.-Dec.	1987	58.6	45.5	2.2	1.0
	1988	57.1	50.2	2.0	1.3
	1989	57.0	45.7	2.0	1.0
	1990	59.6	53.9	2.3	1.7
	1991	59.5	52.5	2.3	1.5

Table 106. HADDOCK: Comparisons of mean length in catches by Scotia-Fundy longliners and otter trawlers in Subarea 3 by Division and season, based on observer samples in the 1988-91 period.

Area	Year	Gear	Season	No. of Fish measured	Mean Length (cm)
3O	1988	LL	Feb-Mar	298	57
		OT	Feb-Mar	3115	54
3O	1990	LL	July-Sept	238	69
		OT	June-Sept	460	57
3Ps	1990	LL	Oct-Nov	375	67
		OT	Oct-Nov	330	57

Table 107. HALIBUT: Comparisons of mean length in catches by Scotia-Fundy longliners and otter trawlers in Div. 3L, Div. 3NOPs and Div. 4VWX + 5 annually, based on observer samples in the 1988-91 period, and in Div. 4VWX+5 based on port samples in the 1987-91 period.

Area	Gear	Year(s)	No. of Fish measured	Mean Length (cm)
		Observer Data		
3L	LL	1988-91	574	141
	OT	1988-91	98	97
3NOPs	LL	1988	244	124
		1989	671	122
		1990	1373	113
		1991	609	107
	OT	1988-91	458	97
4VWX + 5	LL	1988	89	111
	OT	1988	62	85
		Port Sampling Data		
4VWX + 5	LL	1989-91	326	103
	OT	1989-91	513	46

Figure 1: NAFO statistical Divisions and Subdivisions and DFO Regions. Scotia-Fundy Region is highlighted. The contour line is at 200 m.

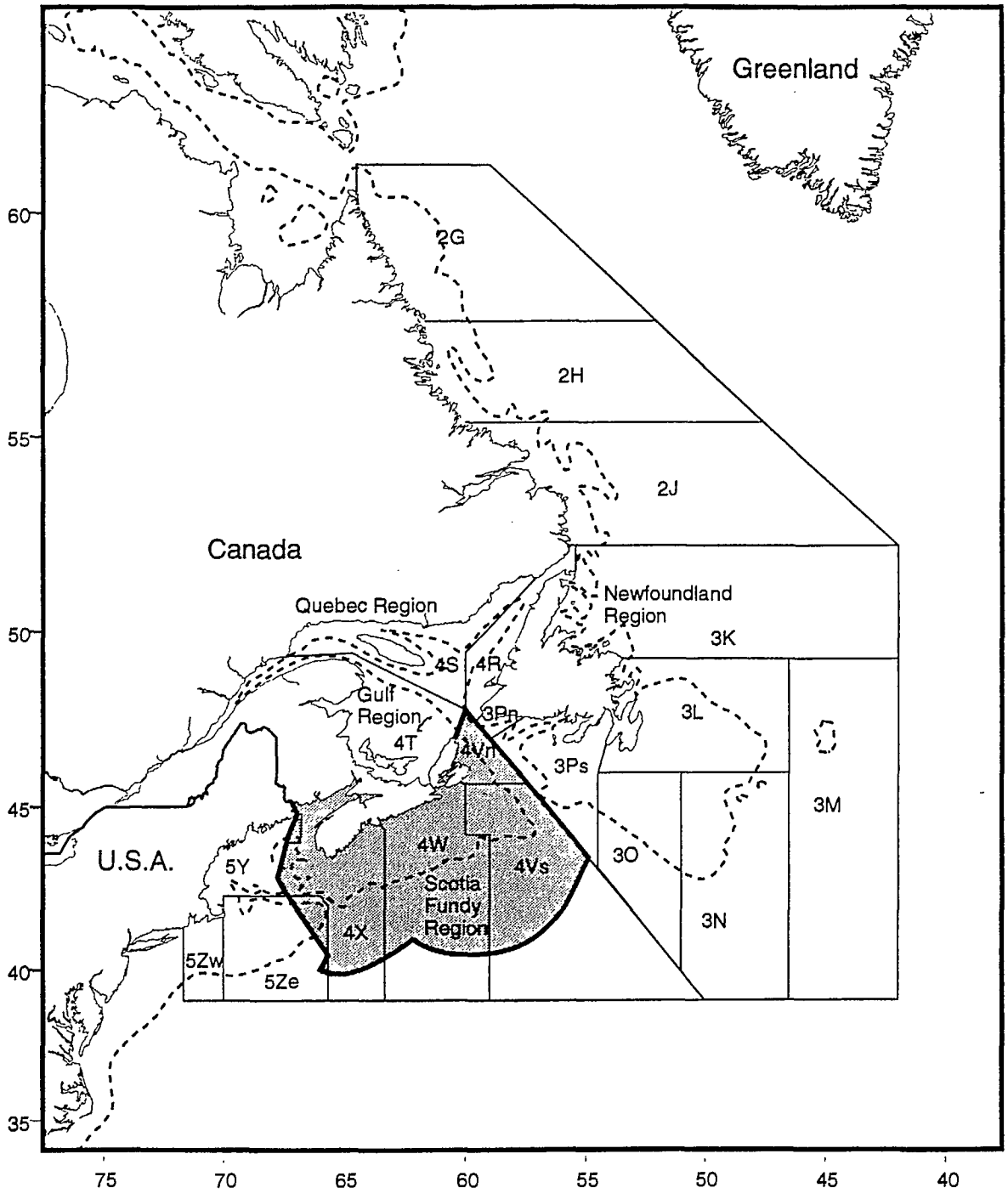


Figure 2. COD: Canada (M) total landings (t) and landings by hook and line gears from Div. 4VWX and Subarea 5 in 1961–81. (Hook and line landings for 1964–66 excluded as unreliable.)

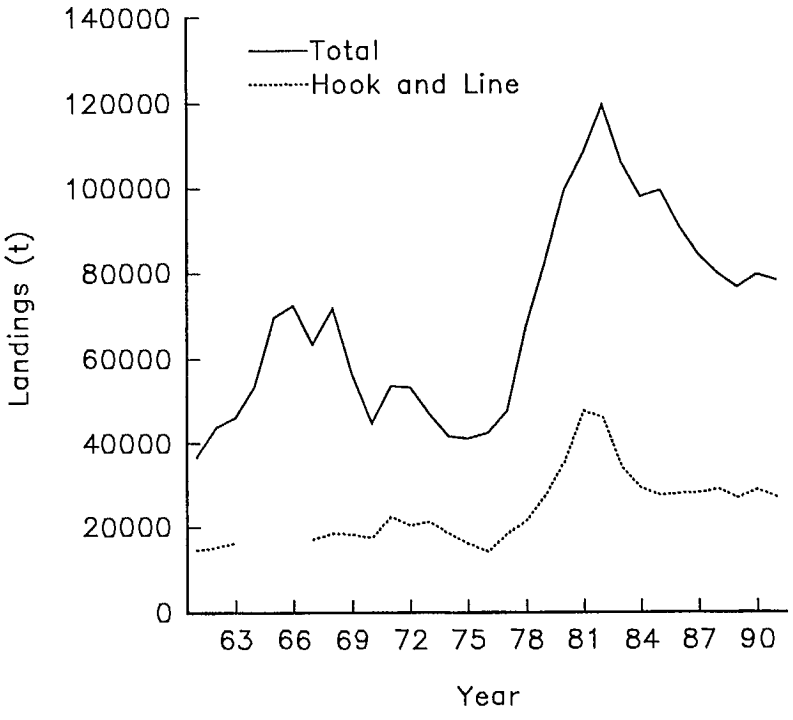


Figure 3. COD: Percent of total Canada (M) landings from Div. 4VWX and Subarea 5 caught by hook and line, 1961–91. (Data for 1964–66 excluded as unreliable.)

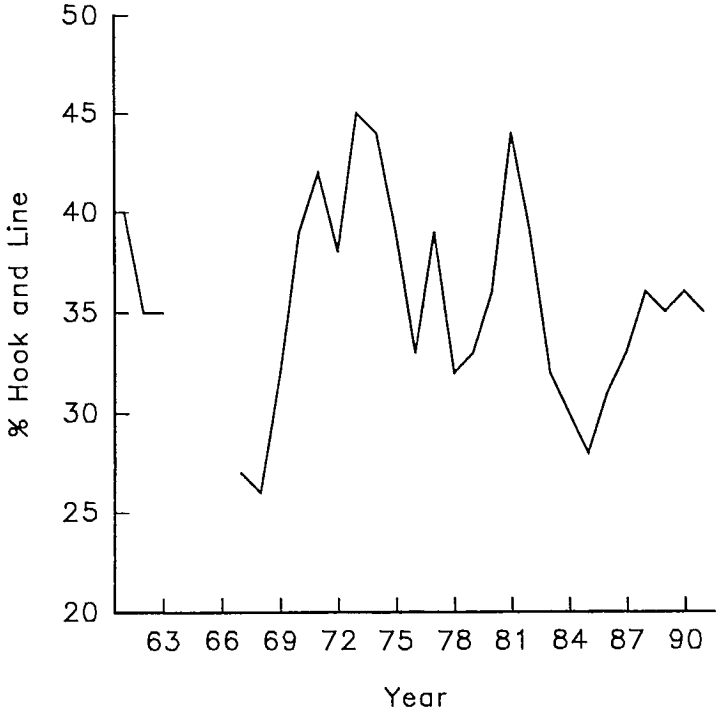


Figure 4. COD: Canada (M) total landings (t) and landings by hook and line gears by Division/Subdivision, 1961–91. (Hook and line landings not shown for 1964–66 in some cases – see tables.)

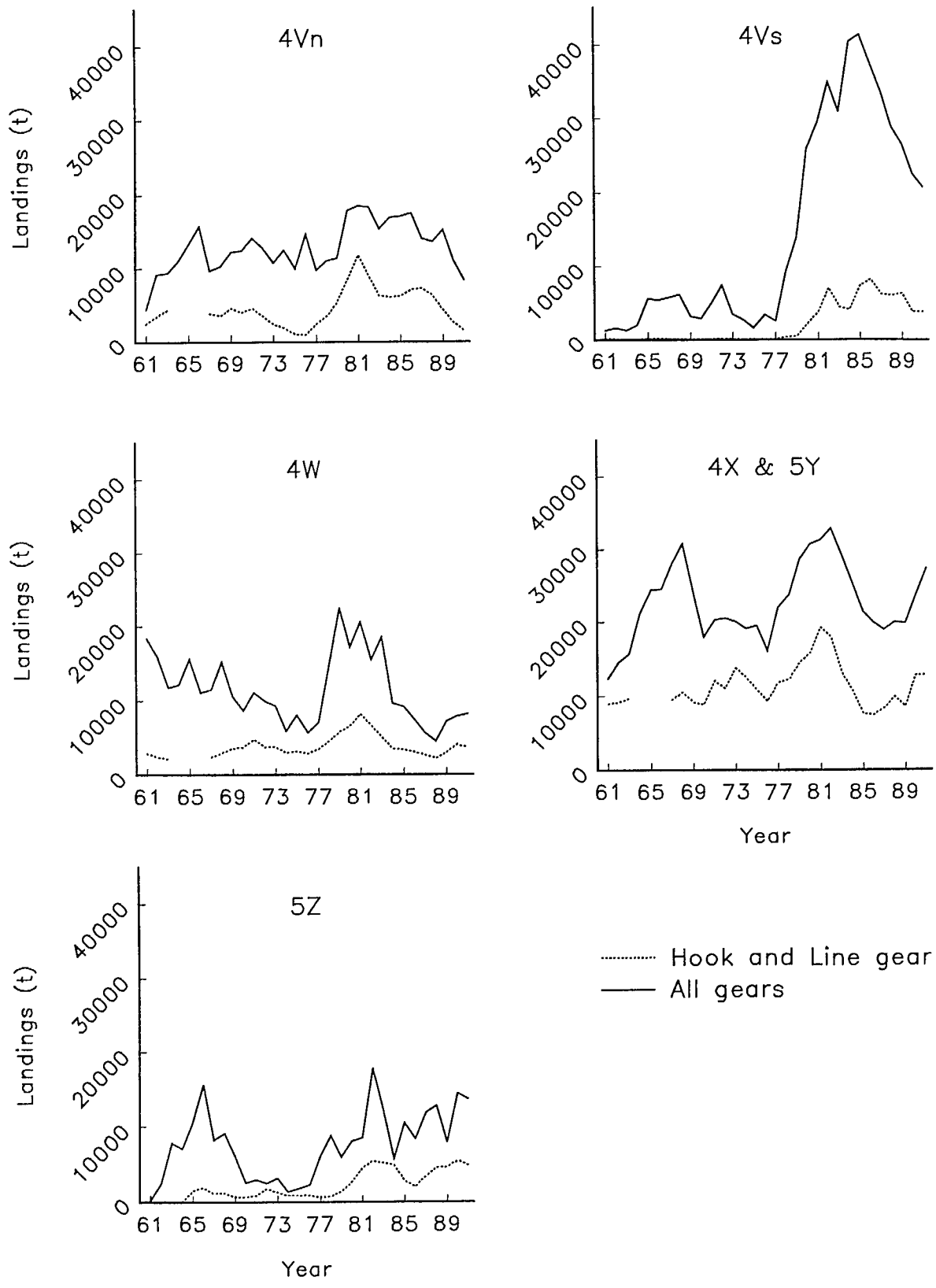


Figure 5. COD: percent of total Canada (M) landings caught by hook and line gears by Division/Subdivision, 1961–91. (Data for 1964–66 not shown in some cases – see tables.)

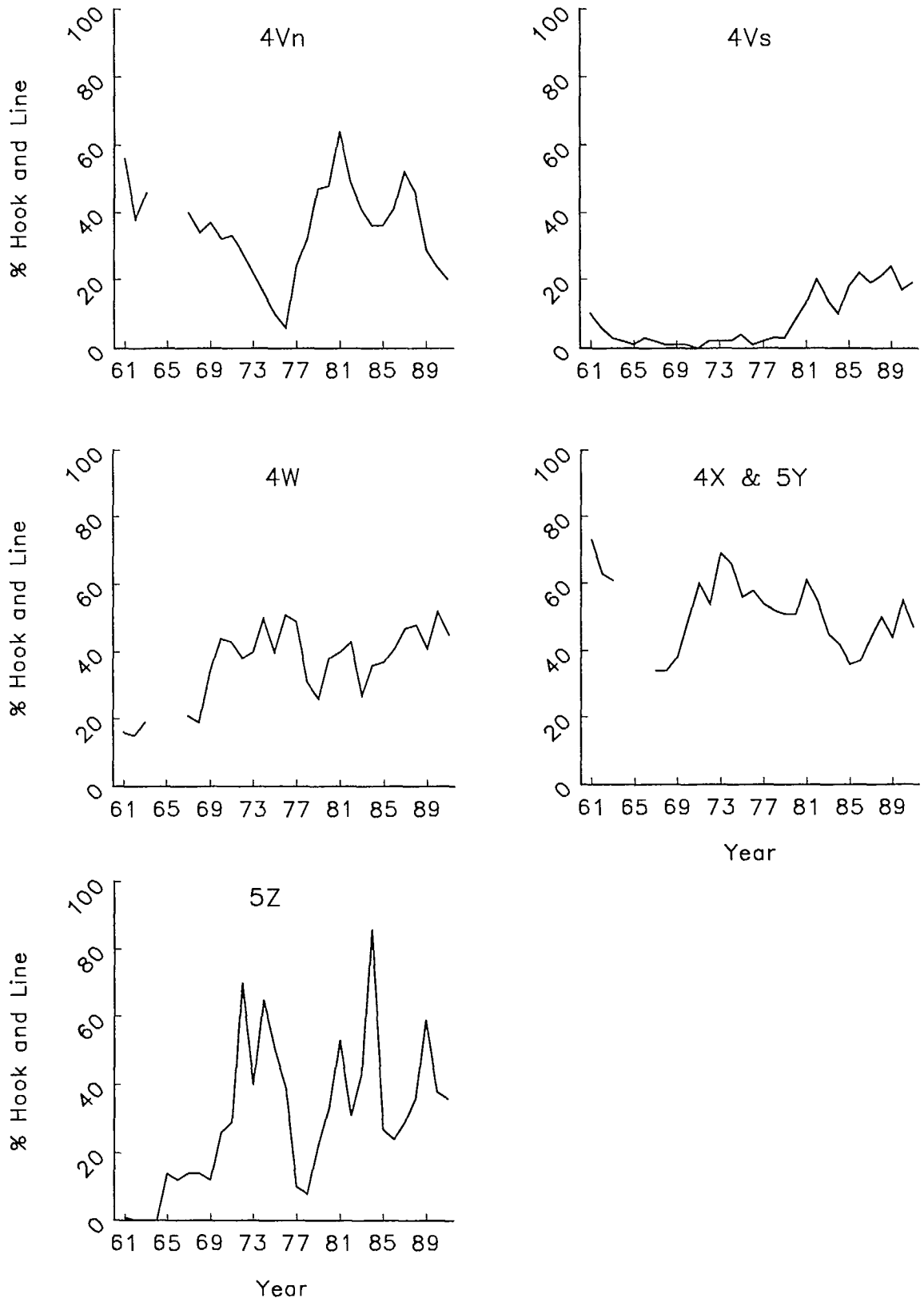


Figure 6. HADDOCK: Canada (M) total landings (t) and landings by hook and line gears from Div. 4VWX and Subarea 5 in 1961–91. Hook and line landings for 1964–66 excluded as unreliable.)

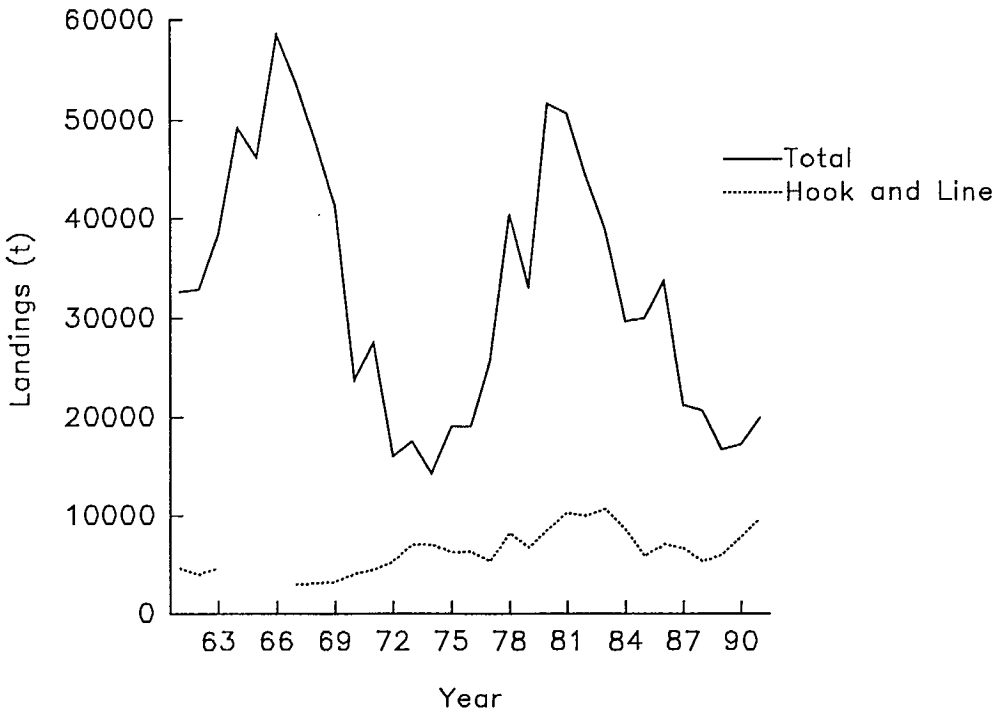


Figure 7. HADDOCK: percent of total Canada (M) landings from Div. 4VWX and Subarea 5 caught by hook and line, 1961–91. (Data for 1964–66 excluded as unreliable.)

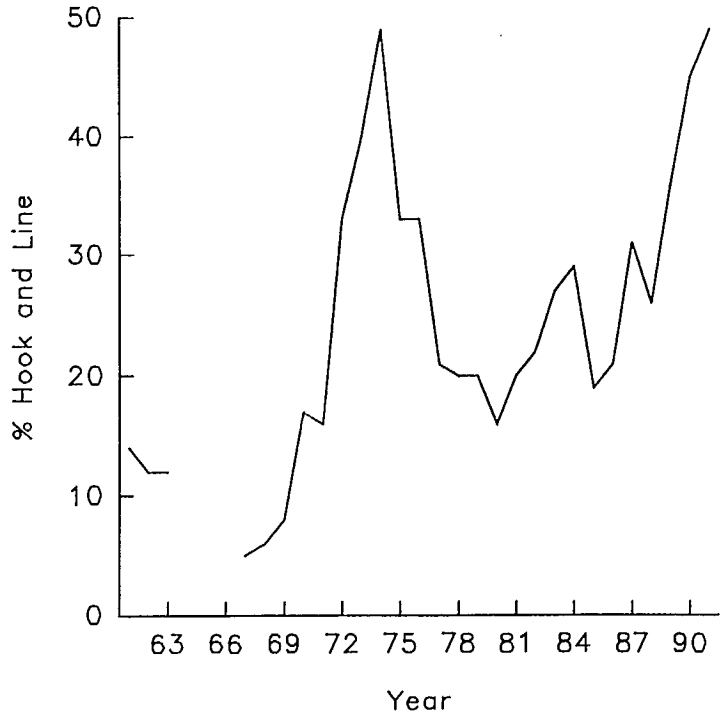


Figure 8. HADDOCK: Canada (M) total landings (t) and landings by hook and line gears by Division/Subdivision, 1961–91. Note variable scales used. (Hook and line landings are not shown for 1964–66 in some cases – see tables.)

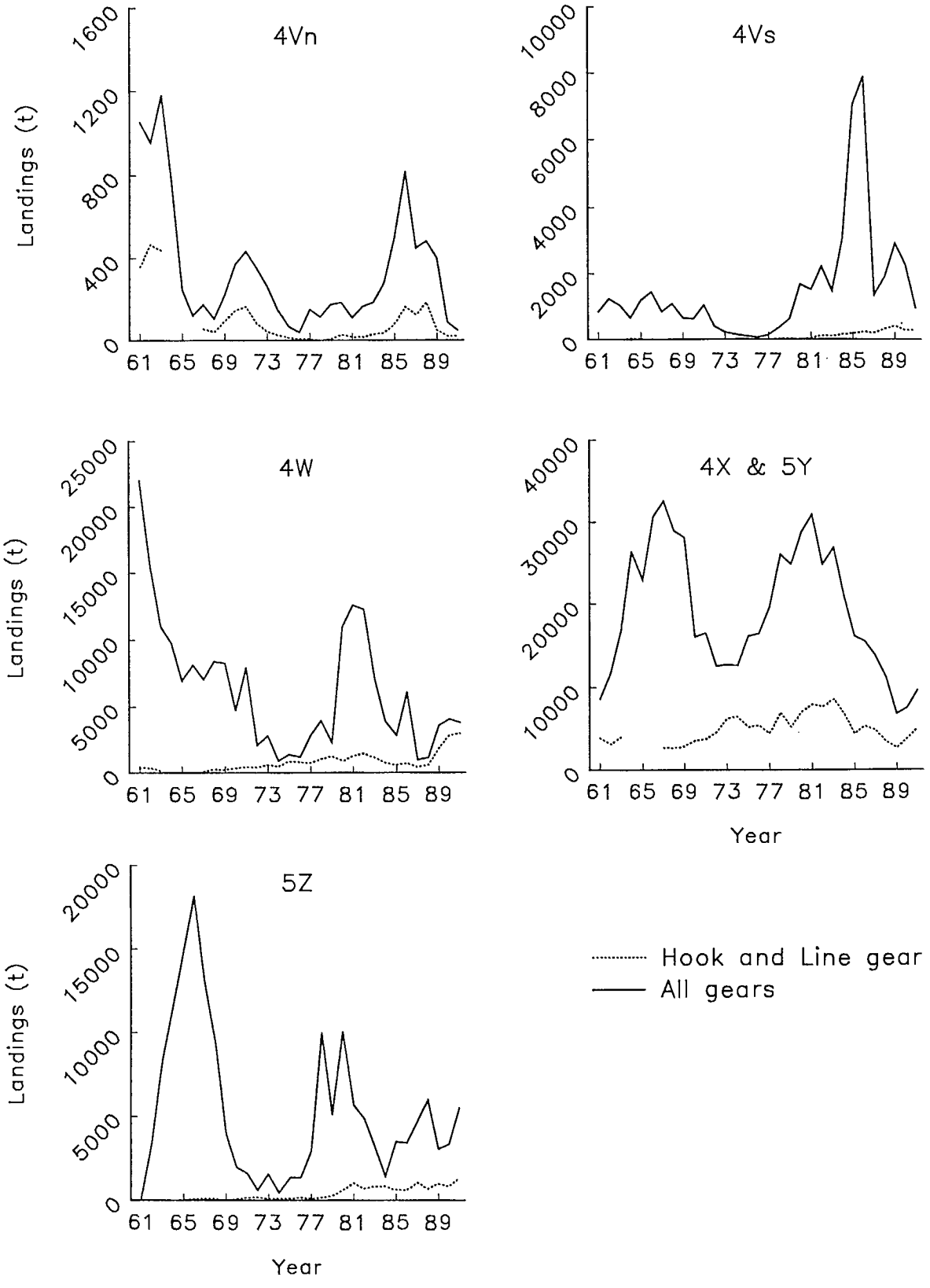


Figure 9. HADDOCK: percent of total Canada (M) landings caught by hook and line gears by Division/Subdivision, 1961–91. (Data for 1964–66 not shown in some cases – see tables.)

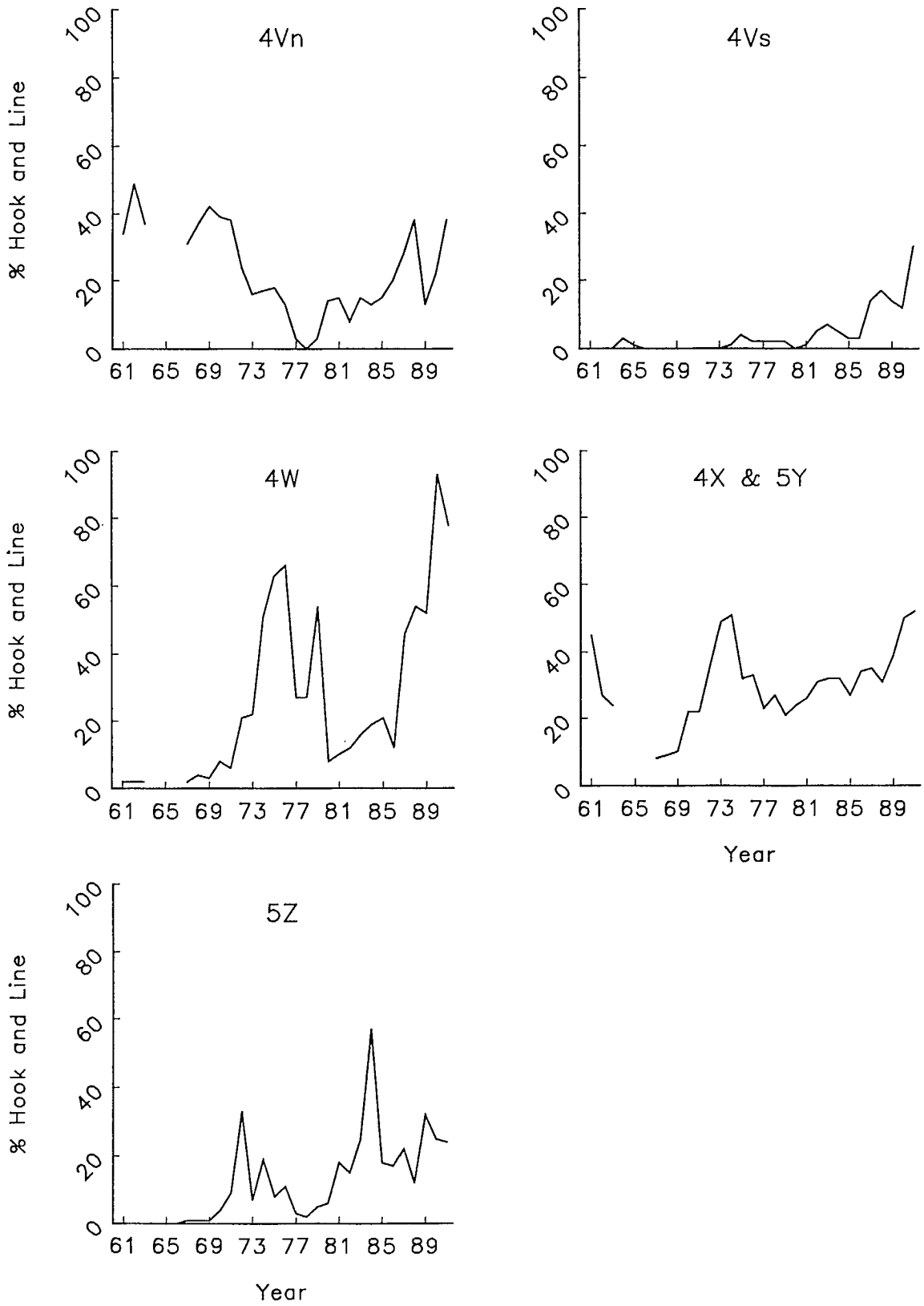


Figure 10. HALIBUT: Canada (M) total landings (t) and landings by hook and line gears from Div. 4VWX and Subarea 5 in 1961–91. (Hook and line landings for 1964–66 excluded as unreliable.)

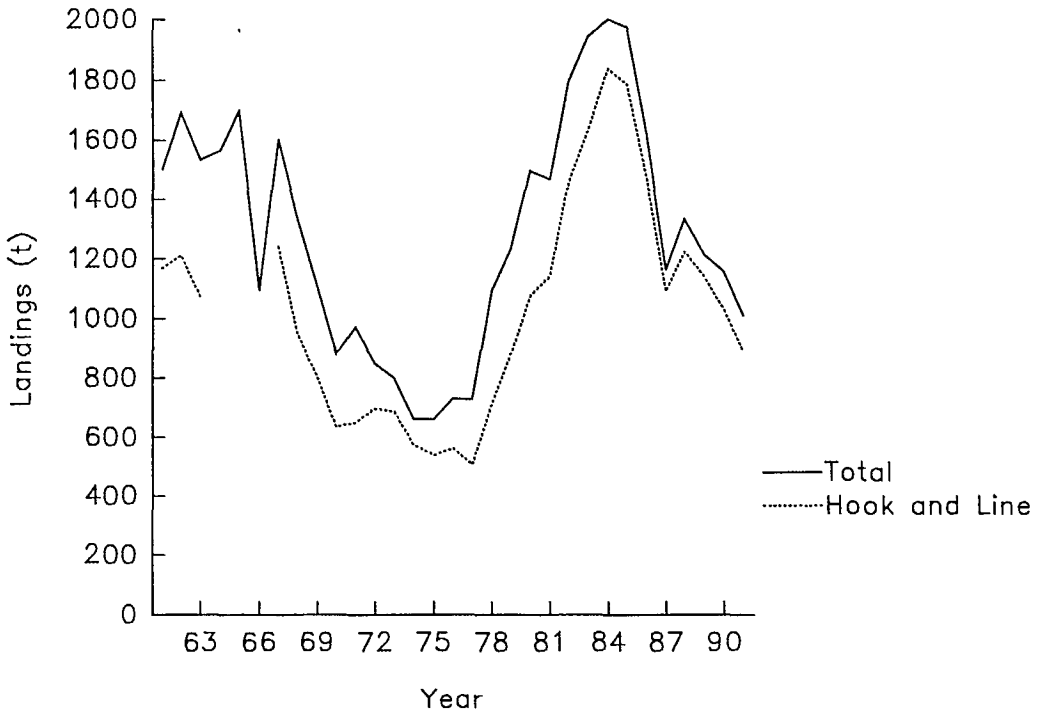


Figure 11. HALIBUT: percent of total Canada (M) landings from Div 4VWX and Subarea 5 caught by hook and line, 1961–91. (Data for 1964–66 excluded asr to unreliable.)

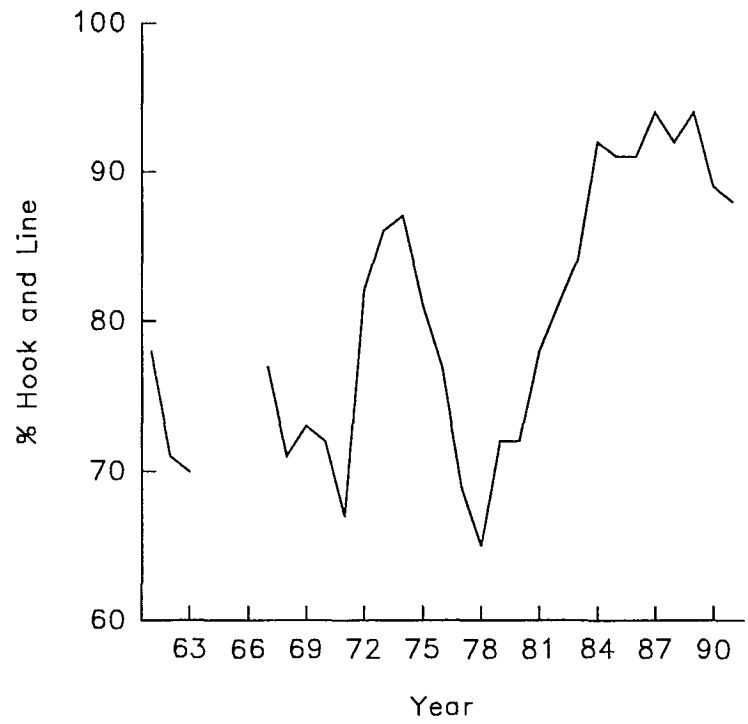


Figure 12. POLLOCK: Canada (M) total landings (t) and landings by hook and line gears from Div. 4VWX and Subarea 5 in 1961–91. (Hook and line landings for 1964–66 excluded as unreliable.)

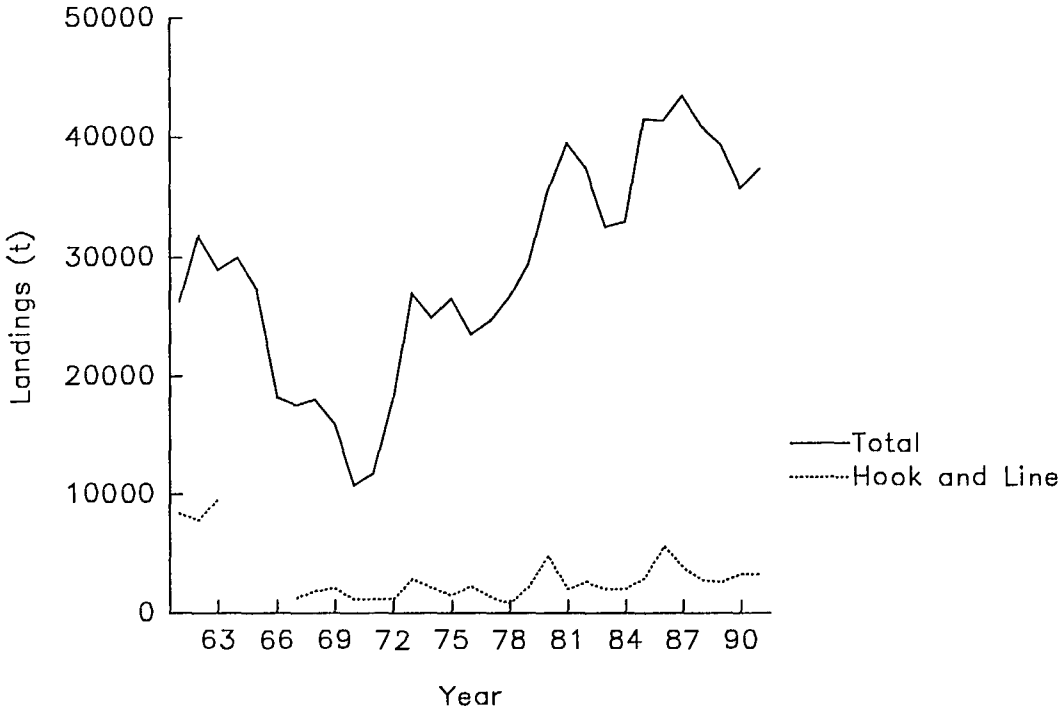


Figure 13. POLLOCK: percent of total Canada (M) landings from Div. 4VWX and Subarea 5 caught by hook and line, 1961–91. (Data for 1964–66 excluded as unreliable.)

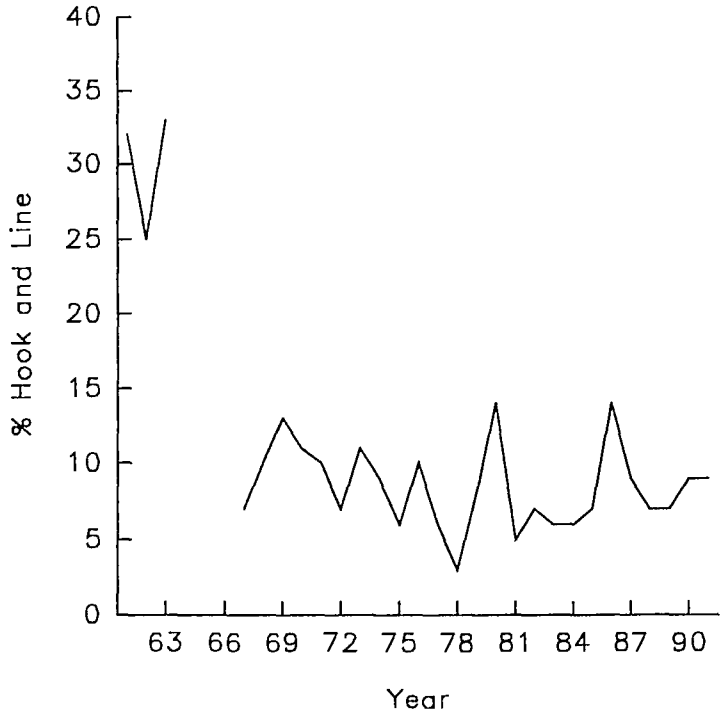


Figure 14. WHITE HAKE: Canada (M) total landings (t) and landings by hook and line gears from Div. 4VWX and Subarea 5 in 1961–91. (Hook and line landings for 1964–66 excluded as unreliable. See Table 71 regarding treatment of red hake catch records, 1965–67.)

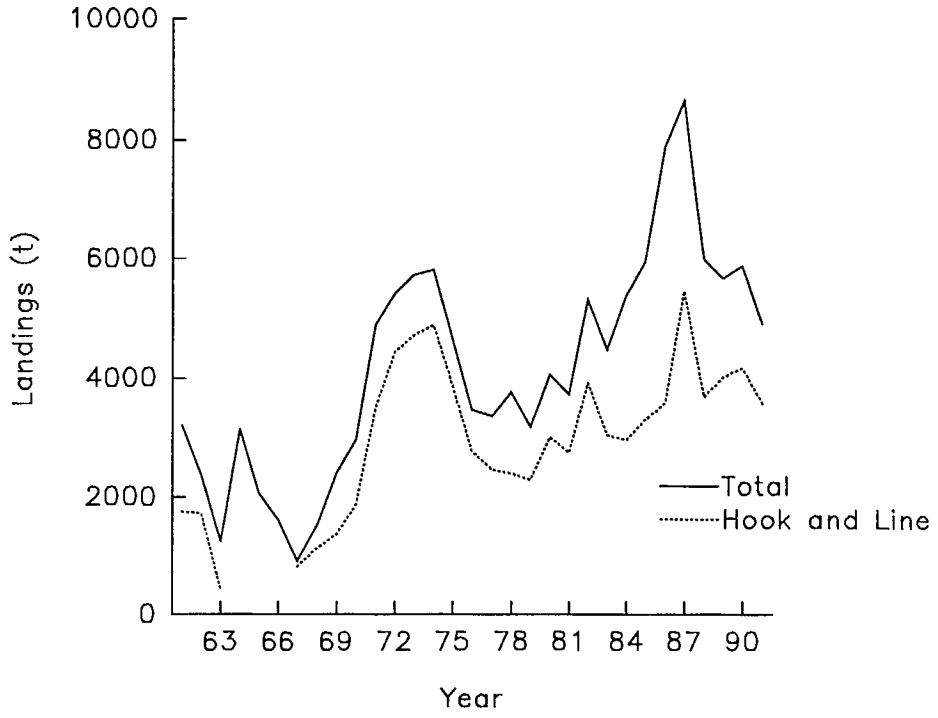


Figure 15. WHITE HAKE: percent of total Canada (M) landings from Div 4VWX and Subarea 5 caught by hook and line, 1961–91. (Data for 1964–66 excluded as unreliable.)

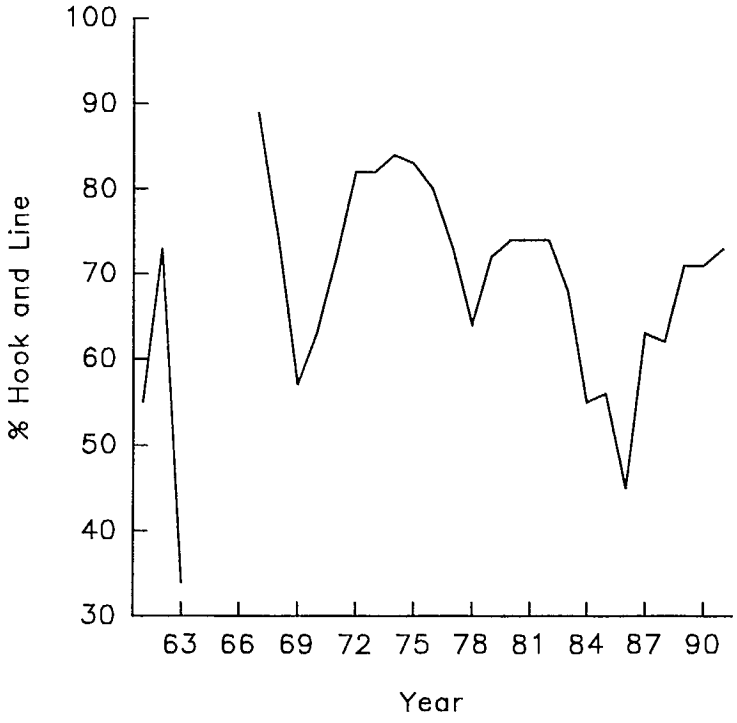


Figure 16. CUSK: Canada (M) total landings (t) and landings by hook and line gears from Div. 4VWX and Subarea 5 in 1961–91. (Hook and line landings for 1964–66 excluded as unreliable.)

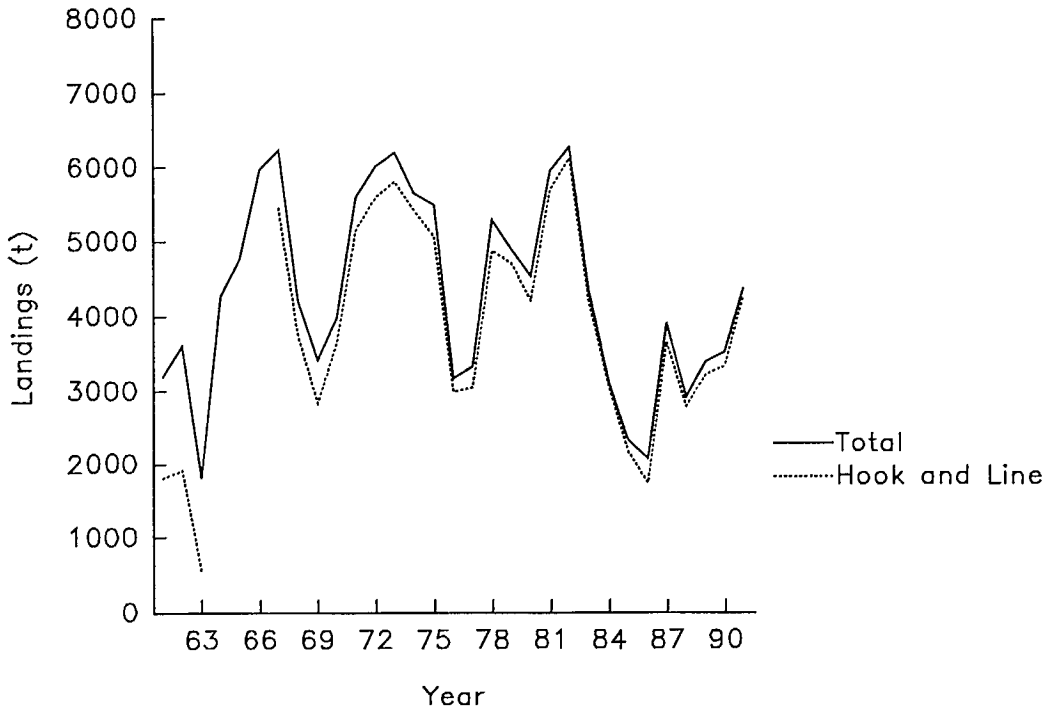


Figure 17. CUSK: percent of total Canada (M) landings from Div. 4VWX and Subarea 5 caught by hook and line, 1961–91. (Data for 1964–66 excluded as unreliable.)

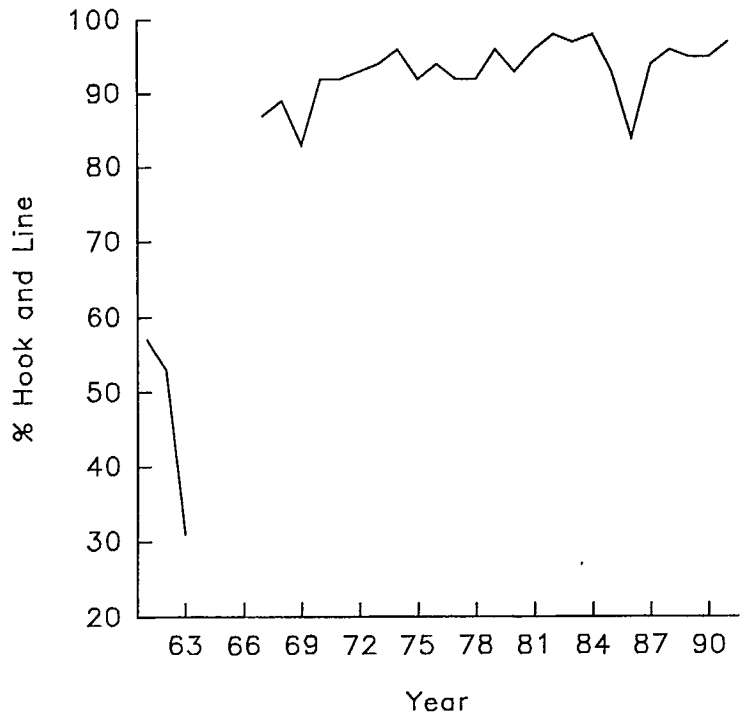


Figure 18a. 4Vn cod length frequencies.

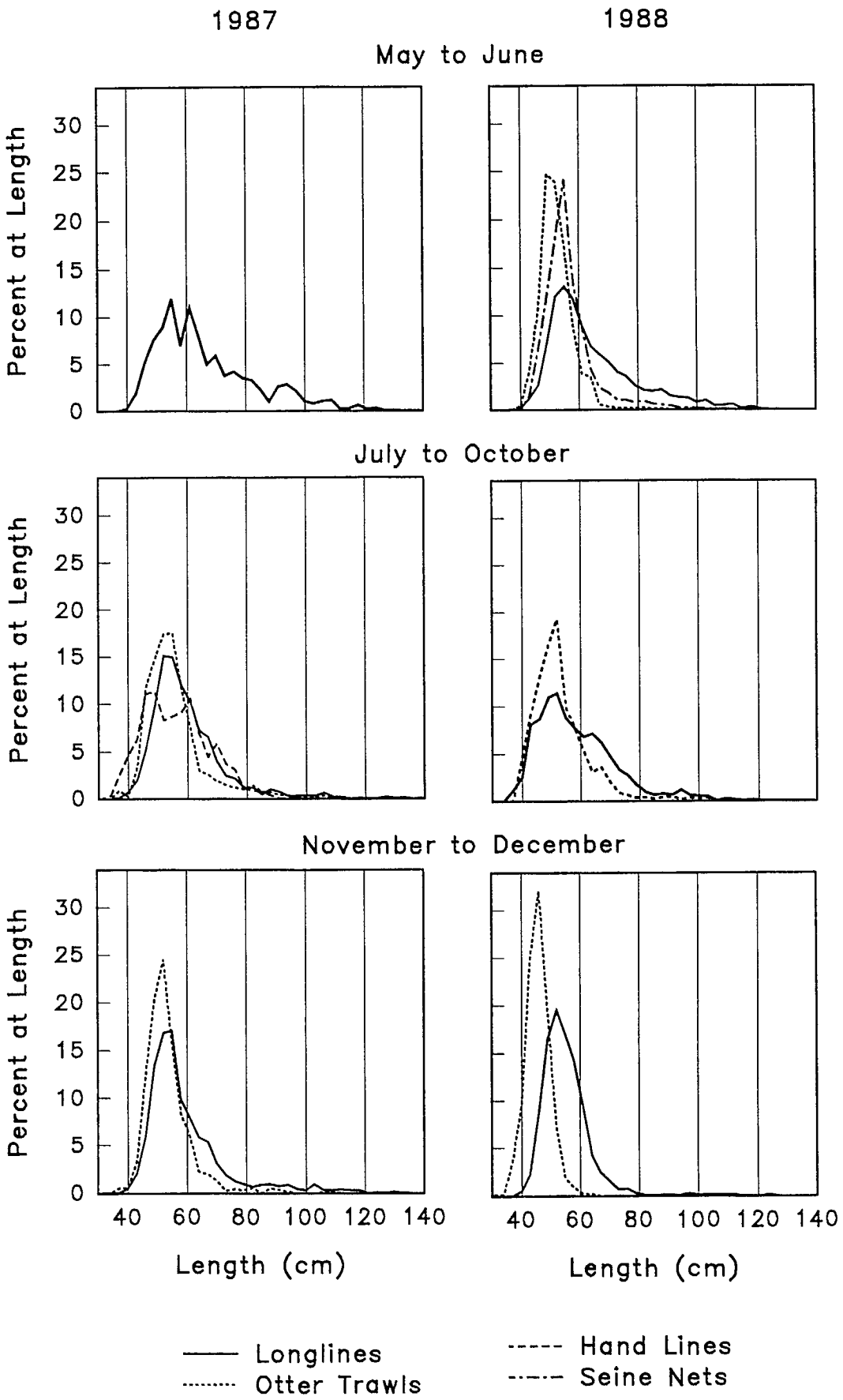


Figure 18b. 4Vn cod length frequencies.

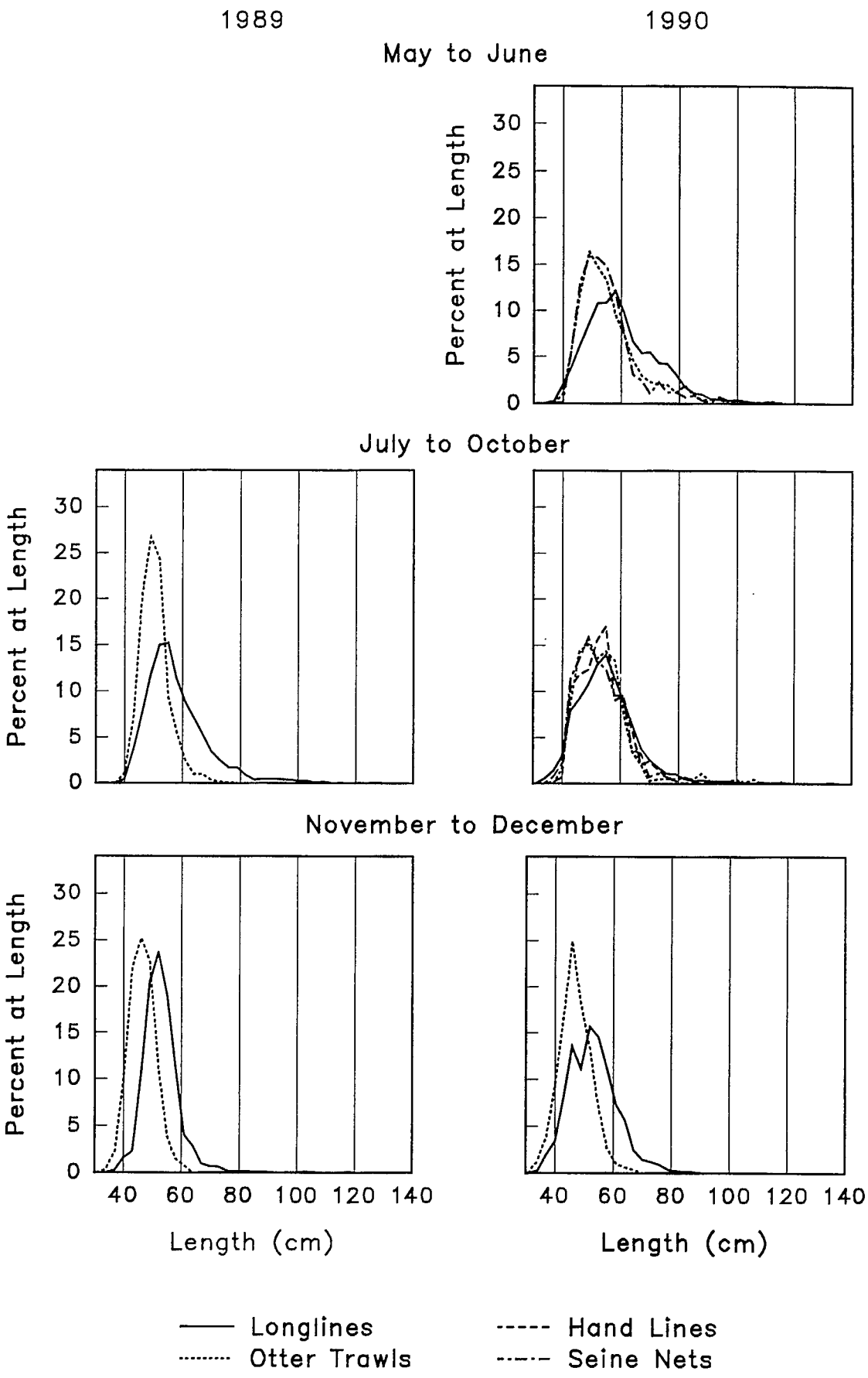


Figure 18c. 1991 4Vn cod length frequencies.

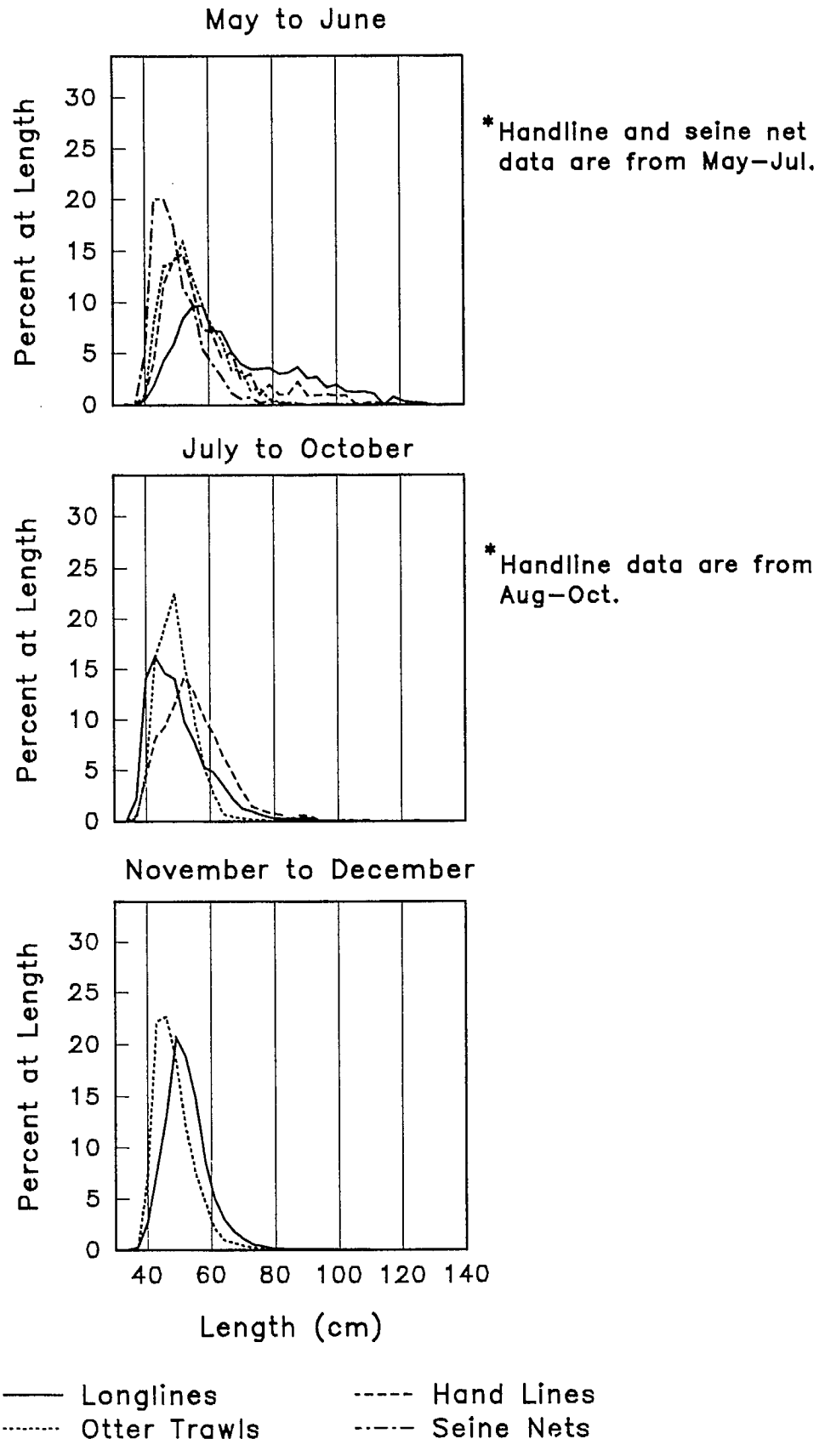


Figure 19a. 4Vn cod age frequencies.

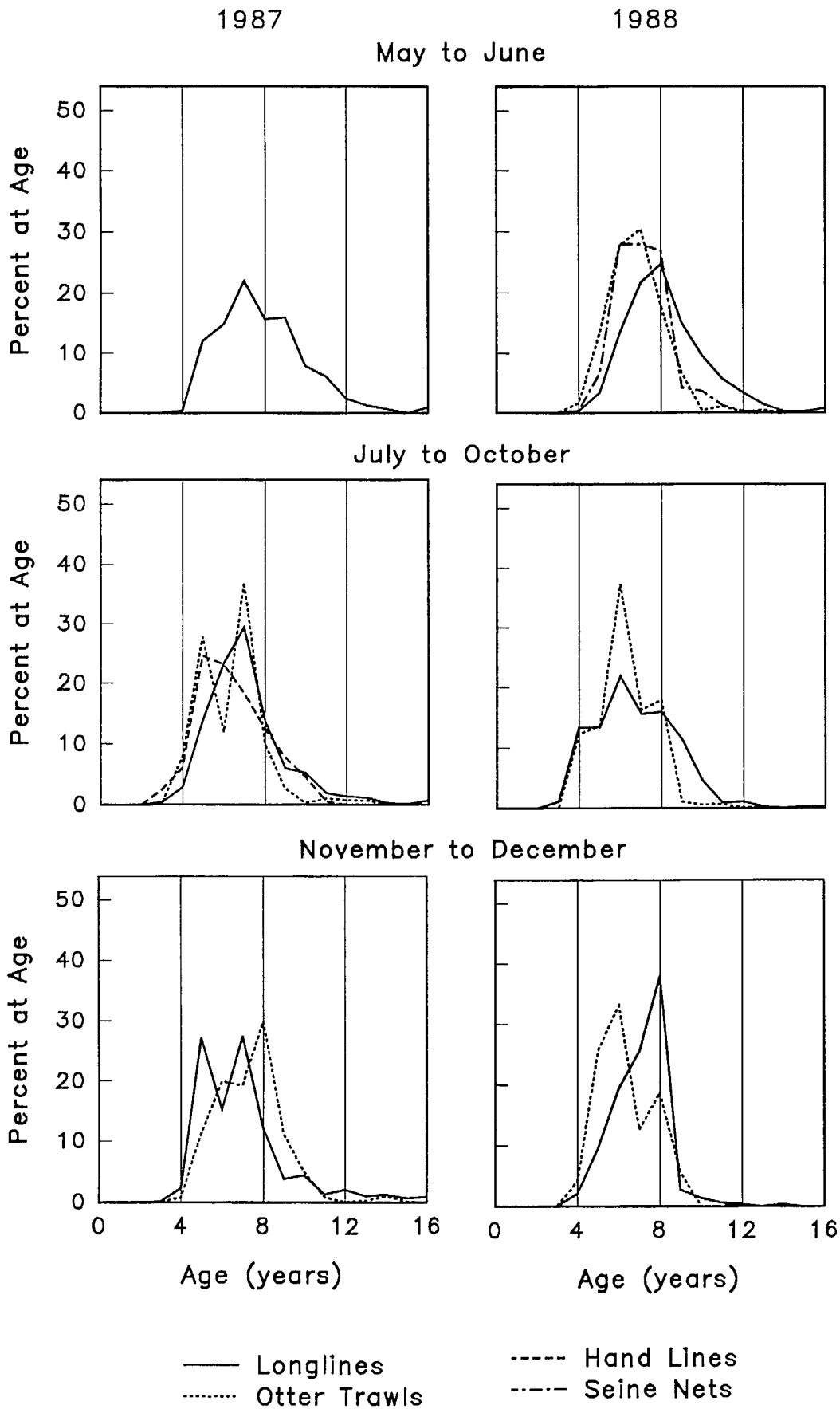


Figure 19b. 4Vn cod age frequencies.

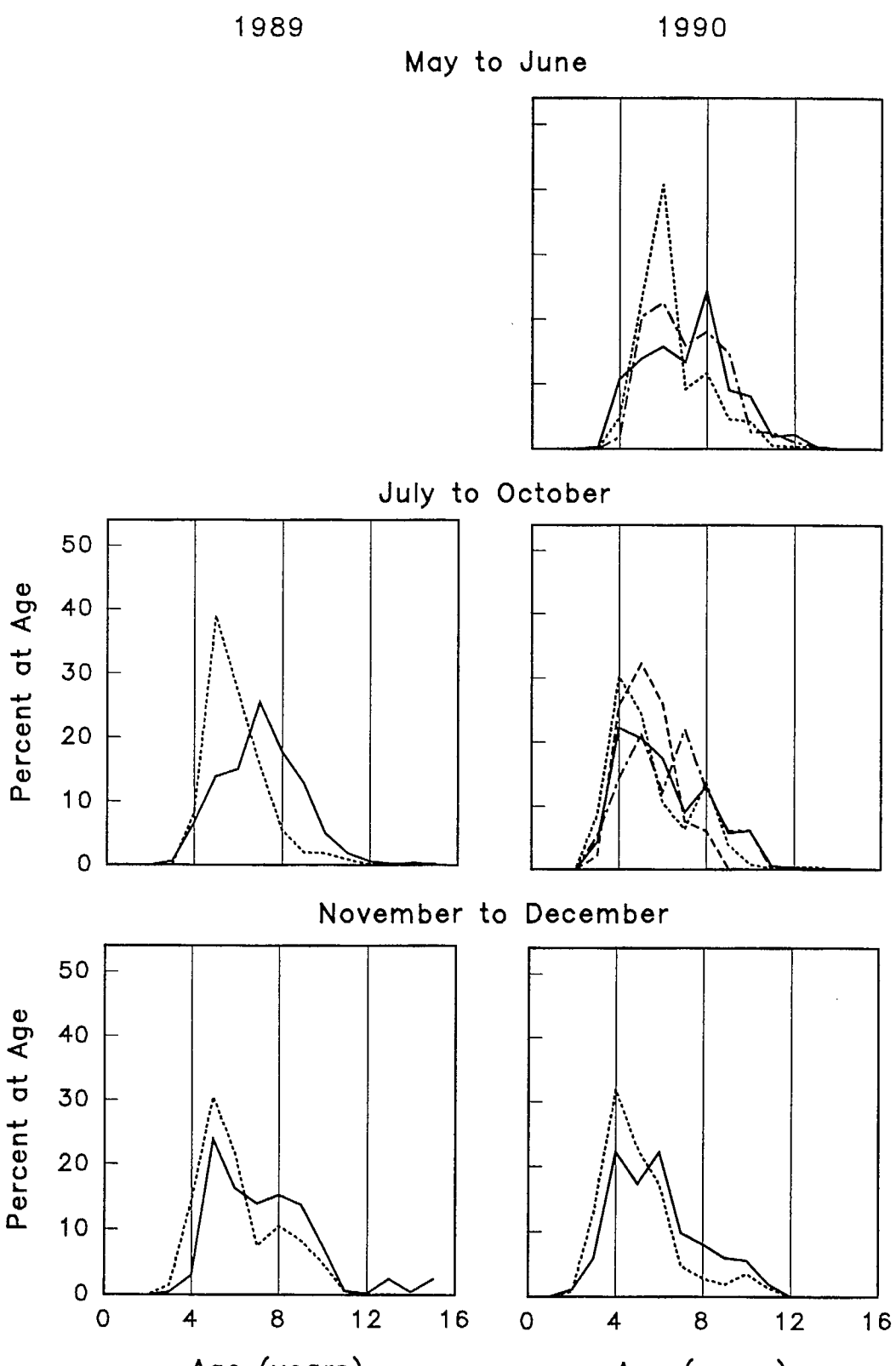


Figure 19c. 1991 4Vn cod age frequencies.

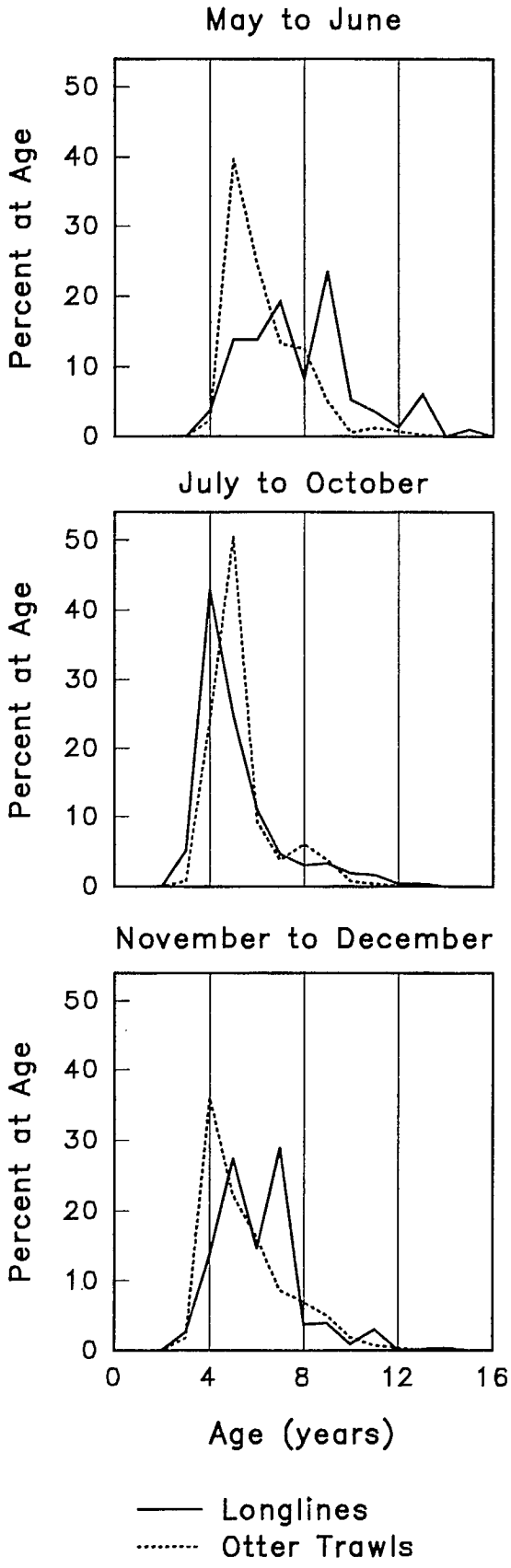


Figure 20. 4Vn cod longline length frequencies.

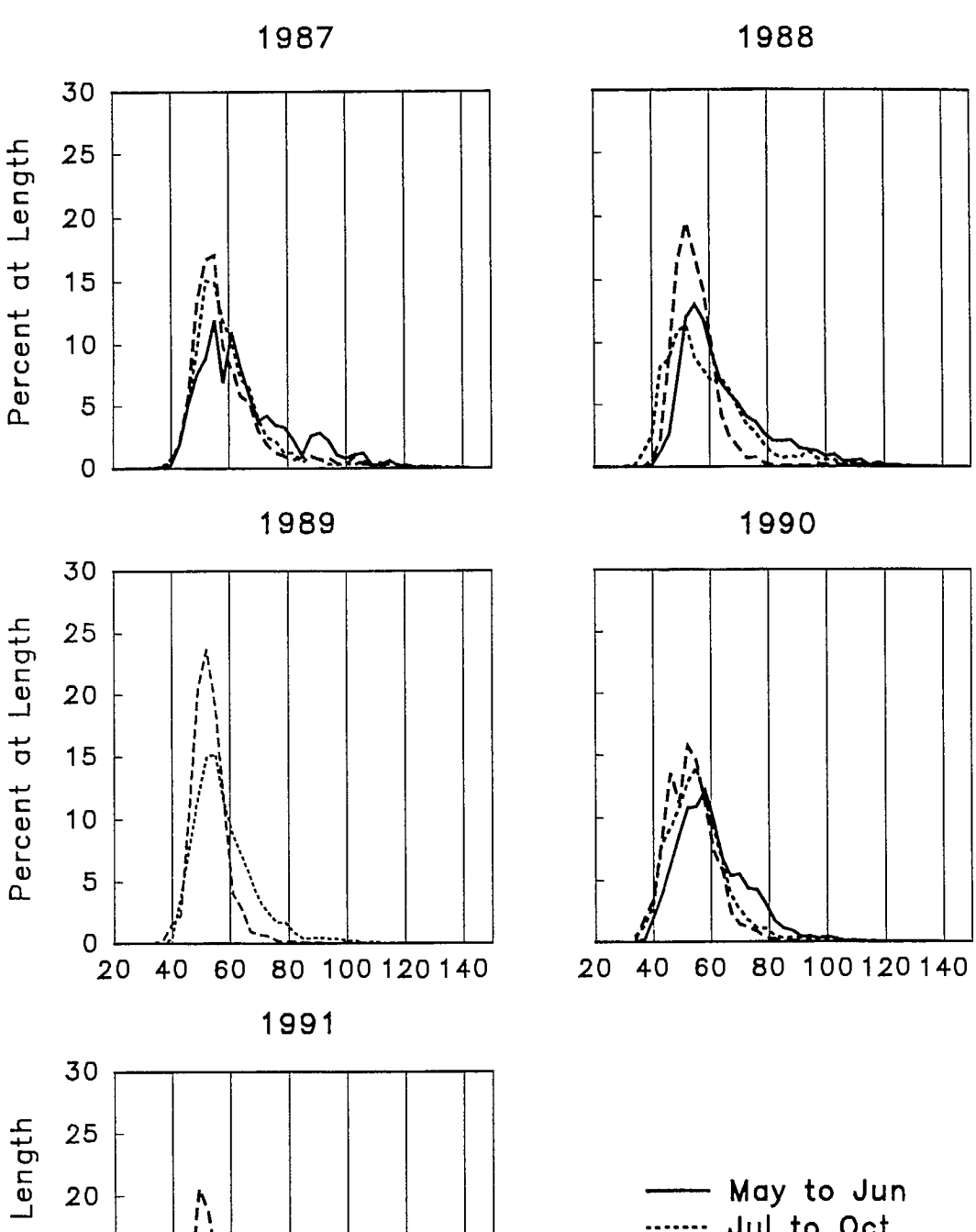


Figure 21. 4Vn cod longline age frequencies.

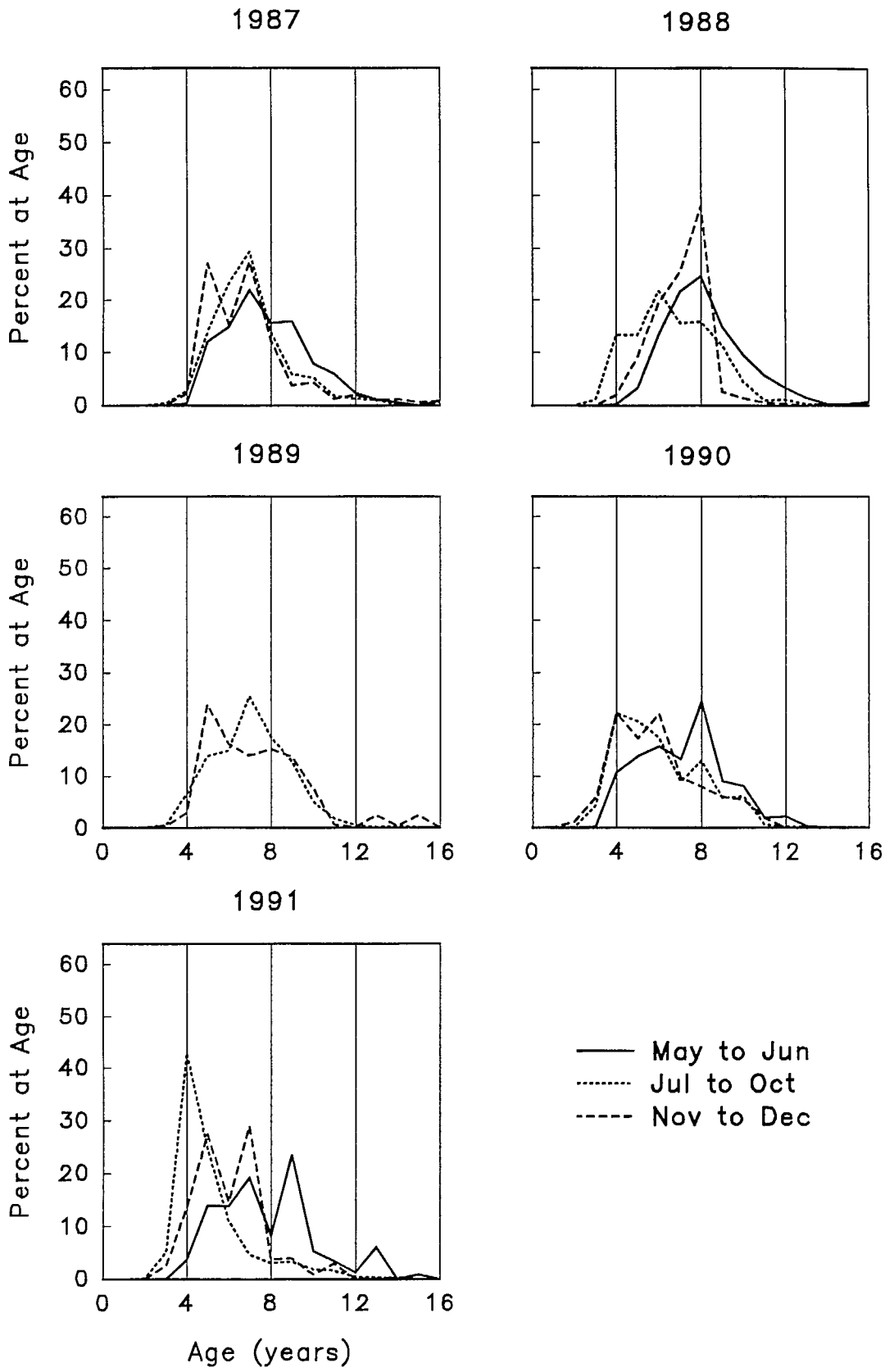


Figure 22. Mean lengths, weights and ages of cod landed in Scotia–Fundy Region from Subdivision 4Vn.

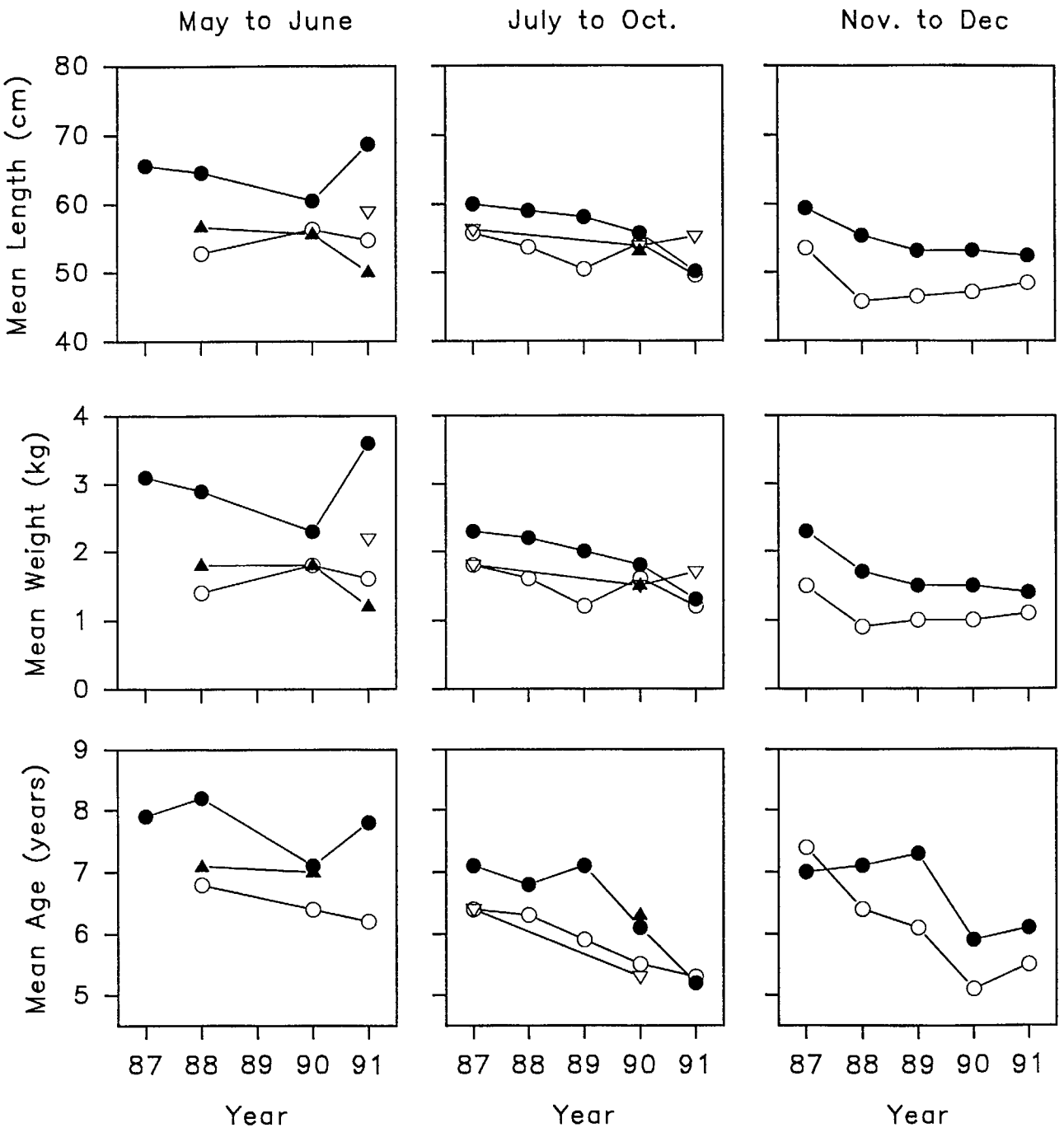
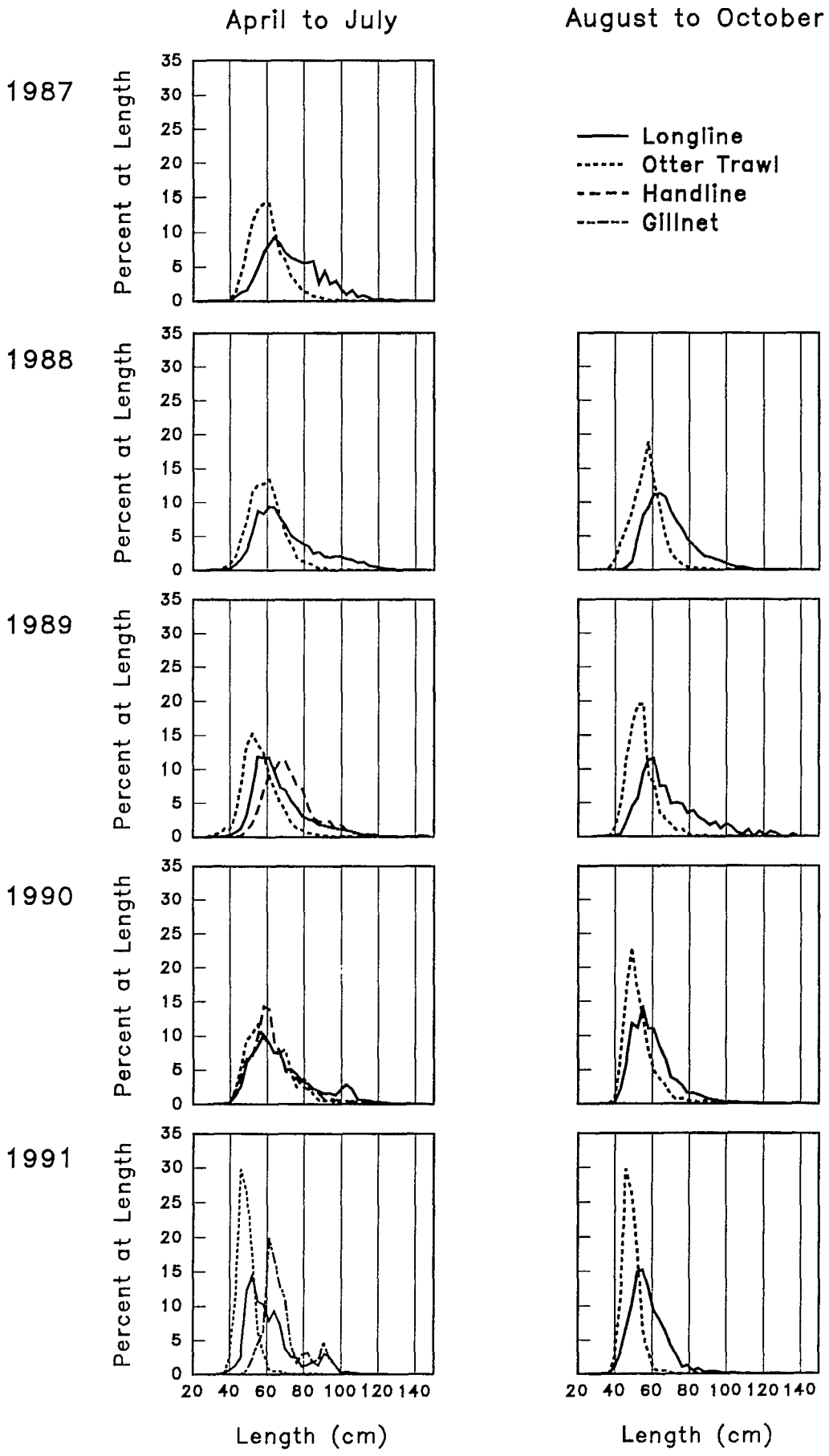
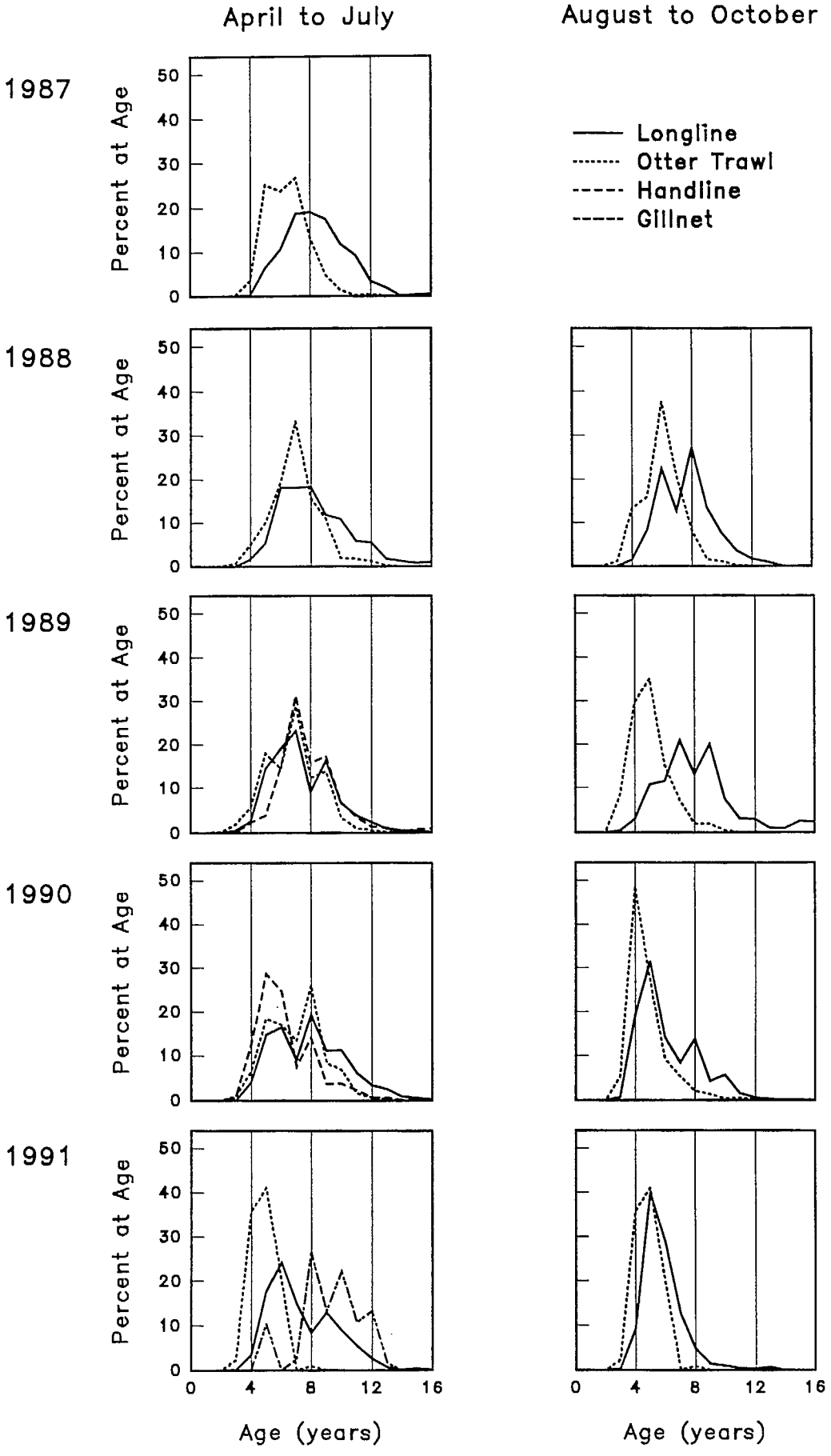


Figure 23. 4Vs cod length frequencies.



* Handline data from 1989 are for April to August

Figure 24. 4Vs cod age frequencies.



* Handline data from 1989 are for April to August

Figure 25. 4Vs cod longline length frequencies.

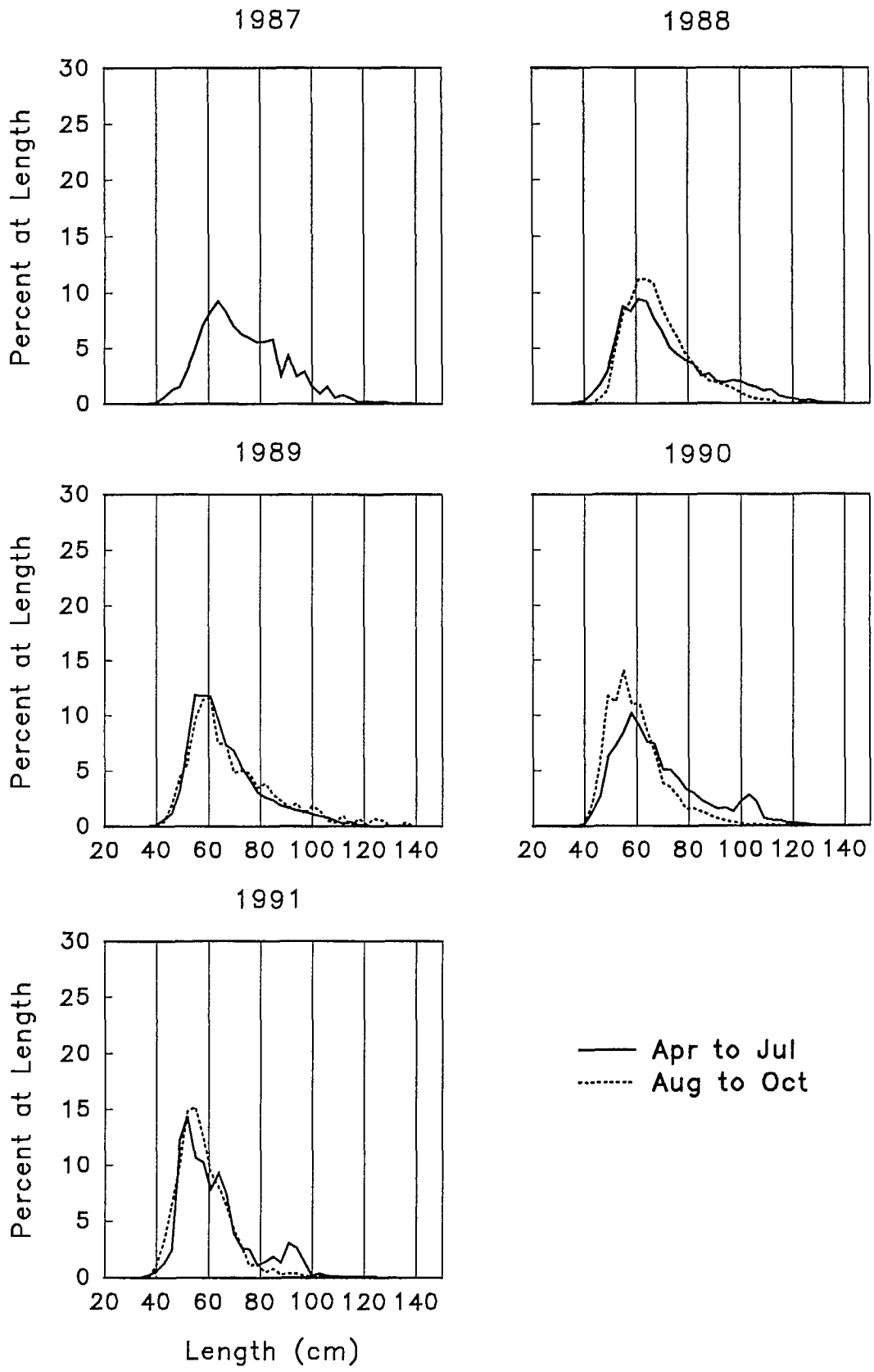


Figure 26. 4Vs cod longline age frequencies.

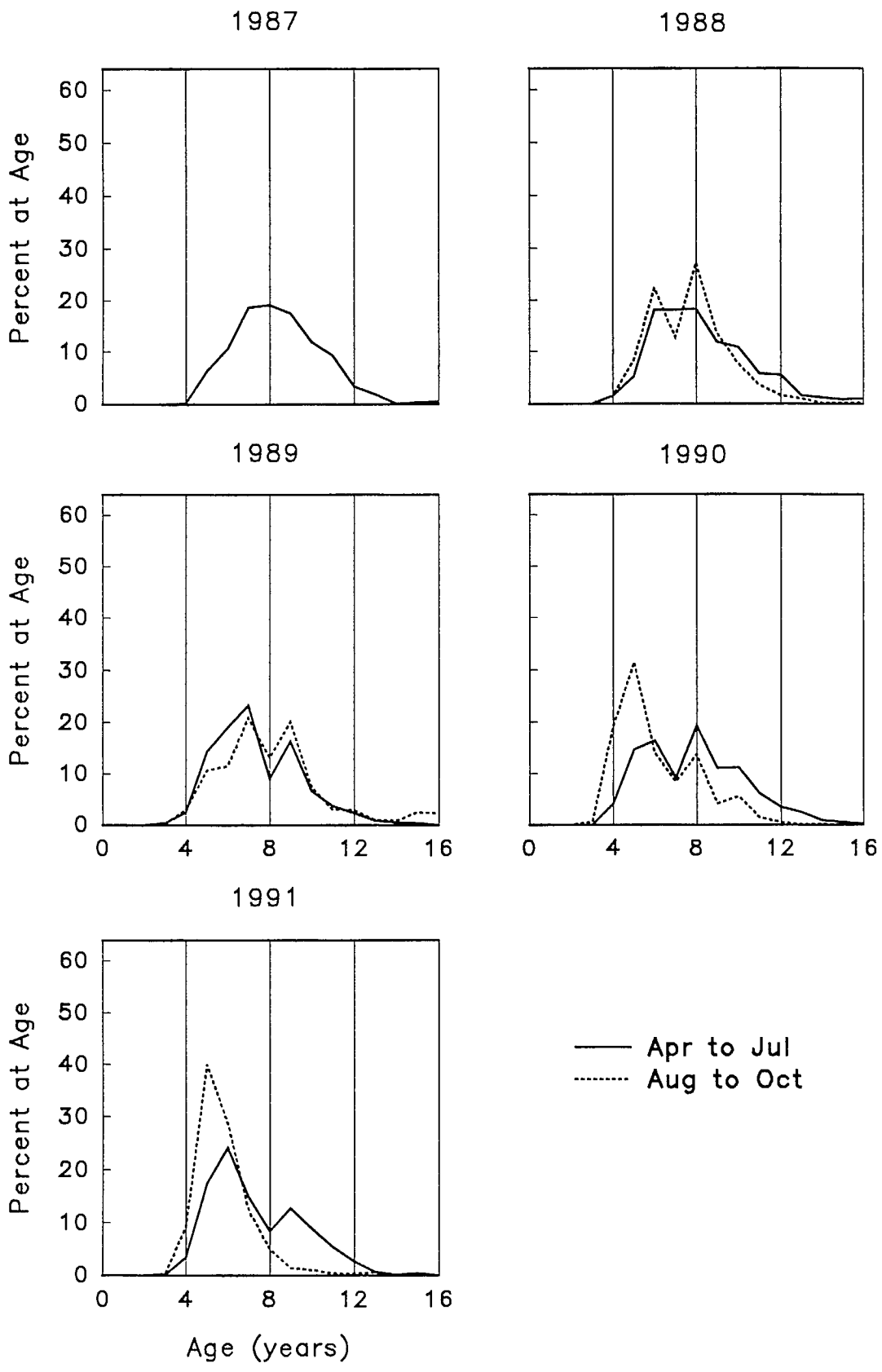


Figure 27. Mean lengths, weights and ages of cod landed in Scotia–Fundy Region from Subdivision 4Vs.

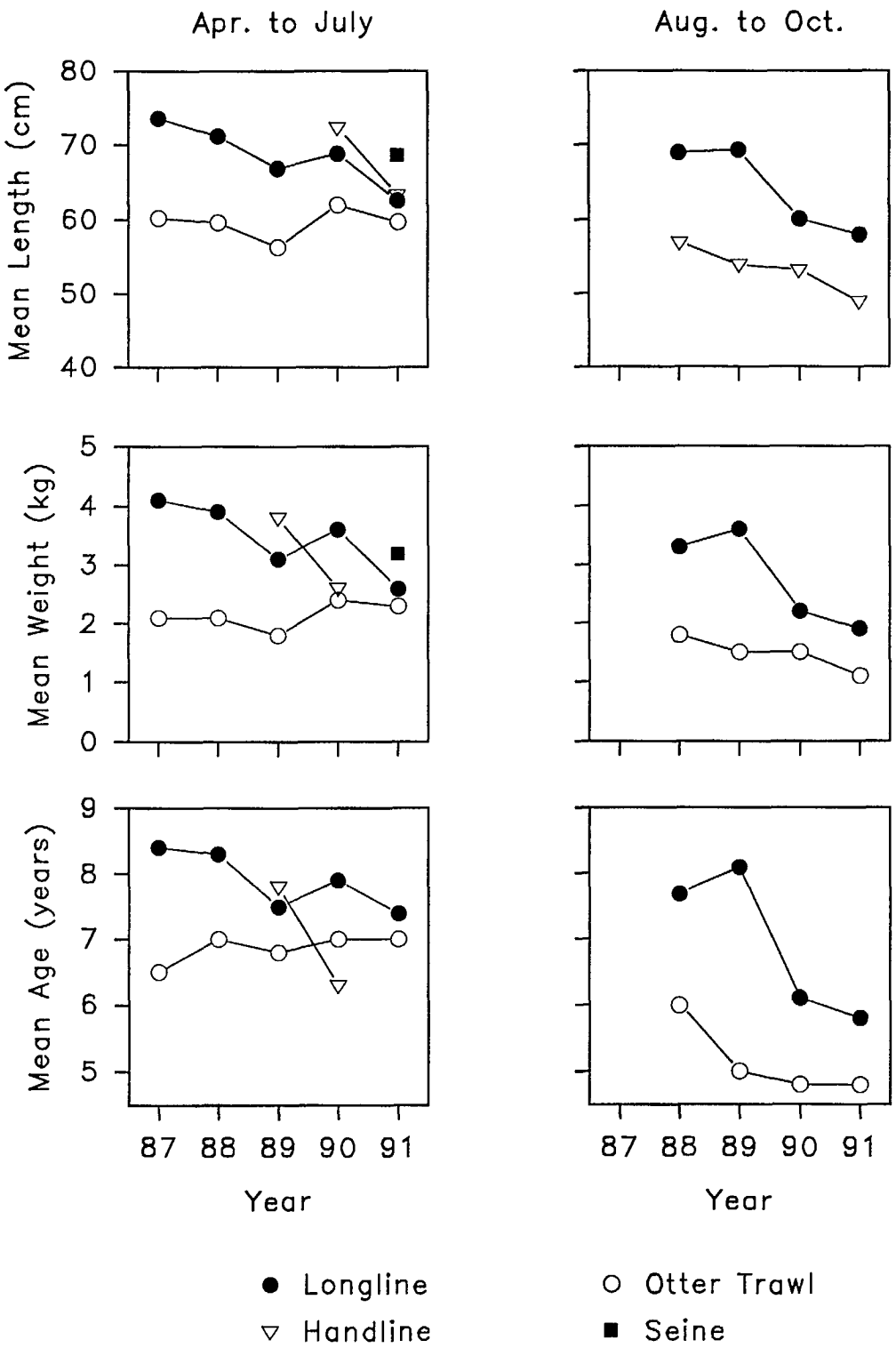


Figure 28. 4W cod length frequencies.

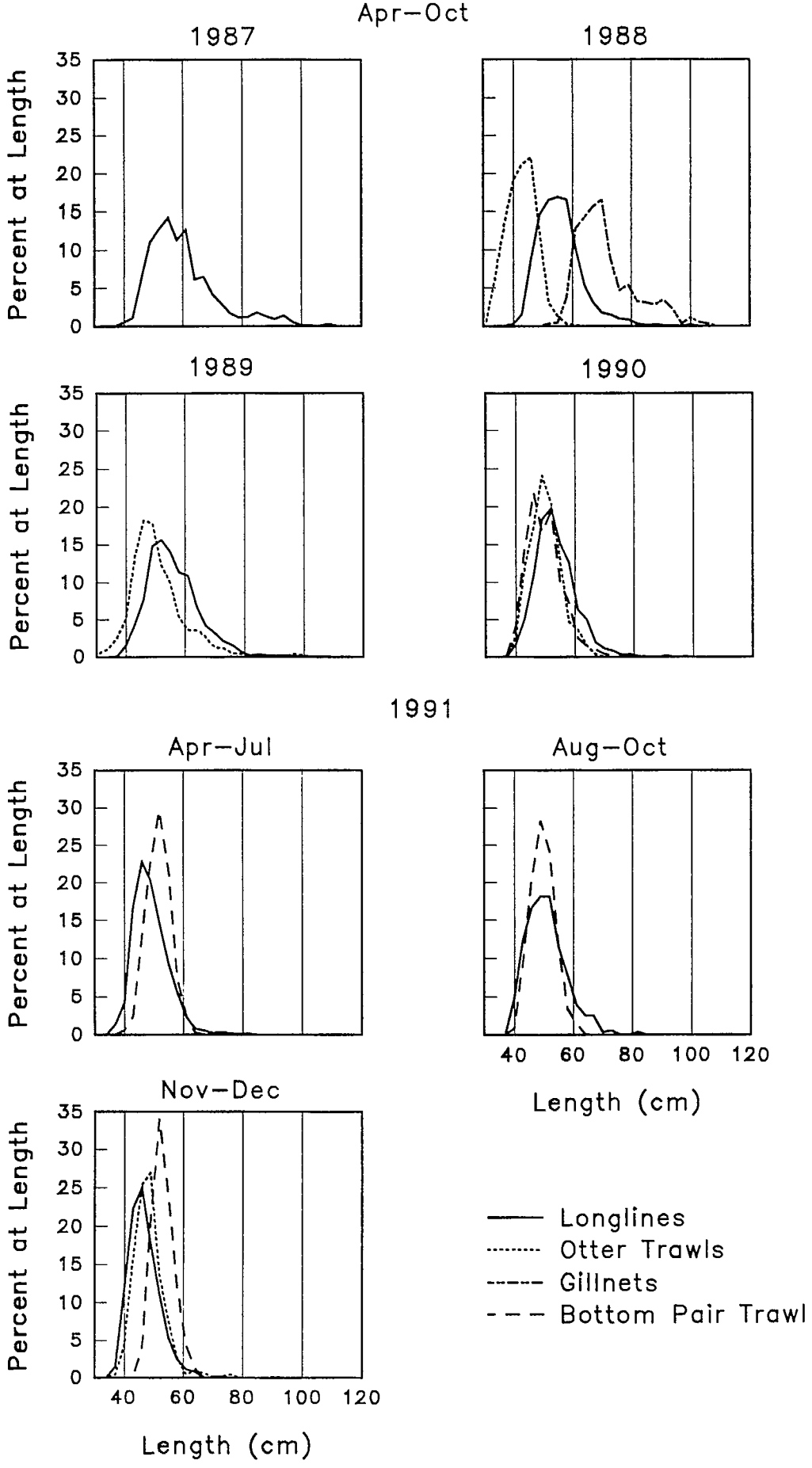


Figure 29. 4W cod age frequencies.

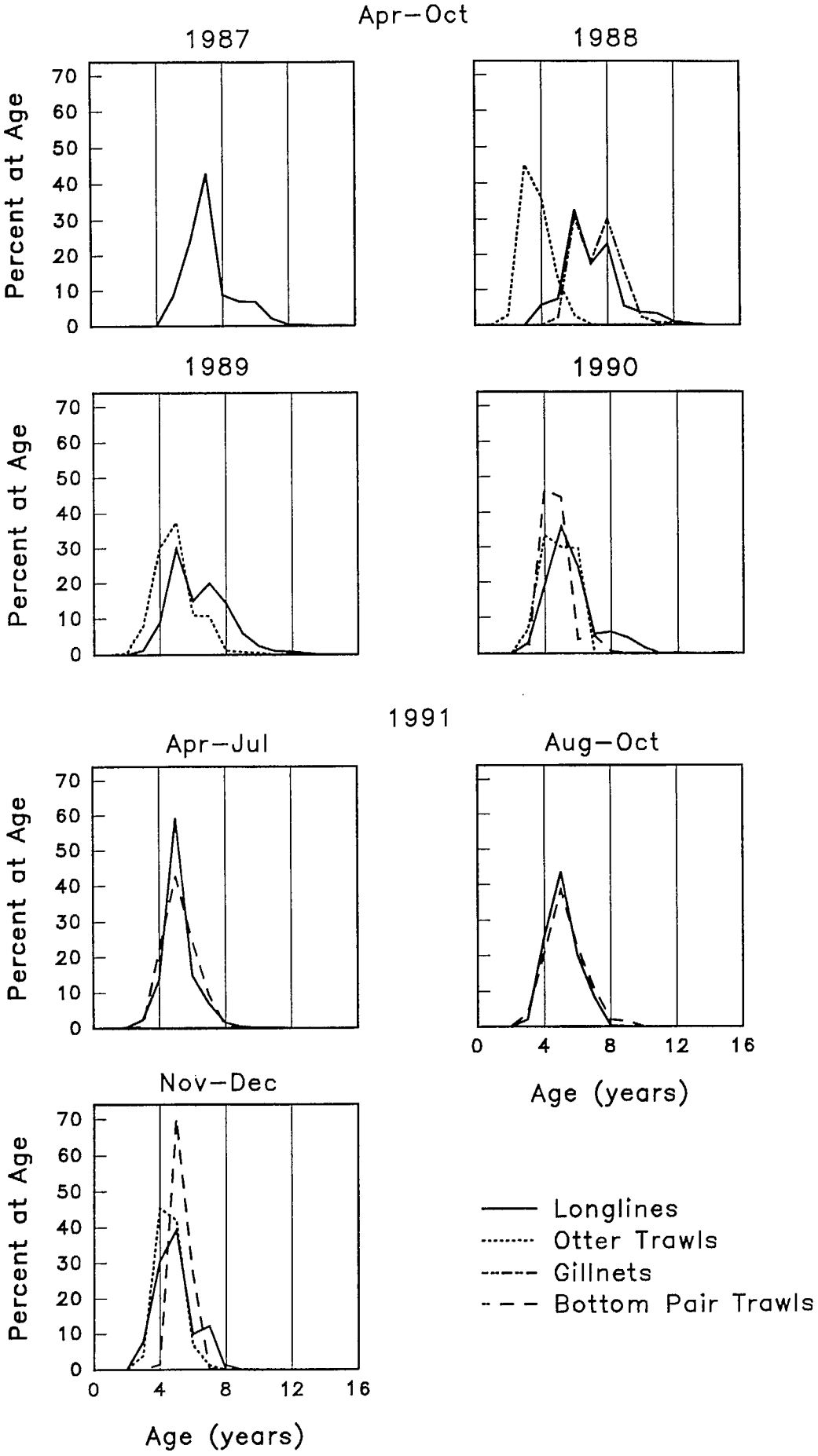


Figure 30. 4W cod longline length frequencies.

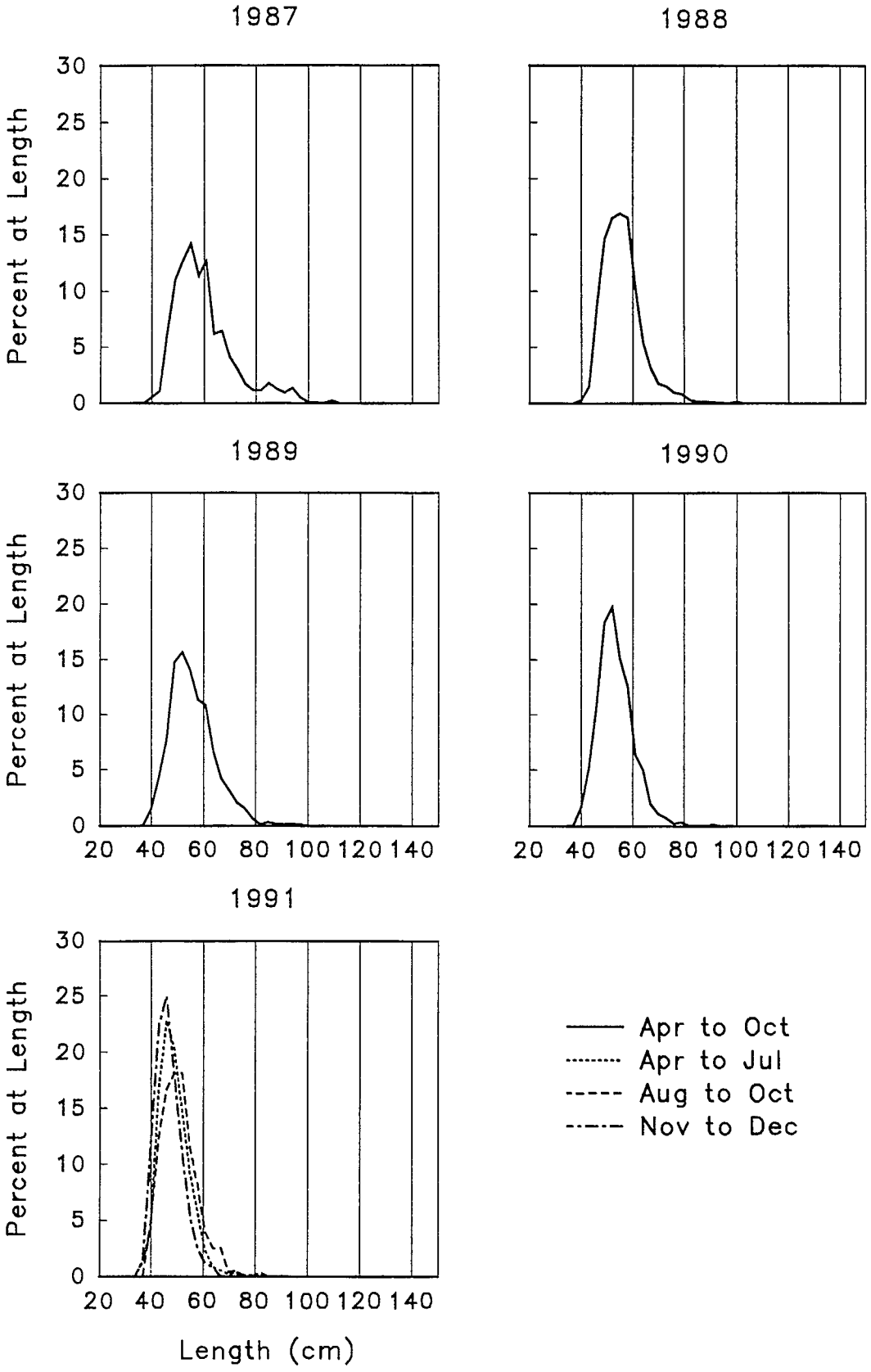


Figure 31. 4W cod longline age frequencies.

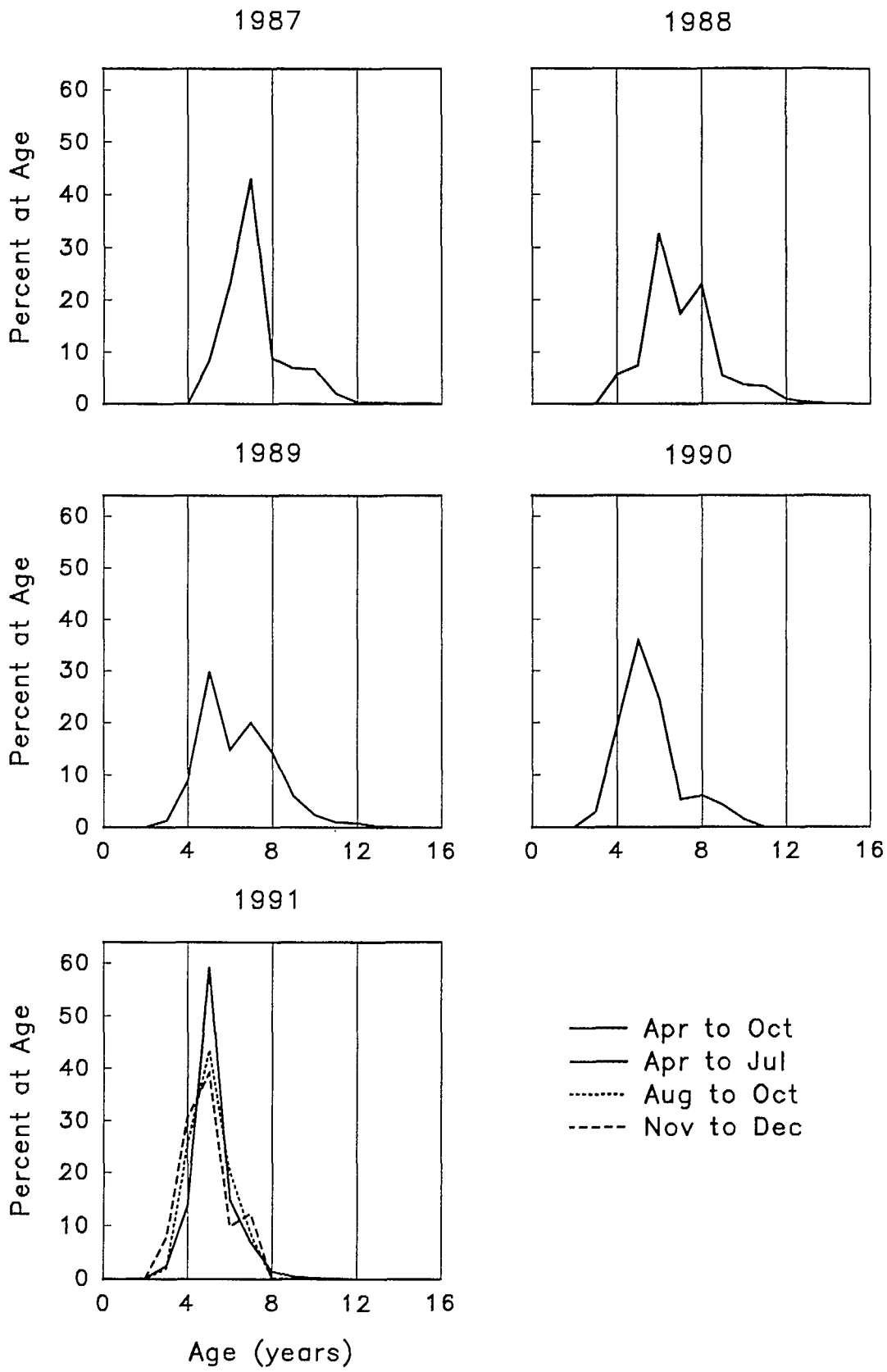


Figure 32. Mean lengths, weights and ages of cod landed in Scotia–Fundy Region from Division 4W.

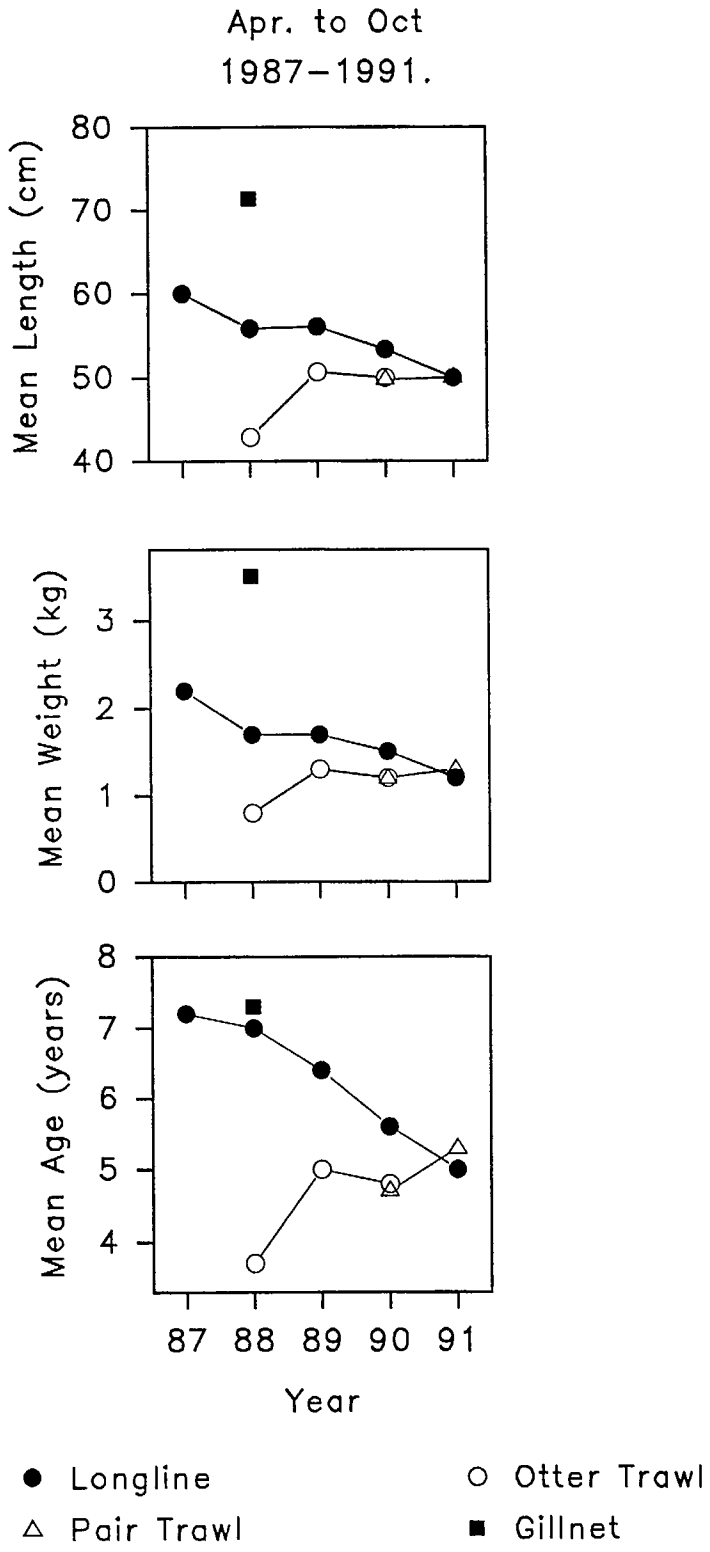


Figure 33a. 4X cod length frequencies.

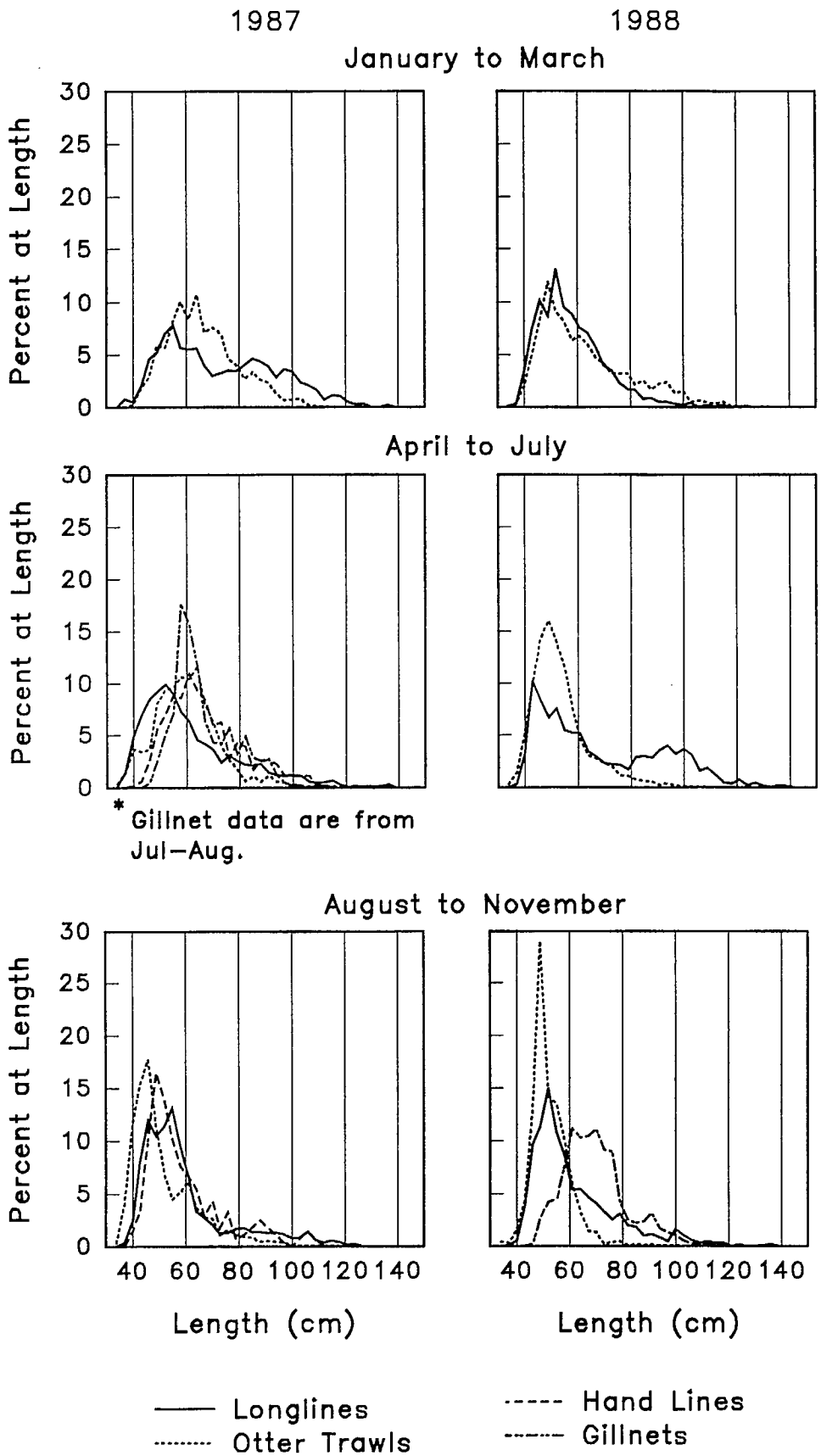


Figure 33b. 4X cod length frequencies.

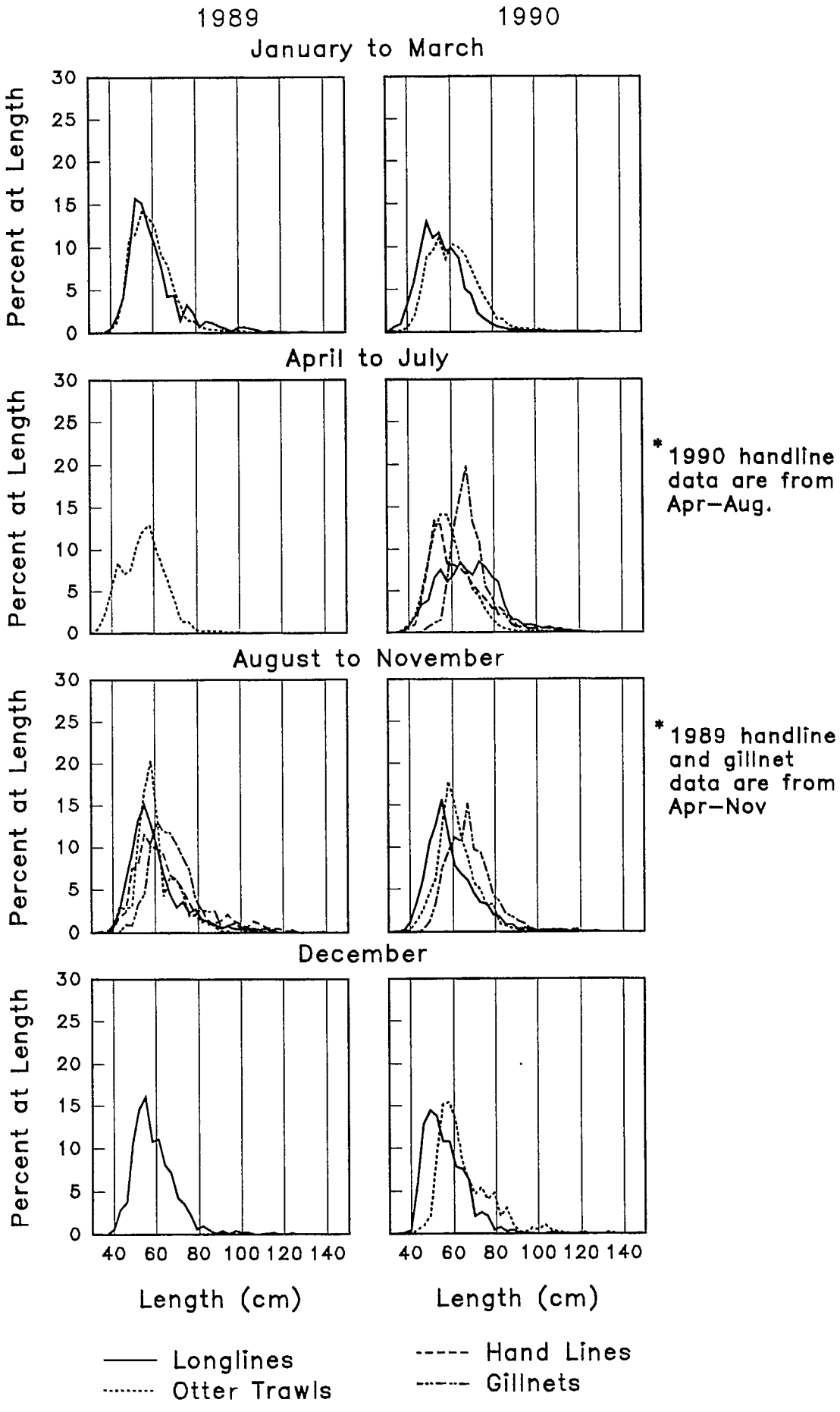


Figure 33c. 4X cod length frequencies.

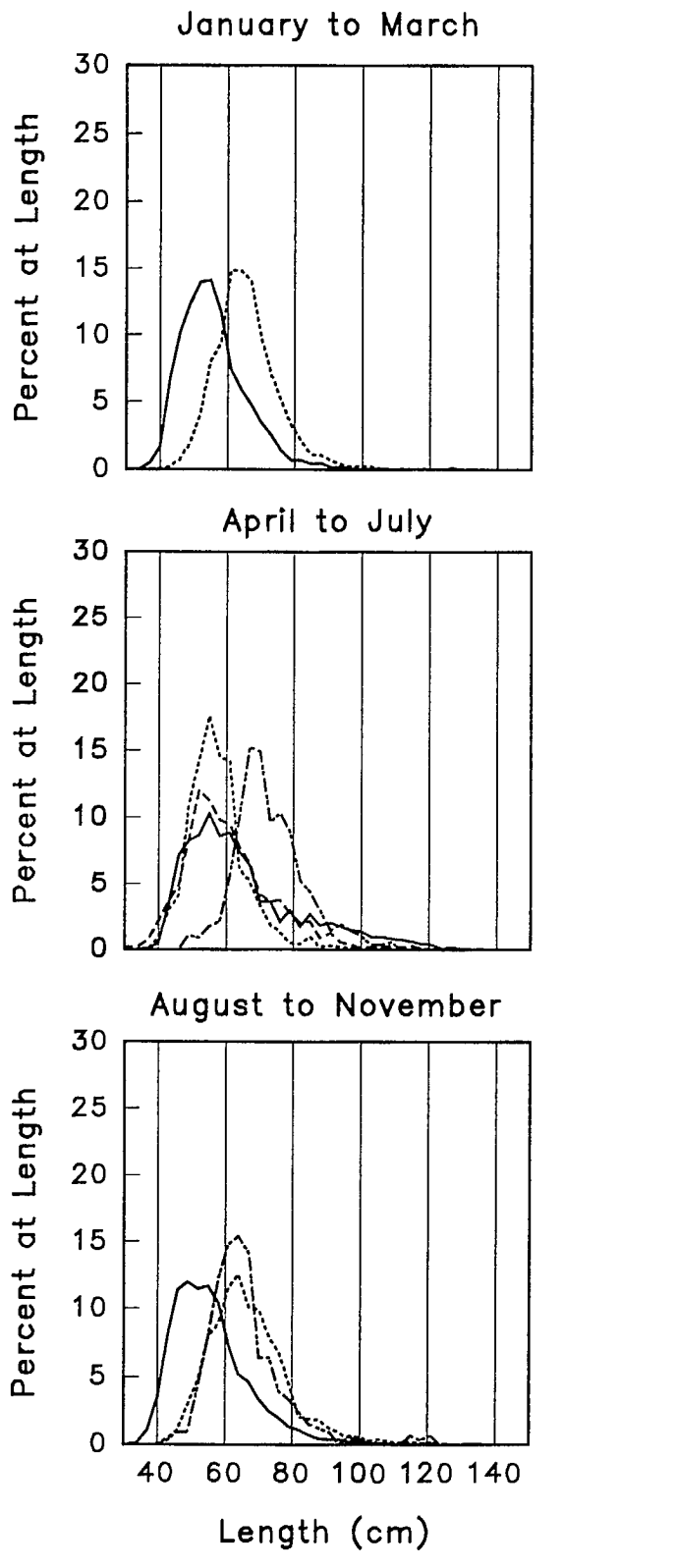


Figure 34a. 4X cod age frequencies.

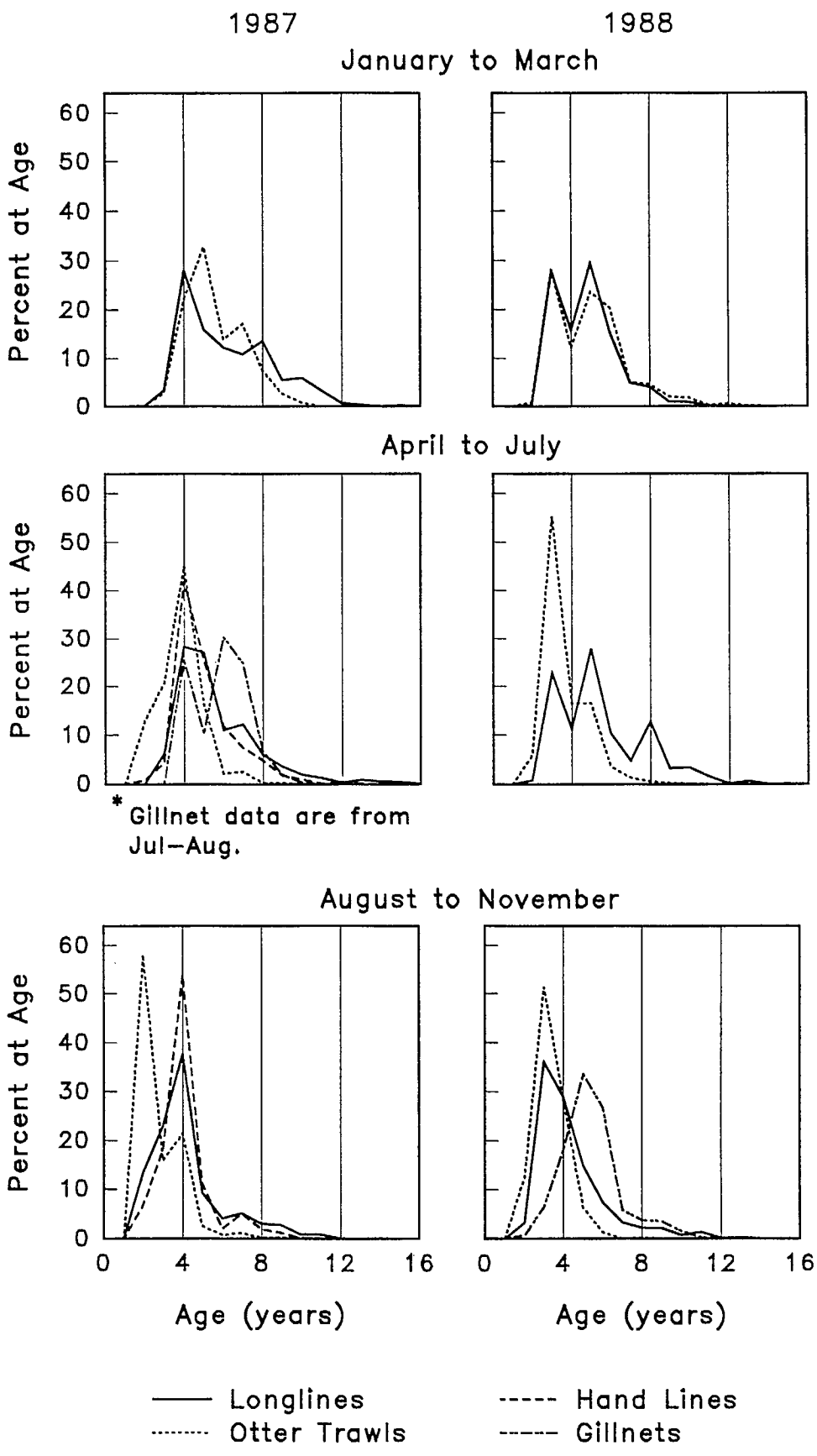


Figure 34b. 4X cod age frequencies.

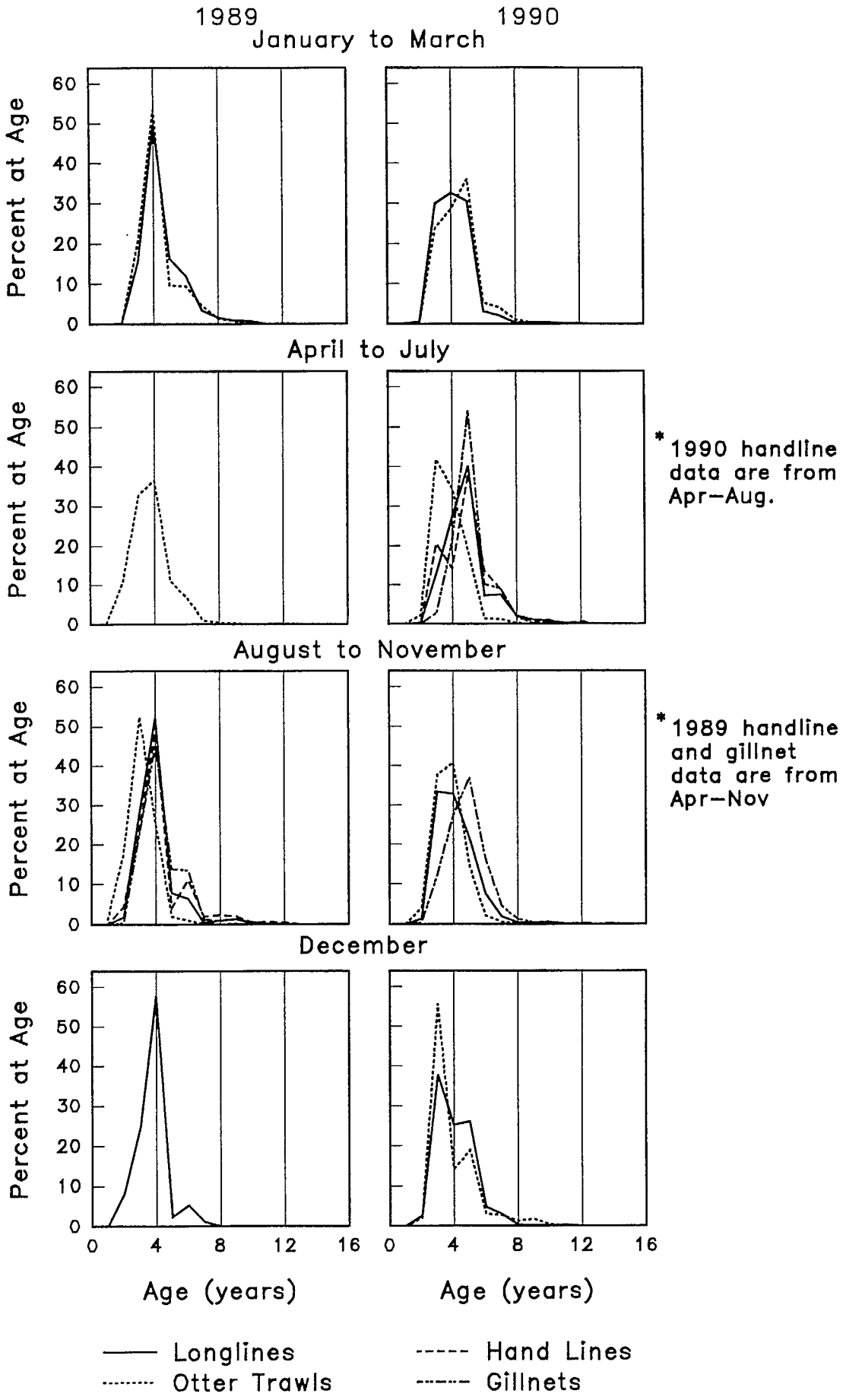


Figure 34c. 4X cod age frequencies.

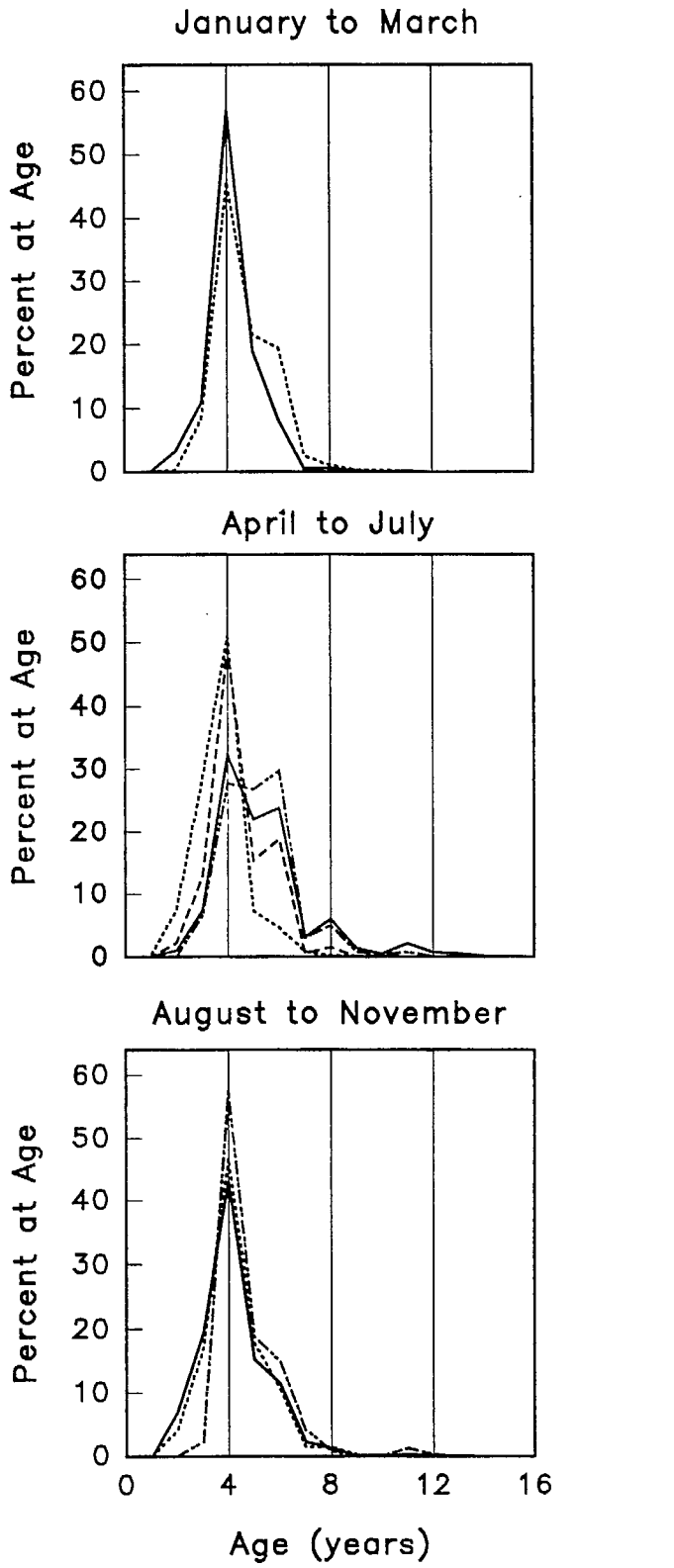


Figure 35. 4X cod longline length frequencies.

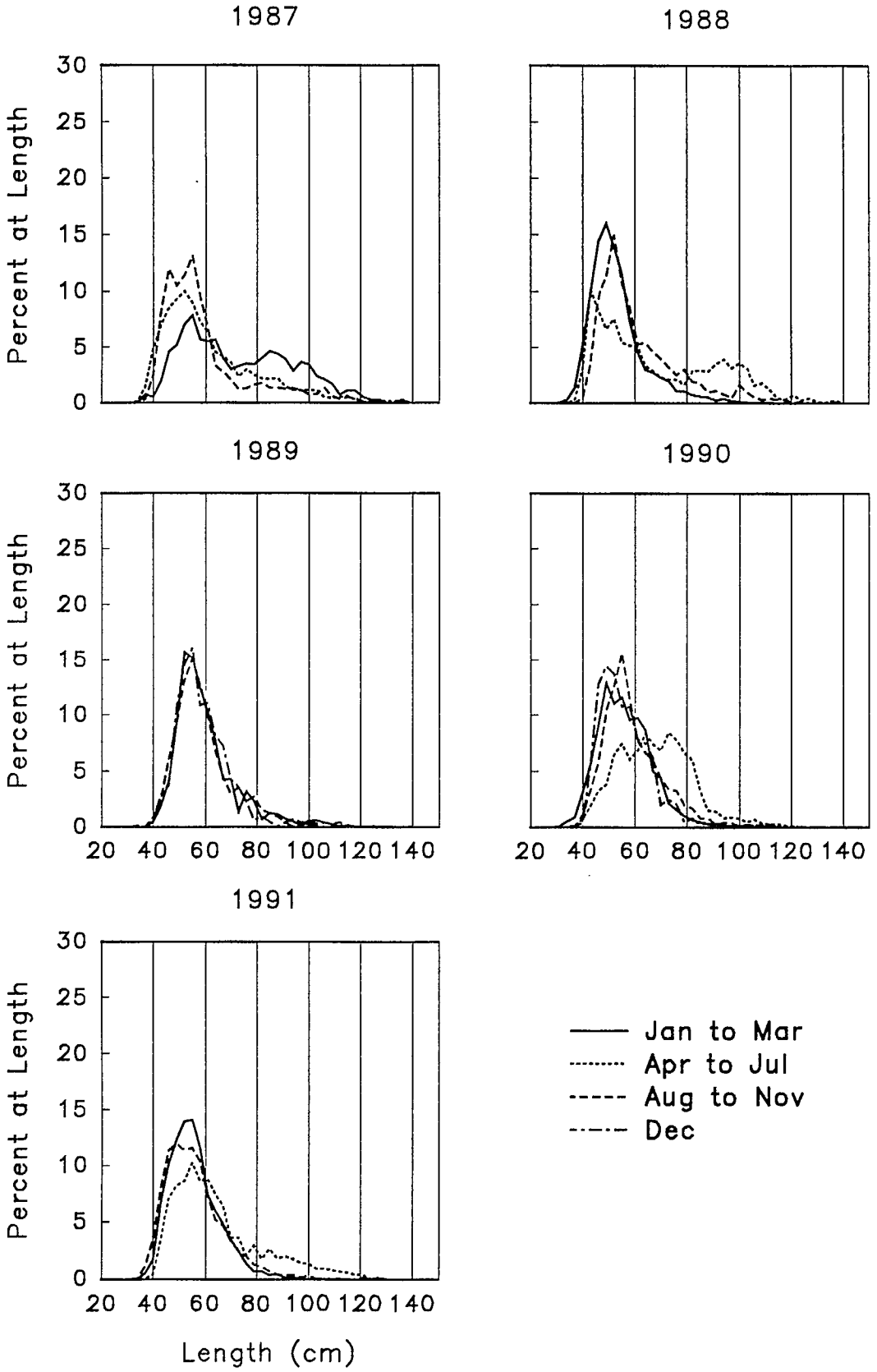


Figure 36. 4X cod longline age frequencies.

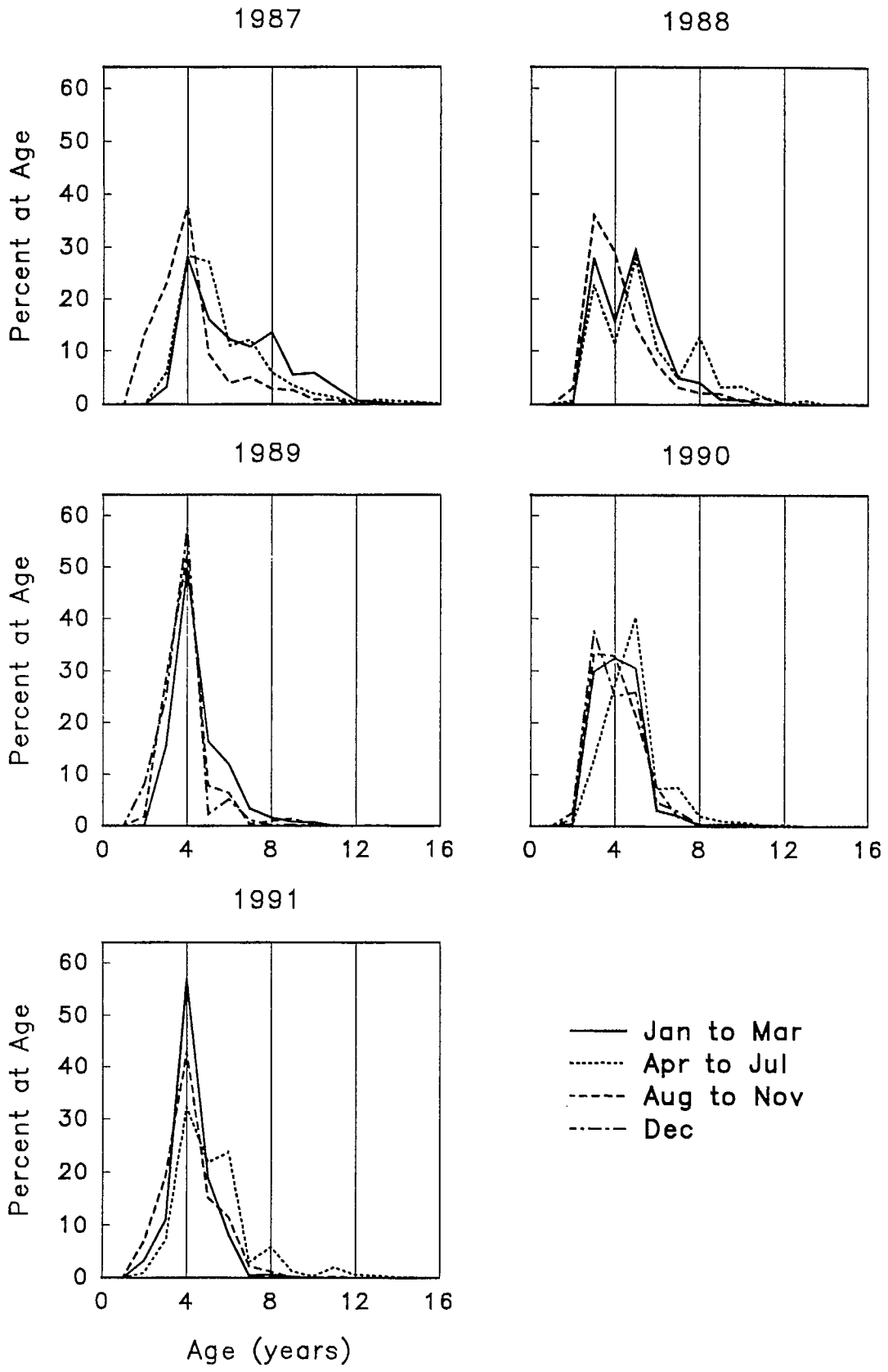


Figure 37a. Mean lengths, weights and ages of cod landed in Scotia–Fundy Region from Division 4X.

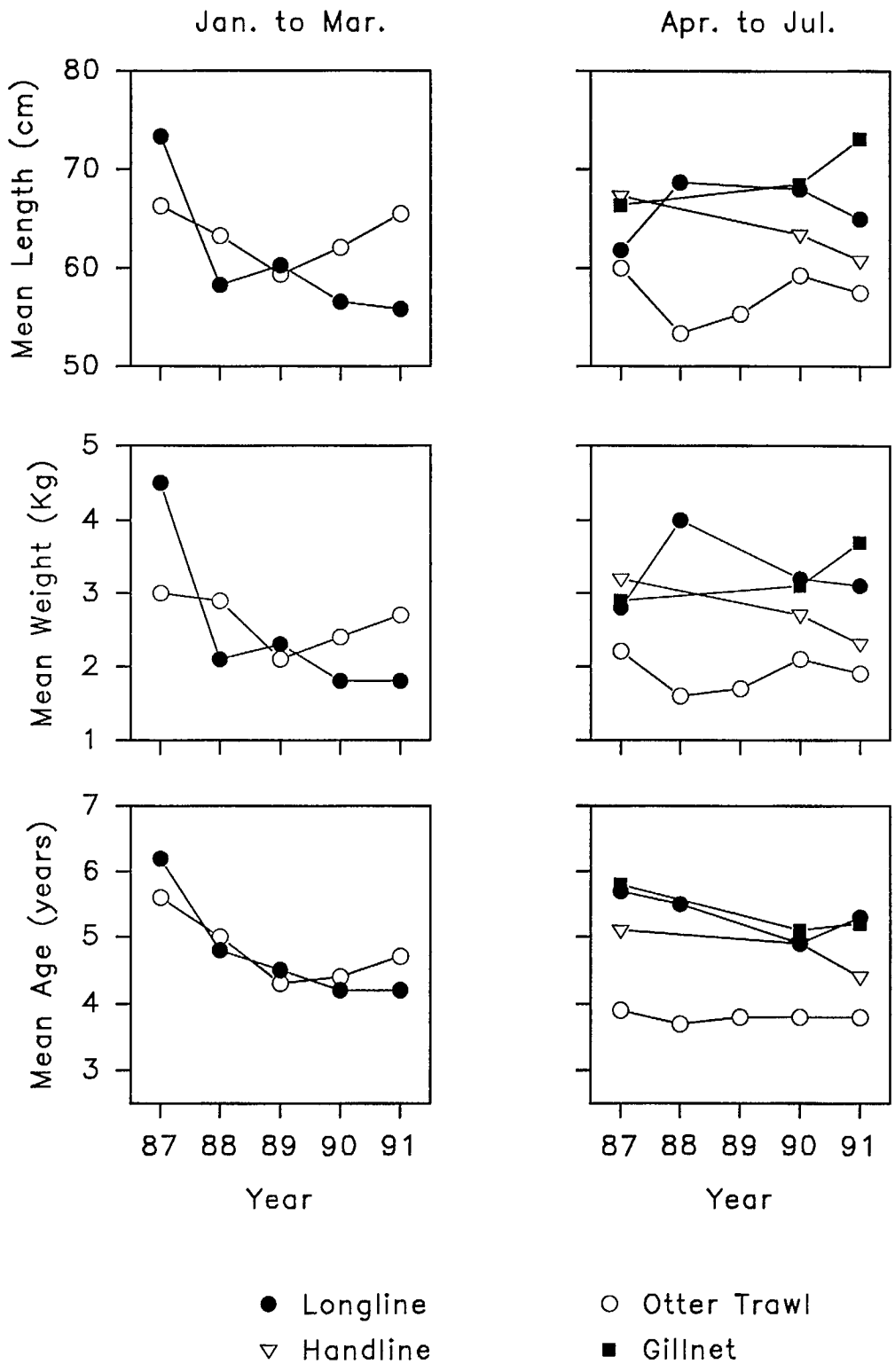


Figure 37b. Mean lengths, weights and ages of cod landed in Scotia–Fundy Region from Division 4X.

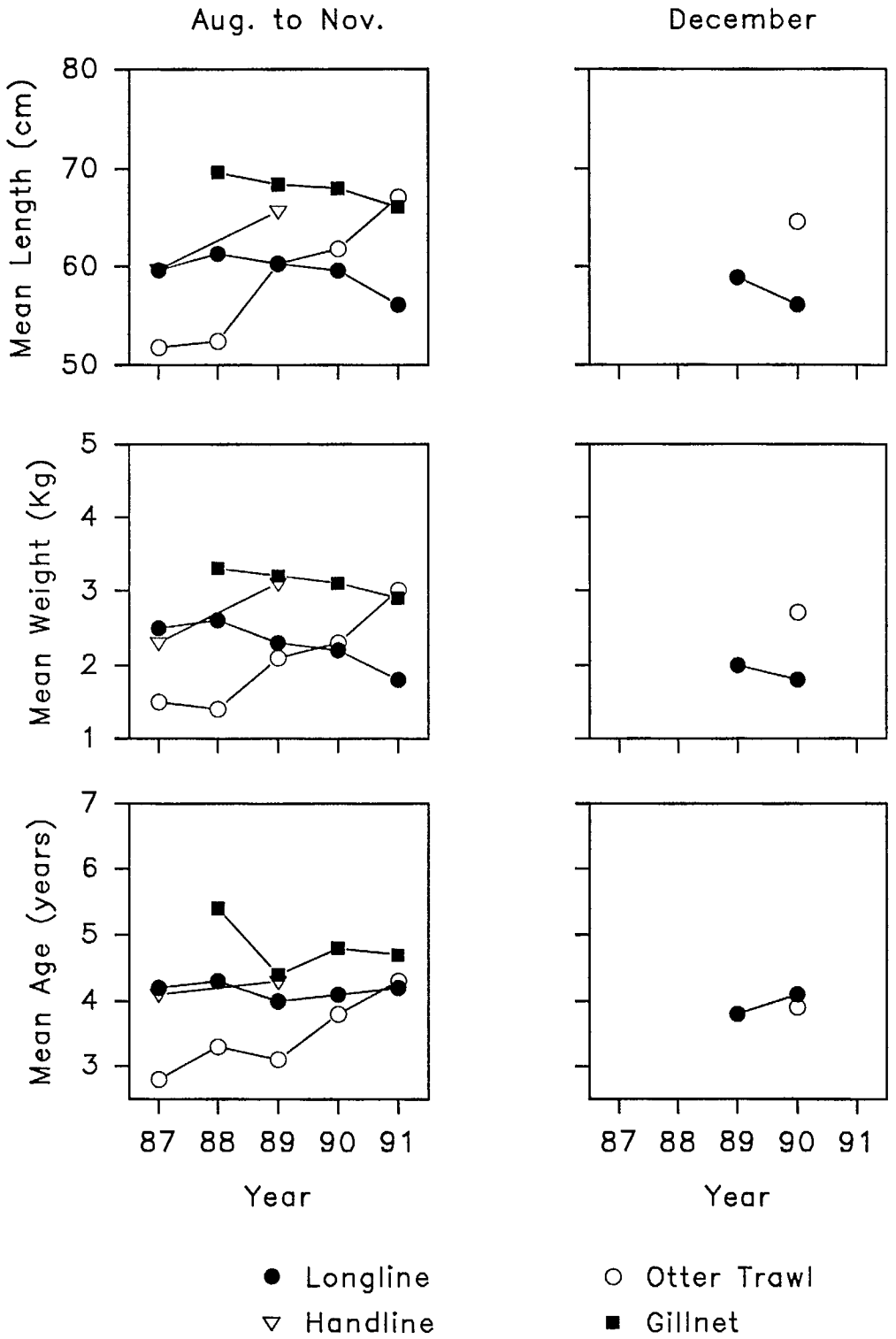


Figure 38a. 5Ze cod length frequencies.

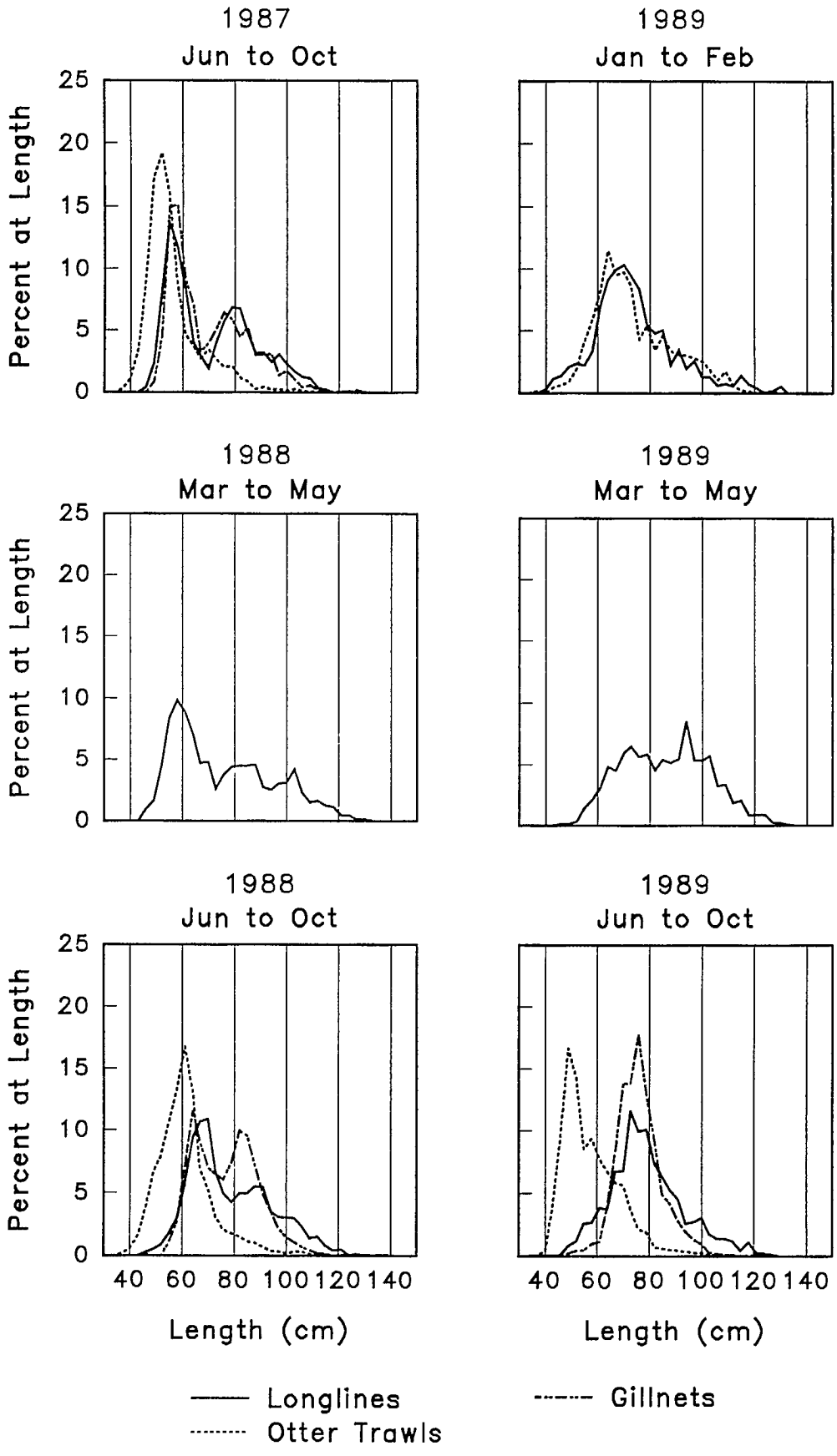


Figure 38b. 5Ze cod length frequencies.

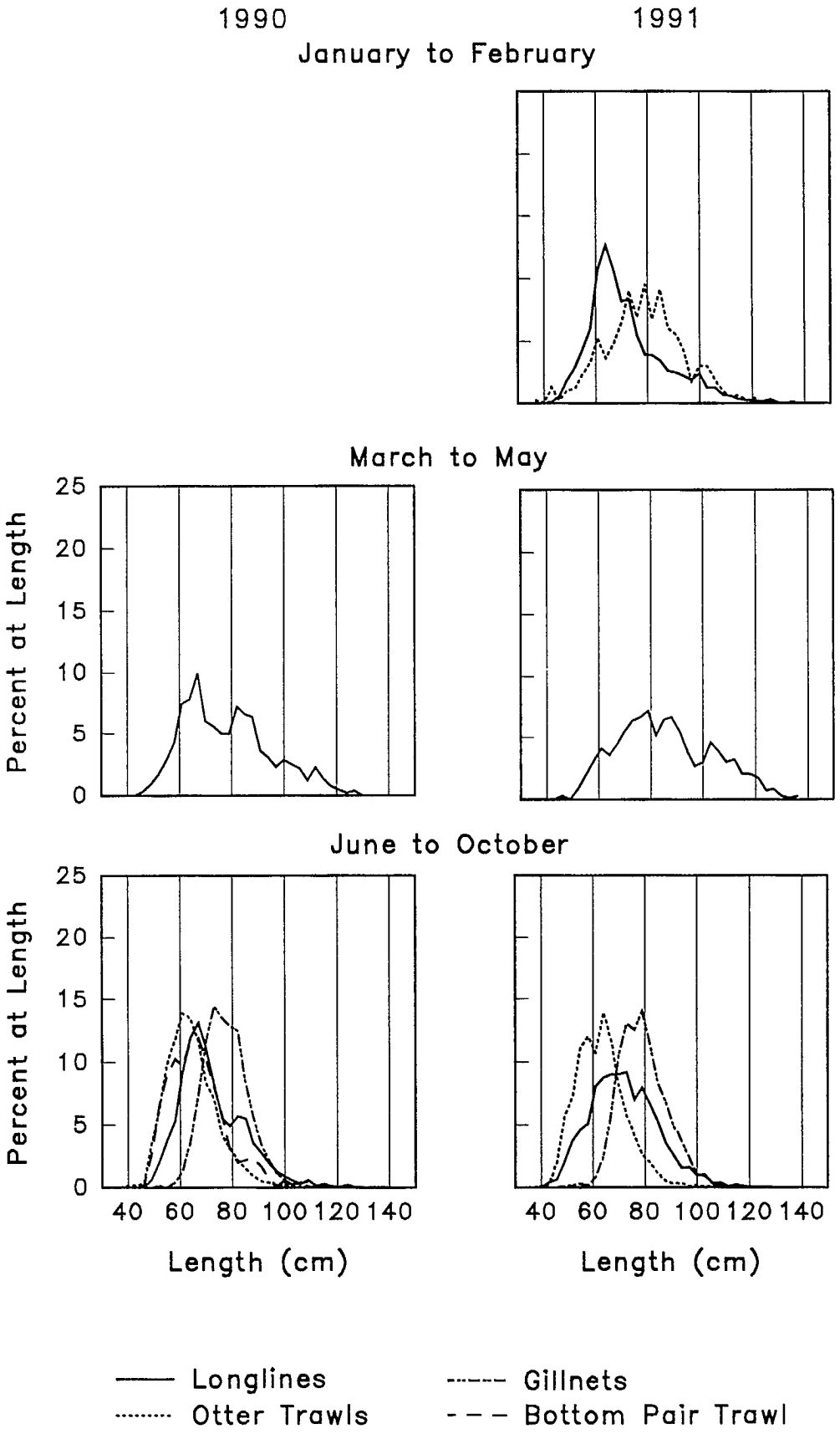


Figure 39a. 5Ze cod age frequencies.

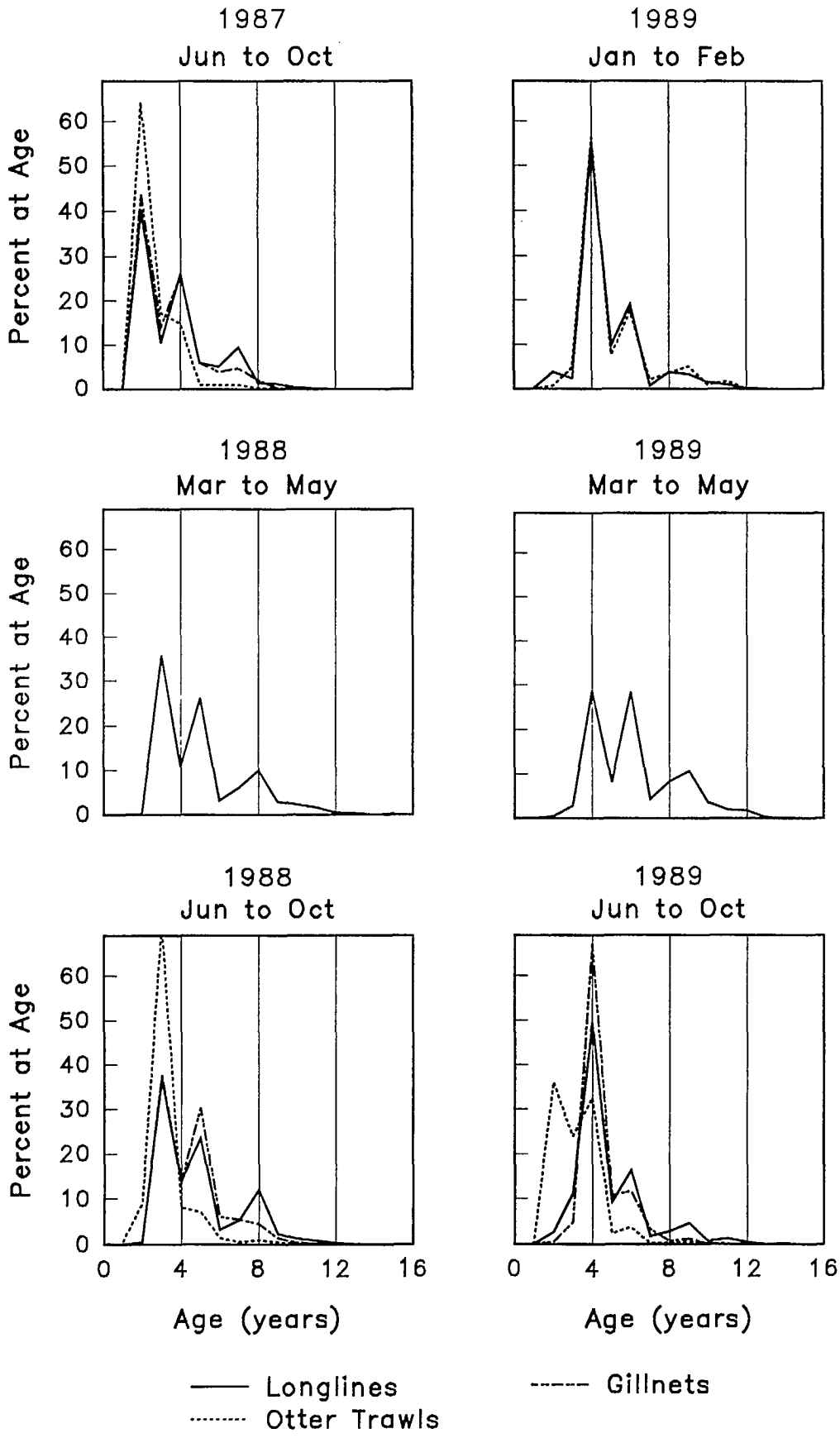


Figure 39b. 5Ze cod age frequencies.

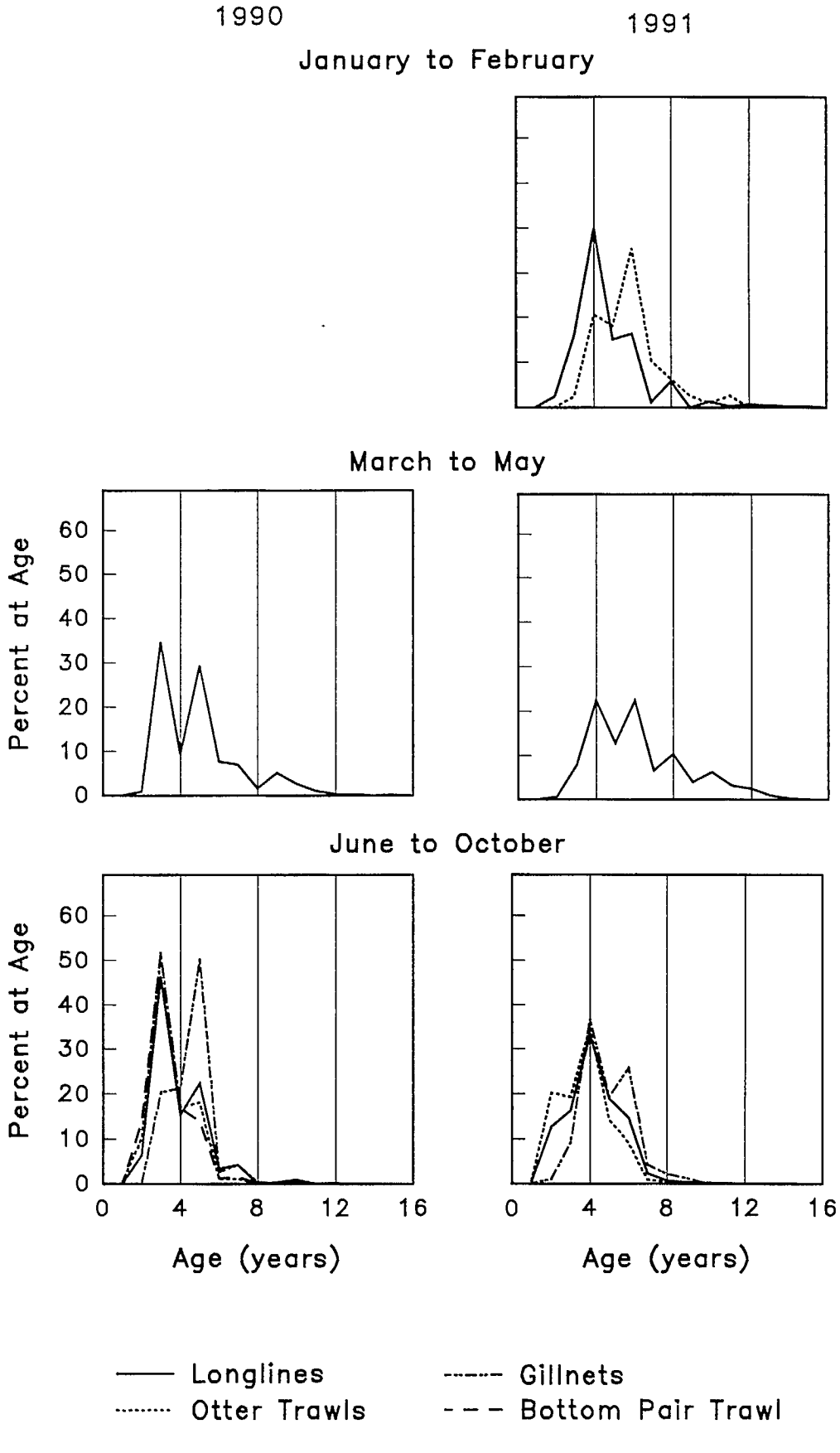


Figure 40. 5Ze cod longline length frequencies.

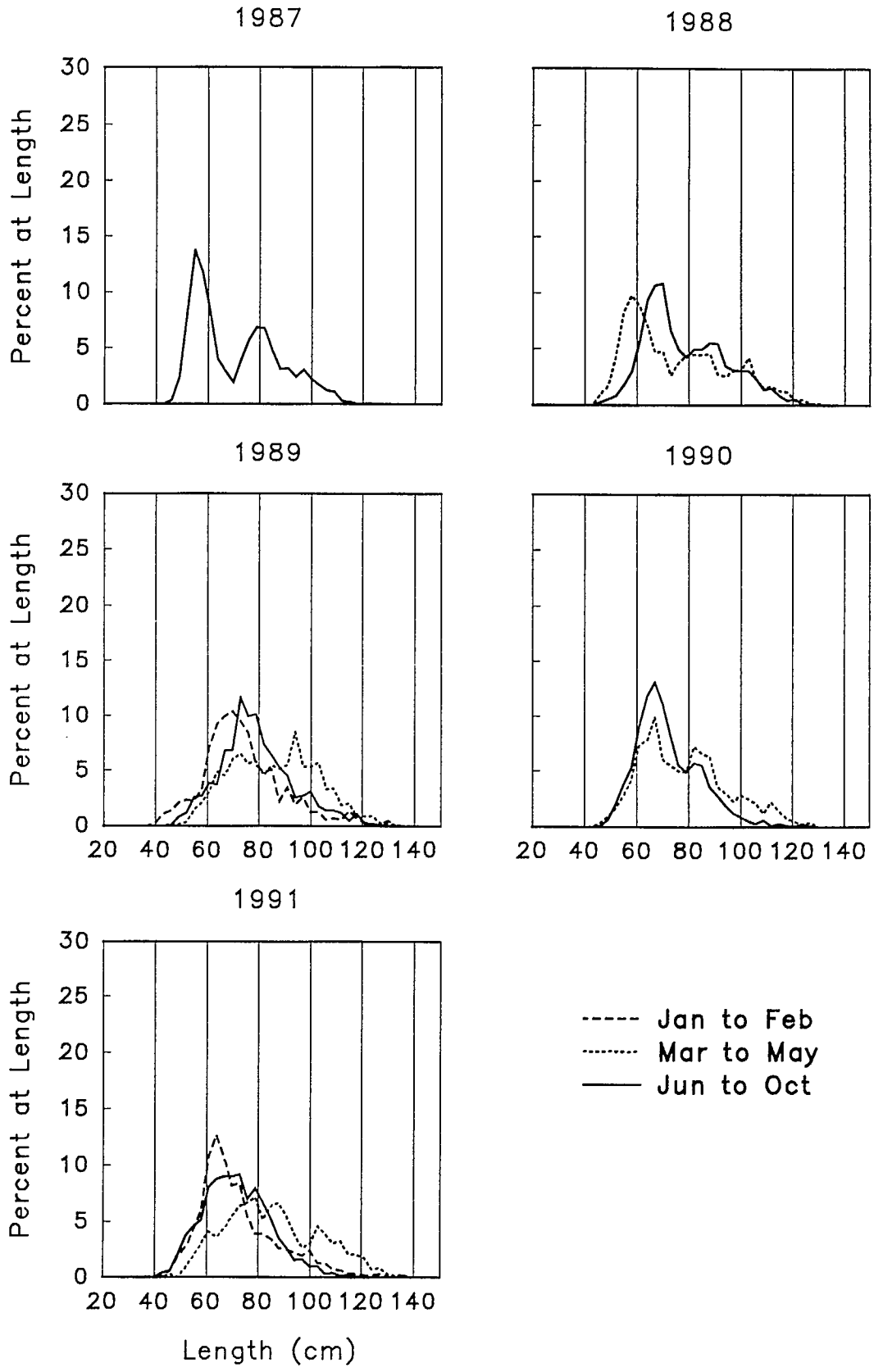


Figure 41. 5Ze cod longline age frequencies.

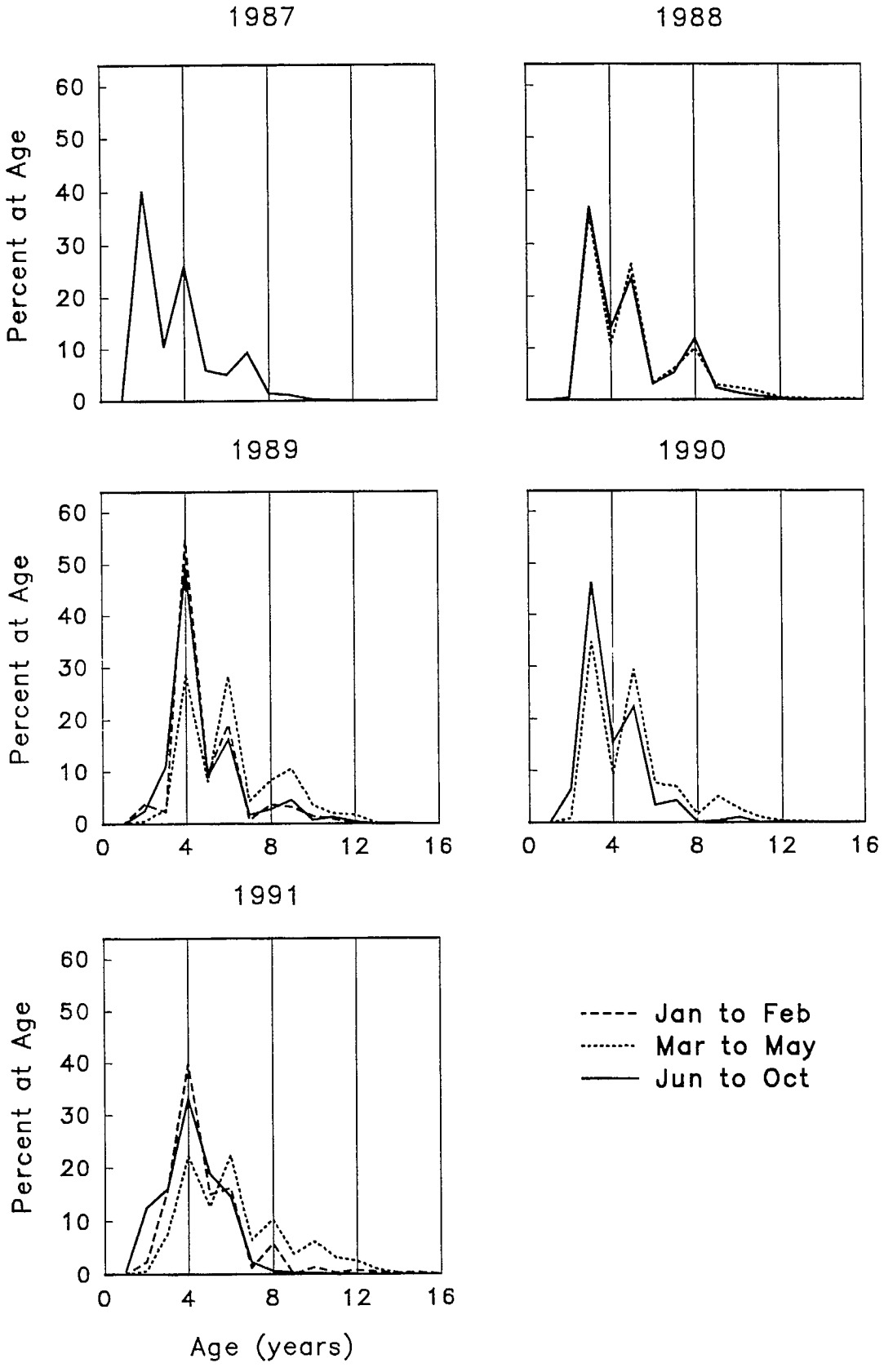


Figure 42. Subarea 3 cod length frequencies.

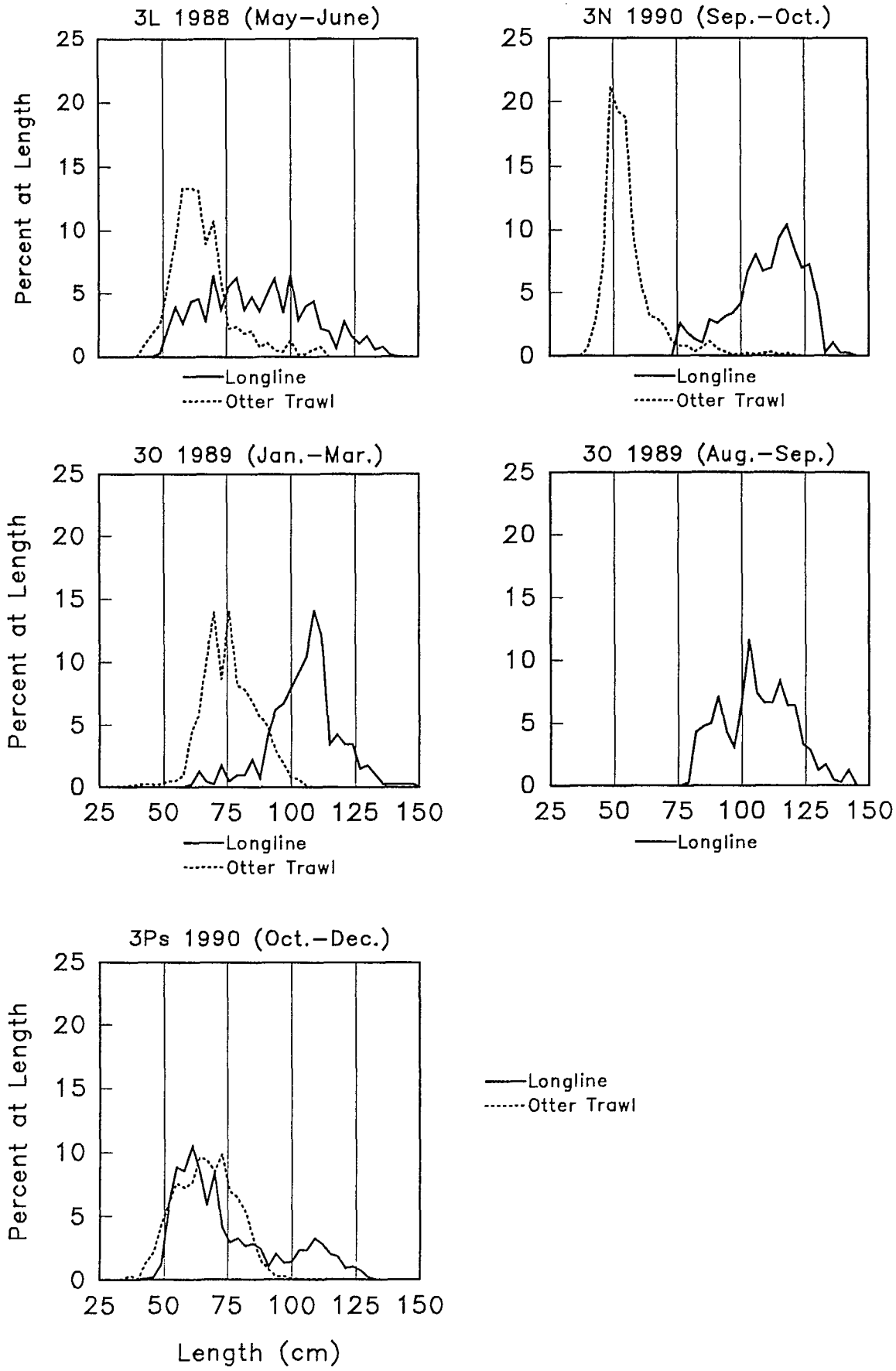


Figure 43. 4Vs haddock length frequencies.

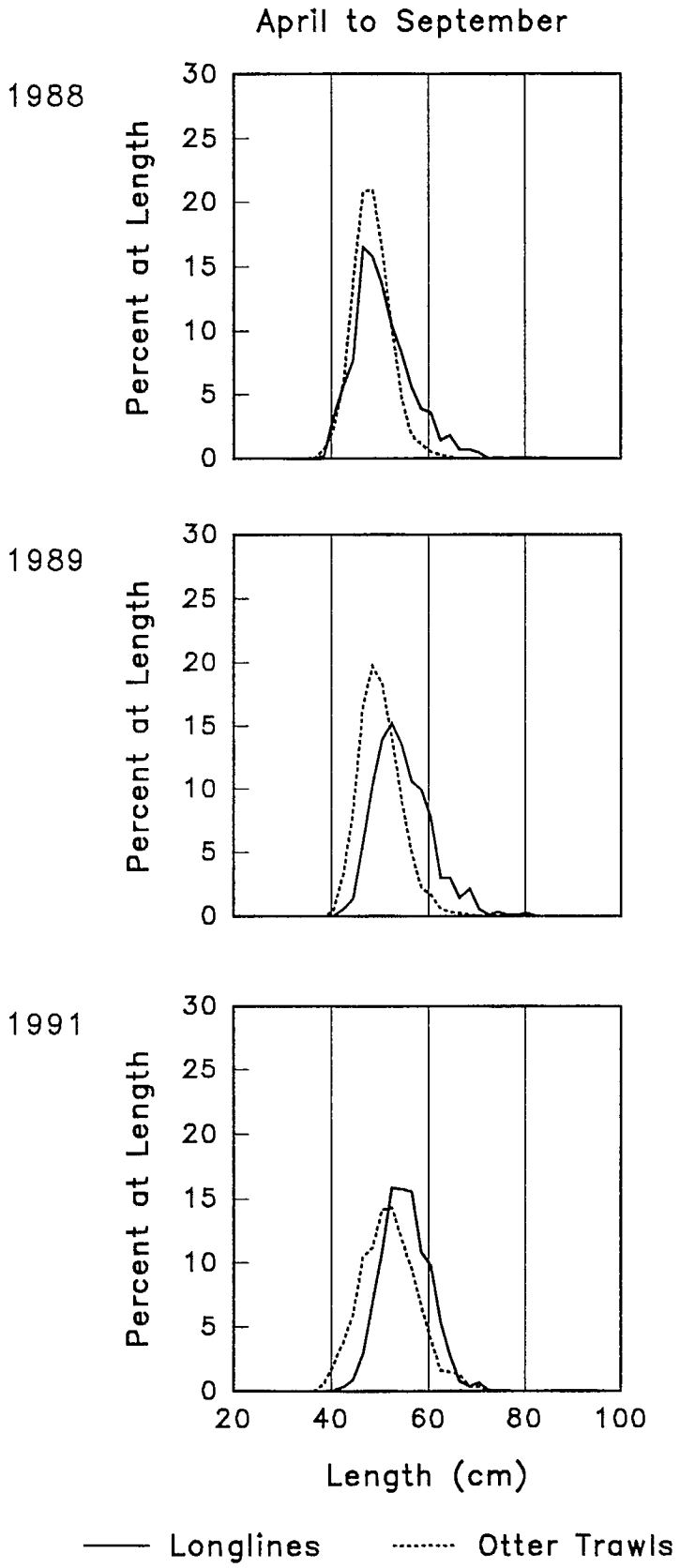


Figure 44. Mean lengths, weights and ages of haddock landed in Scotia–Fundy Region from 4Vs and 4W.

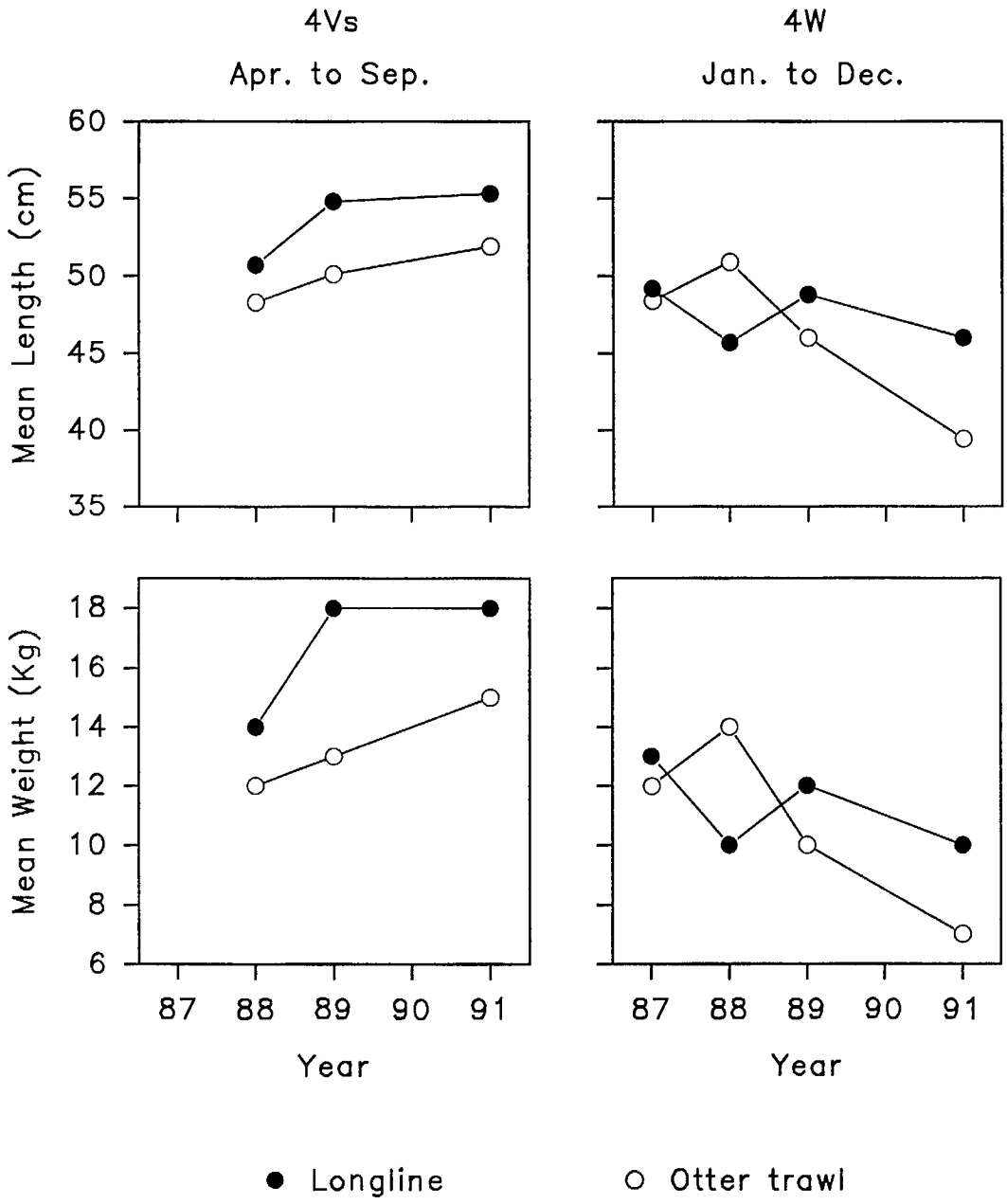


Figure 45. 4W haddock length frequencies.

January to December

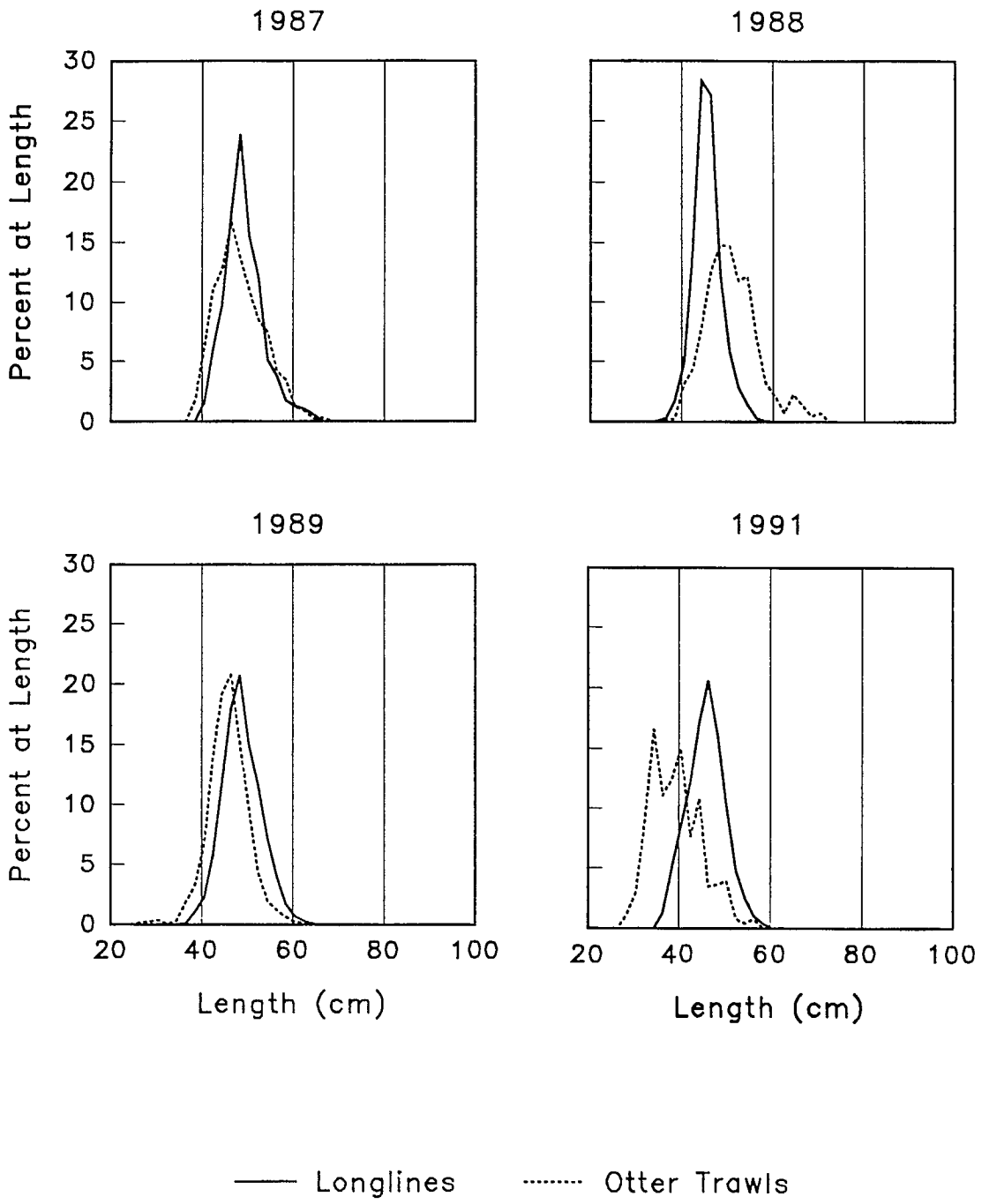


Figure 46a. 4X haddock length frequencies.

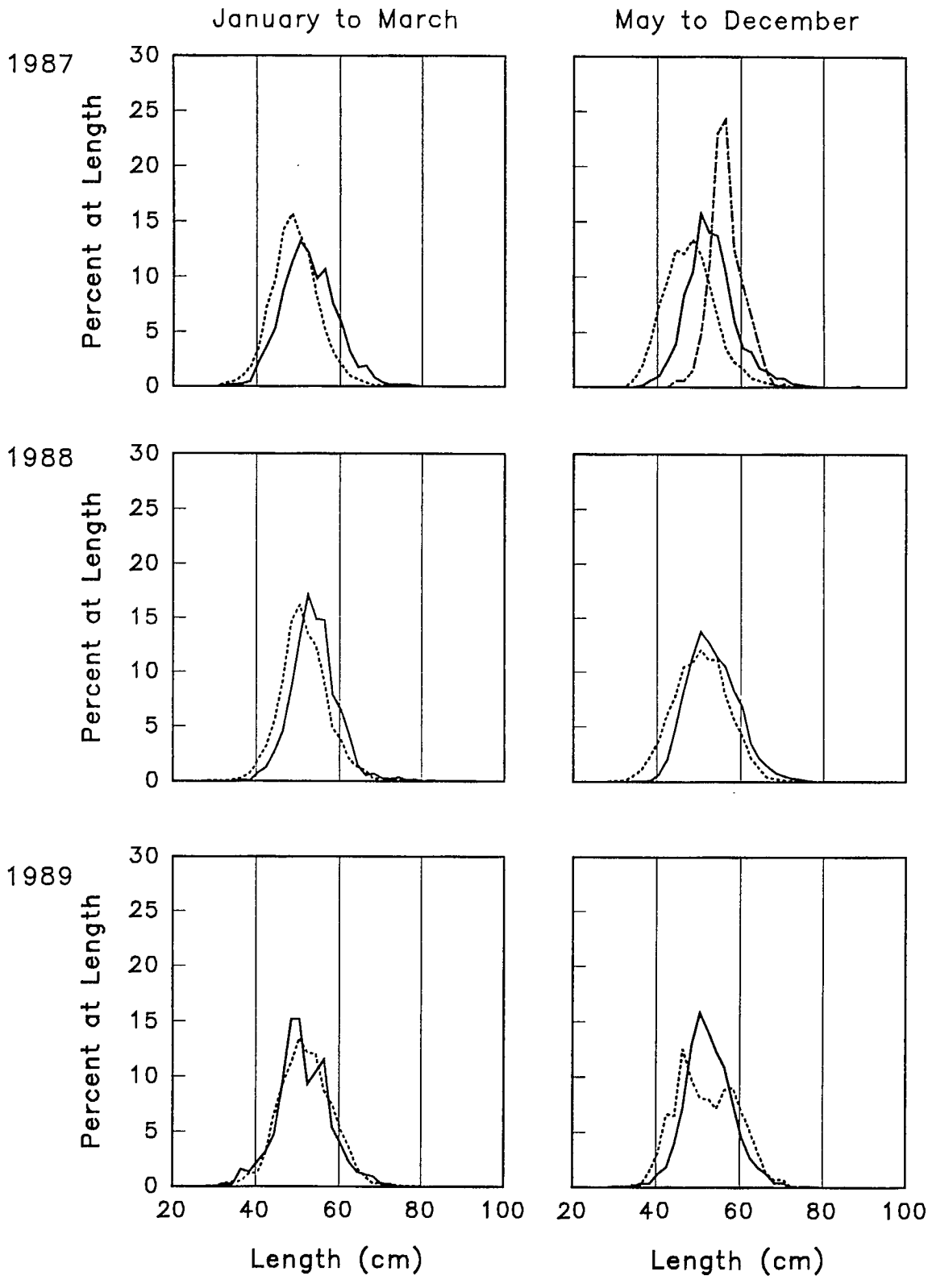


Figure 46b. 4X haddock length frequencies.

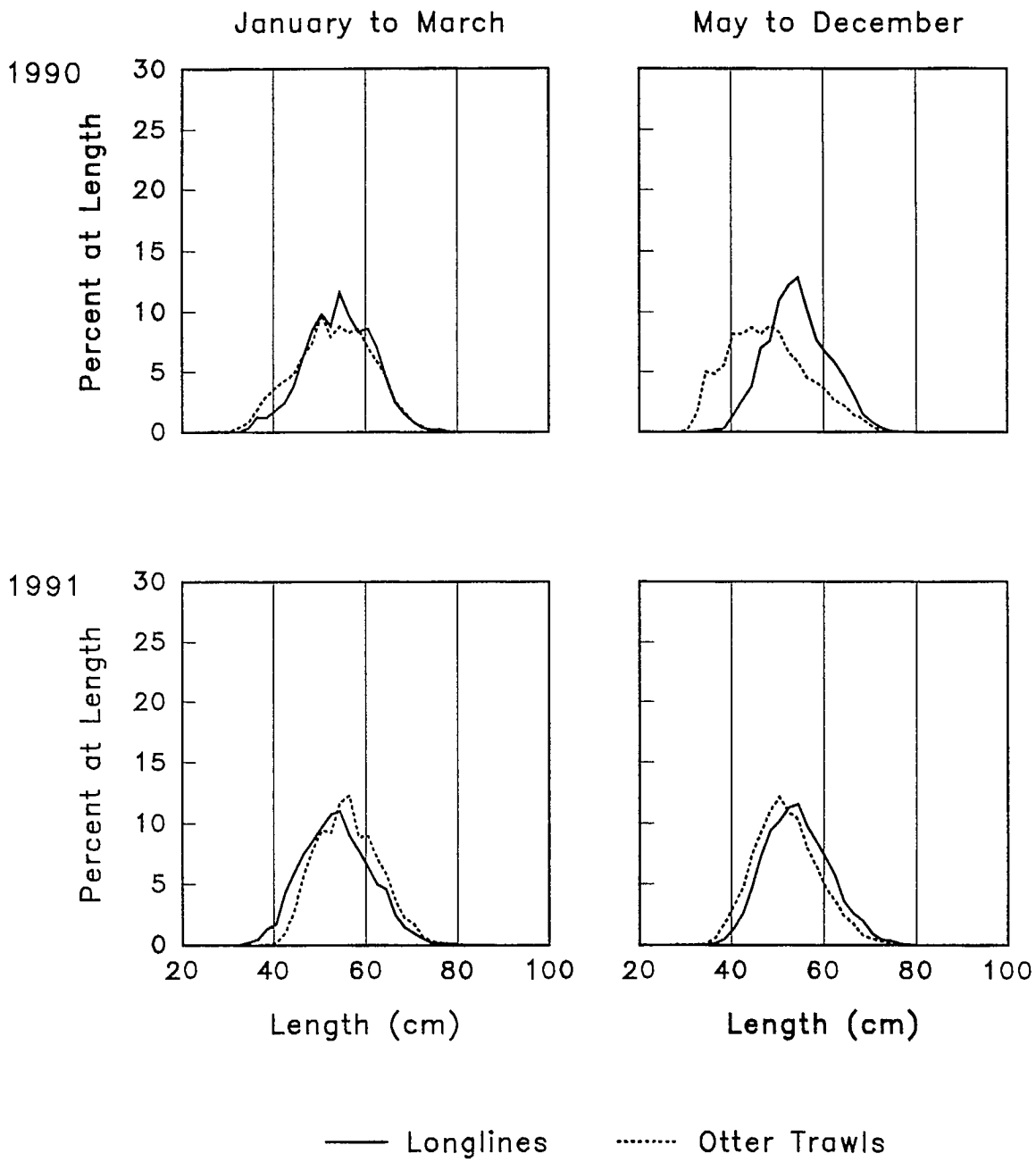


Figure 47. Mean lengths, weights and ages of haddock landed in Scotia–Fundy Region from Division 4X.

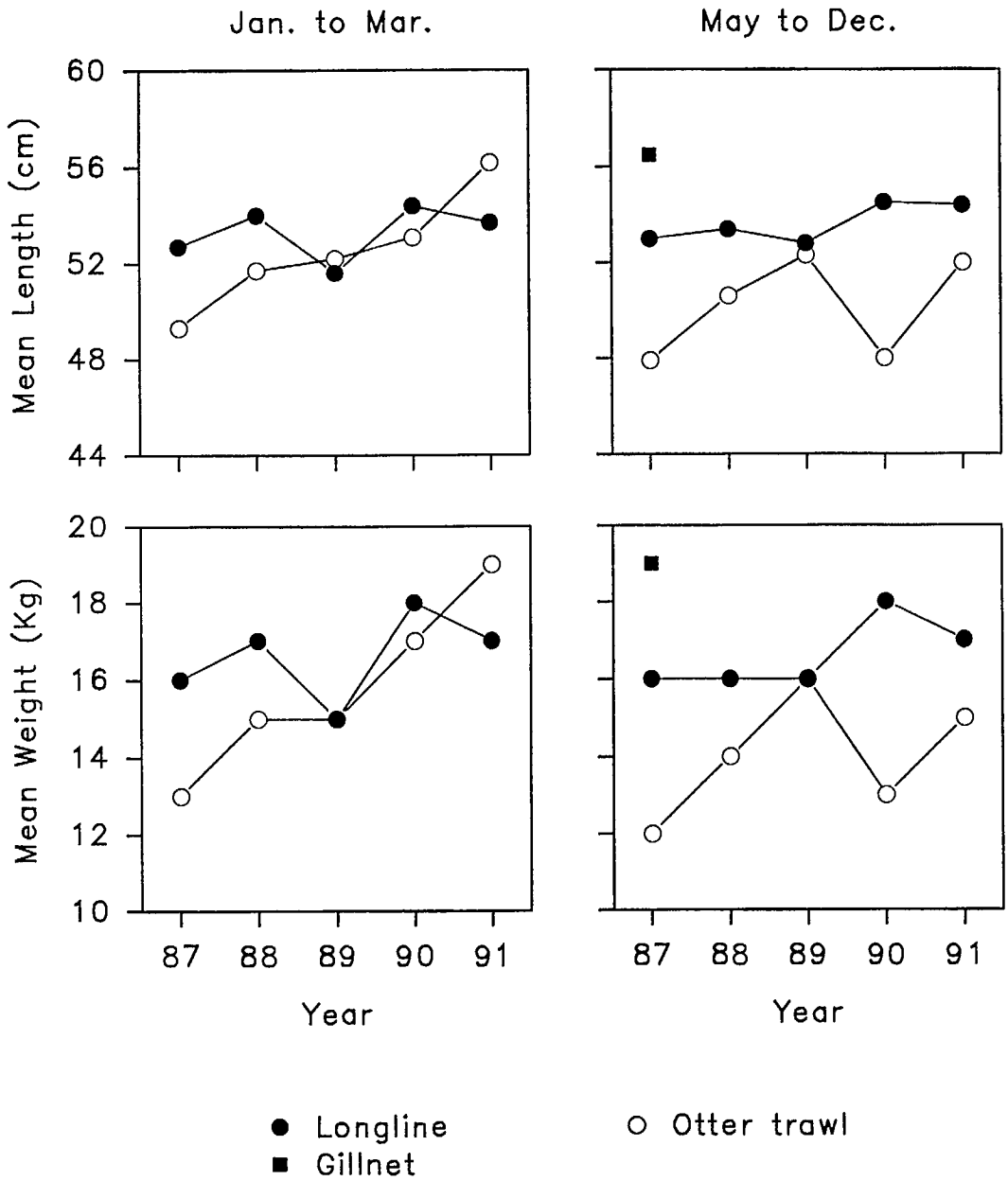


Figure 48a. 5Ze haddock length frequencies.

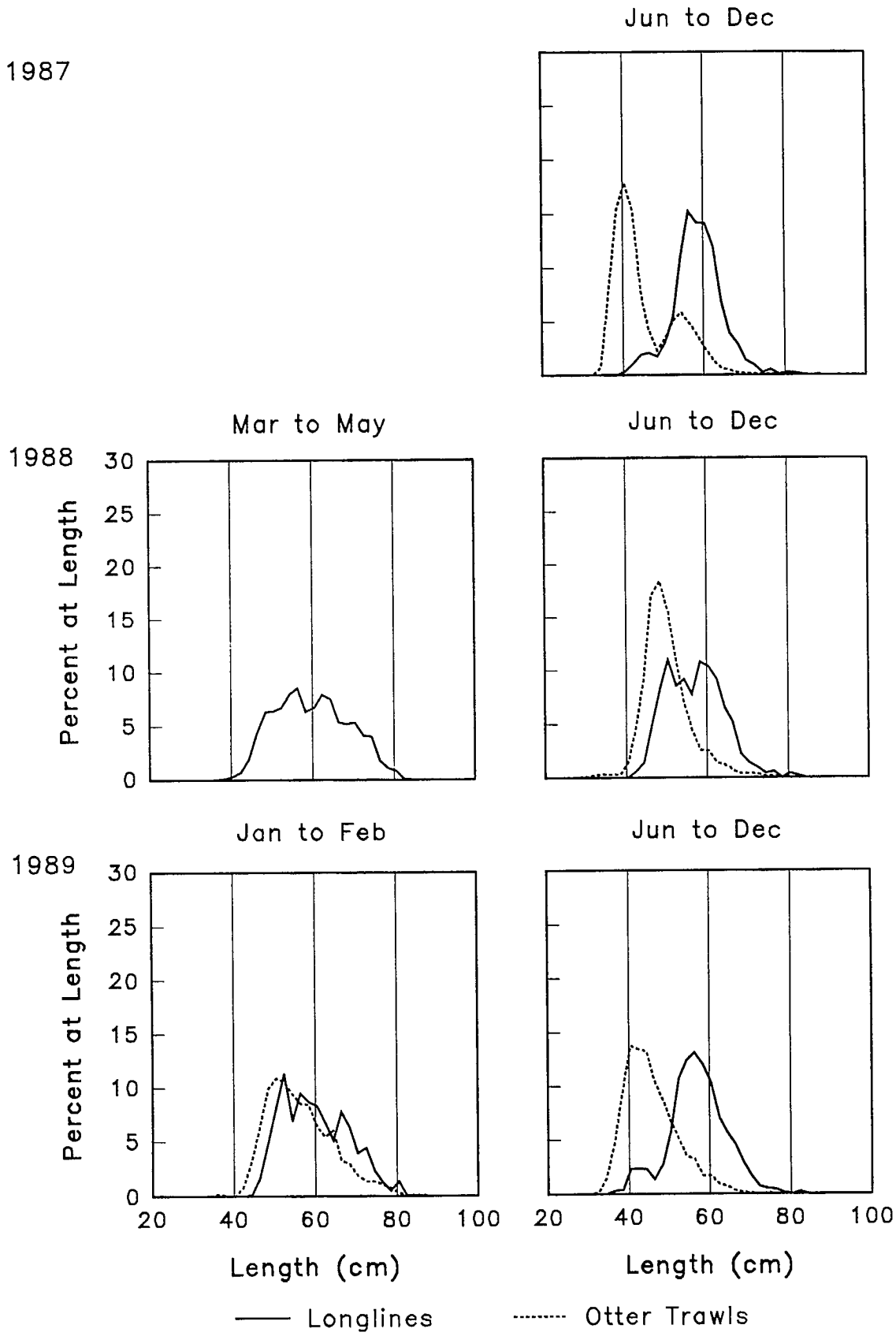


Figure 48b. 5Ze haddock length frequencies.

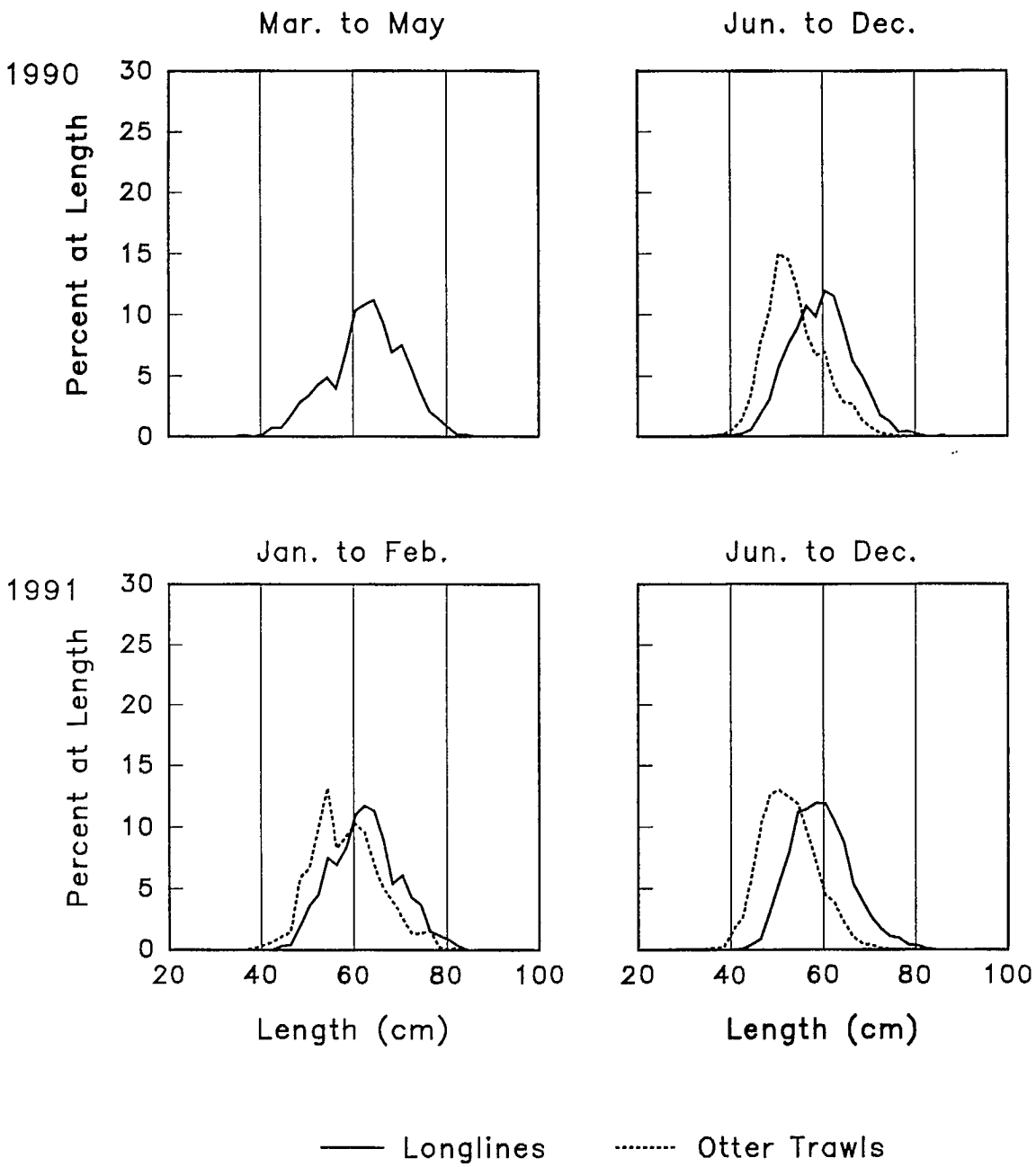


Figure 49. Mean lengths, weights and ages of haddock landed in Scotia–Fundy Region from Subdivision 5Ze.

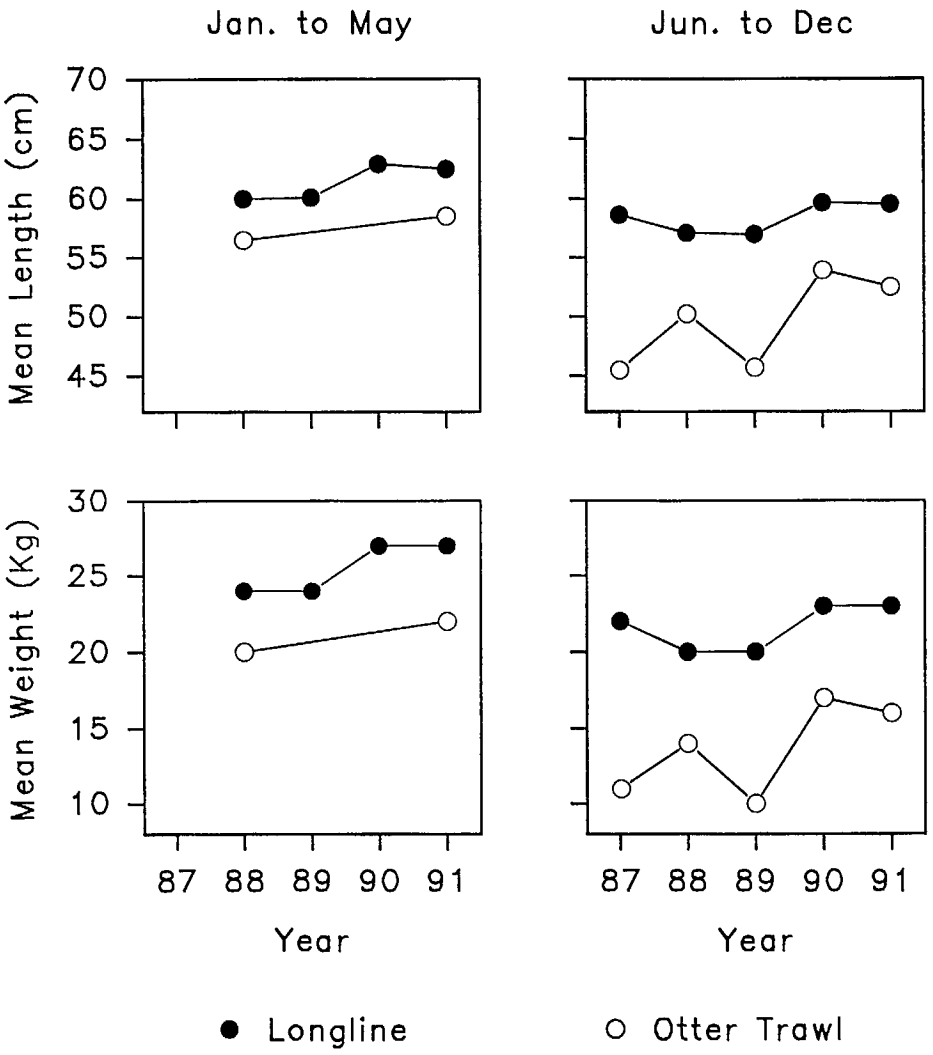


Figure 50. Subarea 3 haddock length frequencies.

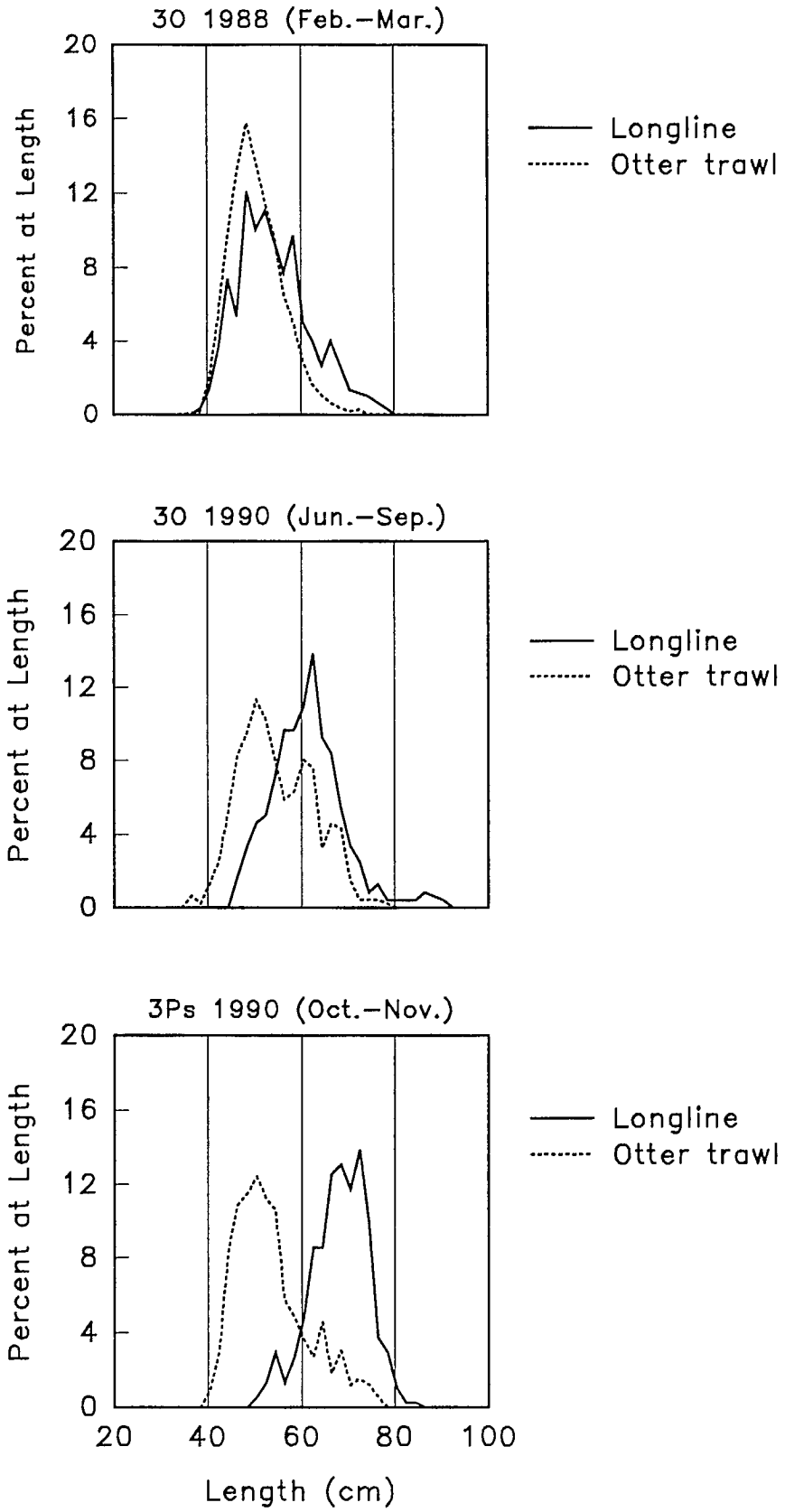


Figure 51. 3L halibut length frequencies.

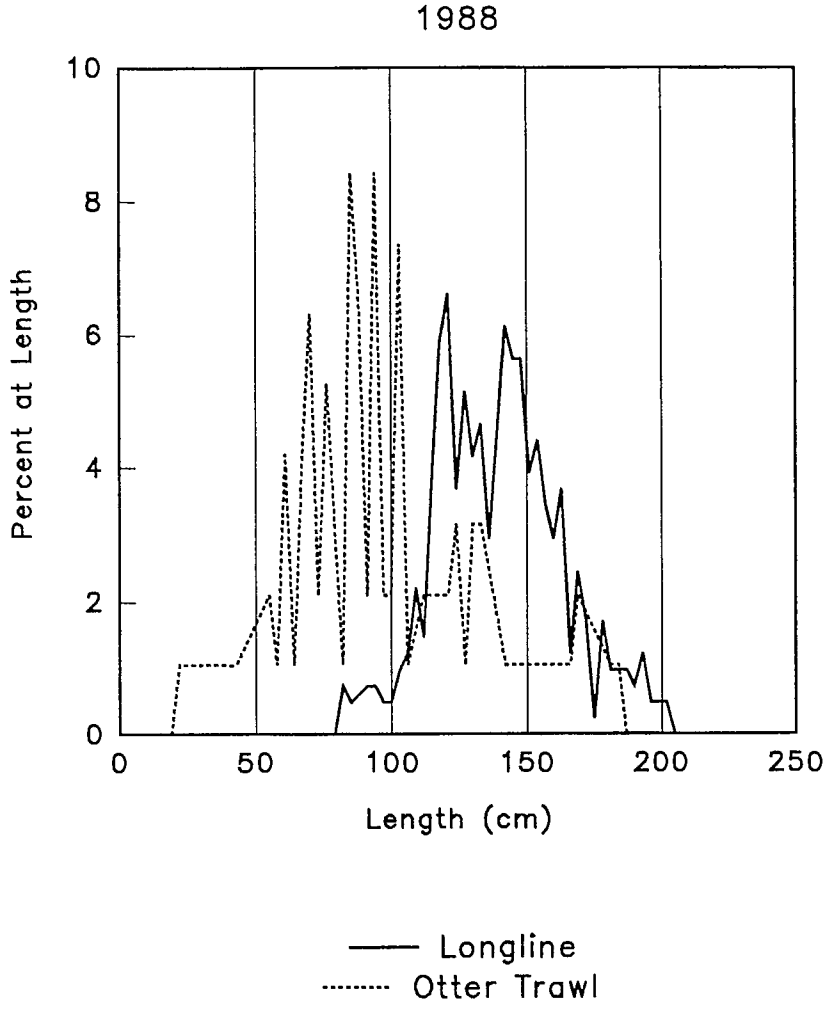


Figure 52. 3NOPs halibut length frequencies.

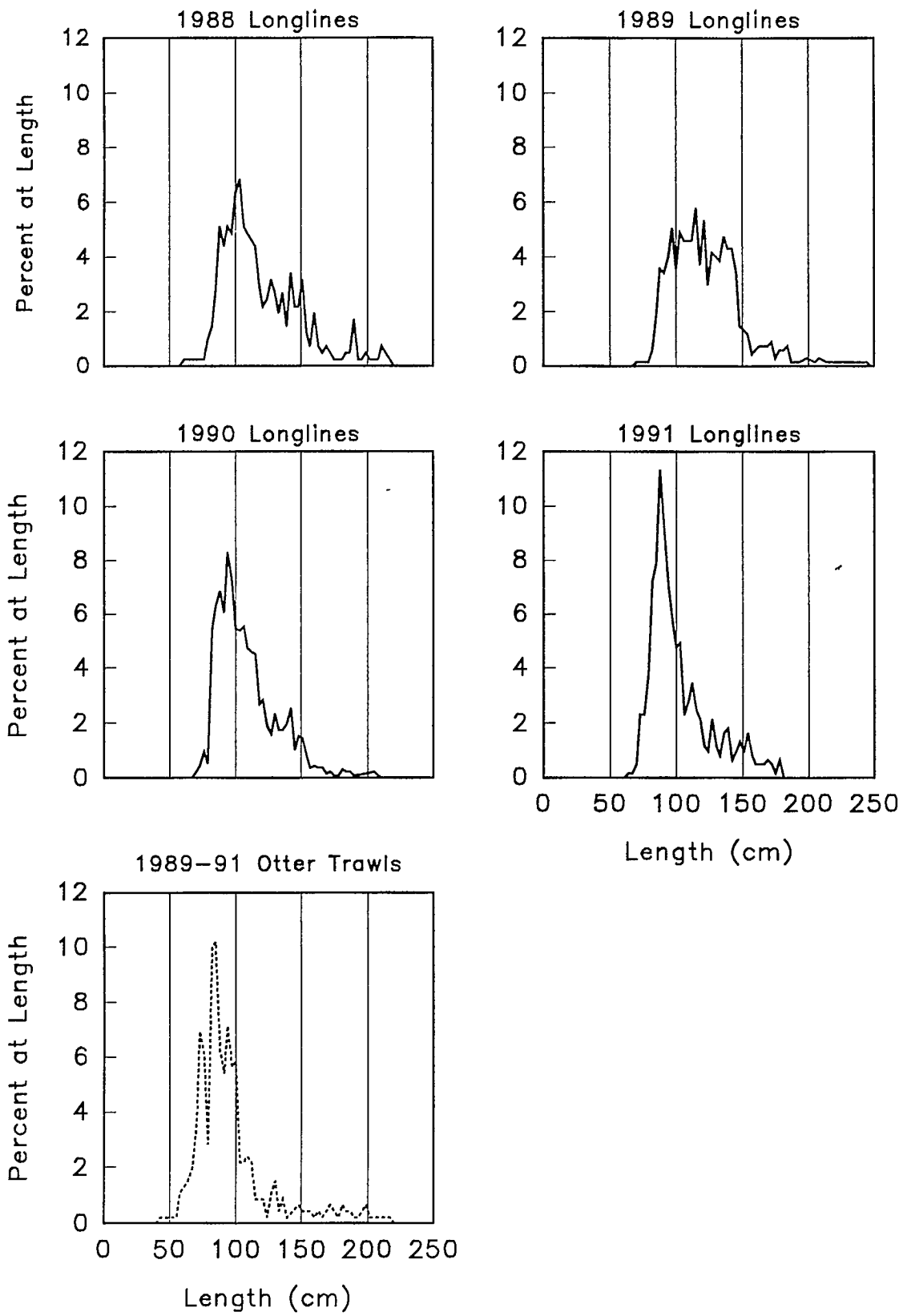


Figure 53. 4VWX and 5Z halibut length frequencies (observer program data).

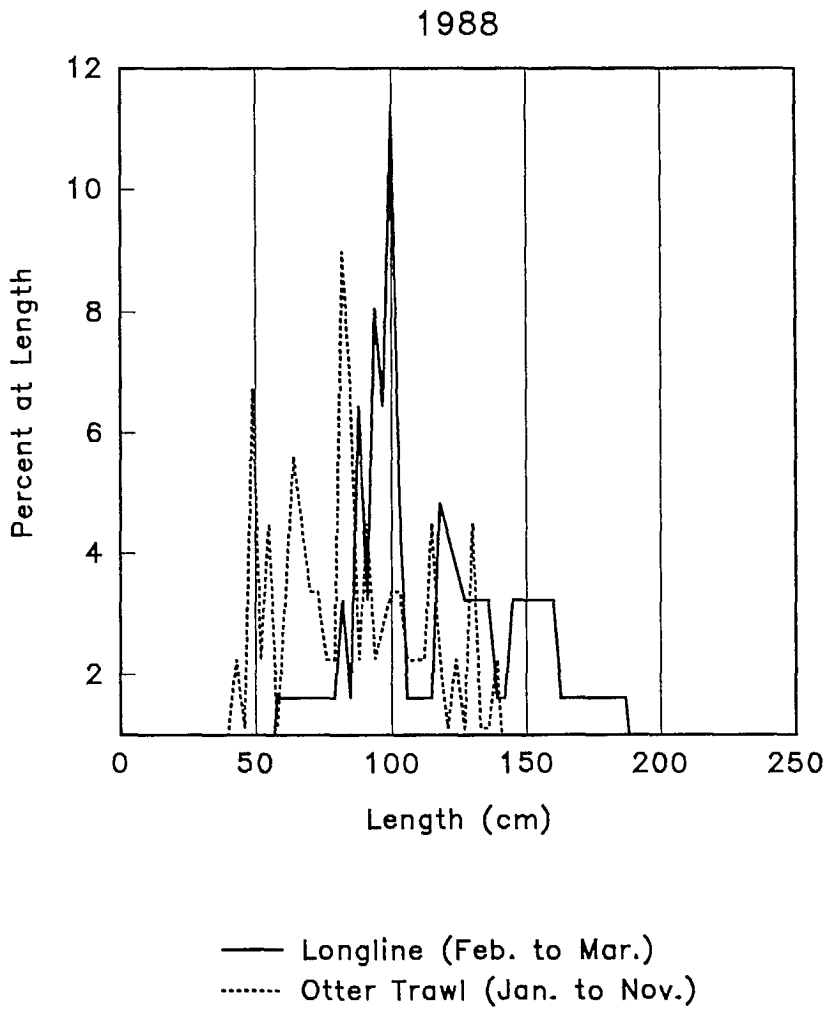


Figure 54. 4VWX and 5Z halibut length frequencies (port sampling data).