

Cetacean Strandings and Bycatches in Nova Scotia, Eastern Canada, 1991 - 1996

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ABSTRACT

Sixty-five records of cetacean strandings around the coast of mainland Nova Scotia between 1991 and 1996 are reported. Ten species are represented in the stranding records, including: Atlantic white-sided dolphin, *Lagenorhynchus acutus* (6 events, 31 individuals); long-finned pilot whale, *Globicephala melas* (5 events, 13 individuals); minke whale, *Balaenoptera acutorostrata* (4 events, 4 individuals); fin whale, *Balaenoptera physalus* (4 events, 4 individuals); sperm whale, *Physeter macrocephalus* (3 events, 4 individuals); humpback whale, *Megaptera novaeangliae* (3 events, 3 individuals); right whale, *Eubalaena glacialis* (1 event, 1 individual); northern bottlenose whale, *Hyperoodon ampullatus* (1 event, 1 individual); harbour porpoise, *Phocoena phocoena* (1 event, 1 individual); and bottlenose dolphin, *Tursiops truncatus* (1 event, 1 individual). Species identification of an additional 39 individuals from 36 events could not be confirmed. Strandings occurred year-round, with a mid- to late-summer peak in reports, due primarily to effort. The majority of strandings (60) involved single animals; Atlantic white-sided dolphins, long-finned pilot whales, and sperm whales were recorded to mass strand. One hundred and twelve records (representing 120 individuals) of cetaceans incidentally killed in fisheries in Nova Scotia waters are also presented (based on an observer program on larger vessels). Kills have been recorded in bottom trawl (99 events), longline (9 events), midwater trawl (3 events) and purse seine (1 event) fisheries. Long-finned pilot whales (72 individuals) and Atlantic white-sided dolphins (6 individuals) comprise the majority of incidentally caught animals.

INTRODUCTION

Records from stranded cetaceans can provide valuable information concerning seasonal and geographic distribution of species in areas where little boat-based research is undertaken. In addition, examination of the carcasses can provide information on causes of mortality, parasite loads, food habits, and reproductive parameters.

Little data concerning cetacean strandings in Nova Scotia, eastern Canada, has been analysed or published in the last twenty years. The most recent reviews providing such information were those of Sergeant (Sergeant and Fisher, 1957; Sergeant *et al.*, 1970). Since then limited information, including some of the records presented here, has been published in several accounts prepared to evaluate the status of individual species within Canada (e.g. Nelson and Lien, 1996; Reeves and Whitehead, 1997). A comprehensive or summary account is lacking however. In addition, little research has been carried out on cetacean bycatch in this region.

In Nova Scotia, a network (the Nova Scotia Stranding Network - NSSN) to record and respond to cetacean strandings was established in 1990, after a number of long-finned pilot whales (*Globicephala melas*) live-stranded in the north-west of the province. Since that time, calls concerning stranded animals have been monitored and when possible, volunteers have collected information on the stranded animals. The NSSN has two major objectives: 1) documentation and research of stranded specimens; and 2) public awareness and education. This report summarises records of cetacean strandings in Nova Scotia from 1991 through 1996, collected through the NSSN. A concurrent database of cetaceans recorded bycaught through a fisheries observer program is maintained by the Department of Fisheries and Oceans, Bedford Institute of Oceanography. Records of bycaught cetaceans from 1991 through 1996 are included.

METHODS

Strandings are reported to the NSSN by a variety of means: direct, to local Fisheries and Oceans officers, and to the Maritime Provinces Environmental Emergencies toll-free number (monitored by the Coast Guard). Varying degrees of sampling have been carried out, depending primarily on the availability and enthusiasm of volunteers and the state of funding for the NSSN. Calls are noted and details are taken as to location and type of stranding. If volunteers are able to attend a stranding, as much information as possible is collected: at the least a confirmation of species and at most a thorough autopsy of the animal is undertaken, with biological samples collected for histopathology, immunotoxin and genetic work (see Geraci and Lounsbury, 1993; Jefferson *et al.*, 1994 for details of sampling protocol).

If volunteers were unable to attend a stranding, when possible, photographs were requested from the report source or other individuals at the stranding to ensure correct species identification. In many instances no photographs were obtained, thus no species confirmation is available. In these cases species identification is either listed as "probable", based on detailed descriptions provided by individuals reporting the stranding, or "possible", when less details are available.

The fisheries observer program places observers on all foreign fishing vessels operating in Canadian waters, on between 25-40% of large Canadian fishing vessels (greater than 100 foot length), and on approximately 5% of smaller Canadian fishing vessels. Species identification for records from the fisheries bycatch database, due to the variability in observers' identification skills, must be regarded as unconfirmed. Records of cetacean bycatch from this program were noted as weight in kilos rather than by the number of animals caught. In order to convert this to number of animals caught, we have divided total weight by the maximum recorded weight of each species (from Jefferson *et al.*, 1993: long-finned pilot whale 2000 kg; Atlantic white-sided dolphin 235 kg; bottlenose dolphin 650 kg). Thus the number of individuals shown for any event likely represents a minimum number of individuals killed.

Further entanglement data exists for the Bay of Fundy, where large whale entanglements (primarily of right whales but also of humpback whales) are routinely monitored and responded to by a number of different organizations. Information on these entanglement records is not included.

RESULTS AND DISCUSSION

Stranding and bycatch data are presented in Appendices 1 and 2. Stranding events have occurred throughout the province (Fig. 1). The concentration of strandings in particular areas of the

province (Fig. 1) reflects areas of higher population density, rather than any particular areas which appear to be stranding "hot-spots". The number of stranding and bycatch events have varied between years (Fig. 2). For stranding events this is likely to reflect the variability in reporting of events (due to varying degrees of advertising in the community by the stranding network) rather than the variability in numbers of stranding events. Increased advertising effort in the future by the NSSN should lead to an increased number of reports.

The fisheries observer effort has also varied, due to the decrease in fishing activity off the coast of Nova Scotia. The total number of sets per year decreased from almost 32,000 in 1991 to 17,500 in 1995 and 23,000 in 1996 (Fig. 3). The decrease in bycatch is therefore partially representative of this decrease in effort. However the number of sets in 1993 and in 1996 are approximately equal, yet there was a marked decrease in cetacean bycatch between these years.

Of cetacean strandings around the province, most (>75%) are found dead. Only 10% have been live-released, the remainder either die on the beach or are euthanised. Confirmed species stranded include Atlantic white-sided dolphins (*Lagenorhynchus acutus*), long-finned pilot whales, sperm whales (*Physeter macrocephalus*), humpback whales (*Megaptera novaeangliae*), fin whales (*Balaenoptera physalus*), right whales (*Eubalaena glacialis*), northern bottlenose whale (*Hyperoodon ampullatus*), harbour porpoise (*Phocoena phocoena*), and bottlenose dolphin (*Tursiops truncatus*). There has also been a probable species identification of a stranded white-beaked dolphin (*Lagenorhynchus albirostris*), and although not considered here, there was a confirmed record of this species stranding in 1997.

Of the 65 stranding events, the majority (60) were of single animals (92.3%), two events concerned two animals (3.1%), two events concerned five animals (3.1%) and one event concerned 26 animals (1.5%). Of stranding events concerning more than one animal, the 26 animal event was of Atlantic white-sided dolphins, both 5 animal events were of long-finned pilot whales, one 2 animal event was of sperm whales, the other of unidentified dolphins/porpoises.

There is great variability in the monthly distribution of strandings, with the majority of strandings observed in August (Fig. 4a). This coincides with the peak season for outdoor human activities, and therefore also with the peak number of people monitoring the coasts and beaches around the province. A more detailed investigation of the species distributions shows that year-round residents in these waters probably include sperm whales, Atlantic white-sided dolphins and long-finned pilot whales. Of the other species observed, fin whales have stranded between July and September, humpback whales between August and November, and minke whales between July and October. Conclusions on seasonality remain very tentative however, due to small sample size and difference in effort over the year.

Of cetacean bycatch, the majority have been recorded from bottom trawl (99 events, (88%), 104 individuals), with only 8 events (8%; 8 individuals) in longline gear, 4 events (3.5%; 7 individuals) from midwater trawl, and 1 animal (0.5%) in purse seine gear. Of the total bycatch in the last 5 years, 72 were recorded as long-finned pilot whales (60%), 6 as Atlantic white-sided dolphins (5%), 2 as northern bottlenose whales (1.5%), 1 as a bottlenose dolphin (0.8%), and the remainder were unidentified. The distribution of cetacean bycatch by fishery type is not all that surprising, however, since 60% of the sets 1991-96 were bottom trawls, 16% were midwater trawls, while longlines made up only 8% of the sets.

The variation in monthly distribution of bycatch with peak bycatch occurring between April and July, is predominately due to effort, as the major fishing season is April - July (Fig. 4b, Fig. 3). Long-finned pilot whales have been caught in all months except January, February, March and September. Atlantic white-sided dolphins have been recorded between April and July and also in November. This agrees with the results of the strandings data, suggesting a year-round distribution of these species off the coast of Nova Scotia. One bottlenose dolphin was bycaught in December. This result is unusual for the region since bottlenose dolphins are almost exclusively sighted or stranded during the summer months (Baird *et al.*, 1993). Two bottlenose whales were bycaught in July.

The humpback whale stranding may represent the first reported stranding in the province (Sergeant *et al.*, 1970; Sergeant and Fisher, 1957). The female sperm whale stranding in 1994 was also quite unusual, since female sperm whales are not often found in the higher latitudes; there has previously been only one confirmed sighting of a group of female and juvenile sperm whales off eastern Canada (Reeves and Whitehead, 1997).

There are more strandings recorded here than have previously been reported in a similar time-span for Nova Scotia, which we feel is due entirely to an increase in effort. Sergeant *et al.* (1970) found that the most commonly recorded species were long-finned pilot whales, harbour porpoise, fin whales and beluga whales (*Delphinapteras leucas*). In this report the most commonly stranded and bycaught species are long-finned pilot whales and Atlantic white-sided dolphins. Sergeant *et al.* (1970) regarded Atlantic white-sided dolphins as an offshore species. There are more Atlantic white-sided dolphin strandings along coastal Nova Scotia than have previously been recorded over a similar time period. Whether this is due to a change in distribution or abundance is not clear, and requires further monitoring.

Other species not reported here, but known to have been found stranded occasionally in Nova Scotia waters include beluga whales, killer whales, and two species of the genus *Mesoplodon*. During the period described here (1991-1996) a young female beluga whale (estimated in 1997 as around 6 - 8 years old, R. Michaud, pers. comm.) has been observed in the waters around Guysborough, Nova Scotia. Killer whales (*Orcinus orca*) have been recorded stranded once in Nova Scotia (Sergeant and Fisher, 1957). True's beaked whale (*Mesoplodon bidens*) has been recorded in Nova Scotia, though it is unclear whether this record was a stranding or a whaling take (Sergeant and Fisher, 1957). Blainville's beaked whale (*Mesoplodon densirostris*) has also been recorded stranded in Nova Scotia (Sergeant *et al.*, 1970).

ACKNOWLEDGMENTS

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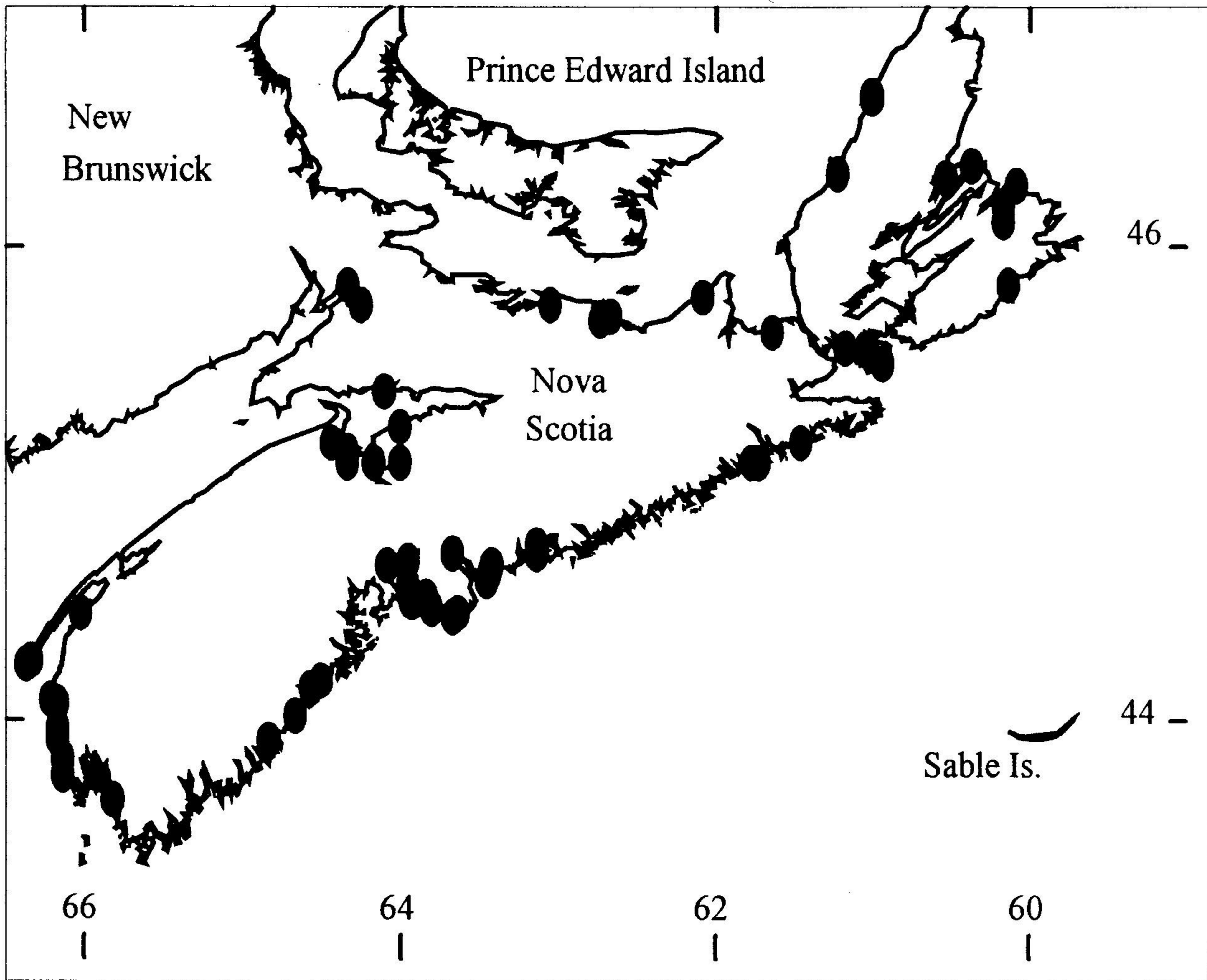


Figure 1. Map of stranding events around Nova Scotia (each event shown as filled circle).

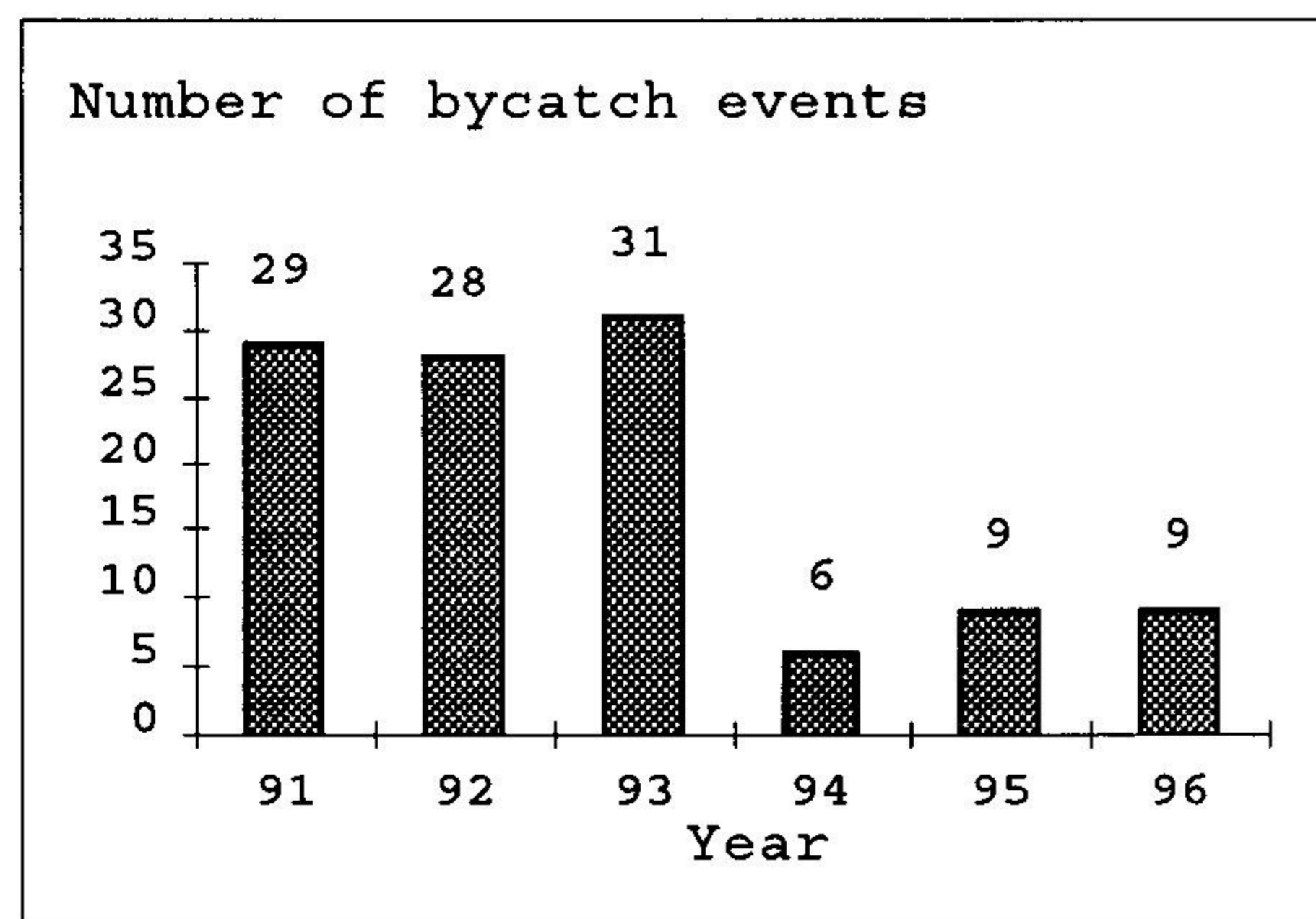
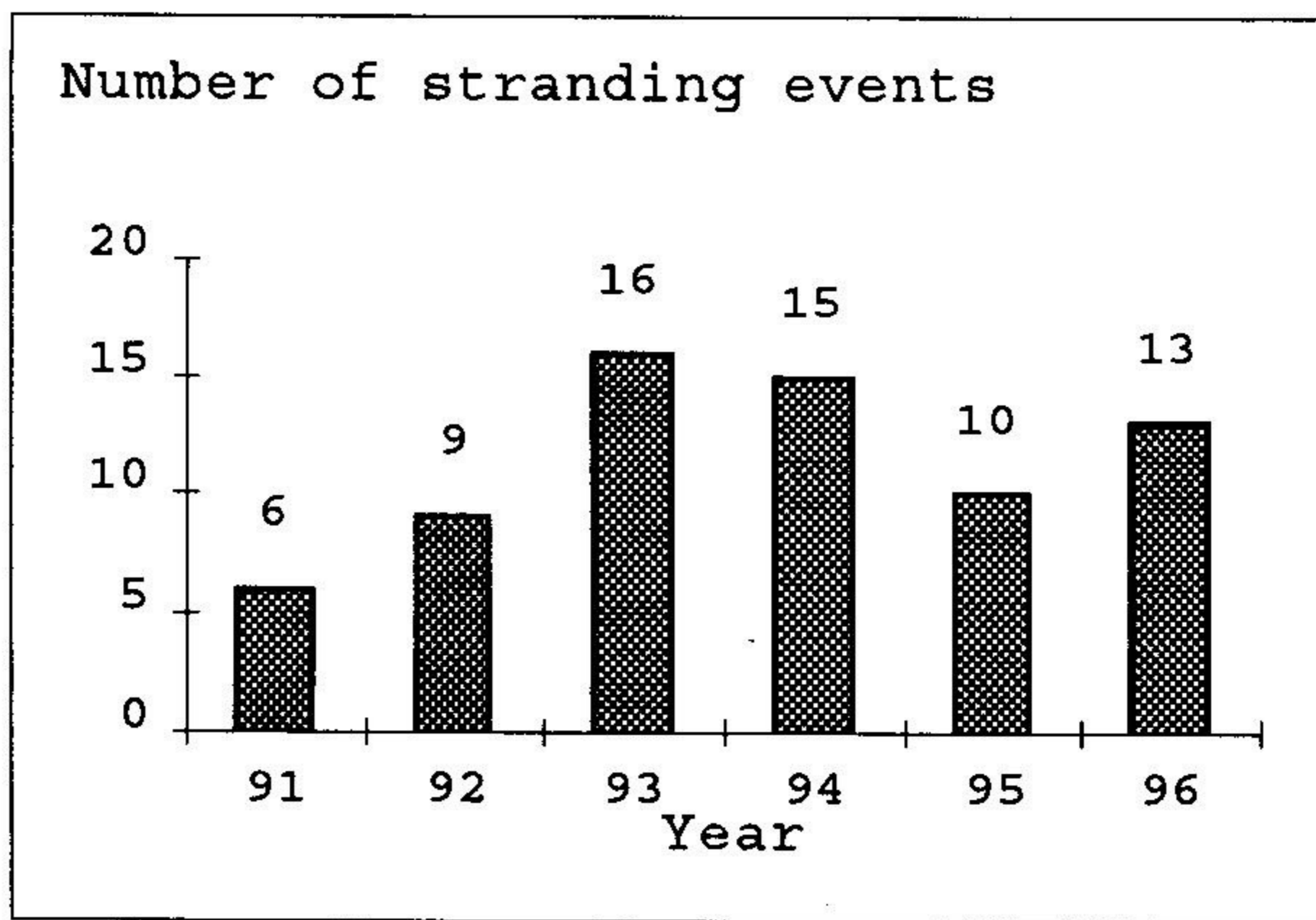


Figure 2. Number of stranding events (a) and bycatch events (b) by year.

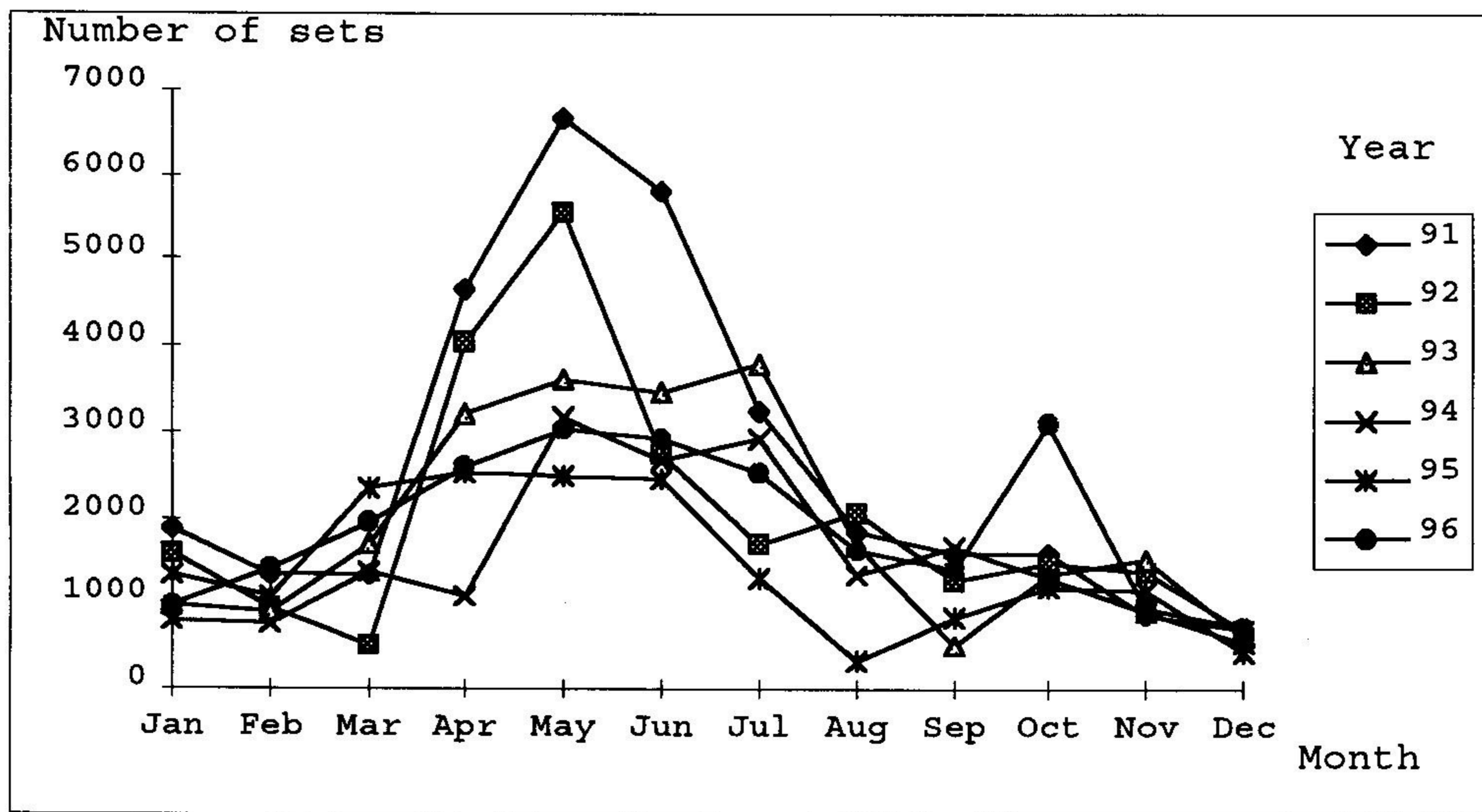


Figure 3. Number of fishing sets per month for years 1991-1996.

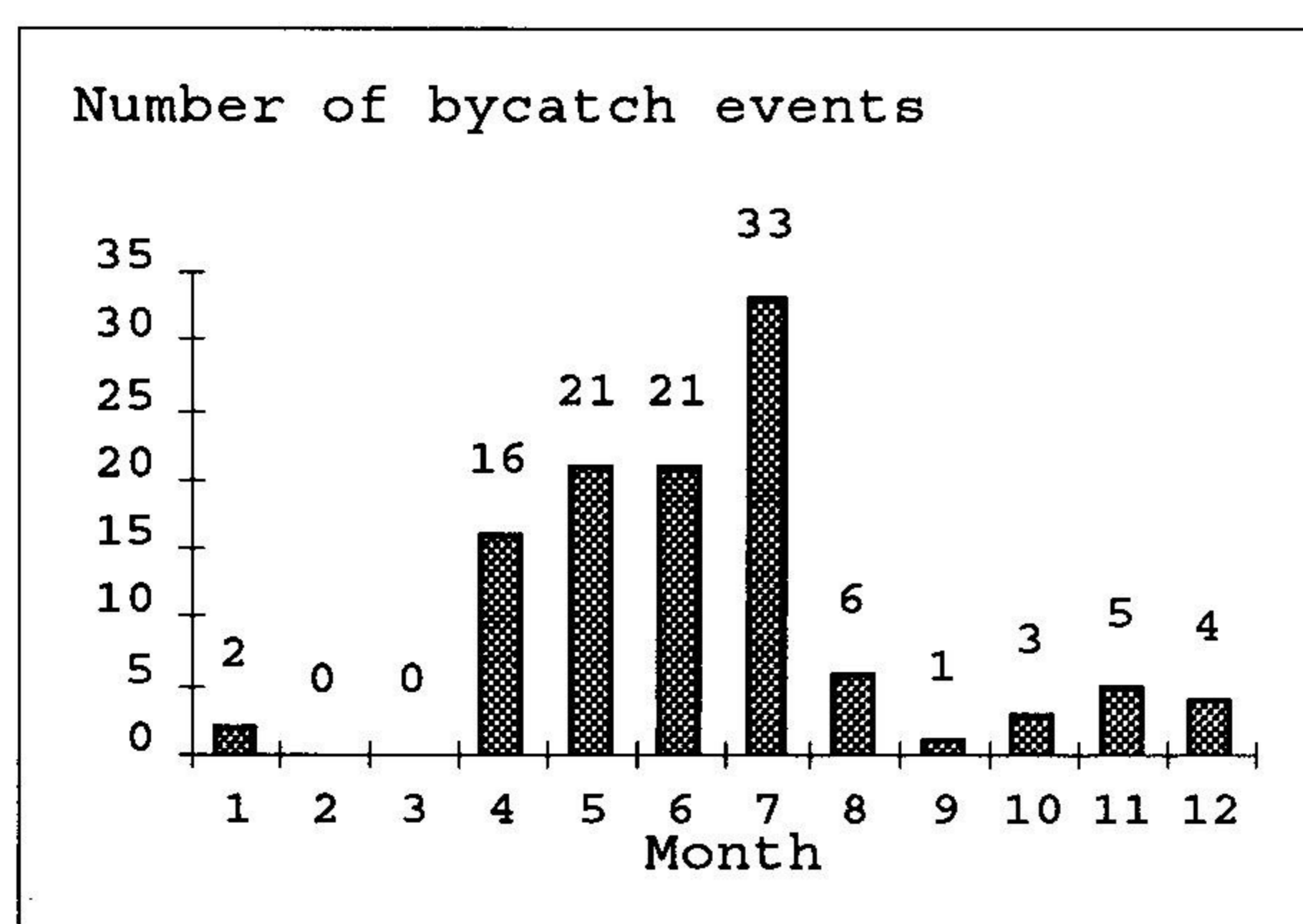
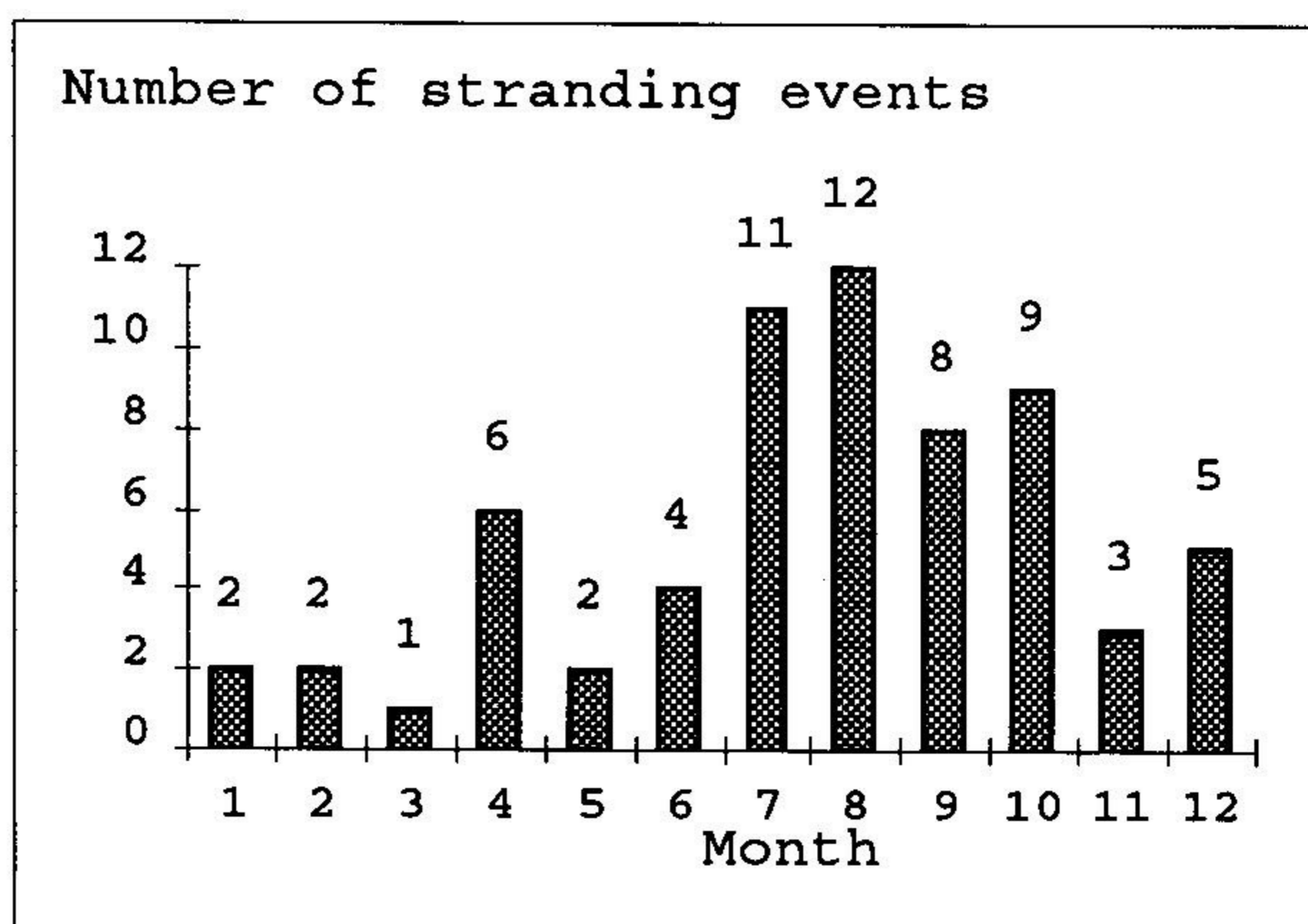


Figure 4. Number of stranding events (a) and bycatch events (b) by month.

Appendix 1

Cetacean strandings in Nova Scotia 1991-96.

Date	Species	Number	Type	Location	Sex	Samples	Length
25/04/91	*sperm whale	2	D	45°30'N 60°56'W	2m	p,s	14.5, 11.4
00/05/91	harbour porpoise	1	D	45°10'N 64°26'W	-	-	-
29/07/91	*long-finned pilot whale	5	D	45°34'N 61°02'W	3m,1f,1-	s	2.75 - 4.88
01/08/91	*Atlantic white-sided dolphin	1	D	45°05'N 64°20'W	f	p	5.25
24/09/91	minke whale	1	D	44°42'N 63°08'W	-	-	-
00/10/91	Atlantic white-sided dolphin	1	D	44°42'N 63°08'W	-	-	-
21/05/92	unid. whale	1	D	45°05'N 61°43'W	-	-	-
22/06/92	long-finned pilot whale	1	D	44°08'N 64°34'W	-	-	~4.8
11/07/92	*minke whale	1	D	44°34'N 63°57'W	-	-	~3.6
11/07/92	*Atlantic white-sided dolphin	26	D(15),LR(11)	45°34'N 61°10'W	8m, -	p,s, nec	1.91 - 2.66
02/08/92	*humpback whale	1	D	43°55'N 66°10'W	-	-	~10.5-12
22/08/92	unid. cetacean	1	D	46°17'N 60°32'W	-	-	-
01/10/92	long-finned pilot whale	1	D	46°18'N 61°13'W	-	-	3.6
08/10/92	*northern bottlenose whale	1	L-D	46°06'N 60°10'W	m	p,s,sk	6
23/04/93	unid. whale	1	D	44°04'N 66°10'W	-	-	~4.8
15/07/93	unid. whale	1	D	45°36'N 61°04'W	-	-	-
25/07/93	*minke whale	1	D	44°35'N 63°27'W	m	p	7
25/07/93	harbour porpoise?	1	D	44°37'N 63°26'W	-	-	~1.5-1.8
08/08/93	white-beaked dolphin	1	D	44°30'N 63°56'W	-	-	~2.7
27/08/93	*long-finned pilot whale	1	Eu	43°46'N 66°08'W	-	p	5.7
05/09/93	*bottlenose dolphin	1	LR	44°26'N 63°40'W	-	-	-
08/09/93	harbour porpoise	1	D	45°50'N 64°20'W	-	-	-
14/09/93	long-finned pilot whale	1	D	43°55'N 64°50'W	-	-	4.5
10/10/93	*minke whale	1	D	45°05'N 64°00'W	-	p	~6.6
13/10/93	*minke whale	1	D	44°32'N 63°57'W	-	p	7.8
00/11/93	Atlantic white-sided dolphin	1	D	44°30'N 63°55'W	-	sk	1.39
11/11/93	*humpback whale	1	D	45°10'N 61°27'W	-	p	14.4
16/12/93	dolphin/porpoise	1	LR	46°10'N 60°10'W	-	-	~1.8
17/12/93	unid. whale	1	D	45°05'N 64°10'W	-	-	~4.5
00/02/94	*Atlantic white-sided dolphin	1	D	44°32'N 63°57'W	-	s,sk	-
24/04/94	dolphin/porpoise	2	LR	45°45'N 64°15'W	-	-	-
03/06/94	long-finned pilot whale?	1	D	45°05'N 61°46'W	-	-	-
04/07/94	*fin whale	1	D	43°58'N 66°10'W	-	-	16.5
05/07/94	*sperm whale	1	D	44°10'N 64°30'W	f	p,s	9.8
06/07/94	dolphin/porpoise	1	D	45°47'N 62°05'W	-	-	-
01/08/94	harbour porpoise	1	LR	45°08'N 64°20'W	-	-	~1.8
02/08/94	long-finned pilot whale	1	L-D	44°39'N 64°05'W	-	-	-
16/08/94	minke whale	1	D	unknown	-	-	~7.2
05/09/94	*long-finned pilot whale	5	L-D	46°37'N 61°00'W	4m, 1f	p,sk	2.57 - 5.28
09/09/94	long-finned pilot whale	1	LR	45°41'N 62°44'W	-	-	-
27/09/94	*fin whale	1	D	45°42'N 62°40'W	m	p	18
08/11/94	*Atlantic white-sided dolphin	1	L-D	43°50'N 66°08'W	-	p	-
12/12/94	*sperm whale	1	L-D	45°45'N 63°03'W	-	p	13.35
05/01/95	*long-finned pilot whale	1	D	Yarmouth County	-	-	5.4
08/04/95	*fin whale	1	D	44°05'N 66°12'W	-	p	~15
11/04/95	*Atlantic white-sided dolphin	1	D	43°56'N 66°10'W	-	p	-
23/06/95	long-finned pilot whale	1	D	44°27'N 63°38'W	-	-	-
10/08/95	Atlantic white-sided dolphin	1	D	44°28'N 63°48'W	-	-	-
18/08/95	harbour porpoise	1	D	44°40'N 63°57'W	-	-	-
20/10/95	*right whale	1	D	44°15'N 66°20'W	m	nec,p,s	12.7
24/10/95	fin whale	1	D	46°15'N 60°05'W	-	-	-
27/10/95	*humpback whale	1	L-D	44°27'N 66°01'W	f	nec,p,s	8.8

24/01/96	*long-finned pilot whale	1	D	44°44'N 63°08'W	-	-	-
24/02/96	unid. whale	1	D	45°14'N 64°00'W	-	-	4.5-6
23/03/96	harbour porpoise	1	D	43°40'N 65°49'W	-	-	~1.2
30/04/96	harbour porpoise?	1	D	45°23'N 64°06'W	-	-	1.2-1.5
01/06/96	dolphin/porpoise	1	D	44°39'N 63°25'W	-	-	-
20/07/96	minke whale	1	LR	45°38'N 61°38'W	-	-	-
23/07/96	*harbour porpoise	1	LR	44°31'N 63°50'W	-	-	-
16/08/96	unid. whale part	1	D	46°37'N 61°00'W	-	-	-
30/08/96	unid. whale	1	D	46°20'N 60°22'W	-	-	-
08/09/96	long-finned pilot whale	1	L-D	44°01'N 64°40'W	-	-	-
10/10/96	*Atlantic white-sided dolphin	1	D	44°42'N 63°40'W	f	-	1.5
00/12/96	long-finned pilot whale	1	D	44°14'N 66°22'W	-	-	-
15/12/96	*fin whale	1	D	45°50'N 60°08'W	m	s,p	14.4

Date: 00/mm/yy is an unknown date but month and year are as shown.

Species: marked with an asterisk are confirmed species identifications, those unmarked are probable species identifications and those marked with a question mark are possible species identifications (see text for details).

Type: D = Dead; L-D = Live then died; LR = Live-released; Eu = Euthanised

Sex: f = female; m = male; u = undetermined

Samples: p = photos; s = samples; sk = skeleton

Lengths: are given in metres for each animal measured. For mass strandings the range of lengths is given. (~ designates an approximate measurement.)

Appendix 2

Cetacean bycatch recorded by Department of Fisheries and Oceans 1991-96.

Date	Species	Number	Fishing activity	Position
10/04/91	unid. whale	1	bottom trawl	43°58'N 61°58'W
26/04/91	unid. whale	1	bottom trawl	42°58'N 62°05'W
03/05/91	unid. whale	1	bottom trawl	43°24'N 60°30'W
12/05/91	unid. dolphin	1	bottom trawl	42°55'N 62°02'W
20/05/91	unid. dolphin	1	bottom trawl	42°59'N 62°29'W
26/05/91	unid. dolphin	1	bottom trawl	45°12'N 57°40'W
05/06/91	long-finned pilot whale	1	bottom trawl	43°19'N 60°49'W
06/06/91	unid. dolphin	1	bottom trawl	42°48'N 63°57'W
15/06/91	long-finned pilot whale	1	bottom trawl	43°21'N 60°52'W
23/06/91	unid. dolphin	1	bottom trawl	43°00'N 62°15'W
27/06/91	long-finned pilot whale	2	bottom trawl	43°11'N 61°21'W
01/07/91	long-finned pilot whale	1	bottom trawl	43°01'N 61°53'W
02/07/91	long-finned pilot whale	1	bottom trawl	42°59'N 62°10'W
03/07/91	long-finned pilot whale	2	bottom trawl	43°00'N 61°56'W
04/07/91	unid. whale	1	bottom trawl	42°57'N 62°12'W
04/07/91	long-finned pilot whale	1	bottom trawl	43°00'N 61°55'W
04/07/91	long-finned pilot whale	1	bottom trawl	42°59'N 61°54'W
05/07/91	unid. whale	1	bottom trawl	43°03'N 61°59'W
08/07/91	long-finned pilot whale	1	bottom trawl	43°01'N 61°57'W
09/07/91	long-finned pilot whale	1	bottom trawl	42°57'N 62°09'W
09/07/91	long-finned pilot whale	1	bottom trawl	43°02'N 61°43'W
10/07/91	long-finned pilot whale	1	bottom trawl	43°06'N 61°32'W
10/07/91	long-finned pilot whale	1	bottom trawl	42°59'N 62°00'W
11/07/91	northern bottlenose whale	1	bottom trawl	43°04'N 61°34'W
13/07/91	Atlantic white-sided dolphin	1	bottom trawl	43°02'N 61°46'W
14/07/91	long-finned pilot whale	1	bottom trawl	43°17'N 61°11'W
21/10/91	long-finned pilot whale	2	midwater trawl	43°57'N 61°16'W
02/12/91	bottlenose dolphin	1	longline	42°35'N 63°34'W
03/12/91	unidentified dolphin	1	longline	42°36'N 64°16'W
10/04/92	unidentified dolphin	1	bottom trawl	43°00'N 62°10'W
18/04/92	long-finned pilot whale	1	bottom trawl	42°58'N 61°56'W
25/04/92	unid. whale	1	bottom trawl	42°57'N 62°04'W
30/04/92	Atlantic white-sided dolphin	1	bottom trawl	42°51'N 62°45'W
02/05/92	long-finned pilot whale	1	bottom trawl	42°58'N 62°05'W
02/05/92	long-finned pilot whale	1	bottom trawl	42°56'N 62°16'W
03/05/92	Atlantic white-sided dolphin	1	bottom trawl	42°49'N 62°55'W
12/05/92	unid. whale	1	bottom trawl	42°58'N 61°49'W
13/05/92	unid. whale	1	bottom trawl	42°55'N 62°16'W
20/05/92	unid. dolphin	1	bottom trawl	43°39'N 59°23'W
22/05/92	long-finned pilot whale	1	bottom trawl	42°58'N 62°11'W
25/05/92	long-finned pilot whale	1	bottom trawl	42°46'N 64°03'W
25/05/92	long-finned pilot whale	2	bottom trawl	42°54'N 62°32'W
26/05/92	long-finned pilot whale	1	bottom trawl	42°48'N 63°58'W
26/05/92	long-finned pilot whale	1	bottom trawl	42°58'N 62°07'W
26/05/92	long-finned pilot whale	2	bottom trawl	42°59'N 62°30'W
06/06/92	long-finned pilot whale	1	bottom trawl	42°57'N 62°08'W
06/06/92	long-finned pilot whale	1	bottom trawl	42°30'N 64°38'W
06/06/92	long-finned pilot whale	2	bottom trawl	42°31'N 64°35'W
08/06/92	long-finned pilot whale	1	bottom trawl	42°50'N 62°41'W
31/07/92	long-finned pilot whale	1	bottom trawl	43°09'N 61°26'W
07/08/92	long-finned pilot whale	1	bottom trawl	42°37'N 64°27'W
23/08/92	unid. dolphin	1	bottom trawl	42°48'N 63°06'W
27/08/92	unid. whale	1	bottom trawl	43°25'N 60°23'W
16/10/92	unid. dolphin	1	longline	41°52'N 62°15'W
02/11/92	long-finned pilot whale	1	midwater trawl	44°07'N 60°45'W
11/11/92	long-finned pilot whale	3	midwater trawl	44°04'N 60°51'W
16/11/92	unid. whale	1	bottom trawl	44°28'N 57°12'W

01/01/93	unid. dolphin	1	longline	42°47'N 62°53'W
03/01/93	unid. dolphin	1	longline	42°33'N 62°38'W
02/04/93	unid. dolphin	1	bottom trawl	42°58'N 62°01'W
04/04/93	unid. dolphin	1	bottom trawl	42°50'N 62°47'W
09/04/93	Atlantic white-sided dolphin	1	bottom trawl	43°39'N 59°34'W
12/04/93	unid. dolphin	1	bottom trawl	43°41'N 59°31'W
14/04/93	unid. dolphin	1	bottom trawl	43°05'N 61°33'W
18/04/93	unid. dolphin	1	bottom trawl	43°35'N 59°49'W
26/04/93	long-finned pilot whale	1	bottom trawl	43°02'N 61°37'W
28/04/93	unid. whale	1	bottom trawl	43°35'N 59°47'W
07/05/93	long-finned pilot whale	1	bottom trawl	43°49'N 59°04'W
24/05/93	unid. whale	1	bottom trawl	43°40'N 59°30'W
11/06/93	long-finned pilot whale	1	bottom trawl	43°19'N 61°03'W
13/06/93	Atlantic white-sided dolphin	1	bottom trawl	43°23'N 60°45'W
17/06/93	unid. whale	1	bottom trawl	42°45'N 64°08'W
20/06/93	long-finned pilot whale	1	bottom trawl	43°36'N 59°59'W
23/06/93	long-finned pilot whale	1	bottom trawl	42°47'N 64°00'W
23/06/93	long-finned pilot whale	1	bottom trawl	43°35'N 60°01'W
23/06/93	long-finned pilot whale	1	bottom trawl	43°36'N 60°05'W
04/07/93	northern bottlenose whale	1	bottom trawl	43°26'N 60°25'W
09/07/93	unid. dolphin	1	bottom trawl	42°59'N 62°14'W
20/07/93	unid. whale	1	purse seine	43°32'N 66°22'W
20/07/93	long-finned pilot whale	1	bottom trawl	42°39'N 64°23'W
20/07/93	long-finned pilot whale	1	bottom trawl	42°57'N 62°49'W
25/07/93	long-finned pilot whale	1	bottom trawl	42°47'N 64°01'W
26/07/93	long-finned pilot whale	1	bottom trawl	42°47'N 64°03'W
27/07/93	long-finned pilot whale	1	bottom trawl	42°38'N 64°22'W
06/08/93	unid. dolphin	1	bottom trawl	42°51'N 62°39'W
12/08/93	long-finned pilot whale	1	bottom trawl	43°30'N 63°06'W
16/08/93	long-finned pilot whale	1	bottom trawl	42°57'N 61°53'W
27/12/93	unid. dolphin	1	longline	42°25'N 54°39'W
25/05/94	unid. whale	1	bottom trawl	42°48'N 63°00'W
06/06/94	long-finned pilot whale	1	bottom trawl	42°50'N 62°52'W
10/07/94	long-finned pilot whale	1	bottom trawl	42°49'N 63°05'W
13/07/94	long-finned pilot whale	1	bottom trawl	42°55'N 62°31'W
31/10/94	unid. whale	1	longline	42°07'N 61°25'W
20/11/94	unid. dolphin	1	bottom trawl	42°09'N 66°38'W
28/04/95	long-finned pilot whale	1	bottom trawl	43°03'N 61°35'W
16/05/95	long-finned pilot whale	1	bottom trawl	42°55'N 62°33'W
13/06/95	long-finned pilot whale	1	bottom trawl	43°28'N 60°27'W
05/07/95	long-finned pilot whale	1	bottom trawl	42°58'N 62°19'W
05/07/95	long-finned pilot whale	1	bottom trawl	42°58'N 62°21'W
08/07/95	long-finned pilot whale	1	bottom trawl	42°59'N 62°12'W
14/07/95	long-finned pilot whale	1	bottom trawl	43°00'N 61°56'W
20/07/95	long-finned pilot whale	1	bottom trawl	42°58'N 62°10'W
27/12/95	long-finned pilot whale	1	longline	41°56'N 64°24'W
13/04/96	unid. dolphin	1	bottom trawl	42°36'N 66°53'W
03/05/96	long-finned pilot whale	1	bottom trawl	42°55'N 62°16'W
07/06/96	long-finned pilot whale	1	bottom trawl	42°52'N 62°36'W
09/06/96	long-finned pilot whale	1	bottom trawl	43°00'N 61°56'W
12/06/96	long-finned pilot whale	1	bottom trawl	42°52'N 62°37'W
07/07/96	long-finned pilot whale	1	bottom trawl	42°58'N 62°11'W
15/07/96	long-finned pilot whale	1	bottom trawl	43°03'N 61°40'W
11/09/96	unid. dolphin	1	bottom trawl	42°39'N 67°04'W
27/11/96	Atlantic white-sided dolphin	1	longline	43°10'N 53°08'W