

# **Summary of Non-halibut Catch from the Standardized Stock Assessment Survey Conducted by the International Pacific Halibut Commission in British Columbia from May 29 to July 22, 2006**

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## **Canadian Technical Report of Fisheries and Aquatic Sciences**

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SUMMARY OF NON-HALIBUT CATCH FROM THE STANDARDIZED STOCK  
ASSESSMENT SURVEY CONDUCTED BY THE INTERNATIONAL PACIFIC  
HALIBUT COMMISSION IN BRITISH COLUMBIA FROM  
MAY 29 TO JULY 22, 2006

by

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## ABSTRACT

Yamanaka, K.L., Obradovich, S.G., Cooke, K., Lacko, L.C., and Dykstra, C. 2008.  
 Summary of non-halibut catch from the Standardized Stock Assessment Survey conducted by the International Pacific Halibut Commission in British Columbia from May 29 to July 22, 2006. Can. Tech. Rep. Fish. Aquat. Sci. 2796: vii + 58 p.

Since 2003, a third observer has been deployed on the International Pacific Halibut Commission's (IPHC) Standardized Stock Assessment (SSA) survey in British Columbia, IPHC regulatory area 2B. Similar to the previous surveys, this document summarizes the non-halibut catch during the 2006 survey and constructs a time series from 1995 to 2006 of relative abundance indices for four species of rockfish: quillback (*Sebastodes maliger*), yelloweye (*S. ruberrimus*), redbanded (*S. babcocki*), and rougheye (*S. aleutianus*). Negative growth rates are noted over the time series; annual relative growth rates range from -2.7% for quillback rockfish to -9.2% for yelloweye rockfish and the accumulated relative change over the 1995 to 2006 series are -25.9% and -65.5 %, respectively.

## RÉSUMÉ

Yamanaka, K.L., Obradovich, S.G., Cooke, K., Lacko, L.C., and Dykstra, C. 2008.  
 Summary of non-halibut catch from the Standardized Stock Assessment Survey conducted by the International Pacific Halibut Commission in British Columbia from May 29 to July 22, 2006. Can. Tech. Rep. Fish. Aquat. Sci. 2796: vii + 58 p.

Depuis 2003, un troisième observateur a été affecté au recensement normalisé des stocks de la Commission internationale du flétan du Pacifique (CIFP) dans la zone réglementée 2B de la CIFP, en Colombie-Britannique. Comme pour les recensements antérieurs, nous résumons les espèces autres que le flétan qui ont été capturées au cours de l'étude de 2006, puis nous établissons une série chronologique des indices d'abondance relative pour la période de 1995 à 2006 de quatre espèces de sélastes : sébaste à dos épineux (*Sebastodes maliger*), sébaste aux yeux jaunes (*S. ruberrimus*), sébaste à bandes rouges (*S. babcocki*) et sébaste à œil épineux (*S. aleutianus*). Des taux de croissance négatifs ont été enregistrés dans la série chronologique. Les taux annuels de croissance relative varient de -2,7 % pour le sébaste à dos épineux à -9,2 % pour le sébaste aux yeux jaunes, et les variations relatives cumulatives dans la série de 1995 à 2006 sont respectivement de -25,9 % et de -65,5 % pour ces deux espèces.



## **1.0 INTRODUCTION**

The International Pacific Halibut Commission's (IPHC) Standardized Stock Assessment (SSA) survey is a fixed-station longline survey that extends from southern Oregon to the Bering Sea. This survey is directed to index halibut abundance and provide accompanying biological data to assess the Pacific halibut stock. The British Columbia (regulatory area 2B) portion of the survey has been conducted annually in various configurations since 1963 ([www.iphc.washington.edu](http://www.iphc.washington.edu)). Since 2003, the IPHC has provided the opportunity to deploy an additional technician during the survey to identify the catch to species on a hook-by-hook basis and to collect biological samples from rockfishes (Yamanaka *et al.* 2004 and 2007, Lochead *et al.* 2006). In addition to halibut, many other groundfish species are commonly caught on the survey including spiny dogfish (*Squalus acanthias*), sablefish (*Anoplopoma fimbria*), and rockfishes (*Sebastodes spp.*).

Similar to past reports, this report summarizes the catch and effort by location and the biological data for the rockfish species caught incidentally to the halibut during the survey. Catch rate indices are constructed for yelloweye (*Sebastodes ruberrimus*), quillback (*S. maliger*), redbanded (*S. babcocki*), and rougheye (*S. aleutianus*) rockfishes using partial hook-by-hook data between 1996 and 2002 and complete species enumerations in 1995 and 2003 to 2006. Catch and effort data collected from the IPHC SSA survey in British Columbia provide informative coastwide relative abundance indices for many groundfish species.

## **2.0 METHODS**

### **2.1 IPHC Chartered Vessels and Survey Locations**

The *F/V Star Wars II*, *F/V Pender Isle*, and *F/V Proud Venture* were chartered in 2006 to conduct the Canadian portion (Area 2B) of the IPHC SSA surveys. *F/V Star Wars II* (CFV/VRN 20492) is an 80-foot wood vessel skippered by Rob Tournier during the survey. The *F/V Pender Isle* (CFV/VRN 27282) is a 70-foot steel vessel, skippered by Garth Roberts. The *F/V Proud Venture* (CFV/VRN 23197) is a 70-foot steel vessel, skippered by Charles Harper.

The Canadian portion of the IPHC survey consists of 170 fixed (non-random) survey stations and is divided into four charter regions: 'Vancouver', 'Goose Island', 'St. James', and 'Charlotte'. The left panel of Figure 1 shows the location of the IPHC fixed survey stations and identifies the chartered vessel that fished each station, while the right panel of Figure 1 shows the IPHC survey stations relative to the Pacific States Marine Fisheries Commission (PSMFC) areas, used in the Fisheries and Oceans Canada Groundfish Management Plan (2006). In 2006, the inshore rockfish management areas changed to conform to other groundfish fishing sectors for ease of management within the groundfish licence integration initiative.

## 2.2 Fishing Gear and Operations

Standardized “conventional” (fixed) longline fishing gear was deployed during the survey and standardized fishing operations followed, as required in the IPHC Charter Bid Specifications ([www.iphc.washington.edu](http://www.iphc.washington.edu)). Fishing gear specifications and fishing operations are detailed in Yamanaka *et al.* (2004), except only six skates per string were deployed in 2006.

## 2.3 Data Collection

The hook-by-hook observations and biological sampling were conducted as described for the 2003 survey (Yamanaka *et al.* 2004). Appendix A details the biological sampling protocol.

## 2.4 Catch Rate

As in previous reports (Yamanaka *et al.* 2004), the catch rate  $U$  is defined as the total number of fish  $N$  divided by the number of intact skates  $M$  returned from the set.

Mean species catch rates  $\bar{U}_s$  are calculated as the sum of the catch rates by skate per set  $U_{is}$  divided by the number of sets  $n$ , where  $s$  denotes the species, and  $i$  denotes the set.

$$U_{is} = \frac{N_{is}}{M_i} \quad \bar{U}_s = \frac{1}{n} \sum_{i=1}^n \frac{N_{is}}{M_i}$$

## 2.5 Relative Abundance Index

The 2006 catch rate data is added to the relative abundance index constructed from the IPHC SSA surveys for the years 1995 through 2005 (Yamanaka *et. al.* 2007). Species composition data, compiled from the identification of the total catch, is available for 1995 and after 2003, while an estimated species composition is used for 1996 to 2002 (historic IPHC data). For these years with partial species composition data, the catch from the first 20 hooks of each skate in the set was expanded to estimate the total rockfish species composition for the set. Although the entire catch was identified to species during the 1995 survey, 2.78% of the rockfish were recorded as “unidentified rockfish”, thus, the catch rate index may be slightly underestimated for these unidentified species.

The spatial distribution of the survey stations has changed over time. In 1995 through to 1997, survey stations were grouped in triangular clusters, while in 1998 to the present, survey stations are positioned equidistant from one another on a 10 nm square grid (Figure 2). Beginning in 1998, regulatory area 2B was divided into four survey regions: ‘Vancouver’, ‘Goose Island’, ‘St. James’, and ‘Charlotte’. Surveys were conducted annually in all regions with the exception of ‘Vancouver’, which was surveyed in 1999 and in years since 2001. The relative abundance index from 1995 to 2006 includes only those survey stations that:

1. overlapped with the present grid stations by a radius less than 10 kilometres, and

2. were surveyed in all years.

The stations used for the catch rate time series are shown in Figure 2 (right panel).

As in past years, station catch rates ( $C$ ) are calculated as the total number of fish ( $N$ ) divided by the number of effective skates ( $E$ ) in the set. IPHC defines an effective skate as a skate of 100 circle hooks with 18-foot spacing. Using  $E$  standardizes survey data in years when the number of hooks, hook spacing, or hook type varied. Mean species catch rates ( $\bar{C}_s$ ) for each year are estimated from all overlapping stations in the time series for that year ( $n$ ).

$$C_{is} = \frac{N_{is}}{E_i} \quad \bar{C}_s = \frac{1}{n} \sum_{i=1}^n \frac{N_{is}}{E_i}$$

From IPHC:

$$E = 1.52 S (1 - e^{-0.006D}) \frac{H}{100} A.$$

where  $E$  = number of effective skates;

$S$  = number of skates hauled;

$D$  = hook spacing in feet,;

$H$  = number of hooks;

$A$  = adjustment value for differences among hook types

If the hook spacing is  $\leq 4$  feet skates are considered ineffective (effective skates = 0). In the years 1996 to 1999, there were fewer “effective skates” than “skates hauled”, as skates with less than 100 hooks per skate were deployed in those years. Since 2000, there is little to no difference between effective skate and skates hauled.

The relative abundance index is constructed from  $\log_2$  transformed non-zero catch rate data. Examining the slope of the regression line running through the median values gives an annual logarithmic growth rate ( $b$ ), where a slope of 1 and -1 reflects a doubling and halving, respectively, of the catch rate (Schnute *et al.* 2004). Annual relative growth rate ( $r$ ) is calculated from:

$$r = 2^b - 1$$

where  $b$  is the annual logarithmic growth rate

The accumulated relative change ( $R$ ) is similarly calculated from:

$$R_l = 2^{b(l-1)} - 1$$

where  $b$  is the annual logarithmic growth rate and  $l$  is the number of observations over the time series (Schnute *et al.* 2004).

## 3.0 RESULTS AND DISCUSSION

### 3.1 Survey Locations

The *F/V Pender Isle* fished the ‘Vancouver’ and ‘Goose Island’ regions between May 29 and June 27, the *F/V Proud Venture* fished the ‘St. James’ region between May 31 and June 18, and the *F/V Star Wars II* fished the ‘Charlotte’ region between July 9 and July 22 (Figure 1 and Appendix B).

### 3.2 Catch Summary

The DFO GFBio database archives data from the 2006 IPHC SSA survey with TRIP\_IDs 62006 (*F/V Pender Isle*), 62007 (*F/V Proud Venture*) and 62008 (*F/V Star Wars II*).

Species catch, in numbers, is shown in Table 1. Spiny dogfish (*Squalus acanthias*), Pacific halibut (*Hippoglossus stenolepis*) and sablefish (*Anoplopoma fimbria*) are the three most commonly caught species on the survey, accounting for 76% (in numbers) of all species caught. A total of 24.7 tonnes (t) of halibut and 7.8 t of rockfish were landed during the survey (Table 2).

#### 3.2.1. Hook by Hook

Fifty-three percent of the hooks deployed on the survey returned empty and 29% of the hooks were occupied by a fish or an invertebrate (Table 3). Less than one percent of the hooks went missing, bent or broke and one percent of the lines were snarled.

#### 3.2.2. Biological Sampling

Biological samples were taken for 15 species of rockfish, including 1079, 881 and 186 otolith pairs from redbanded, yelloweye and quillback rockfishes, respectively (Table 4). Rockfish length summaries by species, for all regions combined, and by survey region, are shown in Tables 5 through to Table 9. Rockfish length frequencies are shown in Figure 3. Rockfish sexual maturity summaries are shown in Table 10. The majority of the rockfish caught during the survey were sexually mature. The sex ratio for yelloweye rockfish skewed towards male, with females making up only 39% of the sampled catch. The higher proportion of males is consistent with previous years, when female yelloweye rockfish were approximately 44% of the catch. Yelloweye rockfish age summaries are shown for all regions combined, and by region in Table 11. Age frequencies for yelloweye rockfish are shown in Figure 4. The mean age of female yelloweye rockfish is greater than that for males throughout the survey, at 40 and 34 years respectively. Yelloweye rockfish from area 5C/D had the oldest mean age at 39 years and area grouping 3C/D,5A had the youngest at 34 years, while area 5E had the youngest mean age for males at 29 years. Area 5C/D also had the largest mean size for yelloweye rockfish at 58 cm, which is consistent with the older mean age in this area.

### 3.3 Catch Rates

Overall mean catch rates were highest for redbanded and yelloweye rockfishes at 1.26 fish per skate and 0.99 fish per skate, respectively (Table 12). The highest mean catch rate for redbanded rockfish occurred in area 5C/D at 1.94 fish per skate, while those for yelloweye and rougheye rockfishes occurred in areas 5B at 1.40 fish per skate and 5E at 2.03 fish per skate, respectively (Tables 13 to 16). The lowest catch rates for redbanded and yelloweye rockfishes were in area grouping 3C/D, 5A at 0.28 fish per skate and 0.72 fish per skate, respectively.

The spatial distribution of rockfish catch rates (numbers per skate by species) are shown in Figure 5. Bocaccio, canary, quillback, redbanded, silvergray, and yelloweye rockfishes were caught throughout the entire survey area, while rougheye rockfish was caught in all areas except the southern 3C/D, 5A. Black, greenstriped, rosethorn, shorthraker, tiger, yellowmouth, yellowtail, and vermillion rockfishes were caught only sporadically and catches were small (Figure 5).

### 3.4 Relative abundance index

Relative abundance indices were constructed for four commonly caught rockfish species, quillback, yelloweye, redbanded, and rougheye, using catch rate data from overlapping survey stations that were fished in all years between 1995 and 2006 (Appendix C). A low of 69 stations in 1998 to a high of 92 stations in 1997 were used in this analysis (Table 17). In 2006, a total of 75 of the 170 stations were used in this analysis.

A high proportion of stations fished in this halibut directed survey did not yield a quillback, yelloweye, redbanded or rougheye rockfish catch, from a low of 44% for redbanded rockfish in 1996 to a high of 97% for quillback rockfish in 2001 (Table 17). The non-zero catch rates were  $\log_2$  transformed and are shown in Table 17. For these commonly caught rockfish, boxplots of the non-zero  $\log_2$  transformed catch rate data for the 1995 to 2006 time series are shown in the upper panels of Figures 6 to 9. The lower panels of the same figures show a plot of the median non-zero  $\log_2$  transformed catch rate with the regression line.

The slope of the regression line through the annual median values shows a declining trend for these rockfishes. Annual relative growth rates are -2.7%, -9.2%, -7.0%, and -7.2%, for quillback, yelloweye, redbanded and rougheye rockfishes, respectively. The accumulated relative change over the time series of surveys from 1995 to 2006 is -25.9%, -65.5%, -55.1%, and -56.1% for quillback, yelloweye, redbanded and rougheye rockfishes, respectively.

The IPHC SSA halibut survey provides a valuable, fishery independent, relative abundance index for commonly caught rockfish. There is no other coastwide, long-term abundance index available for these rockfishes. This survey may also provide similar indices for other commonly caught species, such as dogfish and sablefish.

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Table 1. Summary of species catch in numbers (descending) for the BC coast, each PSMFC area grouping of capture, and as a percent of total catch.

Common Name	Taxonomic Name	Total	3C/D, 5A	5B	5C/D	5E	% Total
SPINY DOGFISH	<i>SQUALUS ACANTHIAS</i>	13984	5991	3833	4049	111	46.83
PACIFIC HALIBUT	<i>HIPPOGLOSSUS STENOLEPIS</i>	5567	1505	1758	1815	489	18.64
SABLEFISH	<i>ANOPLOPOMA FIMBRIA</i>	3000	362	1167	1245	226	10.05
REDBANDED ROCKFISH	<i>SEBASTES BABCOCKI</i>	1285	90	429	675	91	4.30
ARROWTOOTH FLounder	<i>ATHERESTHES STOMIAS</i>	1060	81	299	659	21	3.55
YELLOW-EYE ROCKFISH	<i>SEBASTES RUBERRIMUS</i>	1005	232	404	293	76	3.37
LONGNOSE SKATE	<i>RAJA RHINA</i>	795	121	297	350	27	2.66
STARFISH	<i>ASTEROIDEA</i>	426	338	77	7	4	-
UNKNOWN FISH <sup>A</sup>	<i>UNKNOWN FISH</i>	420	340	75	5	-	1.41
LINGCOD	<i>OPIODON ELONGATUS</i>	375	186	81	66	42	1.26
SUNFLOWER STARFISH	<i>PYCNOPODIA HELIANTHOIDES</i>	232	-	-	210	22	-
ROUGHEYE ROCKFISH	<i>SEBASTES ALEUTIANUS</i>	216	-	26	68	122	0.72
QUILLBACK ROCKFISH	<i>SEBASTES MALIGER</i>	198	99	17	61	21	0.66
PACIFIC COD	<i>GADUS MACROCEPHALUS</i>	162	4	18	139	1	0.54
BIG SKATE	<i>RAJA BINOCULATA</i>	159	47	10	85	17	0.53
SILVERGRAY ROCKFISH	<i>SEBASTES BREVISPINIS</i>	155	19	26	35	75	0.52
SHORTSPINE THORNYHEAD	<i>SEBASTOLOBUS ALASCANUS</i>	152	3	32	74	43	0.51
SPOTTED RATFISH	<i>HYDROLAGUS COLLIEI</i>	100	25	8	37	30	0.33
BRYOZOA	<i>BRYOZOA</i>	71	-	-	70	1	-
CANARY ROCKFISH	<i>SEBASTES PINNiger</i>	63	7	6	29	21	0.21
BOCACCO	<i>SEBASTES PAUCISPINIS</i>	37	4	4	10	19	0.12
SCALLOP	<i>PECTINIDAE</i>	34	28	6	-	-	-
OREGONTRITON	<i>FUSIRITRON OREGONENSIS</i>	32	4	5	19	4	-
GLASS Sponges	<i>HEACTINELLIDA</i>	29	-	17	11	1	-
FISH-EATING STAR	<i>STYLASTERIAS FORRERI</i>	26	-	3	16	7	-
TEALIA	<i>TEALIA</i>	24	-	-	7	17	-
ANEMONE	<i>ACTINIARIA</i>	23	8	13	2	-	-
SPONGES	<i>PORIFERA</i>	22	1	5	14	2	-
BASKET STARS	<i>EURYALINA</i>	21	16	1	2	2	-
SHORTRAKER ROCKFISH	<i>SEBASTES BOREALIS</i>	17	1	6	-	10	0.06
PETRALE SOLE	<i>EOPSETTA JORDANI</i>	16	2	8	6	-	0.05
GIANT PACIFIC OCTOPUS	<i>ENTEROCTOPUS DOFLEINI</i>	12	9	1	2	-	-
ALEUTIAN SKATE	<i>BATHYRAJA ALEUTICA</i>	12	-	3	8	1	0.04
SEA CUCUMBER	<i>HOLOTHUROIDEA</i>	7	3	1	-	3	-
SANDPAPER SKATE	<i>BATHYRAJA INTERRUPTA</i>	7	-	2	5	-	0.02
WALLEYE POLLACK	<i>THERAGRA CHALCogramma</i>	7	-	-	7	-	0.02
METRIDIUM	<i>METRIDIUM</i>	7	-	-	7	-	-
PACIFIC SLEEPER SHARK	<i>SOMNIOSIS PACIFICUS</i>	7	-	-	6	1	0.02
ZOANTHARIA	<i>ZOANTHARIA</i>	6	1	-	3	2	-
BATH SPONGES	<i>DEMOSSPONGIAE</i>	6	-	-	3	3	-
YELLOWMOUTH ROCKFISH	<i>SEBASTES REEDI</i>	5	2	2	-	1	0.02
SAND STAR	<i>LUEDIA FOLIOLATA</i>	5	-	-	5	-	-
YELLOWTAIL ROCKFISH	<i>SEBASTES FLAVIDUS</i>	4	1	-	-	3	0.01
SEA URCHINS	<i>ECHINACEA</i>	4	-	2	2	-	-
SEA WHIP	<i>OSTEOCELLA SEPTENTRIONALIS</i>	4	-	1	3	-	-
OCTOPUS	<i>OCTOPODA</i>	4	-	-	4	-	-
PINK SCALLOP, (aka REDDISH SCALLOP)	<i>CHLAMYS RUBIDA</i>	4	-	-	4	-	-
SIXGILL SHARK	<i>HEXANCHUS GRISEUS</i>	3	-	3	-	-	0.01
INVERTEBRATES	<i>INVERTEBRATES</i>	3	-	3	-	-	-
PINK SALMON	<i>ONCORHYNCHUS GORBUSCHA</i>	3	-	-	3	-	0.01
WEATHERVANE SCALLOP	<i>PATINOPECTEN CAURINUS</i>	3	-	-	3	-	-
PACIFIC SANDDAB	<i>CITHARICHTHYS SORDIDUS</i>	2	2	-	-	-	0.01
PARAGORGIA PACIFICA	<i>PARAGORGIA PACIFICA</i>	2	2	-	-	-	-
WOLF EEL	<i>ANARRHICHTHYS OCCELLATUS</i>	2	2	-	-	-	0.01
VERMILION ROCKFISH	<i>SEBASTES MINIATUS</i>	2	2	-	-	-	0.01
GREENSTRIPED ROCKFISH	<i>SEBASTES ELONGATUS</i>	2	1	-	-	1	0.01
ROSETHORN ROCKFISH	<i>SEBASTES HELVOMACULATUS</i>	2	-	2	-	-	0.01
ASCIDIANS AND TUNICATES	<i>ASCIDIACEA</i>	2	-	1	1	-	-
HYDROID	<i>HYDROZOA</i>	2	-	1	1	-	-
PACIFIC HAKE	<i>MERLUCCIUS PRODUCTUS</i>	2	-	1	1	-	0.01
PRIMNOA	<i>PRIMNOA</i>	2	-	1	1	-	-
JELLYFISH	<i>SCYPHOZOA</i>	2	-	-	2	-	-
SOUPFIN SHARK	<i>GALEORHINUS ZYOPTERUS</i>	2	-	-	2	-	0.01
BLACK ROCKFISH	<i>SEBASTES MELANOPS</i>	2	-	-	2	-	0.01
SPINY SCALLOP	<i>CHLAMYS HASTATA</i>	2	-	-	1	1	-
PHRYNOPIHURIDA	<i>PHRYNOPIHURIDA</i>	2	-	-	1	1	-
SEA LILIES AND FEATHER STARS	<i>CRINOIDEA</i>	2	-	-	-	2	-
BENT-NOSE MACOMA	<i>MACOMA NASUTA</i>	1	1	-	-	-	-
SOUTHERN ROCK SOLE	<i>LEPIDOPSETTA BILINEATA</i>	1	1	-	-	-	0.00
BLOOD STAR	<i>HENRICIA LEVIUSCULA</i>	1	-	1	-	-	-
SQUIDS	<i>TEUTHOIDEA</i>	1	-	-	1	-	-
DOVER SOLE	<i>MICROSTOMUS PACIFICUS</i>	1	-	-	1	-	0.00
STOMPHIA	<i>STOMPHIA</i>	1	-	-	1	-	0.00
GORGONIAN CORALS	<i>GORGONACEA</i>	1	-	-	1	-	-
SEA PENS	<i>PENNATULACEA</i>	1	-	-	1	-	-
INANIMATE OBJECT(S)	<i>INANIMATE OBJECT(S)</i>	1	-	-	1	-	-
GIANT WRYMOUTH	<i>CRYPTACANTHODES GIGANTEUS</i>	1	-	-	1	-	0.00
SKATES	<i>RAJIDAE</i>	1	-	-	-	1	0.00
STRIPED SUN STARFISH	<i>SOLASTER STIMPSONI</i>	1	-	-	-	1	-
TIGER ROCKFISH	<i>SEBASTES NIGROCINCTUS</i>	1	-	-	-	1	0.00
Marine Fish Only		28836	9130	8517	9738	1451	96.56
Total Catch		29864	9541	8656	10143	1524	100.00

<sup>A</sup> Of the 420 unknown fish, 302 were head only on the hook, while 108 were dropped off the hook during gear retrieval.

NB: This table includes second species caught on the same hook, and thus reports higher catch than Table 3. In addition, 8 fish not recorded in Table 3 are included in this table.

Table 2. Total retained/landed weight (kg) by species for the BC stations in the 2006 IPHC survey. Weights reported are for fresh, round fish, and for some species were calculated from dressed fish weights.

Species	Kilograms
Pacific halibut	24705
Yelloweye rockfish	3297
Redbanded rockfish	3073
Rougheye rockfish	474
Silvergray rockfish	351
Quillback rockfish	235
Bocaccio	160
Canary rockfish	117
Shortraker rockfish	64
Vermilion rockfish	5
Yellowmouth rockfish	5
Black rockfish	5
Tiger rockfish	2
Yellowtail rockfish	1
Greenstriped rockfish	1
ALL ROCKFISH	7790
Shortspine thornyhead	198
Pacific cod	95
Sablefish	1138

Table 3. Summary of hook observations by description, DFO GFBio database code, number of hooks retrieved, and percent of total hooks.

#### HOOK YIELD

Description	GFBio Code	# hooks	% of total
Empty hook	1	53344	52.67
Bait on hook	2	7688	7.59
Animals and inanimate objects on hook	3	29007	28.64
Species head on hook	4	457	0.45
Species dropped off hook	5	269	0.27
Bait skin on hook	6	9804	9.68
Hook not observed	7	704	0.70
<b>Total</b>		<b>101273</b>	<b>100.00</b>

#### HOOK CONDITION

Description	GFBio Code	# hooks	% of total
Missing hook	1	704	0.70
Bent hook	2	126	0.12
Broken hook	3	20	0.02
Broken at rail	4	0	0.00
Hook condition not observed	5	0	0.00
Normal	6	100423	99.16
<b>Total</b>		<b>101273</b>	<b>100.00</b>

#### LINE CONDITION

Description	GFBio Code	# hooks	% of total
Normal	1	100126	98.87
Snarl in line	2	1139	1.12
Line not observed	3	0	0.00
Gear parted	4	8	0.01
<b>Total</b>		<b>101273</b>	<b>100.00</b>

NB: Table counts do not include second animals/inanimate objects caught on the same hook.

Table 4. Number of specimens, by species, measured for length, examined for gender and maturity state, and with otoliths removed for ageing.

<b>Species</b>	<b>Lengths</b>	<b>Sex</b>	<b>Maturities</b>	<b>Otoliths</b>
Redbanded Rockfish	1201	1079	1055	1079
Yelloweye Rockfish	958	881	871	881
Rougeye Rockfish	210	0	0	0
Quillback Rockfish	186	186	185	186
Silvergray Rockfish	141	0	0	0
Shortspine Thornyhead	136	0	0	0
Canary Rockfish	60	0	0	0
Bocaccio	33	0	0	0
Shortraker Rockfish	16	0	0	0
Yellowtail Rockfish	4	0	0	0
Yellowmouth Rockfish	3	0	0	0
Greenstriped Rockfish	2	0	0	0
Black Rockfish	2	2	2	2
Vermilion Rockfish	2	0	0	0
Tiger Rockfish	1	1	1	1
<b>All Rockfish</b>	<b>2955</b>	<b>2149</b>	<b>2114</b>	<b>2149</b>

Table 5. Summary of rockfish fork length (mm) for entire BC coast (IPHC area 2B).

All Areas	Black	Bocaccio	Canary	Greenstriped	Quillback	Redbanded	Rougheye	Shortraker
<b>Mean</b>	505	711	483	299	401	508	516	678
<b>Standard Error</b>	4.00	12.55	7.33	0.50	1.97	1.52	4.03	25.64
<b>Median</b>	505	695	483	299	400	509	508	680
<b>Mode</b>	-	689	470	-	388	513	525	-
<b>Standard Deviation</b>	-	72.07	56.79	-	26.92	52.71	58.43	102.57
<b>Sample Variance</b>	-	5194.35	3225.61	-	724.76	2778.39	3414.41	10519.85
<b>Range</b>	8	288	268	1	148	397	307	339
<b>Minimum</b>	501	605	350	298	320	290	398	543
<b>Maximum</b>	509	893	618	299	468	686	705	882
<b>Count</b>	2	33	60	2	186	1201	210	16

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All Areas	SSThornyhead	Silvergray	Tiger	Vermilion	Yelloweye	Yellowmouth	Yellowtail
<b>Mean</b>	462	561	421	516	558	472	478
<b>Standard Error</b>	7.75	3.84	0.00	5.50	2.04	22.53	22.47
<b>Median</b>	445	562	421	516	552	473	479
<b>Mode</b>	442	581	-	-	529	-	-
<b>Standard Deviation</b>	90.33	45.60	-	7.78	63.07	39.02	44.95
<b>Sample Variance</b>	8158.63	2079.61	-	60.50	3977.83	1522.33	2020.33
<b>Range</b>	522	262	0	11	403	78	110
<b>Minimum</b>	298	421	421	510	352	432	421
<b>Maximum</b>	820	683	421	521	755	510	531
<b>Count</b>	136	141	1	2	958	3	4

Table 6. Summary of rockfish fork length (mm) for the PSMFC area grouping 3C/D, 5A.

<b>3C/D, 5A</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rougheye</b>	<b>Shortraker</b>
<b>Mean</b>	-	716	415	299	402	489	-	817
<b>Standard Error</b>	-	76.00	17.03	0.00	2.21	6.52	-	0.00
<b>Median</b>	-	716	400	299	402	477	-	817
<b>Mode</b>	-	-	395	-	388	477	-	-
<b>Standard Deviation</b>	-	107.48	45.06	-	22.00	54.90	-	-
<b>Sample Variance</b>	-	11552.00	2030.48	-	483.92	3014.52	-	-
<b>Range</b>	-	152	141	0	102	294	-	0
<b>Minimum</b>	-	640	350	299	351	392	-	817
<b>Maximum</b>	-	792	491	299	454	686	-	817
<b>Count</b>	-	2	7	1	99	71	-	1

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<b>3C/D, 5A</b>	<b>SSThornyhead</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
<b>Mean</b>	464	558	-	516	543	432	421
<b>Standard Error</b>	69.05	18.41	-	5.50	3.55	0.00	0.00
<b>Median</b>	523	532	-	516	542	432	421
<b>Mode</b>	-	-	-	-	552	-	-
<b>Standard Deviation</b>	119.60	61.07	-	7.78	53.08	-	-
<b>Sample Variance</b>	14304.33	3729.56	-	60.50	2818.00	-	-
<b>Range</b>	216	191	-	11	305	0	0
<b>Minimum</b>	326	492	-	510	372	432	421
<b>Maximum</b>	542	683	-	521	677	432	421
<b>Count</b>	3	11	-	2	223	1	1

Table 7. Summary of rockfish fork length (mm) for the PSMFC area 5B.

<b>5B</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rougheye</b>	<b>Shortraker</b>
<b>Mean</b>	-	779	547	-	400	499	516	-
<b>Standard Error</b>	-	88.00	26.87	-	8.43	2.61	13.69	-
<b>Median</b>	-	779	567	-	397	495	536	-
<b>Mode</b>	-	-	-	-	-	513	536	-
<b>Standard Deviation</b>	-	124.45	60.08	-	23.84	53.07	62.71	-
<b>Sample Variance</b>	-	15488.00	3609.50	-	568.53	2816.56	3932.95	-
<b>Range</b>	-	176	153	-	72	281	230	-
<b>Minimum</b>	-	691	442	-	365	348	407	-
<b>Maximum</b>	-	867	595	-	437	629	637	-
<b>Count</b>	-	2	5	-	8	415	21	-

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<b>5B</b>	<b>SSThornyhead</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
<b>Mean</b>	421	547	-	-	555	473	-
<b>Standard Error</b>	13.13	6.88	-	-	3.08	0.00	-
<b>Median</b>	400	549	-	-	549	473	-
<b>Mode</b>	384	557	-	-	502	-	-
<b>Standard Deviation</b>	66.93	31.54	-	-	59.64	-	-
<b>Sample Variance</b>	4480.04	994.86	-	-	3557.00	-	-
<b>Range</b>	260	101	-	-	320	0	-
<b>Minimum</b>	298	500	-	-	395	473	-
<b>Maximum</b>	558	601	-	-	715	473	-
<b>Count</b>	26	21	-	-	374	1	-

Table 8. Summary of rockfish fork length (mm) for the PSMFC area grouping 5C/D.

<b>5C/D</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rougheye</b>	<b>Shortraker</b>
<b>Mean</b>	505	738	503	-	405	516	548	561
<b>Standard Error</b>	4.00	25.85	8.44	-	4.08	2.00	8.28	9.82
<b>Median</b>	505	707	505	-	405	518	555	556
<b>Mode</b>	-	-	470	-	427	514	565	-
<b>Standard Deviation</b>	-	81.76	44.66	-	31.35	50.04	67.77	21.97
<b>Sample Variance</b>	-	6684.62	1994.26	-	982.58	2503.67	4592.34	482.50
<b>Range</b>	8	224	217	-	135	361	282	56
<b>Minimum</b>	501	669	401	-	333	290	423	543
<b>Maximum</b>	509	893	618	-	468	651	705	599
<b>Count</b>	2	10	28	-	59	625	67	5

<b>5C/D</b>	<b>SSThornyhead</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
<b>Mean</b>	464	556	-	-	578	-	-
<b>Standard Error</b>	9.26	6.26	-	-	4.10	-	-
<b>Median</b>	446	555	-	-	575	-	-
<b>Mode</b>	442	548	-	-	542	-	-
<b>Standard Deviation</b>	75.21	36.51	-	-	69.64	-	-
<b>Sample Variance</b>	5656.52	1332.68	-	-	4849.30	-	-
<b>Range</b>	340	180	-	-	403	-	-
<b>Minimum</b>	325	460	-	-	352	-	-
<b>Maximum</b>	665	640	-	-	755	-	-
<b>Count</b>	66	34	-	-	289	-	-

Table 9. Summary of rockfish fork length (mm) for the PSMFC area 5E.

<b>5E</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rougheye</b>	<b>Shortraker</b>
<b>Mean</b>	-	689	463	298	380	506	498	723
<b>Standard Error</b>	-	12.45	9.88	0.00	6.51	6.06	3.86	23.02
<b>Median</b>	-	693	456	298	381	502	496	704
<b>Mode</b>	-	689	440	-	376	483	499	-
<b>Standard Deviation</b>	-	54.28	44.20	-	29.11	57.52	42.65	72.78
<b>Sample Variance</b>	-	2946.36	1954.03	-	847.52	3308.72	1819.01	5297.07
<b>Range</b>	-	233	189	0	113	267	211	254
<b>Minimum</b>	-	605	380	298	320	376	398	628
<b>Maximum</b>	-	838	569	298	433	643	609	882
<b>Count</b>	-	19	20	1	20	90	122	10

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<b>5E</b>	<b>SSThornyhead</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
<b>Mean</b>	485	567	421	-	544	510	496
<b>Standard Error</b>	17.94	5.73	0.00	-	7.38	0.00	17.34
<b>Median</b>	455	572	421	-	557	510	480
<b>Mode</b>	530	604	-	-	597	-	-
<b>Standard Deviation</b>	114.84	49.63	-	-	62.65	-	30.04
<b>Sample Variance</b>	13188.87	2463.47	-	-	3925.18	-	902.33
<b>Range</b>	475	243	0	-	263	0	53
<b>Minimum</b>	345	421	421	-	400	510	478
<b>Maximum</b>	820	664	421	-	663	510	531
<b>Count</b>	41	75	1	-	72	1	3

Table 10. Sexual maturity, assessed visually, for male and female rockfish species showing the number (proportion) of fish in each maturity stage and the total number of fish sampled.

ROCKFISH	Number (Proportion) of Individuals in Each Maturity Stage							Total N
	Immature	Maturing	Developing	Developed	Running	Spent	Resting	
<b>Black</b>	0	0	0	2 (1.000)	0	0	0	2
<b>Quillback</b>	0	0	39 (0.453)	0	0	22 (0.256)	25 (0.291)	86
<b>Redbanded</b>	0	10 (0.022)	188 (0.419)	48 (0.107)	0	76 (0.169)	127 (0.283)	449
<b>Tiger</b>	0	0	0	0	0	0	1 (1.000)	1
<b>Yelloweye</b>	7 (0.013)	27 (0.051)	65 (0.122)	1 (0.002)	1 (0.002)	289 (0.541)	144 (0.270)	534
<b>Total Number</b>	7 (0.007)	37 (0.035)	292 (0.272)	51 (0.048)	1 (0.001)	387 (0.361)	297 (0.277)	1072

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ROCKFISH	Number (Proportion) of Individuals in Each Maturity Stage							Total N
	Immature	Maturing	Mature	Fertilized	Larvae	Spent	Resting	
<b>Black</b>	0	0	0	0	0	0	0	0
<b>Quillback</b>	0	0	46 (0.465)	0	0	30 (0.303)	23 (0.232)	99
<b>Redbanded</b>	0	19 (0.031)	41 (0.068)	2 (0.003)	43 (0.071)	170 (0.281)	331 (0.546)	606
<b>Tiger</b>	0	0	0	0	0	0	0	0
<b>Yelloweye</b>	0	16 (.047)	43 (0.128)	17 (0.050)	29 (0.086)	130 (0.386)	102 (0.303)	337
<b>Total Number</b>	0 (0.000)	35 (0.034)	130 (0.125)	19 (0.018)	72 (0.069)	330 (0.317)	456 (0.438)	1042

Table 11. Summary statistics by PSMFC area groupings for yelloweye rockfish age data collected on the IPHC 2006 SSA Survey.

<b>Male and Female Ages (years)</b>	<b>ALL AREAS</b>	<b>3C/D, 5A</b>	<b>5B</b>	<b>5C/D</b>	<b>5E</b>
<b>Mean</b>	36.5	34.4	36.7	38.8	33.8
<b>Standard Error</b>	0.59	1.12	0.94	1.20	1.68
<b>Median</b>	28.0	27.0	28.0	30.0	28.0
<b>Mode</b>	26	26	26	25	24
<b>Standard Deviation</b>	17.50	16.65	16.72	19.55	14.25
<b>Sample Variance</b>	306.10	277.32	279.39	382.34	203.10
<b>Minimum</b>	11	13	15	11	15
<b>Maximum</b>	118	118	103	110	91
<b>Count</b>	875	222	316	265	72
<b>Confidence Level (95.0%)</b>	1.16	2.20	1.85	2.37	3.35

<b>Male Ages (years)</b>	<b>ALL AREAS</b>	<b>3C/D, 5A</b>	<b>5B</b>	<b>5C/D</b>	<b>5E</b>
<b>Mean</b>	34.0	32.2	33.5	37.5	28.8
<b>Standard Error</b>	0.67	1.09	1.02	1.55	1.51
<b>Median</b>	27.0	27.0	27.0	27.0	26.0
<b>Mode</b>	26	27	26	24	24
<b>Standard Deviation</b>	15.59	12.70	14.80	19.20	8.93
<b>Sample Variance</b>	243.08	161.31	219.11	368.45	79.73
<b>Minimum</b>	13	15	15	13	17
<b>Maximum</b>	100	85	88	100	53
<b>Count</b>	535	136	211	153	35
<b>Confidence Level (95.0%)</b>	1.32	2.15	2.01	3.07	3.07

<b>Female Ages (years)</b>	<b>ALL AREAS</b>	<b>3C/D, 5A</b>	<b>5B</b>	<b>5C/D</b>	<b>5E</b>
<b>Mean</b>	40.4	37.9	43.0	40.5	38.5
<b>Standard Error</b>	1.06	2.27	1.81	1.89	2.74
<b>Median</b>	33.0	28.0	41.0	38.5	32.0
<b>Mode</b>	25	26	24	25	24
<b>Standard Deviation</b>	19.53	21.09	18.54	19.99	16.69
<b>Sample Variance</b>	381.42	444.91	343.73	399.49	278.65
<b>Minimum</b>	11	13	20	11	15
<b>Maximum</b>	118	118	103	110	91
<b>Count</b>	340	86	105	112	37
<b>Confidence Level (95.0%)</b>	2.08	4.52	3.59	3.74	5.57

Table 12. Summary of rockfish catch rate (numbers of fish per skate) for entire BC coast (IPHC area 2B).

All Areas	Black	Bocaccio	Canary	Greenstriped	Quillback	Redbanded	Rosethorn	Rougheye
Mean	0.002	0.036	0.062	0.002	0.194	1.260	0.002	0.212
Standard Error	0.002	0.018	0.021	0.001	0.050	0.200	0.002	0.101
Median	0	0	0	0	0	0	0	0
Standard Deviation	0.025	0.235	0.269	0.018	0.651	2.614	0.025	1.321
Sample Variance	0.001	0.055	0.072	0.000	0.424	6.831	0.001	1.746
Minimum	0	0	0	0	0	0	0	0
Maximum	0.33	2.83	2	0.17	5.17	14.33	0.33	16.17
Total Number of Skates	170	170	170	170	170	170	170	170
Confidence Level (95.0%)	0.004	0.036	0.041	0.003	0.099	0.396	0.004	0.200
Coefficient of Variation	13.038	6.468	4.347	9.192	3.353	2.075	13.038	6.240

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All Areas	Shortraker	Silvergray	Tiger	Vermilion	Yelloweye	Yellowmouth	Yellowtail
Mean	0.017	0.152	0.001	0.002	0.985	0.005	0.004
Standard Error	0.011	0.051	0.001	0.002	0.187	0.002	0.003
Median	0	0	0	0	0	0	0
Standard Deviation	0.140	0.665	0.013	0.025	2.432	0.029	0.040
Sample Variance	0.020	0.442	0.000	0.001	5.915	0.001	0.002
Minimum	0	0	0	0	0	0	0
Maximum	1.67	7.83	0.17	0.33	14.5	0.17	0.5
Total Number of Skates	170	170	170	170	170	170	170
Confidence Level (95.0%)	0.021	0.101	0.002	0.004	0.368	0.004	0.006
Coefficient of Variation	8.400	4.367	13.038	13.038	2.468	5.762	10.259

Table 13. Summary of rockfish catch rate (numbers of fish per skate) for the PSMFC area grouping 3C/D, 5A.

<b>3C/D, 5A</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rosethorn</b>	<b>Rougheye</b>
Mean	-	0.012	0.022	0.003	0.306	0.278	-	-
Standard Error	-	0.007	0.016	0.003	0.127	0.167	-	-
Median	-	0	0	0	0	0	-	-
Standard Deviation	-	0.055	0.117	0.023	0.934	1.225	-	-
Sample Variance	-	0.003	0.014	0.001	0.872	1.501	-	-
Minimum	-	0	0	0	0	0	-	-
Maximum	-	0.33	0.83	0.17	5.17	8.33	-	-
Total Number of Skates	54	54	54	54	54	54	54	54
Confidence Level (95.0%)	-	0.015	0.032	0.006	0.255	0.334	-	-
Coefficient of Variation	-	4.406	5.384	7.348	3.056	4.413	-	-

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<b>3C/D, 5A</b>	<b>Shortraker</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
Mean	0.003	0.059	-	0.006	0.716	0.006	0.003
Standard Error	0.003	0.027	-	0.006	0.210	0.004	0.003
Median	0	0	-	0	0	0	0
Standard Deviation	0.023	0.200	-	0.045	1.541	0.032	0.023
Sample Variance	0.001	0.040	-	0.002	2.374	0.001	0.001
Minimum	0	0	-	0	0	0	0
Maximum	0.17	1.33	-	0.33	7.33	0.17	0.17
Total Number of Skates	54	54	54	54	54	54	54
Confidence Level (95.0%)	0.006	0.055	-	0.012	0.421	0.009	0.006
Coefficient of Variation	7.348	3.391	-	7.348	2.152	5.147	7.348

Table 14. Summary of rockfish catch rate (numbers of fish per skate) for the PSMFC area 5B.

<b>5B</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rosethorn</b>	<b>Rougheye</b>
Mean	-	0.014	0.021	-	0.059	1.490	0.007	0.090
Standard Error	-	0.007	0.012	-	0.035	0.378	0.007	0.038
Median	-	0	0	-	0	0.25	0	0
Standard Deviation	-	0.047	0.082	-	0.245	2.620	0.048	0.264
Sample Variance	-	0.002	0.007	-	0.060	6.863	0.002	0.070
Minimum	-	0	0	-	0	0	0	0
Maximum	-	0.17	0.5	-	1.5	11.33	0.33	1.17
Total Number of Skates	48	48	48	48	48	48	48	48
Confidence Level (95.0%)	-	0.014	0.024	-	0.071	0.761	0.014	0.077
Coefficient of Variation	-	3.352	3.893	-	4.132	1.759	6.928	2.922

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<b>5B</b>	<b>Shortraker</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
Mean	0.021	0.090	-	-	1.403	0.007	-
Standard Error	0.015	0.039	-	-	0.499	0.005	-
Median	0	0	-	-	0	0	-
Standard Deviation	0.107	0.273	-	-	3.459	0.034	-
Sample Variance	0.011	0.075	-	-	11.968	0.001	-
Minimum	0	0	-	-	0	0	-
Maximum	0.67	1.67	-	-	14.5	0.17	-
Total Number of Skates	48	48	48	48	48	48	48
Confidence Level (95.0%)	0.031	0.079	-	-	1.005	0.010	-
Coefficient of Variation	5.131	3.022	-	-	2.466	4.847	-

Table 15. Summary of rockfish catch rate (numbers of fish per skate) for the PSMFC area grouping 5C/D.

<b>5C/D</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rosethorn</b>	<b>Rougheye</b>
Mean	0.006	0.029	0.083	-	0.176	1.939	-	0.195
Standard Error	0.006	0.018	0.046	-	0.068	0.405	-	0.089
Median	0	0	0	-	0	0.17	-	0
Standard Deviation	0.043	0.140	0.348	-	0.518	3.083	-	0.675
Sample Variance	0.002	0.020	0.121	-	0.268	9.507	-	0.455
Minimum	0	0	0	-	0	0	-	0
Maximum	0.33	1.00	2.00	-	3.33	14.33	-	3.83
Total Number of Skates	58	58	58	58	58	58	58	58
Confidence Level (95.0%)	0.011	0.037	0.092	-	0.136	0.811	-	0.177
Coefficient of Variation	7.616	4.865	4.174	-	2.951	1.590	-	3.458

<b>5C/D</b>	<b>Shortraker</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
Mean	-	0.101	-	-	0.842	-	-
Standard Error	-	0.031	-	-	0.288	-	-
Median	-	0	-	-	0	-	-
Standard Deviation	-	0.234	-	-	2.192	-	-
Sample Variance	-	0.055	-	-	4.806	-	-
Minimum	-	0	-	-	0	-	-
Maximum	-	1.17	-	-	10.50	-	-
Total Number of Skates	58	58	58	58	58	58	58
Confidence Level (95.0%)	-	0.061	-	-	0.576	-	-
Coefficient of Variation	-	2.318	-	-	2.603	-	-

Table 16. Summary of rockfish catch rate (numbers of fish per skate) for the PSMFC area 5E.

<b>5E</b>	<b>Black</b>	<b>Bocaccio</b>	<b>Canary</b>	<b>Greenstriped</b>	<b>Quillback</b>	<b>Redbanded</b>	<b>Rosethorn</b>	<b>Rougheye</b>
Mean	-	0.316	0.350	0.017	0.350	1.517	-	2.034
Standard Error	-	0.281	0.190	0.017	0.249	1.194	-	1.597
Median	-	0	0	0	0	0	-	0
Standard Deviation	-	0.889	0.601	0.054	0.787	3.777	-	5.049
Sample Variance	-	0.791	0.361	0.003	0.619	14.263	-	25.497
Minimum	-	0	0	0	0	0	-	0
Maximum	-	2.83	1.67	0.17	2.33	12.00	-	16.17
Total Number of Skates	10	10	10	10	10	10	10	10
Confidence Level (95.0%)	-	0.636	0.430	0.038	0.563	2.702	-	3.612
Coefficient of Variation	-	2.815	1.718	3.162	2.248	2.490	-	2.483

<b>5E</b>	<b>Shortraker</b>	<b>Silvergray</b>	<b>Tiger</b>	<b>Vermilion</b>	<b>Yelloweye</b>	<b>Yellowmouth</b>	<b>Yellowtail</b>
Mean	0.167	1.250	0.017	-	1.268	0.017	0.050
Standard Error	0.167	0.768	0.017	-	0.506	0.017	0.050
Median	0	0.165	0	-	0.585	0	0
Standard Deviation	0.528	2.427	0.054	-	1.602	0.054	0.158
Sample Variance	0.279	5.892	0.003	-	2.565	0.003	0.025
Minimum	0	0	0	-	0	0	0
Maximum	1.67	7.83	0.17	-	4.17	0.17	0.50
Total Number of Skates	10	10	10	10	10	10	10
Confidence Level (95.0%)	0.378	1.736	0.038	-	1.146	0.038	0.113
Coefficient of Variation	3.162	1.942	3.162	-	1.263	3.162	3.162

Table 17. Catch data summary for quillback, yelloweye, redbanded and rougheye rockfishes caught on the IPHC SSA survey from 1995 to 2006 for overlapping stations fished in all years. For each year, the number of stations fished, the percent of zero catches, and the  $\log_2$  median catch rates (#fish/effective skate) of the non-zero catches.

Year	Quillback Rockfish			Yelloweye Rockfish			Redbanded Rockfish			Rougheye Rockfish		
	# Stations fished	Percent Zero Catch	Median	Percent Zero Catch	Median	Percent Zero Catch	Median	Percent Zero Catch	Median	Percent Zero Catch	Median	
1995	79	89	-1.315	71	2.146	61	2.132	91	0.009			
1996	86	85	-0.720	62	1.281	44	1.087	88	1.270			
1997	92	93	0.644	66	2.000	66	1.679	93	1.471			
1998	69	94	1.082	68	1.424	51	1.585	93	0.299			
1999	76	95	0.281	67	0.848	54	1.866	89	0.857			
2000	72	93	0.509	72	2.216	60	2.049	88	0.509			
2001	75	97	1.396	73	2.424	60	2.148	92	1.587			
2002	75	96	-0.006	77	1.580	73	0.987	93	0.994			
2003	74	91	0.179	61	-0.183	54	0.317	85	-2.006			
2004	74	91	-2.006	64	0.802	50	1.082	86	1.594			
2005	76	95	-0.312	58	0.509	49	0.888	87	-0.806			
2006	75	93	-0.576	68	0.424	52	0.753	85	-0.269			

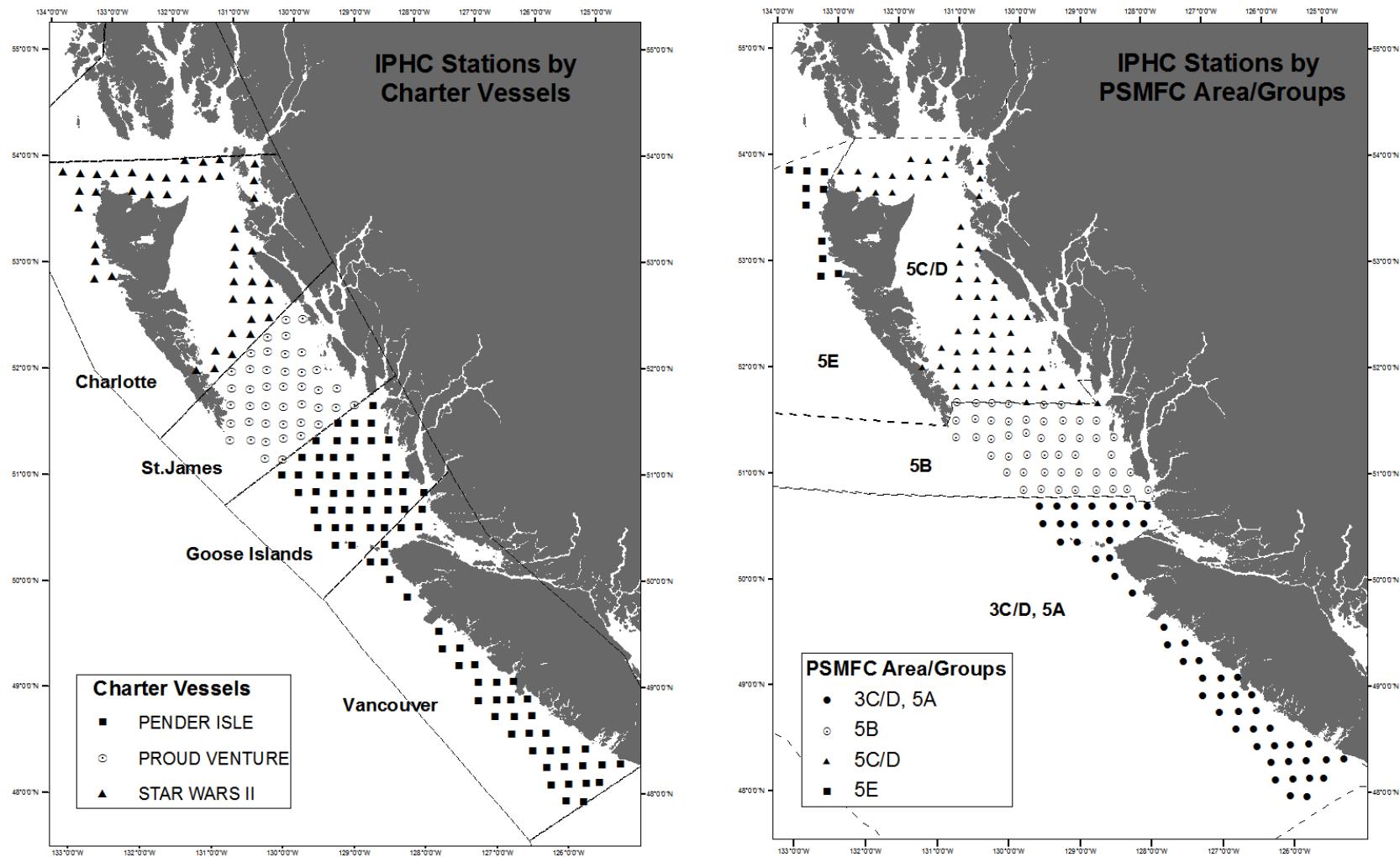


Figure 1. Distribution of IPHC survey stations by charter vessel illustrating IPHC charter region boundaries (left panel) and PSMFC Areas (right panel).

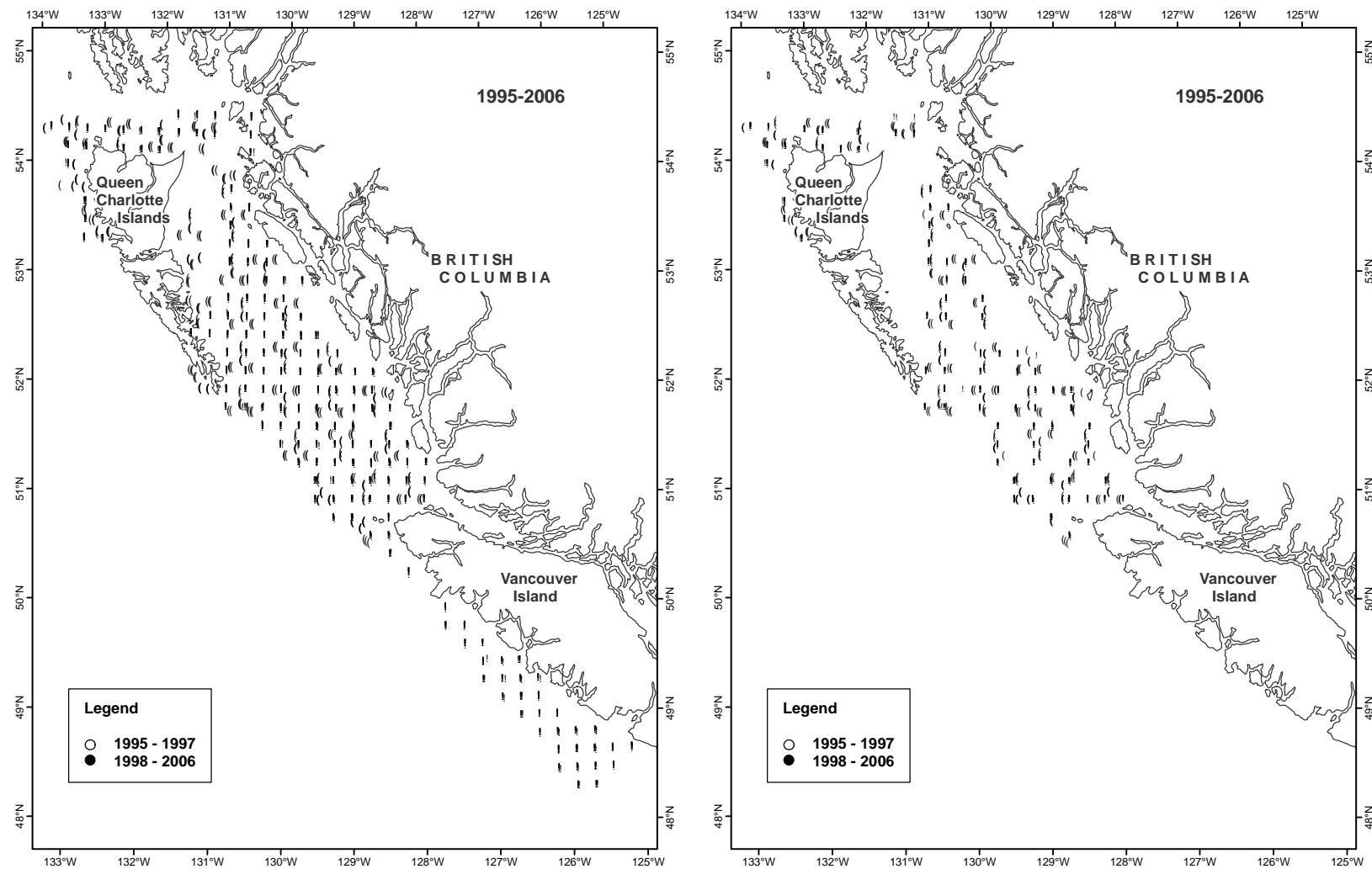


Figure 2. Locations of all 1995 - 2006 IPHC SSA survey stations (left panel), and the subset of stations, sampled in all years (1995 – 2006) and located within 10 kilometres of each other, included in the relative abundance index calculations (right panel).

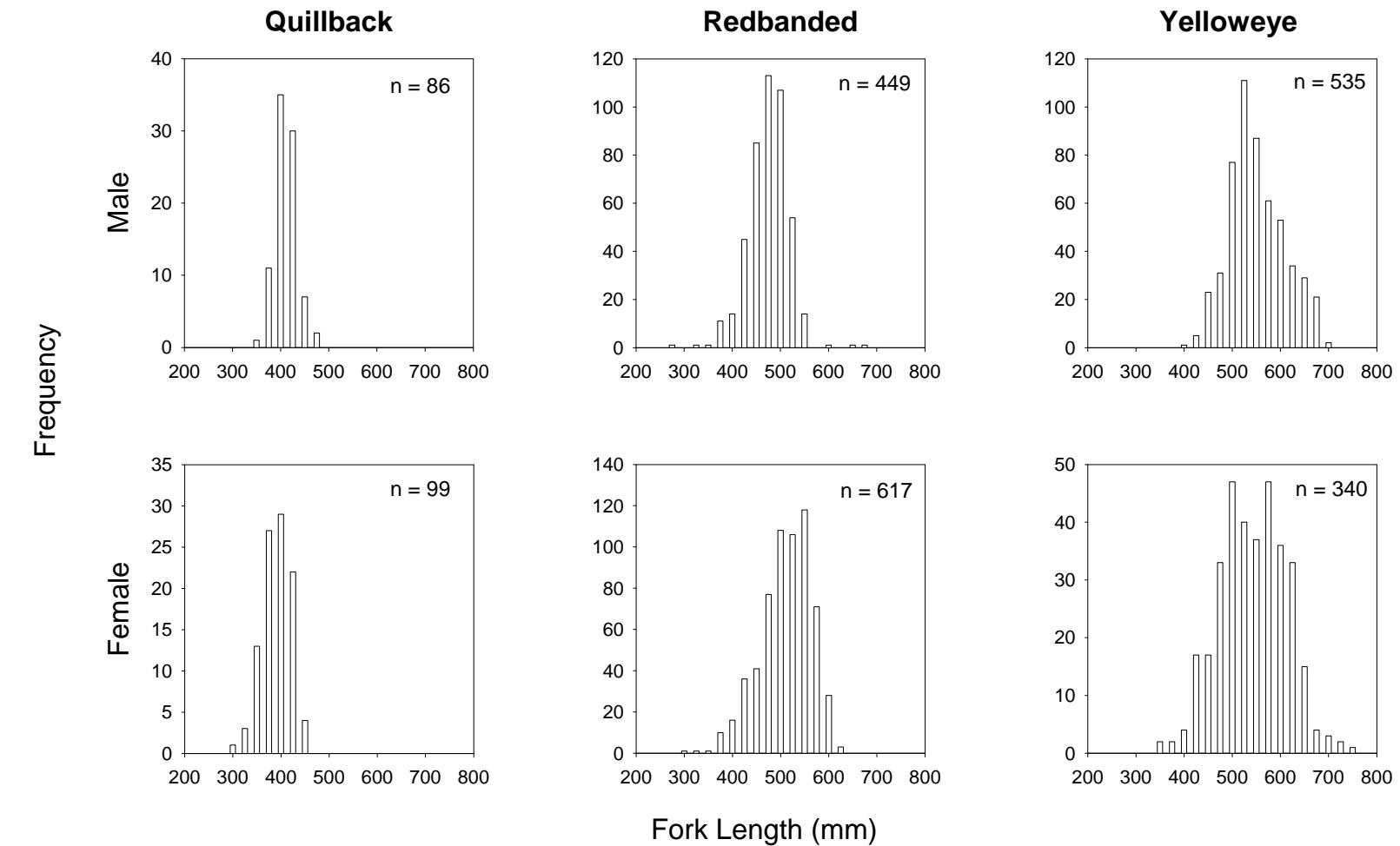


Figure 3. Length frequency distributions by sex for quillback, redbanded, and yelloweye rockfishes with sample sizes (n).

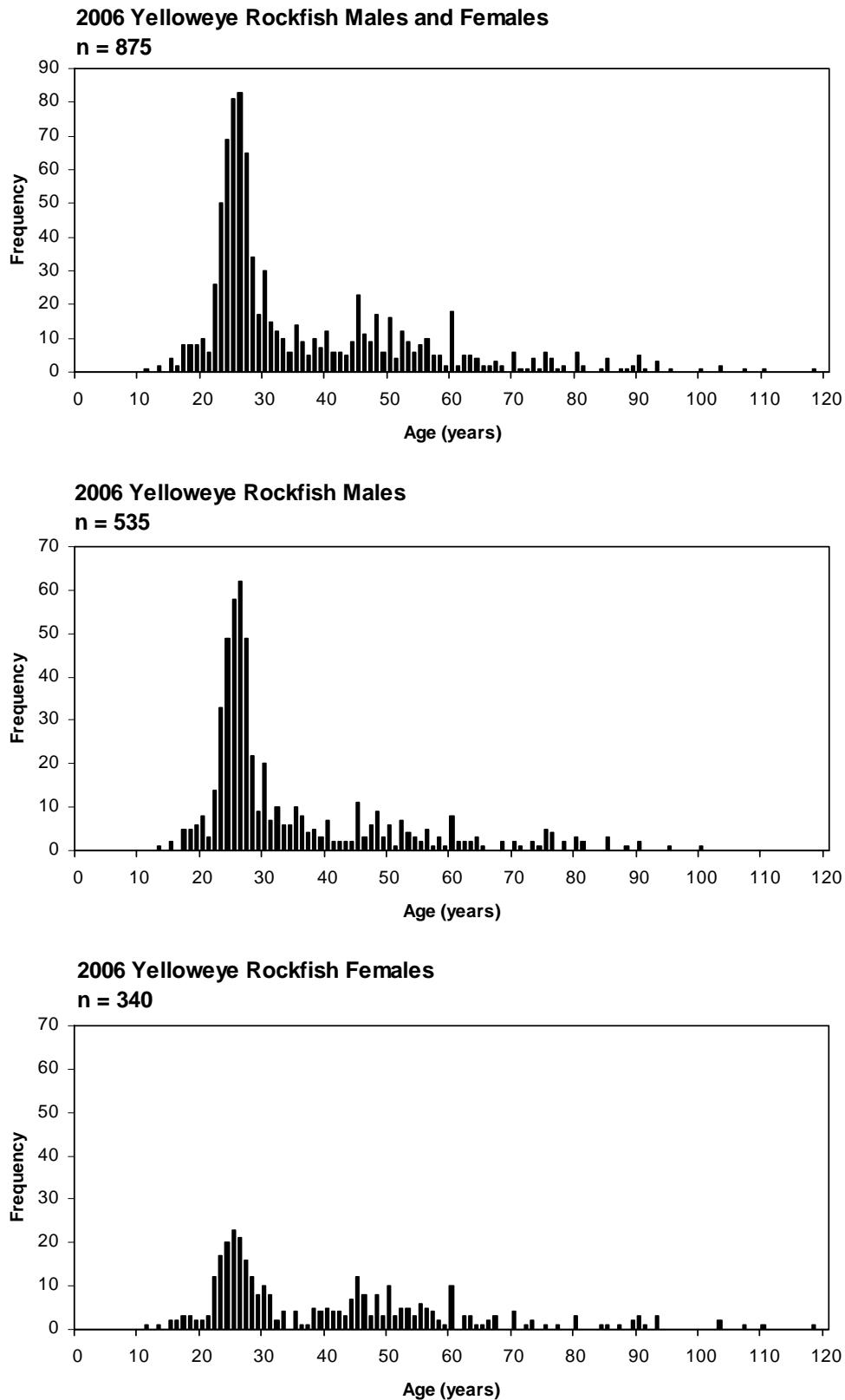


Figure 4. Yelloweye rockfish age frequency histograms by sex using data collected on the 2006 IPHC SSA Survey.

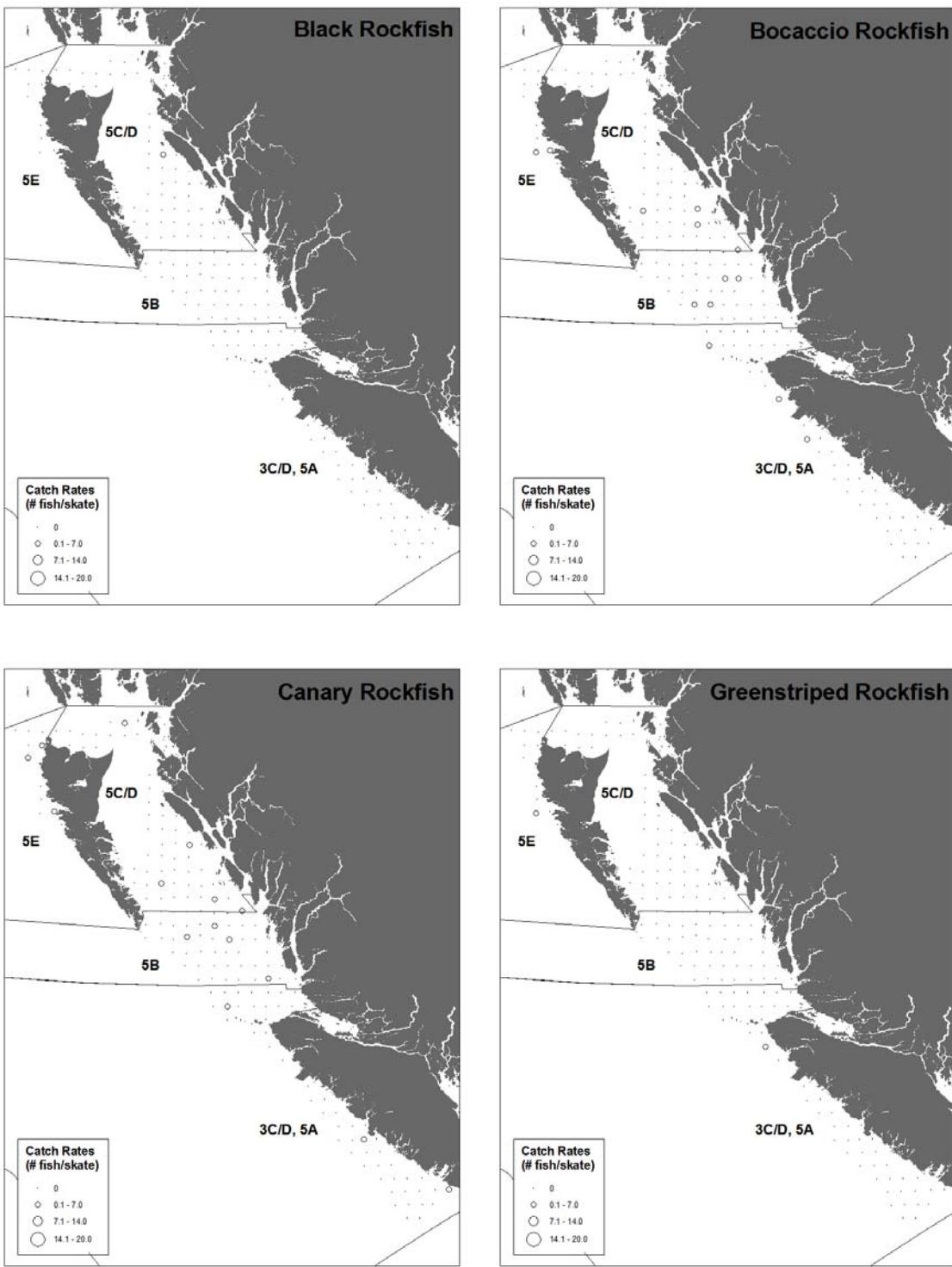


Figure 5. Catch rate in numbers of fish per skate displayed by station surveyed. Common names are shown in the upper right corner of the panel.

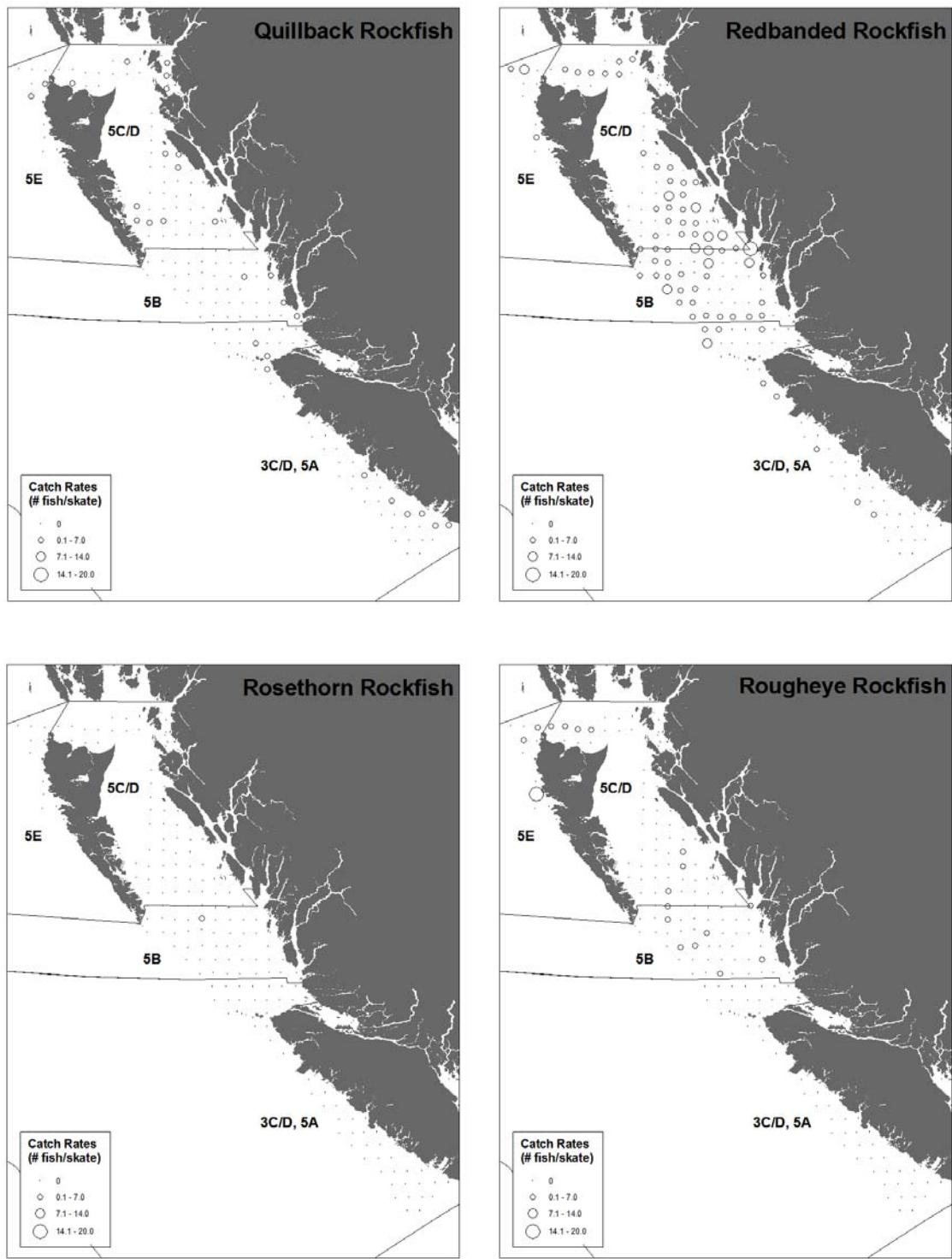


Figure 5 continued.

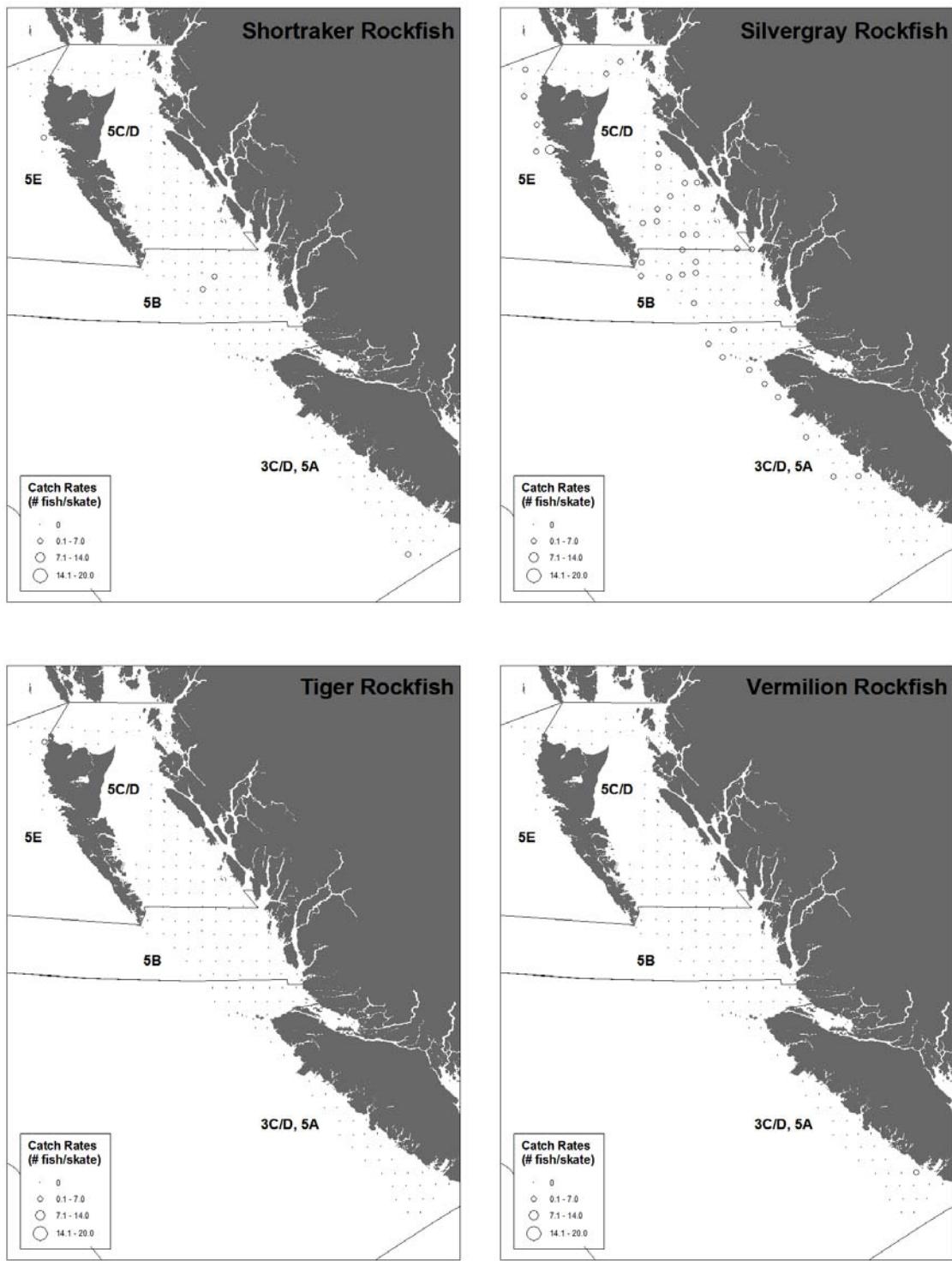


Figure 5 continued.

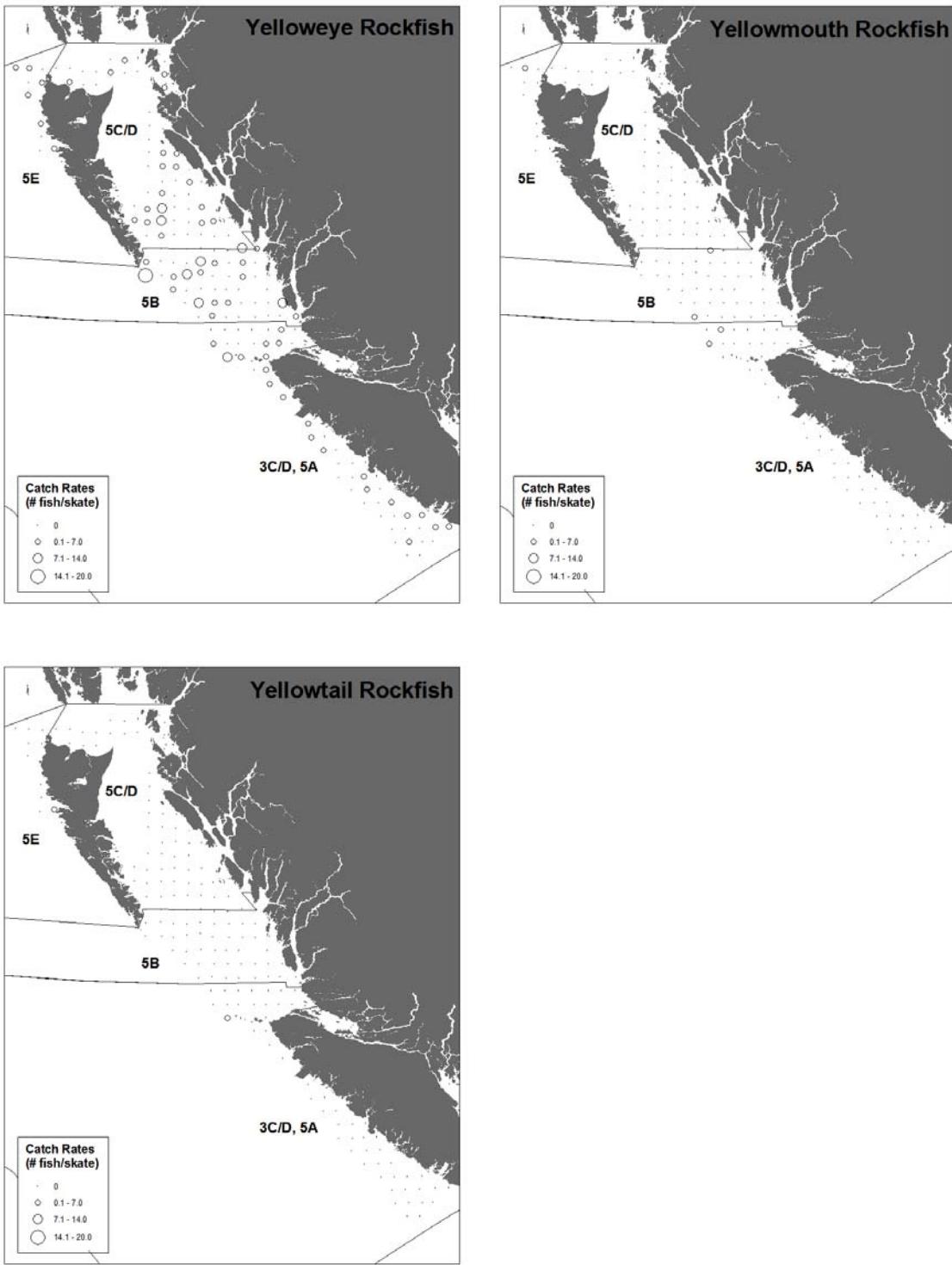


Figure 5 continued.

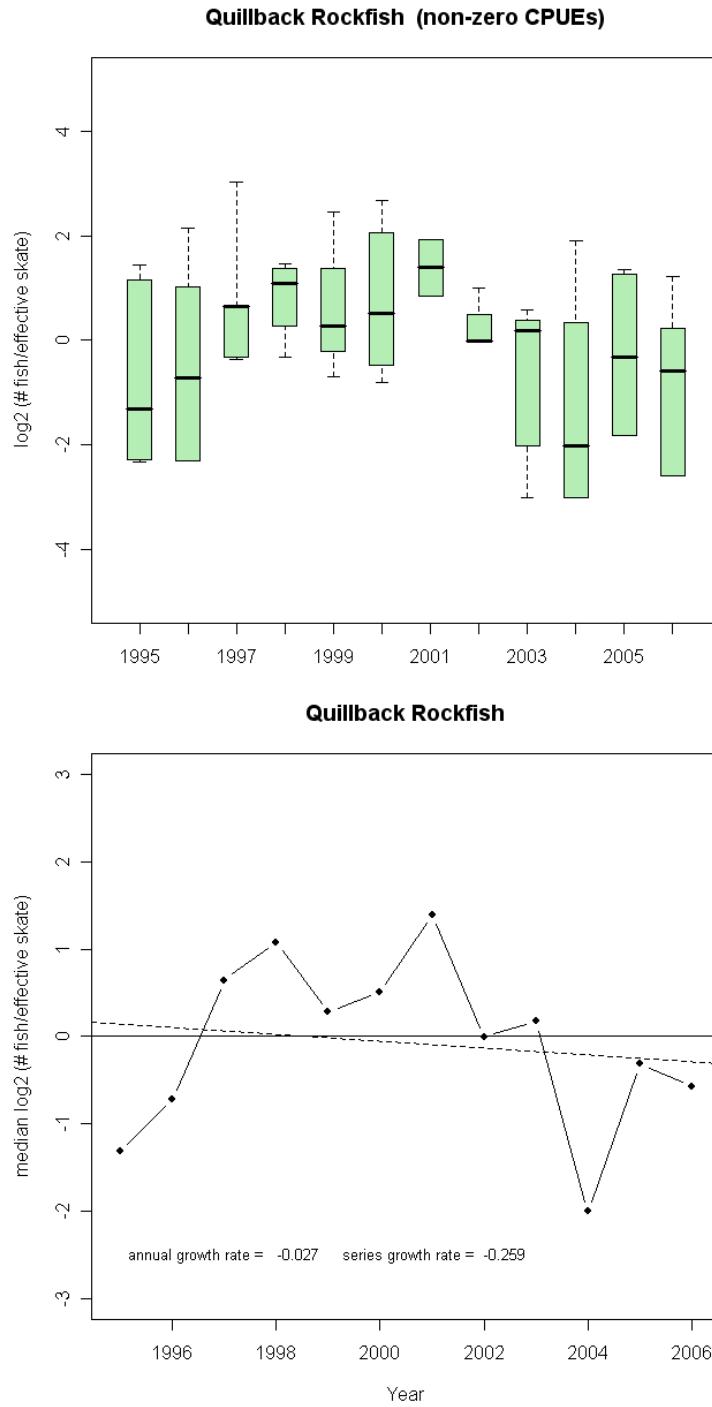


Figure 6. Relative abundance index  $\log_2$  (number of fish / effective skate) for non-zero quillback rockfish catches from the IPHC SSA survey for the years 1995 to 2006. Boxplots summarize annual non-zero data with a box for the upper and lower hinges of the data, bar for the median and whiskers for the extremes of the data. The regression line of the median non-zero catch rates is shown as a dotted line. Annual growth rate and the growth rate over the series of surveys are shown.

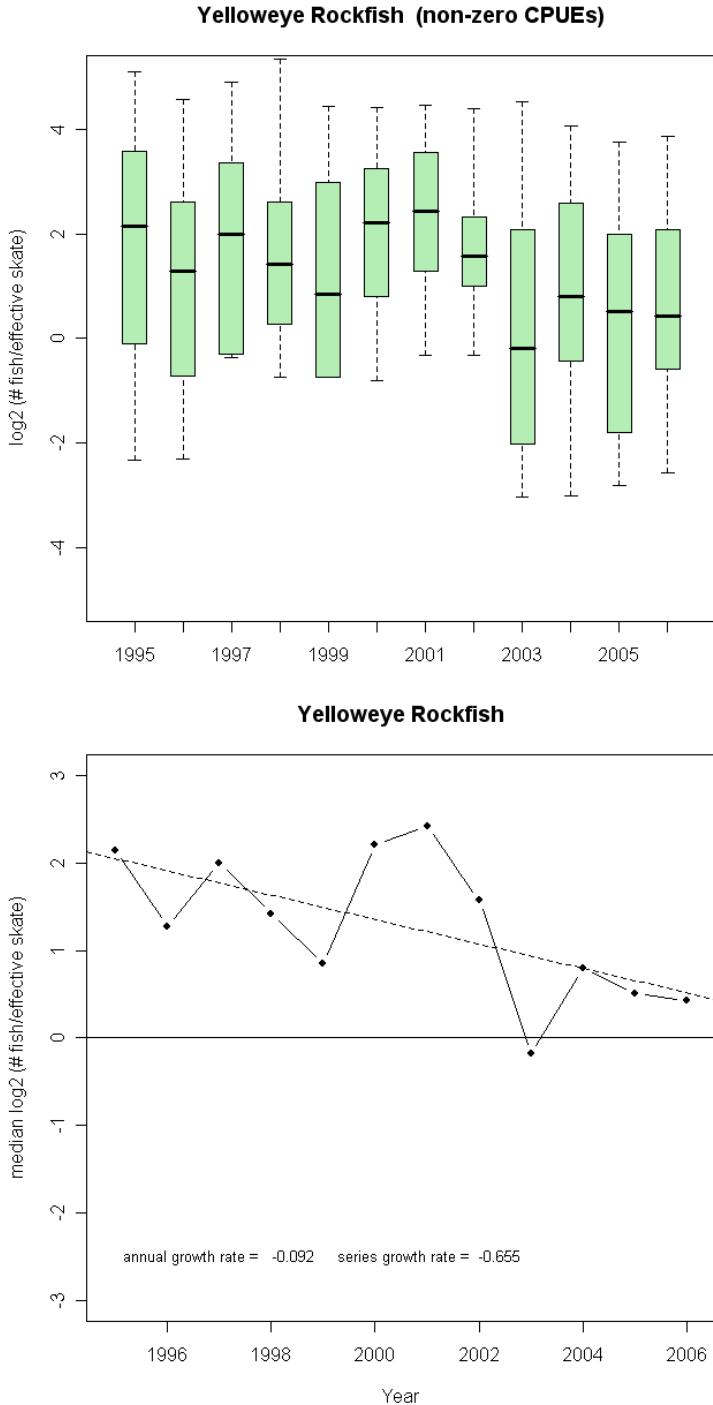


Figure 7. Relative abundance index  $\log_2$  (number of fish / effective skate) for non-zero yelloweye rockfish catches from the IPHC SSA survey for the years 1995 to 2006. Boxplots summarize annual non-zero data with a box for the upper and lower hinges of the data, bar for the median and whiskers for the extremes of the data. The regression line of the median non-zero catch rates is shown as a dotted line. Annual growth rate and the growth rate over the series of surveys are shown.

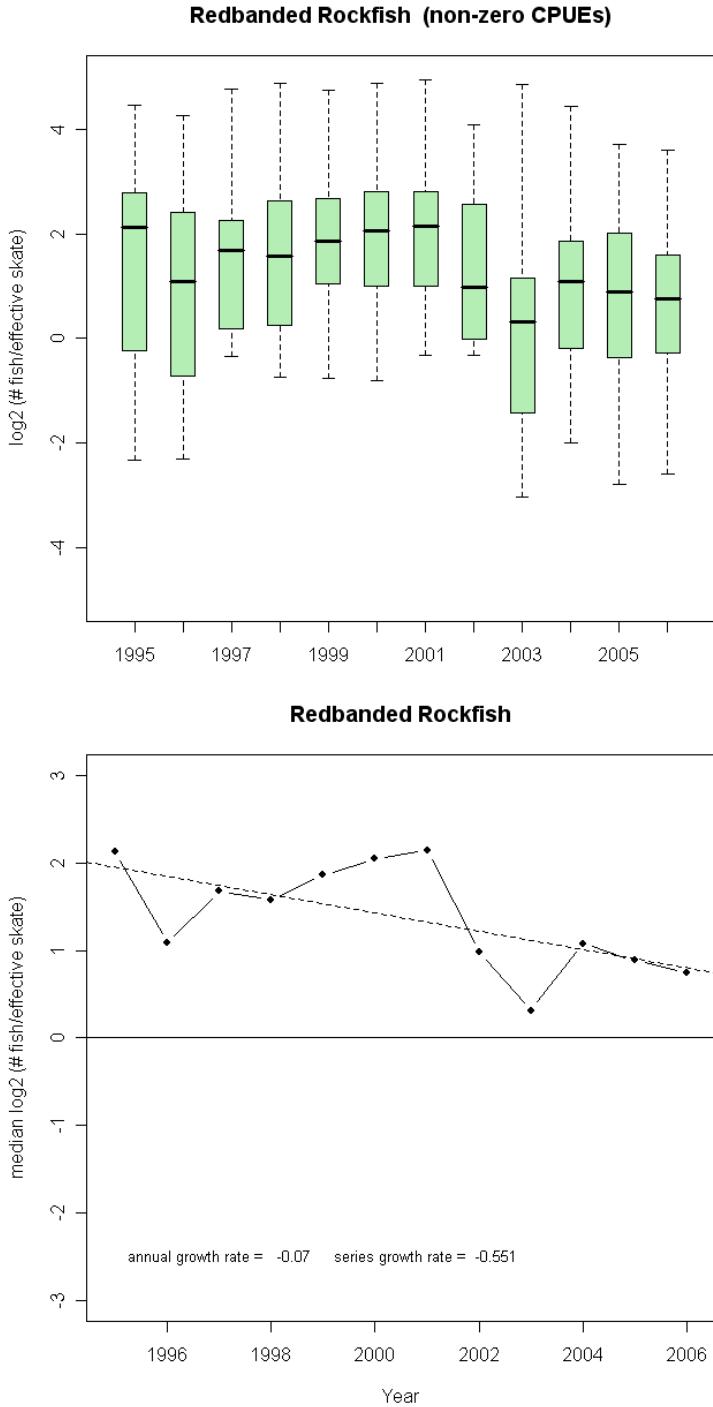


Figure 8. Relative abundance index  $\log_2$  (number of fish / effective skate) for non-zero redbanded rockfish catches from the IPHC SSA survey for the years 1995 to 2006. Boxplots summarize annual non-zero data with a box for the upper and lower hinges of the data, bar for the median and whiskers for the extremes of the data. The regression line of the median non-zero catch rates is shown as a dotted line. Annual growth rate and the growth rate over the series of surveys are shown.

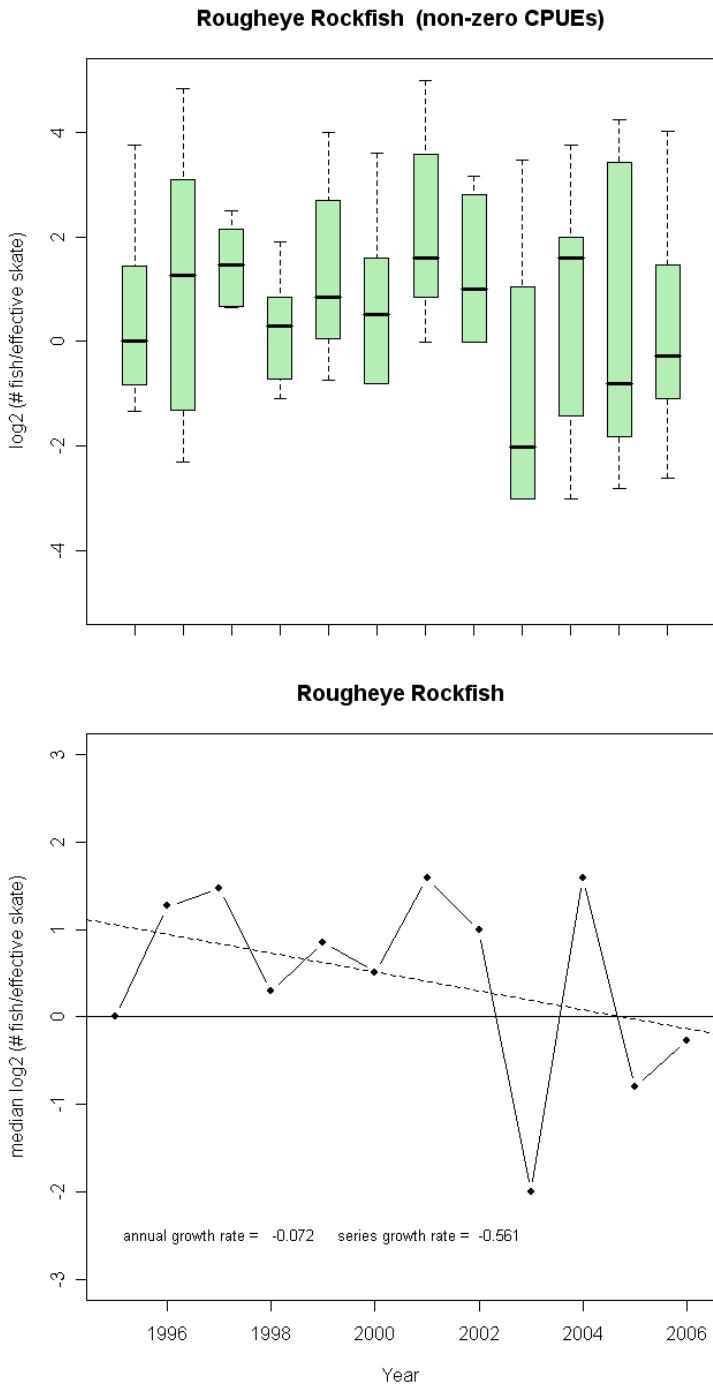


Figure 9. Relative abundance index  $\log_2$  (number of fish / effective skate) for non-zero rougheye rockfish catches from the IPHC SSA survey for the years 1995 to 2006. Boxplots summarize annual non-zero data with a box for the upper and lower hinges of the data, bar for the median and whiskers for the extremes of the data. The regression line of the median non-zero catch rates is shown as a dotted line. Annual growth rate and the growth rate over the series of surveys are shown.

## Appendix A. 2006 IPHC Survey Sampling Protocol

### 1.0 Contacts

Contacts: Rockfish -Janet Lochead (250-756-7136) or Lynne Yamanaka (250-756-7211); Archipelago – Scott Buchanan (250-383-4535) or (250-686-5691)

Priority work for the observer is to determine the hook-by-hook catch. The biological sampling of rockfish should be done opportunistically and in no way should impinge upon the IPHC setline survey objectives.

### 2.0 Data Recording

#### 2.1 Data Reporting and Delivery

Vessels involved in the survey will land fish every 5-6 days. When the vessel lands, the Catch by Hook Data, and the T23 data must be faxed to AMR if the vessel lands in port with an AMR office. The original data forms and otoliths should be kept on board the vessel until the vessel has completed the survey. At the end of the survey, all original data forms and otoliths will be delivered to AMR in Victoria. A trip report must be completed for each vessel.

#### 2.2 Recording Catch By Hook Header Information

The vessel will set and haul up to 4 strings per day depending on weather and running times between stations. It is expected that the average vessel will haul 3 strings per day. Obtain all bridge log information on the Catch by Hook data sheet from the IPHC set form. Positional information (lat and long) and depth should be recorded for the start of the set and can be obtained from the IPHC set form. This information only needs to be recorded on skate 1 and skate 6 on the Catch By Hook data form. This information can be completed for all strings after the gear has been set in the morning and prior to hauling of the gear. Record the Hook 001 position (start or end) for the string and the time for first flag out of water when the hauling begins. The vessel crew will identify which end of the string is to be hauled first.

#### 2.3 Hook by Hook Catch Recording

Identify to species (for fish and invertebrates) and record the hook-by-hook catch in the order in which the hooks are retrieved. An abbreviation list should be maintained for all species and include codes for empty hooks, bait, skin etc. Also note the start/end of each skate so that any missed hooks will be confined to a skate. There will be 6 skates of approximately 100 hooks per set for a total of 600 hooks per set. The

end of each skate will be indicated by an anchor/shackle and will be verbally confirmed by either the vessel crew or IPHC staff.

- Empty hooks, missing /bent hooks and hooks with bait or skin must also be recorded. (see abbreviations list)
- Fish that are lost at the rail should also be recorded as such. (see abbreviations list)
- When two fish are caught on the same hook, both fish should be recorded. The predator species should be recorded first, followed by a slash (/) then the prey species.
- At the end of each set (or end of the day), compare the catch data for rockfish to the T23 (otolith) data collected. Record comments on the T23 form as to why any discrepancies exist between the number of fish caught and the number sampled.

### **3.0 Biological Sampling**

During the survey only rockfish will be sampled. Sampling should commence after all gear is on board the vessel and the vessel is transiting to the next station.

There may be times when you will not be able to complete all the required rockfish sampling before it is time to haul the next string. If this situation is encountered, the fish should be placed in baskets or buckets and stored out of the way, (and separate from fish on the next string) until there is sufficient time to complete the sampling. There will usually be time to complete the sampling at the end of the day. If the situation arises where there are fish from several sets that could not be sampled, the fish can be zap strapped through the operculum and iced in the hold. A different colour strap should be used in order to differentiate fish from different sets and the information should be recorded on the Dockside Sampling Inventory Form. These fish can then be sampled at the dock when the vessel lands.

- Dock sampling is logistically difficult and negatively affects the quality of the fish and should be avoided if at all possible. If fish have to be sampled at the dock, AMR must be contacted prior to landing in order to arrange sampling facilities and personnel.
- IPHC staff will assist in recording data on the T22's and T23's and vessel crew will assist with dressing rockfish. It may be best to have the crew pre-dress rockfish as the fish come on board (remove the gills and slit the bellies, leaving gonads in tact). This will speed up the sampling and limit the time required from IPHC staff and vessel crew. (See Collection of Length Conversion Data) Please consult with the crew of the vessel and the IPHC staff to determine when to conduct your samples (before or after the fish are dressed).
- During periods of heavy by-catch, there may not be enough time to properly clean otoliths as they are extracted. Otoliths can simply be extracted and stored in a tray until they can be properly cleaned later. Record each sample on the appropriate B01 form after each set. Mornings (while the gear is being set) are a

good time to catalogue T23's and clean otolith samples collected the previous day. Remove and clean all otoliths from the collection tray, and place them in the correct cell of the clean delivery tray for that species. (use one label per tray) Check each sample against the B01 form for that species, to ensure there is no overlap in fish numbers.

- Otoliths will be stored in separate trays for each species and otolith numbers for each species will run consecutively. Use the following numbering system:

<b>Species</b>	<b>Otolith # Range</b>
Yelloweye	0001-1000
Redbanded	1001- 2000
Quillback	2001-2500
Copper	2501-3000
China	3001-3500
Tiger	3501-4000
Black	4001-4500
Other Rockfish	*4501-6000

\* Use blocks of 100 per species

- DFO has requested that we collect gonad samples from each of the rockfish maturity states encountered. The gonads should be carefully removed and frozen in a Ziploc bag with a label stating the species and maturity state.

### 3.1 Sampling Protocols

#### 3.1.1 Rockfish

All rockfish will be retained from each set. Sample up to 50 rockfish per set for Length/Sex/Maturity/Otoliths (LSMO). The priority species is yelloweye rockfish followed by redbanded, quillback, copper, china, tiger and black rockfish. All other rockfish species can be sampled for length only if time permits. Length only data can be reported to the nearest millimetre to an otolith data form. If there are more than 50 yelloweye rockfish per set then randomly sub-sample 50 pieces for LSMO. If there is less than 50 yelloweye rockfish then sample them all and make up the rest of the 50 pieces with other rockfish i.e. redbanded, quillback, copper, china, tiger and black rockfish for a total of 50 rockfish sampled per set. Other rockfish species can also be sampled if time permits.

#### Rockfish Maturities

There was new clarification of rockfish cycles on the rockfish maturity sheet for 2005:

- Rockfish cycle back to maturity stage #3, after the resting stage #7, for example: 1-2-3-4-5-6-**7-3-4...**
- Females- look for the presence of eyed larvae (small black dots on ovaries) to distinguish mature females (stage 3) from maturing females (stage 2), which do not have eyed larvae present.
- Males – look for the presence of residual milt in the seminal vesicle to distinguish developing testes (stage 3) from maturing testes (stage 2), which will not have residual milt present.

### 3.1.2 Documenting Collection Methods and Utilizations on T23 Data Forms

The following guidelines should be used for recording collection methods and utilizations for rockfish:

- All rockfish caught are sampled and retained:  
Collection = **01** (whole haul) and Util = **1**
- All rockfish caught are sampled but some are **discarded** (poor quality):  
Collection = 01 (whole haul) and Util = blank
- Sub-sample of rockfish caught are used for sampling:  
Collection = **03** (random ungraded) and Util = **blank**
- Sub-sample of rockfish are used for sampling but all rockfish are retained:  
Collection = **02** (random graded) and Util = **1**
- Please note that when fish are sampled before being gilled the fish state code should be 20 as hard coded on the T23 data form.
- If gilled fish are sampled please overwrite the 20 and document a fish state code of 04 to indicate that the lengths were recorded after the fish were gilled.

### 3.1.3 Collection of Length Conversion Data

DFO has requested that we collect some length conversion (CF) data for each species of rockfish sampled after vessel crew has dressed them during the survey. Procedures for this sampling follow:

- **Step 1** ~ Collect up to 50 individuals of each species for sampling. These should be the same fish that you are sampling for otoliths during the survey. In order to collect 50 fish of each species you may have to do this
- sampling for several sets (samples). As the number of fish encountered for some species (i.e. Quillback) will be quite low, you should sample all individuals encountered. For species that are more numerous (i.e.

yelloweye), spread the collection of this data out – do the first 10 fish of each sample until you have collected the data for 50 fish. This will spread out the time required for this sampling into manageable proportions.

- **Step 2 ~** Each fish sampled for length CF data should be measured for fork length to the nearest millimetre before the crew has dressed the fish. Pre dressed fish lengths can be recorded onto a separate t23 data form with the fish number (otolith number) but no sex or maturity data. The fish number should match the LSMO data collected for the fish during actual (post dressed) otolith sampling. On these data sheets record “Length CF Data” under the header information for the form, as it will be a duplicate of the actual otolith data recorded during sampling.
- **Step 3 ~** Allow the crew to gill (dress) the fish in the same manner to what has been done for otolith sampled fish to date.
- **Step 4 ~** Proceed with normal (post dressed) otolith sampling procedures ensuring that the post dressed length data can be matched to the pre dressed length information using the “otolith” fish number assigned to each individual

OTOLITH SAMPLE DATA FORM											
VESSEL: <u>LOTSA FISH</u>			OBSERVER: <u>J OTOLITH</u>			SPECIES: <u>YELLOW EYE</u>					
FISHERY FILE NUMBER		VESSEL	YEAR	MONTH	DAY	SET NO.					
1	3	4	12	15	17	19	21	12	15	17	19
L	2	5	1	2	3	4	5	6	0	4	0
COLLECTION FISH METHOD STATE FISH LENGTH UTIL											
24	27	29	31	33							
4	4	2	0	1	2	0	0	2			
LENGTH CF DATA											
FISH NUMBER	LENGTH (mm)	SEX MATURITY	FISH NUMBER	LENGTH (mm)	SEX MATURITY	FISH NUMBER	LENGTH (mm)	SEX MATURITY			
34	38	42 43	34	38	42 43	34	38	42 43			
0 0 3 1	6 3 1										
1 2	5 2 7										
3	4 6 1										
4	5 6 0										
5	5 0 1										
6	5 5 5										
7	5 9 7										
8	6 2 1										
0 0 3 9	6 3 2										
0 0 4 0	6 2 8										
These are fresh fish lengths for CF data											
CONTINUED ON NEXT PAGE? Y/N	NO. MEASURED:	MALE: _____	UNKNOWN: _____	CARD TYPE: 45 46 47 T 2 3	PAGE 1 OF 1	CONTINUED ON NEXT PAGE? Y/N	NO. MEASURED:	MALE: <u>8</u>	UNKNOWN: <u>8</u>	CARD TYPE: 45 46 47 T 2 3	PAGE 1 OF 1
March 2000						March 2000					
AscpNewGeneralGeneralForms\Trawl\OptionA\2004\T23.FRP											
page 2 of 27 for trip											
This is the actual LSMO data with post-dressed lengths.											
CONTINUED ON NEXT PAGE? Y/N	NO. MEASURED:	MALE: _____	UNKNOWN: _____	CARD TYPE: 45 46 47 T 2 3	PAGE 1 OF 1	CONTINUED ON NEXT PAGE? Y/N	NO. MEASURED:	MALE: <u>8</u>	UNKNOWN: <u>8</u>	CARD TYPE: 45 46 47 T 2 3	PAGE 1 OF 1
March 2000						March 2000					
AscpNewGeneralGeneralForms\Trawl\OptionA\2004\T23.FRP											
page 7 of 48 for trip											

#### **4.0 Documenting Gear Problems on Catch by Hook Data Form**

### 4.1 Gear Snarls

The most frequent problem encountered during longline operations is the snarling of the line and the hooks. When the gear becomes snarled the recording of hooks and catch in sequential order becomes difficult at best. There are two basic scenarios.

1. The crew will bring the entire snarl aboard, remove the hooks and untangle the snarl. Then depending on the size of the snarl, they will throw the line outboard again and resume haul back. In this scenario you will be able to determine the total number of hooks involved because all the hooks involved will have been removed. However, you may not know the order of the hooks and the catch. In this situation record all hooks and catch in the boxes provided (do your best at estimating the sequential order) and then separate those hooks involved in the snarl with a set of brackets as illustrated in the example below. The brackets will inform the data transcribers that these items were caught, but the order is unclear because of a gear snarl.
  2. The crew may bring the entire snarl aboard, but may not untangle the hooks and line at that time. In this particular situation you should record in the appropriate boxes all items caught, estimate the number of hooks, and then place brackets around those items. You will need to ask the crew to inform you about the total number of hook involved after they have untangled the snarl and you will need to note that in the comment section.

## Hook Snarl Example

Vessel Name: <u>U'King Sea</u>				Vessel Code: <u>UKS</u>				ASOP File: <u>Z49999</u>											
Station: <u>234</u> , Set Number: <u>022</u> , Skate Number: <u>1</u>				Date: <u>07/25/04</u>				Time of First Flag Out of Water: <u>1350</u>											
Hook 001 Position: Set Start <input checked="" type="checkbox"/> End <input type="checkbox"/>				Latitude: <u>53 12 6</u> ,				Longitude: <u>127 13 2</u> ,				Depth: <u>85 fm</u>							
Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species				
001	X	013	YE	025		037		049		061		073		085		097		109	
002	X	014	YE	026		038		050		062		074		086		098		110	
003	DF	015	X	027		039		051		063		075		087		099		111	
004	DF	016	X	028		040		052		064		076		088		100		112	
005	X	017	H	029		041		053		065		077		089		101		113	
006	X	018	S	030		042		054		066		078		090		102		114	
007	DF	019	DF	031		043		055		067		079		091		103		115	
008	H	020	X	032		044		056		068		080		092		104		116	
009	X	021	X	033		045		057		069		081		093		105		117	
010	X	022		034		046		058		070		082		094		106		118	
011	X	)	023		035		047		059		071		083		095		107		119
012	H	024		036		048		060		072		084		096		108		120	
Comments: <u>↳ Parted gear after hook 21 (Go to skate #8)</u>																			

## 4.2 PARTING of the Gear

When the longline parts the vessel must travel to the other end of the string (**skate # 7**) in order to retrieve the gear. At the time when the longline parts you should place a double backslash after the last retrieved hook and then record what happened in the comment section provided. When the haul back resumes, you will need to record hook status in reverse order starting with hook #**105** for skate #7. You will record hook status in reverse order for each skate for the remainder of the string. Start on hook #105 for each skate and record backwards to allow sufficient space on the catch by hook form for all hooks on each skate.

### Gear Part Example

Vessel Name:		Star Wars		Vessel Code:		STA		ASOP File:		241296					
Station:		235	Set Number:		023	Skate Number:		7	Date:		7/16/04	Time of First Flag Out of Water:		1350	
Hook 001 Position:		Set Start	X	End		<input type="checkbox"/>	Latitude:		Longitude:				Depth:		90 fms
Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species
001	DF	013	YE	025	DF	037	X	04						109	
002	X	014	YE	026		038	X	05						110	
003	X	015	X	027		039	TL	05						111	
004	H	016	X	028		040	DF	05						112	
005	H	017	X	029		041	DF	05						113	
006	X	018	X	030	X	042	DF	054	H	066	SL	078	X	090	X
007	X	019	X	031	X	043	X	055	H	067	H	079	X	091	SK
008	X	020	X	032	H	044	H	056	X	068	H	080	DF	092	S
009	S	021	X	033	H	045	X	057	X	069	H	081	YE	093	B
010	DF	022	X	034	DF	046	X	058	X	070	X	082	YE	094	X
011	H	023	H	035	DF	047	DF	059	DF	071	X	083	X	095	X
012	H	024	DF	036	YE	048	DF	060	X	072	X	084	X	096	X
Comments: Parted gear after hook #25 (Go to skate #8)															
Station:		235	Set Number:		023	Skate Number:		8							
Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species	Hook	Species
001		013		025				3	X	085	X	097	X	109	
002		014	YE	026				4	H	086	DF	098	H	110	
003		015	S	027				5	H	087	DF	099	H	111	
004		016	S	028				6	X	088	X	100	H	112	
005		017	X	029				7	DF	089	X	101	DF	113	
006	X	018	X	030				8	X	090	X	102	DF	114	
007	H	019	X	031				9	X	091	X	103	X	115	
008	H	020	X	032				10	H	092	DF	104	X	116	
009	X	021	X	033				11	H	093	DF	105	X	117	
010	X	022	B	034	H	046	X	058	DF	070	TL	082	X	094	X
011	X	023	B	035	H	047	X	059	DF	071	TL	083	X	095	B
012	X	024	B	036	X	048	Y	060	X	072	DF				
Comments: Started at end of skate															
Start at hook #105 and record catch in reverse hook order and reverse skate order.															

Archipelago Marine Research Ltd. IPHC Set Line Survey

Appendix B. Summary of set specifications by vessel, including set number, date, location (start and end latitudes and longitudes in degrees, decimal minutes), depths (minimum, maximum and average in metres) and times (start deployment, start retrieval and end retrieval).

**Star Wars II**

Set	Date	Start	Start	End	End	Min (m)	Max (m)	Average (m)	Begin	Begin	End
		Latitude	Longitude	Latitude	Longitude				Deploy Time	Retrieve Time	Retrieve Time
1	09-Jul-06	54 31.98	131 43.35	54 35.08	131 43.33	83	103	93	5:00 AM	10:28 AM	11:59 AM
2	09-Jul-06	54 48.48	131 43.33	54 51.57	131 43.33	41	78	59	6:10 AM	1:08 PM	2:30 PM
3	09-Jul-06	54 51.45	131 15	54 48.8	131 15	71	79	75	7:40 AM	3:49 PM	5:22 PM
4	09-Jul-06	54 34.65	131 15	54 31.57	131 15	31	36	33	8:50 AM	6:30 PM	7:45 PM
5	10-Jul-06	53 84.63	130 86.65	53 81.53	130 86.67	43	52	47	5:00 AM	11:18 AM	12:46 PM
6	10-Jul-06	53 68.08	130 86.65	53 65.07	130 86.67	25	27	26	6:07 AM	2:00 PM	3:14 PM
7	10-Jul-06	53 51.42	130 86.67	53 48.3	130 86.67	47	53	50	7:15 AM	7:10 PM	8:29 PM
8	10-Jul-06	53 65.18	130 58.3	53 68.22	130 58.33	15	22	18	9:20 AM	4:25 PM	5:40 PM
9	11-Jul-06	52 68.02	131 13.32	52 64.87	131 13.33	35	40	37	5:00 AM	10:01 AM	11:13 AM
10	11-Jul-06	52 51.23	131 13.33	52 48.13	131 13.33	38	83	60	6:10 AM	12:16 PM	1:40 PM
11	11-Jul-06	52 48.7	131 41.67	52 51.62	131 41.67	40	159	99	7:43 AM	2:58 PM	4:12 PM
12	12-Jul-06	52 65.15	130 86.67	52 67.78	130 86.65	50	54	52	5:35 AM	10:48 AM	12:12 PM
13	12-Jul-06	52 84.62	130 86.67	52 81.47	130 86.67	26	29	27	7:12 AM	1:28 PM	2:52 PM
14	12-Jul-06	52 84.7	130 58.33	52 81.6	130 58.33	58	63	60	8:50 AM	3:55 PM	5:34 PM
15	13-Jul-06	53 33.63	130 30	53 31.67	130 30	51	65	58	5:00 AM	11:52 AM	1:08 PM
16	13-Jul-06	53 17.93	130 30	53 14.83	130 30	55	119	87	6:16 AM	1:47 PM	2:24 PM
17	13-Jul-06	53 01.43	130 29.98	52 98.27	130 30	113	114	113	7:30 AM	5:04 PM	6:15 PM
18	13-Jul-06	52 98.53	130 58.33	53 01.18	130 58.33	47	52	49	9:00 AM	7:40 PM	9:01 PM
19	14-Jul-06	53 34.67	130 86.65	53 31.87	130 86.67	73	78	75	5:00 AM	10:57 AM	12:29 PM
20	14-Jul-06	53 18.08	130 86.67	53 14.95	130 86.67	58	59	58	6:14 AM	1:40 PM	2:48 PM
21	14-Jul-06	53 18	130 58.32	53 14.92	130 58.33	98	106	102	7:40 AM	4:09 PM	5:28 PM
22	14-Jul-06	53 34.67	130 58.32	53 31.55	130 58.33	31	54	42	9:25 AM	6:42 PM	8:02 PM
23	15-Jul-06	54 15.28	130 58.32	54 18.27	130 58.33	50	70	60	5:00 AM	10:11 AM	11:26 AM
24	15-Jul-06	54 31.95	130 58.33	54 35.05	130 58.33	37	69	53	6:10 AM	12:28 PM	1:35 PM
25	15-Jul-06	54 48.38	130 58.32	54 51.53	130 58.33	56	75	65	7:18 AM	2:33 PM	3:50 PM
26	18-Jul-06	53 34.63	132 81.67	53 31.53	132 81.67	74	81	77	5:45 AM	12:34 PM	2:06 PM
27	18-Jul-06	53 32.15	133 10	53 34.95	133 10	117	161	139	7:12 AM	3:18 PM	4:48 PM
28	18-Jul-06	53 48.62	133 10	53 51.48	133 10	146	276	211	8:23 AM	5:53 PM	7:33 PM
29	18-Jul-06	53 65.33	133 11.67	53 68.35	133 11.67	77	83	80	9:35 AM	8:34 PM	10:02 PM
30	19-Jul-06	54 32.07	133 14.98	54 35.15	133 15	247	256	251	5:05 AM	10:14 AM	12:00 PM
31	19-Jul-06	54 34.5	132 86.67	54 31.58	132 86.67	208	212	210	6:28 AM	1:12 PM	3:00 PM
32	19-Jul-06	54 15.37	133 15	54 18.23	133 14.98	29	46	37	8:39 AM	5:15 PM	6:41 PM
33	20-Jul-06	54 18.17	132 56.67	54 15.18	132 56.67	41	51	46	5:05 AM	10:20 AM	11:42 AM
34	20-Jul-06	54 15.35	132 28.33	54 18.25	132 28.33	42	57	49	6:30 AM	12:55 PM	2:03 PM
35	20-Jul-06	54 31.83	132 30	54 34.82	132 30	115	133	124	7:37 AM	3:03 PM	4:39 PM
36	20-Jul-06	54 34.67	132 58.33	54 31.7	132 58.33	141	151	146	9:07 AM	5:59 PM	7:26 PM
37	21-Jul-06	53 98.67	133 41.67	54 01.78	133 41.67	39	45	42	5:15 AM	12:31 PM	1:54 PM
38	21-Jul-06	54 15.27	133 43.33	54 18.27	133 43.33	212	215	213	6:22 AM	3:18 PM	4:54 PM
39	21-Jul-06	54 32.03	133 43.35	54 35.15	133 43.35	108	125	116	7:38 AM	9:40 PM	11:19 PM
40	21-Jul-06	54 31.95	133 71.67	54 34.85	133 71.65	129	135	132	9:10 AM	6:55 PM	8:18 PM
41	22-Jul-06	54 15.5	132 00.02	54 18.5	132 00.02	25	48	36	5:10 AM	12:01 PM	1:16 PM
42	22-Jul-06	54 31.75	132 01.7	54 34.67	132 01.67	127	138	132	6:22 AM	2:27 PM	4:11 PM
43	22-Jul-06	54 32.07	131 71.65	54 35.1	131 71.67	100	113	106	7:52 AM	5:33 PM	6:54 PM
44	22-Jul-06	54 48.65	131 73.33	54 51.9	131 73.35	184	189	186	8:58 AM	7:56 PM	9:25 PM

## Appendix B continued.

Proud Venture												
Set	Date	Start	Start	End	End	Min	Max	Average	Begin	Begin	End	
		Lat	Long	Lat	Long	Depth (m)	Depth (m)	Depth (m)	Deploy Time	Retrieve Time	Retrieve Time	
1	31-May-06	52 34.45	129 21.68	52 31.47	129 21.65	81	90	85	5:01 AM	10:05 AM	11:59 AM	
2	31-May-06	52 18.32	128 95.02	52 15.87	128 94.97	73	93	83	7:02 AM	1:51 PM	3:43 PM	
3	31-May-06	52 15.37	129 23.35	52 18.08	129 23.33	94	95	94	8:40 AM	5:07 PM	6:47 PM	
4	01-Jun-06	52 14.58	129 49.98	52 17.37	129 50.02	115	117	116	5:06 AM	11:27 AM	1:17 PM	
5	01-Jun-06	52 31.83	129 50	52 34.55	129 49.98	92	100	96	6:32 AM	2:40 PM	4:16 PM	
6	01-Jun-06	52 34.78	129 76.75	52 31.92	129 76.92	114	118	116	8:20 AM	5:38 PM	7:19 PM	
7	01-Jun-06	52 17.68	129 76.68	52 14.65	129 76.67	106	116	111	9:46 AM	8:25 PM	11:00 PM	
8	02-Jun-06	52 01.08	129 78.32	51 98.1	129 78.3	60	64	62	5:41 AM	11:00 AM	12:58 PM	
9	02-Jun-06	51 98.8	129 50.05	52 01.47	129 50.02	112	117	114	7:27 AM	2:32 PM	4:33 PM	
10	02-Jun-06	51 87.67	129 78.15	51 90.38	129 78.25	74	80	77	9:46 AM	6:28 PM	8:09 PM	
11	03-Jun-06	51 85.17	130 04.85	51 82.5	130 05	98	104	101	5:05 AM	11:37 AM	1:31 PM	
12	03-Jun-06	51 65.47	130 04.9	51 68.23	130 04.95	192	196	194	7:00 AM	2:51 PM	4:42 PM	
13	03-Jun-06	51 65.77	130 31.7	51 68.6	130 31.63	134	152	143	8:40 AM	6:06 PM	7:56 PM	
14	03-Jun-06	51 81.77	130 31.65	51 84.55	130 31.83	117	120	118	10:00 AM	9:13 PM	11:06 PM	
15	04-Jun-06	51 83.07	130 54.95	51 86.12	130 55.02	148	158	153	5:40 AM	11:51 AM	2:14 PM	
16	04-Jun-06	51 82.6	130 86.62	51 85.4	130 86.22	95	109	102	7:41 AM	3:54 PM	6:08 PM	
17	04-Jun-06	51 98.65	130 86.63	52 01.38	130 86.72	90	122	106	8:57 AM	7:22 PM	9:01 PM	
18	04-Jun-06	52 01.08	130 58.3	51 98.2	130 58.33	126	168	147	10:40 AM	10:26 PM	11:58 PM	
19	05-Jun-06	51 99.05	130 31.7	52 02.05	130 31.52	191	195	193	5:13 AM	10:28 AM	12:18 PM	
20	05-Jun-06	51 99.03	130 05.08	52 02.25	130 04.97	77	78	77	6:51 AM	1:36 PM	3:28 PM	
21	05-Jun-06	52 15.62	130 04.95	52 18.72	130 04.98	86	92	89	8:15 AM	4:33 PM	6:16 PM	
22	06-Jun-06	52 98.85	130 03.32	53 01.7	130 03.4	81	113	97	5:06 AM	10:08 AM	1:29 PM	
23	06-Jun-06	52 99.98	129 76.85	53 00	129 72.1	119	130	124	6:56 AM	2:24 PM	4:07 PM	
24	12-Jun-06	52 67.8	129 76.65	52 64.72	129 76.67	99	109	104	5:04 AM	10:05 AM	11:50 AM	
25	12-Jun-06	52 51.17	129 53.32	52 48.17	129 53.33	53	61	57	6:50 AM	1:49 PM	3:28 PM	
26	12-Jun-06	52 48.88	129 76.65	52 51.72	129 76.65	92	101	96	8:18 AM	4:49 PM	6:27 PM	
27	13-Jun-06	52 49.05	130 03.35	52 51.82	130 03.32	147	152	149	5:05 AM	10:59 AM	12:56 PM	
28	13-Jun-06	52 65.75	130 03.33	52 68.53	130 03.32	144	147	145	6:33 AM	2:05 PM	3:51 PM	
29	13-Jun-06	52 67.7	130 31.67	52 64.63	130 31.72	121	122	121	8:11 AM	5:12 PM	6:40 PM	
30	13-Jun-06	52 51.05	130 31.67	52 48.27	130 31.68	133	147	140	9:26 AM	7:46 PM	9:38 PM	
31	14-Jun-06	52 34.97	130 31.72	52 32.08	130 31.7	190	198	194	5:05 AM	10:05 AM	11:54 AM	
32	14-Jun-06	52 34.75	130 05	52 31.83	130 05.02	119	135	127	6:37 AM	1:17 PM	2:57 PM	
33	14-Jun-06	52 15.78	130 31.65	52 18.48	130 31.62	212	225	218	8:43 AM	4:49 PM	6:46 PM	
34	15-Jun-06	52 15.78	130 57.22	52 18.15	130 59.67	106	108	107	5:04 AM	10:21 AM	11:50 AM	
35	15-Jun-06	52 15.52	130 86.63	52 18.23	130 86.68	119	125	122	6:43 AM	1:19 PM	3:07 PM	
36	15-Jun-06	52 32.2	130 86.72	52 34.98	130 86.75	77	83	80	8:14 AM	4:28 PM	5:46 PM	
37	17-Jun-06	52 31.53	130 58.33	52 34.6	130 58.33	91	96	93	5:04 AM	10:11 AM	11:53 AM	
38	17-Jun-06	52 48.48	130 86.67	52 51.37	130 86.67	59	62	60	7:04 AM	1:59 PM	3:18 PM	
39	17-Jun-06	52 51.03	130 58.4	52 47.87	130 58.32	65	70	67	8:43 AM	4:40 PM	5:57 PM	
40	18-Jun-06	52 65.68	130 58.28	52 68.72	130 58.42	78	85	81	5:07 AM	11:52 AM	1:39 PM	
41	18-Jun-06	52 82.17	130 31.67	52 85.05	130 31.68	116	117	116	7:04 AM	3:19 PM	4:53 PM	
42	18-Jun-06	52 84.43	130 03.33	52 81.58	130 03.33	142	142	142	8:42 AM	6:11 PM	7:40 PM	

## Appendix B continued.

Pender Isle												
Set	Date	Start	Start	End	End	Min	Max	Average	Begin	Begin	End	
		Lat	Long	Lat	Long	Depth (m)	Depth (m)	Depth (m)	Deploy Time	Retrieve Time	Retrieve Time	
1	29-May-06	48 66.6	125 09.5	48 66.73	125 14.03	32	36	34	5:01 AM	10:14 AM	11:42 AM	
2	29-May-06	48 66.63	125 36.2	48 66.7	125 40.67	32	37	34	6:21 AM	1:38 PM	2:15 PM	
3	29-May-06	48 50.02	125 40.77	48 50.05	125 36.83	69	80	74	7:58 AM	3:43 PM	5:17 PM	
4	30-May-06	48 33.9	125 90.22	48 33.67	125 86.05	108	205	156	5:03 AM	10:36 AM	1:03 PM	
5	30-May-06	48 33.33	125 65.67	48 33.33	125 61.33	75	76	75	6:17 AM	2:11 PM	3:43 PM	
6	30-May-06	48 49.88	125 61.07	48 50.08	125 65.5	52	72	62	7:50 AM	5:01 PM	6:36 PM	
7	30-May-06	48 49.97	125 85.97	48 50.03	125 90.45	55	58	56	9:01 AM	7:46 PM	9:22 PM	
8	31-May-06	48 49.98	126 11.03	48 50.03	126 15.18	104	114	109	5:06 AM	12:13 PM	2:01 PM	
9	31-May-06	48 66.67	126 15.6	48 66.65	126 11.48	75	82	78	6:41 AM	3:15 PM	4:50 PM	
10	31-May-06	48 66.68	125 90.58	48 66.63	125 86.45	39	43	41	7:59 AM	5:49 PM	7:20 PM	
11	31-May-06	48 66.68	125 65.43	48 66.63	125 61.45	51	79	65	9:18 AM	8:20 PM	9:47 PM	
12	01-Jun-06	48 83.4	125 59.57	48 83.33	125 64.02	23	27	25	5:05 AM	11:59 AM	1:30 PM	
13	01-Jun-06	48 83.32	125 86.62	48 83.37	125 91.12	31	35	33	6:19 AM	2:34 PM	4:04 PM	
14	01-Jun-06	48 83.28	126 11.08	48 83.33	126 15.53	55	63	59	7:26 AM	5:03 PM	6:19 PM	
15	01-Jun-06	48 99.97	126 15.63	48 99.98	126 11.4	36	41	38	8:55 AM	7:33 PM	9:12 PM	
16	02-Jun-06	49 16.63	126 90.5	49 16.7	126 86.23	89	105	97	5:01 AM	10:01 AM	11:32 AM	
17	02-Jun-06	49 33.32	126 86.15	49 33.33	126 90.57	73	80	76	6:28 AM	12:44 PM	2:29 PM	
18	02-Jun-06	49 33.33	127 12.75	49 33.33	127 17.18	93	110	101	7:43 AM	3:43 PM	5:20 PM	
19	03-Jun-06	48 83.33	126 36.07	48 83.28	126 40.2	98	98	98	4:58 AM	10:04 AM	11:55 AM	
20	03-Jun-06	49 00.03	126 65.52	49 00.05	126 61.07	113	147	130	7:15 AM	1:30 PM	3:05 PM	
21	03-Jun-06	49 00	126 40.48	49 00	126 36.08	73	79	76	8:24 AM	4:16 PM	5:49 PM	
22	06-Jun-06	49 33.38	126 40.53	49 33.32	126 36.02	21	21	21	5:01 AM	10:07 AM	11:47 AM	
23	06-Jun-06	49 16.63	126 36.13	49 16.7	126 40.62	44	51	47	6:26 AM	12:58 PM	2:29 PM	
24	06-Jun-06	49 16.68	126 61.15	49 16.67	126 65.47	65	69	67	7:35 AM	3:27 PM	4:58 PM	
25	06-Jun-06	49 33.28	126 65.6	49 33.42	126 61.38	33	48	40	8:58 AM	6:10 PM	8:20 PM	
26	07-Jun-06	49 49.98	126 61.1	49 50.07	126 65.63	20	24	22	4:59 AM	11:41 AM	12:57 PM	
27	07-Jun-06	49 49.98	126 86.12	49 50.02	126 90.32	44	54	49	6:09 AM	1:58 PM	3:34 PM	
28	07-Jun-06	49 49.97	127 12.73	49 50.08	127 17	78	81	79	7:24 AM	4:42 PM	6:10 PM	
29	07-Jun-06	49 66.7	127 17.27	49 66.63	127 12.93	61	65	63	8:51 AM	7:34 PM	9:03 PM	
30	08-Jun-06	49 66.72	127 41.22	49 66.6	127 36.82	85	163	124	5:00 AM	12:11 PM	1:41 PM	
31	08-Jun-06	49 83.5	127 37.75	49 83.17	127 42.22	41	42	41	6:35 AM	3:10 PM	4:41 PM	
32	08-Jun-06	49 83.33	127 63.9	49 83.28	127 68.57	79	120	99	7:56 AM	6:03 PM	7:42 PM	
33	08-Jun-06	49 99.73	127 69	50 00.2	127 64.67	45	52	48	9:26 AM	9:03 PM	10:46 PM	
34	09-Jun-06	50 33.32	128 16.08	50 33.3	128 20.58	83	91	87	5:03 AM	11:12 AM	12:33 PM	
35	09-Jun-06	50 50	128 42.5	50 50	128 46.85	98	103	100	6:56 AM	2:19 PM	4:12 PM	
36	09-Jun-06	50 66.7	128 48.93	50 66.6	128 44.22	42	51	46	8:29 AM	5:28 PM	6:56 PM	
37	10-Jun-06	50 66.67	128 71.05	50 66.68	128 75.27	99	107	103	5:11 AM	11:13 AM	12:45 PM	
38	10-Jun-06	50 82.98	128 97.83	50 83.68	129 02.28	39	52	45	7:03 AM	2:38 PM	4:25 PM	
39	10-Jun-06	50 83.18	129 24.35	50 83.42	129 28.88	60	71	65	8:19 AM	5:38 PM	8:47 PM	
40	11-Jun-06	50 83.67	128 49.18	50 83.22	128 45.17	24	40	32	4:59 AM	11:55 AM	1:27 PM	
41	11-Jun-06	50 99.98	128 49	50 99.98	128 44.87	46	53	49	6:26 AM	2:47 PM	4:14 PM	
42	11-Jun-06	51 00.03	128 23.93	50 99.97	128 19.7	54	56	55	7:35 AM	5:13 PM	6:36 PM	

*F/V Pender Isle* set specifications continued on next page.

## Appendix B continued.

Pender Isle												
Set	Date	Start	Start	End	End	Min	Max	Average	Begin	Begin	End	
		Lat	Long	Lat	Long	Depth (m)	Depth (m)	Depth (m)	Deploy Time	Retrieve Time	Retrieve Time	
43	11-Jun-06	50 99.9	127 97.38	51 00.1	127 93.22	59	64	61	8:52 AM	7:43 PM	9:08 PM	
44	14-Jun-06	51 33.4	127 89.42	51 33.22	127 94.02	65	85	75	5:00 AM	11:30 AM	12:56 PM	
45	14-Jun-06	51 16.68	127 91.13	51 16.72	127 95.95	62	74	68	6:21 AM	2:09 PM	3:44 PM	
46	14-Jun-06	51 16.68	128 17.72	51 16.68	128 22.55	50	60	55	7:28 AM	4:54 PM	6:24 PM	
47	14-Jun-06	51 16.67	128 44.33	51 16.7	128 49.03	103	106	104	8:30 AM	7:27 PM	9:09 PM	
48	15-Jun-06	51 33.53	128 20.62	51 33.13	128 16.23	42	50	46	5:05 AM	10:05 AM	11:33 AM	
49	15-Jun-06	51 49.98	128 15.98	51 49.98	128 20.75	34	50	42	6:33 AM	12:38 PM	2:11 PM	
50	16-Jun-06	51 50.03	128 69.1	51 49.92	128 73.83	31	67	49	5:58 AM	10:59 AM	12:24 PM	
51	16-Jun-06	51 49.98	128 96.12	51 50	129 00.87	25	27	26	7:13 AM	1:30 PM	2:55 PM	
52	16-Jun-06	51 33	129 00.62	51 33.65	128 96.57	132	139	135	8:55 AM	4:17 PM	5:53 PM	
53	17-Jun-06	51 49.78	129 22.62	51 50.28	129 27.08	26	29	27	5:01 AM	10:25 AM	11:55 AM	
54	17-Jun-06	51 50.08	129 49.33	51 49.95	129 53.62	53	61	57	6:18 AM	1:00 PM	2:57 PM	
55	17-Jun-06	51 33.5	129 53.97	51 33.22	129 49.68	109	114	111	7:43 AM	4:17 PM	5:50 PM	
56	17-Jun-06	51 33.37	129 27.25	51 33.27	129 22.9	126	131	128	8:57 AM	7:14 PM	9:12 PM	
57	18-Jun-06	51 16.63	129 55.58	51 16.73	129 51	156	158	157	5:02 AM	10:17 AM	12:03 PM	
58	18-Jun-06	51 16.62	129 28.95	51 16.72	129 24.4	137	155	146	6:11 AM	1:21 PM	3:06 PM	
59	18-Jun-06	51 00.05	129 24.35	50 99.97	129 28.93	84	91	87	7:38 AM	4:25 PM	6:05 PM	
60	18-Jun-06	51 00.03	129 51	50 99.93	129 55.68	124	138	131	8:49 AM	7:12 PM	8:54 PM	
61	19-Jun-06	50 99.95	129 02.28	51 00.03	128 97.5	43	46	44	5:02 AM	10:13 AM	11:35 AM	
62	19-Jun-06	51 16.57	129 02.27	51 16.73	128 97.95	73	75	74	6:28 AM	12:46 PM	2:16 PM	
63	19-Jun-06	51 16.72	128 75.67	51 16.58	128 71.48	54	54	54	7:39 AM	3:16 PM	5:01 PM	
64	19-Jun-06	51 00.23	128 71.03	50 99.77	128 75.6	35	38	36	9:03 AM	6:15 PM	7:34 PM	
65	22-Jun-06	51 33.35	129 80.55	51 33.27	129 76	129	133	131	5:02 AM	10:02 AM	11:47 AM	
66	22-Jun-06	5149.78	130 07.22	51 50.28	130 02.63	142	183	162	7:05 AM	1:23 PM	3:11 PM	
67	22-Jun-06	5149.95	129 80.53	51 50.07	129 75.82	89	94	91	8:15 AM	4:26 PM	6:04 PM	
68	23-Jun-06	51 66.65	129 49.35	51 66.68	129 54.18	48	58	53	5:02 AM	10:02 AM	11:27 AM	
69	23-Jun-06	51 66.67	129 76.12	51 66.72	129 80.97	128	160	144	6:08 AM	12:44 PM	2:30 PM	
70	23-Jun-06	51 83.05	129 53.85	51 83.6	129 49.28	134	143	138	7:59 AM	4:25 PM	6:09 PM	
71	24-Jun-06	52 16.68	128 65.97	52 16.58	128 70.42	116	126	121	5:01 AM	11:18 AM	1:05 PM	
72	24-Jun-06	52 00.15	128 67.63	51 99.87	128 72.3	88	90	89	6:22 AM	2:18 PM	3:40 PM	
73	24-Jun-06	52 00	128 94.27	51 99.98	128 98.7	61	81	71	7:30 AM	4:40 PM	6:15 PM	
74	24-Jun-06	51 99.87	129 20.92	52 00.08	129 25.45	95	98	96	8:42 AM	7:34 PM	9:05 PM	
75	25-Jun-06	51 83.42	128 94.27	51 83.23	128 99.03	40	50	45	5:00 AM	10:08 AM	11:43 AM	
76	25-Jun-06	51 83.35	129 20.97	51 83.3	129 25.87	66	67	66	6:07 AM	1:05 PM	2:29 PM	
77	25-Jun-06	51 66.68	129 27.4	51 66.63	129 22.88	28	32	30	7:37 AM	3:42 PM	5:15 PM	
78	25-Jun-06	51 66.6	129 00.75	51 66.75	128 96.08	24	32	28	8:46 AM	6:20 PM	7:42 PM	
79	26-Jun-06	51 83.55	128 40.97	51 83.12	128 45.45	45	92	68	5:11 AM	10:11 AM	11:44 AM	
80	26-Jun-06	51 83.33	128 67.73	51 83.3	128 72.5	42	71	56	6:22 AM	12:55 PM	2:27 PM	
81	26-Jun-06	51 66.77	128 45.65	51 66.63	128 41.12	76	78	77	8:16 AM	3:59 PM	5:25 PM	
82	27-Jun-06	51 50.4	128 43.03	51 49.4	128 47.6	101	103	102	5:23 AM	10:27 AM	11:57 AM	
83	27-Jun-06	51 33.62	128 42.8	51 33.05	128 47.55	79	84	81	6:41 AM	1:10 PM	2:40 PM	
84	27-Jun-06	51 33.42	128 69.33	51 33.25	128 74.1	111	115	113	8:00 AM	3:54 PM	5:27 PM	

Appendix C. Species counts and catch rates (CPUE) (number of fish per effective skate) by year (1995-2006) and common IPHC station (see Figure 2) for redbanded rockfish (RB), yelloweye rockfish (YE), rougheye rockfish (RE), quillback rockfish (QB), silvergray rockfish (SG), canary rockfish (CN), copper rockfish (CP), and bocaccio (BC).

PMFC			Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Groupings																	
1995	10G	5C/D	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	10GC	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	10L	5C/D	4.919	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	10LC	5C/D	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	11E	5C/D	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	11H	5C/D	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	11HC	5C/D	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	11J	5C/D	4.919	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	12CC	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	12E	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	12H	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	13D	5C/D	4.768	23.00	4.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	13F	5C/D	4.718	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	13FC	5C/D	4.969	0.00	0.00	8.00	1.61	0.00	0.00	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	14A	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	14AC	5C/D	4.869	47.00	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	14C	5C/D	4.718	39.00	8.27	2.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	14E	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	15C	5C/D	5.019	1.00	0.20	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	15J	5E	5.019	0.00	0.00	8.00	1.59	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	15JC	5E	5.019	0.00	0.00	41.00	8.17	0.00	0.00	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	15L	5E	4.919	0.00	0.00	102.00	20.74	0.00	0.00	0.00	0.00	4.00	0.81	0.00	0.00	0.00	0.00	0.00	
1995	16A	5C/D	4.919	0.00	0.00	3.00	0.61	0.00	0.00	3.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	16AC	5C/D	4.919	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	16H	5E	5.019	0.00	0.00	0.00	0.00	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	17C	5C/D	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	18G	5E	4.969	0.00	0.00	169.00	34.01	0.00	0.00	11.00	2.21	3.00	0.60	1.00	0.20	0.00	0.00	0.00	
1995	19IC	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	19K	5C/D	6.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	19N	5C/D	5.119	0.00	0.00	23.00	4.49	0.00	0.00	14.00	2.74	1.00	0.20	0.00	0.00	0.00	0.00	0.00	
1995	19P	5E	5.019	0.00	0.00	22.00	4.38	0.00	0.00	12.00	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	19PC	5E	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	19R	5E	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	1A	3C/D, 5A	4.969	69.00	13.89	0.00	0.00	31.00	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20C	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20CC	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20E	5C/D	5.069	40.00	7.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20H	5C/D	5.019	22.00	4.38	0.00	0.00	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20K	5C/D	4.969	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20KC	5C/D	4.015	2.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	20M	5C/D	5.842	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	2C	3C/D, 5A	4.869	0.00	0.00	61.00	12.53	0.00	0.00	1.00	0.21	6.00	1.23	0.00	0.00	0.00	0.00	0.00	
1995	3B	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	3BC	3C/D, 5A	4.969	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	3D	3C/D, 5A	5.069	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	3G	3C/D, 5A	4.969	0.00	0.00	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	3J	3C/D, 5A	4.969	18.00	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	3JC	3C/D, 5A	4.969	8.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	3K	3C/D, 5A	4.969	68.00	13.69	7.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	4C	3C/D, 5A	4.969	0.00	0.00	22.00	4.43	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	4F	3C/D, 5A	5.069	10.00	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	4FC	3C/D, 5A	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	4H	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	4K	3C/D, 5A	5.069	6.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	5CC	5B	4.969	14.00	2.82	0.00	0.00	5.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	5E	5B	5.019	52.00	10.36	0.00	0.00	4.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	5H	5B	4.969	3.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	5KC	5B	5.019	28.00	5.58	26.00	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	6B	5B	4.919	18.00	3.66	0.00	0.00	0											

## Appendix C continued.

		PMFC		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Area Groupings																		
1995	8AC	5B	5.019	2.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	8C	5B	5.069	30.00	5.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	8F	5B	5.019	30.00	5.98	25.00	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	8I	5B	5.019	0.00	0.00	131.00	26.10	0.00	0.00	0.00	0.00	6.00	1.20	3.00	0.60	0.00	0.00	0.00	0.00	
1995	8IC	5B	4.969	0.00	0.00	88.00	17.71	0.00	0.00	0.00	0.00	5.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	
1995	8K	5B	5.069	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	9E	5C/D	5.019	16.00	3.19	18.00	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	9G	5C/D	4.919	109.00	22.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	9J	5C/D	4.869	0.00	0.00	55.00	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	9M	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1995	9O	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10211	3C/D, 5A	4.939	4.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10212	5B	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10213	5B	4.939	0.00	0.00	3.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10214	5B	4.939	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10215	5B	4.939	39.00	7.90	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10216	5B	4.939	22.00	4.45	14.00	2.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10218	5B	4.939	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10220	5B	4.939	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10221	5B	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10222	5B	4.939	41.00	8.30	30.00	6.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.20	
1996	10223	5B	4.939	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10224	5B	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.20	0.00	0.00	0.00	
1996	10225	5B	4.939	13.00	2.63	0.00	0.00	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10226	5B	4.939	0.00	0.00	78.00	15.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	1.22	0.00	0.00	0.00	
1996	10227	5B	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10228	5B	4.999	0.00	0.00	50.00	10.00	0.00	0.00	0.00	0.00	7.00	1.40	1.00	0.20	0.00	0.00	0.00	0.00	
1996	10229	5B	4.999	31.00	6.20	75.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10230	5B	4.818	18.00	3.74	0.00	0.00	15.00	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10232	5C/D	4.939	2.00	0.41	3.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10233	5C/D	4.939	6.00	1.22	9.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10234	5C/D	4.939	29.00	5.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10235	5C/D	4.939	35.00	7.09	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	
1996	10236	5C/D	4.939	0.00	0.00	26.00	5.26	0.00	0.00	0.00	0.00	1.00	0.20	1.00	0.20	0.00	0.00	0.00	0.00	
1996	11211	5B	4.818	1.00	0.21	0.00	0.00	1.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11212	5B	4.818	7.00	1.45	2.00	0.42	9.00	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11213	5B	4.015	77.00	19.18	11.00	2.74	20.00	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.25	
1996	11215	5C/D	4.939	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.41	0.00	0.00	
1996	11216	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11217	5C/D	4.939	13.00	2.63	29.00	5.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.41	0.00	0.00	0.00	
1996	11218	5C/D	4.939	10.00	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11219	5C/D	4.939	25.00	5.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11221	5C/D	4.939	19.00	3.85	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11222	5C/D	4.939	46.00	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11223	5C/D	4.939	73.00	14.78	0.00	0.00	0.00	0.00	0.00	0.00	7.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11224	5C/D	4.939	0.00	0.00	14.00	2.84	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11225	5C/D	4.939	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	
1996	11226	5C/D	4.939	34.00	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11227	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11231	5C/D	4.939	0.00	0.00	55.00	11.14	0.00	0.00	5.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11232	5C/D	4.939	28.00	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11233	5C/D	4.939	8.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	11234	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	12112	5C/D	4.939	22.00	4.45	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	12113	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	12114	5C/D	4.939	0.00	0.00	7.00	1.42	0.00	0.00	1.00	0.20	0.00								

## Appendix C continued.

		PMFC		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Area Groupings																		
1996	13215	5C/D	4.939	9.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	13216	5C/D	4.939	6.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	13217	5C/D	4.939	0.00	0.00	3.00	0.61	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.20	
1996	13314	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	13315	5C/D	4.939	20.00	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	13316	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	14211	5C/D	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1996	9012	3C/D, 5A	4.939	0.00	0.00	46.00	9.31	0.00	0.00	6.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9014	3C/D, 5A	4.939	19.00	3.85	0.00	0.00	49.00	9.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.20
1996	9015	3C/D, 5A	4.939	9.00	1.82	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9016	3C/D, 5A	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9017	3C/D, 5A	4.939	35.00	7.09	2.00	0.41	0.00	0.00	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9111	3C/D, 5A	4.939	0.00	0.00	22.00	4.45	0.00	0.00	3.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9112	3C/D, 5A	4.939	3.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9113	3C/D, 5A	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9114	3C/D, 5A	4.939	0.00	0.00	2.00	0.41	0.00	0.00	1.00	0.20	0.00	0.00	1.00	0.20	0.00	0.00	0.00	1.00	0.20
1996	9115	3C/D, 5A	4.939	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9116	3C/D, 5A	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9117	3C/D, 5A	4.939	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9118	3C/D, 5A	4.939	0.00	0.00	12.00	2.43	0.00	0.00	3.00	0.61	0.00	0.00	1.00	0.20	0.00	0.00	0.00	0.00	0.00
1996	9119	5B	4.939	2.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9120	5B	4.939	10.00	2.03	0.00	0.00	4.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9122	5B	4.939	9.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	9123	5B	4.939	11.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10211	3C/D, 5A	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10212	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10213	5B	4.999	0.00	0.00	4.18	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10214	5B	4.999	0.00	0.00	33.20	6.64	0.00	0.00	8.30	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10215	5B	4.999	20.75	4.15	149.40	29.89	0.00	0.00	0.00	0.00	4.15	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10216	5B	4.999	20.75	4.15	45.65	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10217	5B	4.999	29.05	5.81	66.40	13.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10218	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10219	5B	4.999	4.15	0.83	12.45	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10220	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10221	5B	4.999	4.15	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10222	5B	4.999	136.95	27.40	37.35	7.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10223	5B	4.999	8.30	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10224	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10225	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10226	5B	4.999	0.00	0.00	37.35	7.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10227	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10228	5B	4.999	0.00	0.00	62.25	12.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15	0.83	0.00	
1997	10229	5B	4.999	24.90	4.98	70.55	14.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997	10230	5B	4.999	12.45	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10231	5C/D	4.999	0.00	0.00	78.85	15.77	0.00	0.00	41.50	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10232	5C/D	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10233	5C/D	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10234	5C/D	4.999	95.45	19.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10235	5C/D	4.999	53.95	10.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	10236	5C/D	4.999	0.00	0.00	53.95	10.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15	0.83	0.00	0.00	0.00
1997	10237	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	11211	5B	4.999	4.15	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	11212	5B	4.999	0.00	0.00	0.00	0.00	0.00	0.00	8.30	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	11213	5B	4.999	136.95	27.40	4.15	0.83	16.60	3.32	0.00	0.0									

## Appendix C continued.

## Appendix C continued.

		PMFC		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Area Groupings																		
1998	2098	5B	6.424	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2101	5B	6.585	16.40	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2102	5B	6.665	195.05	29.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2104	5B	6.424	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.62	4.00	0.62	0.00	0.00	0.00	0.00	
1998	2106	5B	6.505	12.15	1.87	12.15	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2107	5B	6.585	4.10	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2110	5C/D	6.505	64.80	9.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2111	5C/D	6.665	45.37	6.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2113	5C/D	6.585	0.00	0.00	12.30	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2122	5C/D	6.344	15.80	2.49	0.00	0.00	3.95	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2124	5C/D	6.665	12.45	1.87	12.45	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2125	5C/D	6.665	20.75	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2133	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2135	5C/D	6.585	20.50	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2136	5C/D	6.505	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2137	5C/D	6.585	20.50	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2138	5C/D	6.585	49.20	7.47	8.20	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2139	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2142	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2143	5E	6.264	0.00	0.00	23.40	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.90	0.62	0.00	0.00	0.00	
1998	2145	5C/D	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2146	5E	6.424	36.00	5.60	0.00	0.00	24.00	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2147	5C/D	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.12	0.62	0.00	0.00	
1998	2148	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2149	5E	6.342	0.00	0.00	65.81	10.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2150	5C/D	5.762	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2151	5E	6.585	0.00	0.00	52.97	8.04	0.00	0.00	16.30	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	2153	5C/D	6.505	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2155	5C/D	6.505	0.00	0.00	24.30	3.74	0.00	0.00	12.15	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	2156	5E	6.505	0.00	0.00	9.26	1.42	0.00	0.00	18.51	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	2157	5E	6.505	4.05	0.62	0.00	0.00	8.10	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2159	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2160	5C/D	6.505	40.50	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2162	5C/D	6.585	45.10	6.85	0.00	0.00	4.10	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2164	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2165	5C/D	6.665	0.00	0.00	0.00	0.00	12.45	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2167	5E	6.585	24.60	3.74	0.00	0.00	0.00	0.00	0.00	0.00	4.10	0.62	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2168	5E	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998	2171	5C/D	6.585	4.10	0.62	24.60	3.74	0.00	0.00	0.00	0.00	4.10	0.62	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2039	3C/D, 5A	6.665	24.90	3.74	12.45	1.87	0.00	0.00	0.00	0.00	4.15	0.62	0.00	0.00	0.00	8.30	1.25		
1999	2041	3C/D, 5A	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2042	3C/D, 5A	6.665	0.00	0.00	4.15	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2044	3C/D, 5A	6.585	0.00	0.00	41.00	6.23	0.00	0.00	8.20	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2046	3C/D, 5A	6.665	0.00	0.00	4.15	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2047	3C/D, 5A	6.746	0.00	0.00	8.40	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2049	3C/D, 5A	6.665	29.05	4.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2050	3C/D, 5A	6.746	100.80	14.94	37.80	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2051	3C/D, 5A	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2053	3C/D, 5A	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2054	3C/D, 5A	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2056	3C/D, 5A	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2059	5B	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2060	5B	6.665	8.30	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2062	5B	6.665	12.45	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2064	5B	6.665	16.60	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1999	2066	5B	6.665	20.75	3.11	0.00	0.00	4.1												

## Appendix C continued.

		PMFC		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Area Groupings																		
1999	2097	5B	6.746	0.00	0.00	0.00	0.00	12.60	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2098	5B	6.665	8.30	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2101	5C/D	6.665	24.90	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2102	5B	6.746	50.40	7.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2104	5B	6.665	0.00	0.00	4.15	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15
1999	2106	5B	6.746	4.20	0.62	8.40	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2107	5B	6.665	12.45	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15
1999	2109	5C/D	6.585	69.70	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2110	5C/D	6.746	180.60	26.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2111	5C/D	6.746	33.60	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2113	5C/D	6.665	37.35	5.60	74.70	11.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15
1999	2122	5C/D	6.746	79.80	11.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2124	5C/D	6.665	0.00	0.00	41.50	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2125	5C/D	6.665	62.25	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2131	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2133	5C/D	6.505	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2135	5C/D	6.505	60.75	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2136	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2137	5C/D	6.665	0.00	0.00	4.15	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2138	5C/D	6.585	24.60	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2139	5C/D	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2142	5C/D	6.665	4.15	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2143	5E	6.505	0.00	0.00	36.45	5.60	0.00	0.00	0.00	0.00	0.00	0.00	4.05	0.62	0.00	0.00	0.00	0.00	0.00
1999	2145	5C/D	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2146	5E	6.665	33.20	4.98	0.00	0.00	107.90	16.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2147	5C/D	6.505	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2148	5C/D	6.505	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2149	5E	6.585	0.00	0.00	106.60	16.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2150	5C/D	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2151	5E	6.585	0.00	0.00	53.30	8.09	0.00	0.00	8.20	1.25	0.00	0.00	8.20	1.25	0.00	0.00	0.00	0.00	0.00
1999	2153	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2154	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2155	5C/D	6.665	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2156	5E	5.832	0.00	0.00	14.53	2.49	0.00	0.00	32.68	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2157	5E	6.505	0.00	0.00	0.00	0.00	76.95	11.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2159	5C/D	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2160	5C/D	6.505	32.40	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2162	5C/D	6.505	4.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2164	5C/D	6.585	20.50	3.11	0.00	0.00	24.60	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2165	5C/D	6.585	0.00	0.00	0.00	0.00	12.30	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2167	5E	6.585	36.90	5.60	4.10	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	2168	5E	6.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2044	3C/D, 5A	7.027	0.00	0.00	85.00	12.10	0.00	0.00	10.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2046	3C/D, 5A	6.956	0.00	0.00	9.90	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2047	3C/D, 5A	6.956	0.00	0.00	9.90	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2049	3C/D, 5A	7.027	30.00	4.27	15.00	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00
2000	2050	3C/D, 5A	6.956	55.24	7.94	40.17	5.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2051	3C/D, 5A	6.956	0.00	0.00	54.45	7.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2053	3C/D, 5A	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2054	3C/D, 5A	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2056	3C/D, 5A	6.956	4.95	0.71	0.00	0.00	4.95	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2059	5B	6.956	19.80	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2060	5B	7.027	35.00	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2062	5B	6.956	9.90	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2064	5B	7.027	20.00	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2066	5B	6.956	19.94	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2069	5B	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2071	5B	7.027	0.00	0.00	125.00	17.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	
2000	2073	5B	7.027	14.89	2.12	0.00	0.00	0.00	0.00	0.0										

## Appendix C continued.

		PMFC		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Area Groupings																		
2000	2098	5B	6.956	4.95	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2101	5C/D	7.027	65.00	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2102	5C/D	7.027	129.08	18.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2104	5B	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2106	5B	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2107	5B	7.027	10.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2109	5C/D	6.956	44.55	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2110	5C/D	6.956	204.41	29.38	9.97	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2111	5C/D	6.956	19.80	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2113	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2122	5C/D	7.027	0.00	0.00	0.00	0.00	0.00	5.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2124	5C/D	6.956	0.00	0.00	54.45	7.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2125	5C/D	6.956	39.32	5.65	0.00	0.00	4.91	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2131	5C/D	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.71	
2000	2133	5C/D	6.956	0.00	0.00	36.20	5.20	0.00	0.00	5.17	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.17	0.74
2000	2135	5C/D	6.525	27.86	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2136	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2137	5C/D	6.956	14.85	2.14	4.95	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2138	5C/D	6.956	54.84	7.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2139	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2142	5C/D	6.956	29.70	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2143	5E	6.525	0.00	0.00	22.57	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2145	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2146	5E	6.956	0.00	0.00	0.00	0.00	74.25	10.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2147	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2148	5C/D	6.886	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2149	5E	6.956	0.00	0.00	84.15	12.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2150	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2151	5E	6.886	0.00	0.00	58.80	8.54	0.00	0.00	44.10	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2153	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2154	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2155	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	4.95	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2156	5E	6.956	0.00	0.00	19.80	2.85	0.00	0.00	29.70	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2157	5E	6.956	0.00	0.00	0.00	0.00	84.15	12.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2159	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2160	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2162	5C/D	6.956	24.75	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2164	5C/D	6.956	14.85	2.14	0.00	0.00	4.95	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2165	5C/D	6.956	0.00	0.00	0.00	0.00	15.07	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2167	5E	6.956	49.50	7.12	24.75	3.56	0.00	0.00	0.00	0.00	14.85	2.14	0.00	0.00	0.00	0.00	0.00	0.00	
2000	2168	5E	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2039	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2041	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2042	3C/D, 5A	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2044	3C/D, 5A	5.069	0.00	0.00	25.25	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2046	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2047	3C/D, 5A	5.069	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2049	3C/D, 5A	5.019	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2050	3C/D, 5A	5.019	25.00	4.98	10.00	1.99	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2051	3C/D, 5A	5.019	0.00	0.00	10.64	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2053	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2054	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2056	3C/D, 5A	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2059	5B	5.019	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2060	5B	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2062	5B	4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2064	5B	5.019	20.20	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2066	5B	5.069	10.10	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2069	5B	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2071	5B	5.069	0.00	0.00	95.95	18.93	0.00	0.00	0.00	0.00	10.10	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	2073	5B	5																	

## Appendix C continued.

		PMFC																		
Year	Station	Area Groupings		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
2001	2095	5B		4.969	0.00	0.00	29.70	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2096	5B		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2098	5B		5.069	10.10	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2101	5C/D		5.019	30.00	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2102	5B		5.069	55.55	10.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2104	5B		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2106	5B		5.019	5.00	1.00	25.00	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2107	5B		5.019	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2109	5C/D		5.019	10.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2110	5C/D		5.019	155.00	30.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2111	5C/D		5.019	35.00	6.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2113	5C/D		5.019	40.00	7.97	45.00	8.97	0.00	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	0.00	
2001	2122	5C/D		5.019	25.00	4.98	0.00	0.00	15.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2124	5C/D		5.019	0.00	0.00	30.00	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2125	5C/D		5.069	25.25	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2131	5C/D		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2133	5C/D		5.019	0.00	0.00	29.41	5.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2135	5C/D		4.969	64.35	12.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2136	5C/D		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2137	5C/D		4.969	29.12	5.86	9.71	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2138	5C/D		5.019	15.15	3.02	15.15	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2139	5C/D		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2142	5C/D		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2143	5E		5.019	0.00	0.00	19.61	3.91	0.00	0.00	0.00	0.00	0.00	19.61	3.91	0.00	0.00	0.00	0.00	
2001	2145	5C/D		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2146	5E		5.019	10.00	1.99	0.00	0.00	160.00	31.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2147	5C/D		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2148	5C/D		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2149	5E		4.969	0.00	0.00	70.00	14.09	0.00	0.00	0.00	0.00	0.00	5.00	1.01	0.00	0.00	0.00	0.00	
2001	2150	5C/D		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2151	5E		4.969	0.00	0.00	79.20	15.94	0.00	0.00	19.80	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2153	5C/D		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2154	5C/D		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2155	5C/D		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2156	5E		4.969	0.00	0.00	4.95	1.00	0.00	0.00	9.90	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2157	5E		4.969	0.00	0.00	0.00	0.00	9.80	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2159	5C/D		4.919	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2160	5C/D		5.019	40.00	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2162	5C/D		4.919	14.70	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2164	5C/D		4.969	45.46	9.15	0.00	0.00	15.15	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2165	5C/D		4.969	0.00	0.00	0.00	0.00	59.40	11.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2001	2167	5E		5.019	121.21	24.15	50.51	10.06	0.00	0.00	0.00	0.00	0.00	15.15	3.02	0.00	0.00	0.00	10.10	
2001	2168	5E		4.969	4.85	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2039	3C/D, 5A		4.969	0.00	0.00	4.95	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2041	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2042	3C/D, 5A		4.969	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2044	3C/D, 5A		5.019	0.00	0.00	25.77	5.14	0.00	0.00	5.15	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2046	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2047	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	
2002	2049	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2050	3C/D, 5A		5.019	60.00	11.95	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2051	3C/D, 5A		5.019	0.00	0.00	0.00	10.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2053	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2054	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2056	3C/D, 5A		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2059	5B		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2060	5B		5.019	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2062	5B		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2064	5B		5.069	5.05	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2066	5B		4.969	4.71	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2069	5B		5.069	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2071	5B		5.019	0.00	0.00	35.00	6.97	0.00	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	0.00	
2002	2073	5B		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2074	5B		5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2002	2075	5B		5.019	0.00	0.00	0.00</td													

## Appendix C continued.

		PMFC																	
Year	Station	Area Groupings	Effective	RB	RB	YE	YE	RE	RE	QB	QB	SG	SG	CN	CN	CP	CP	BC	BC
			skates	Count	CPUE	Count	CPUE	Count	CPUE	Count	CPUE	Count	CPUE	Count	CPUE	Count	CPUE	Count	CPUE
2002	2092	5B	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2093	5B	5.019	10.00	1.99	105.00	20.92	0.00	0.00	0.00	0.00	20.00	3.99	0.00	0.00	0.00	0.00	0.00	5.00
2002	2095	5B	5.019	0.00	0.00	25.00	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2096	5B	5.069	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2098	5B	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2101	5C/D	5.019	44.55	8.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2102	5C/D	5.019	80.00	15.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2104	5B	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2106	5B	5.069	0.00	0.00	5.05	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2107	5B	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2109	5C/D	5.069	10.10	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2110	5C/D	5.019	15.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2111	5C/D	5.069	10.10	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2113	5C/D	4.969	0.00	0.00	19.80	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.95	1.00	0.00	0.00
2002	2122	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2124	5C/D	5.019	0.00	0.00	20.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2125	5C/D	5.019	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2131	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2133	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2135	5C/D	5.019	60.61	12.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2136	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2137	5C/D	5.019	10.00	1.99	15.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2138	5C/D	5.019	20.00	3.99	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2139	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2142	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2143	5E	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.21	1.04	15.63	3.11	0.00	0.00	0.00
2002	2145	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2146	5E	5.019	5.00	1.00	0.00	0.00	45.00	8.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2147	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2148	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2149	5E	5.019	0.00	0.00	15.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2150	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2151	5E	5.019	0.00	0.00	30.00	5.98	0.00	0.00	10.00	1.99	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2153	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2154	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2155	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2156	5E	5.019	0.00	0.00	10.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2157	5E	5.019	0.00	0.00	0.00	0.00	35.00	6.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2159	5C/D	5.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2160	5C/D	4.969	4.95	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2162	5C/D	5.019	5.05	1.01	0.00	0.00	5.05	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2164	5C/D	5.019	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2165	5C/D	5.019	0.00	0.00	0.00	0.00	10.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2167	5E	5.019	85.00	16.94	20.00	3.99	0.00	0.00	0.00	0.00	5.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	2168	5E	5.069	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2039	3C/D, 5A	7.95	9.00	1.13	7.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2041	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2042	3C/D, 5A	8.031	0.00	0.00	7.00	0.87	0.00	0.00	2.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2044	3C/D, 5A	8.111	0.00	0.00	46.00	5.67	0.00	0.00	10.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2046	3C/D, 5A	8.031	0.00	0.00	2.00	0.25	0.00	0.00	2.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2047	3C/D, 5A	8.031	0.00	0.00	4.00	0.50	0.00	0.00	12.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2049	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2050	3C/D, 5A	8.111	10.00	1.23	1.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2051	3C/D, 5A	8.031	0.00	0.00	9.00	1.12	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2053	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2054	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2056	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2060	5B	8.031	1.00	0.13	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2062	5B	8.031	2.00	0.25	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2066	5B	8.031	3.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2069	5B	8.031	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2071	5B	8.031	8.00	1.00	58.00	7.22	0.00	0.00	0.00	0.00	5.00							

## Appendix C continued.

		PMFC																	
Year	Station	Area Groupings	Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
2003	2092	5B	8.031	2.00	0.25	0.00	0.00	13.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2093	5B	7.95	48.00	6.04	183.00	23.02	0.00	0.00	0.00	0.00	10.00	1.26	0.00	0.00	0.00	0.00	3.00	0.38
2003	2095	5B	8.031	0.00	0.00	41.00	5.11	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00
2003	2096	5B	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2098	5B	7.95	5.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2101	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2102	5B	7.95	2.00	0.25	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2104	5B	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2106	5B	7.95	13.00	1.64	7.00	0.88	0.00	0.00	0.00	0.00	2.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
2003	2107	5B	8.031	8.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2108	5C/D	8.031	29.00	3.61	2.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2110	5C/D	7.87	228.00	28.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2111	5C/D	7.95	33.00	4.15	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00
2003	2113	5C/D	7.95	0.00	0.00	6.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2122	5C/D	8.031	18.00	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2124	5C/D	8.031	1.00	0.13	17.00	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2125	5C/D	8.031	50.00	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2131	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2133	5C/D	8.031	0.00	0.00	20.00	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00
2003	2135	5C/D	7.95	66.00	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2136	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2137	5C/D	7.95	16.00	2.01	6.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2138	5C/D	8.031	16.00	1.99	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2139	5C/D	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2142	5C/D	7.95	8.00	1.01	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2143	5E	8.031	0.00	0.00	13.00	1.62	0.00	0.00	0.00	0.00	12.00	1.49	1.00	0.13	0.00	0.00	3.00	0.37
2003	2145	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2146	5E	8.031	44.00	5.48	0.00	0.00	89.00	11.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2147	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2148	5C/D	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2149	5E	8.031	0.00	0.00	34.00	4.23	0.00	0.00	0.00	0.00	3.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
2003	2150	5C/D	8.031	2.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2151	5E	8.031	0.00	0.00	35.00	4.36	0.00	0.00	11.00	1.37	6.00	0.75	7.00	0.87	0.00	0.00	1.00	0.13
2003	2153	5C/D	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2154	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2155	5C/D	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2156	5E	7.95	0.00	0.00	10.00	1.26	0.00	0.00	9.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2157	5E	7.95	0.00	0.00	0.00	0.00	56.00	7.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2159	5C/D	7.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2160	5C/D	7.95	10.00	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2162	5C/D	8.031	9.00	1.12	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2164	5C/D	7.95	15.00	1.89	0.00	0.00	21.00	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2165	5C/D	8.031	0.00	0.00	0.00	4.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	2167	5E	8.031	103.00	12.83	93.00	11.58	1.00	0.13	0.00	0.00	6.00	0.75	0.00	0.00	0.00	0.00	2.00	0.25
2003	2168	5E	7.95	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	1.00	0.13
2003	2170	5C/D	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2039	3C/D, 5A	8.031	7.00	0.87	7.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2041	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2042	3C/D, 5A	8.031	0.00	0.00	14.00	1.74	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2044	3C/D, 5A	8.031	0.00	0.00	72.00	8.97	0.00	0.00	6.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2046	3C/D, 5A	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2047	3C/D, 5A	8.031	0.00	0.00	1.00	0.13	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2049	3C/D, 5A	7.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00
2004	2050	3C/D, 5A	7.95	64.00	8.05	15.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2051	3C/D, 5A	7.95	0.00	0.00	5.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2053	3C/D, 5A	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	2054	3C/D, 5A	8.031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00
2004	2056	3C/D, 5A	7.95	6.00	0.76	0													

## Appendix C continued.

## Appendix C continued.

		PMFC		Effective skates	RB Count	RB CPUE	YE Count	YE CPUE	RE Count	RE CPUE	QB Count	QB CPUE	SG Count	SG CPUE	CN Count	CN CPUE	CP Count	CP CPUE	BC Count	BC CPUE
Year	Station	Area Groupings																		
2005	2083	5B	7.027	24.00	3.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2084	5B	7.027	0.00	0.00	4.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2085	5B	7.027	8.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2090	5B	6.886	3.00	0.44	37.00	5.37	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.44	0.00	0.00	0.00	0.00	
2005	2092	5B	6.956	1.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	
2005	2093	5B	6.559	27.00	4.12	88.00	13.42	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.76	0.00	0.00	0.00	1.00	
2005	2095	5B	6.956	0.00	0.00	28.00	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	
2005	2096	5B	6.956	0.00	0.00	3.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.29	0.00	0.00	0.00	
2005	2098	5B	6.956	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	
2005	2101	5C/D	6.956	13.00	1.87	1.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	
2005	2102	5B	6.956	63.00	9.06	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2104	5B	7.027	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.43	0.00	0.00	0.00	
2005	2106	5B	7.027	41.00	5.84	9.00	1.28	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	
2005	2107	5C/D	7.027	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2109	5C/D	7.027	16.00	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	
2005	2110	5C/D	7.027	92.00	13.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2111	5C/D	7.027	7.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	
2005	2113	5C/D	6.956	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	
2005	2122	5C/D	6.956	1.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2124	5C/D	6.956	0.00	0.00	24.00	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	
2005	2125	5C/D	6.956	58.00	8.34	0.00	0.00	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2131	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2133	5C/D	6.956	0.00	0.00	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	2.00	0.29	0.00	0.00	
2005	2135	5C/D	7.027	55.00	7.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.29	0.00	0.00	0.00	0.00	
2005	2136	5C/D	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2137	5C/D	7.027	23.00	3.27	16.00	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2138	5C/D	7.027	42.00	5.98	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.00	0.00	0.00	0.00	
2005	2139	5C/D	6.956	0.00	0.00	2.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2142	5C/D	7.027	5.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2143	5E	7.027	0.00	0.00	4.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	10.00	1.42	0.00	0.00	0.00	1.00	
2005	2145	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2146	5E	7.027	36.00	5.12	0.00	0.00	132.00	18.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2147	5C/D	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2148	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2149	5E	7.027	0.00	0.00	37.00	5.27	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.57	0.00	0.00	0.00	0.00	
2005	2150	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2151	5E	7.027	0.00	0.00	13.00	1.85	1.00	0.14	16.00	2.28	5.00	0.71	13.00	1.85	0.00	0.00	0.00	0.00	
2005	2153	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2154	5C/D	6.956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2155	5C/D	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2156	5E	7.027	0.00	0.00	11.00	1.57	0.00	0.00	18.00	2.56	2.00	0.29	4.00	0.57	0.00	0.00	0.00	0.00	
2005	2157	5E	7.027	0.00	0.00	0.00	0.00	128.00	18.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2159	5C/D	7.027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2160	5C/D	7.027	13.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2162	5C/D	6.956	6.00	0.86	1.00	0.14	4.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2164	5C/D	7.027	11.00	1.57	0.00	0.00	75.00	10.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2165	5C/D	6.956	1.00	0.14	0.00	0.00	35.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2167	5E	7.027	70.00	9.96	47.00	6.69	0.00	0.00	0.00	0.00	34.00	4.84	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2168	5E	7.027	4.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	
2005	2171	5C/D	7.027	15.00	2.14	28.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2039	3C/D, 5A	6.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2041	3C/D, 5A	5.963	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2042	3C/D, 5A	6.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2044	3C/D, 5A	5.963	0.00	0.00	8.00	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2046	3C/D, 5A	6.023	0.00	0.00	3.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2047	3C/D, 5A	6.023	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2049	3C/D, 5A	6.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.17	0.00	0.00	0.00	
2006	2050	3C/D, 5A	6.023	50.00	8.30	26.00	4.32	0.00	0.00	0.00	0.00	8.00	1.33	0.00	0.00	0.00	0.00	0.00	2.00	
2006	2051	3C/D, 5A	6.023	0.00	0.00	13.00	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2053	3C/D, 5A	6.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2006	2054	3C/D, 5A	6.083	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.16	0.00	0.00	0.00	0.00	
2006	2056	3C/D, 5A	6.023	2.00	0.3															

## Appendix C continued.