

Appendix II

Closed Area II Yellowtail Flounder Special Access Program

FY 2004

Groundfish Plan Development Team

Overview of the Closed Area II Yellowtail SAP in FY 2004

The Groundfish Committee may consider modifications to existing SAPs, including the CAII Yellowtail Flounder SAP. A brief summary of the FY 2004 landings and estimated revenues from the SAP is followed by a discussion of the discards observed.

Landings and Revenues

Four different sources of information were used to characterize the trips in the CAII Yellowtail Flounder SAP in FY 2004. NMFS NERO publishes information on the number of trips in the SAP and yellowtail flounder catches based on a combination of VMS catch reports and observer reports. The DAS database can be used to summarize the number and type of DAS charged in the SAP as well as the actual time spent underway based on the crossing of the VMS demarcation line – this gives an estimate of the number of DAS “saved” by the provision that did not charge vessels DAS while traveling to and from the SAP area. VTR and dealer reports can be used to summarize landings and revenues from the SAP. There are minor differences in reported catch among these different data sources.

According to reports published on the NERO website, there were 316 SAP trips that caught 8.3 million pounds of yellowtail flounder (7.6 million pounds kept, 0.7 million pounds discarded). These vessels used 260 Category B (regular) DAS and 1,226 Category B (reserve) DAS (1,485 total DAS). The number of DAS charged for each SAP trip showed considerable variability with a gradual increase in trip length as the SAP progressed through the summer (see Figure 1). The actual time underway was 1,995 days. In terms of DAS use, the SAP thus provided vessels an opportunity to use 1,995 fishing days during the summer that would not have been available without the SAP.

Because SAP trips are not specifically identified in either the VTR or dealer databases, total landings and revenue estimates are based on an analysis of the DAS, dealer, and VTR databases. A link was created between the VTR and DAS database in order to identify SAP trips – 307 (out of 316) SAP trips could be identified. A similar link was then created between the dealer and VTR databases, but only about 250 trips could be matched. The trips identified in the dealer database were used to determine prices that were paid to the kept catch for the trips identified in the VTR database in order to estimate revenues. Details of this procedure are described in the appendix. The key point is that the following information is an estimate of landings and revenues from the SAP as reported for 97 percent of the trips.

Reported kept catch for the 307 identified SAP trips was 11.5 million lbs. (Table 1). Landings reported were dominated by yellowtail flounder (8.0 million lbs.), haddock (1.0 million lbs.), winter flounder (622,280 lbs.), skates and skate wings (720,000 lbs.), grey sole (226,000 lbs.), plaice (171,000 lbs.), lobster (159,000 lbs.), monkfish (various products, 271,000 lbs.) and scallops (106,000 lbs). The average catch per trip for yellowtail flounder was 24,348 lbs, haddock was 4,237 lbs, winter flounder was 2,057 lbs, and skates 7,400 lbs. Most (6.6 million lbs.) of the yellowtail flounder was landed in New Bedford, with the remainder distributed between Newport RI, Gloucester MA,

Portland ME, Boston MA, Pt. Judith RI, Barnstable MA, and Chilmark. Estimated total revenues for these 307 trips were \$7.2 million (Table 2). Yellowtail flounder accounted for \$3.45 million, haddock \$929,000, lobster \$645,000, scallops \$501,000, and winter flounder \$495,000. The overall average price received for yellowtail flounder in this SAP was \$0.43 per pound. In comparison, the average price received for yellowtail flounder (all gear, all ports) between May and September 2003 was \$0.92 per pound (3.8 million pounds landed worth \$3.4 million). The average price for haddock on SAP trips was \$0.89 per pound, while for the same period in 2003 it was \$1.27 per pound (4.8 million pounds landed worth \$6.1 million). Overall yellowtail flounder landings from May through September in FY 2004 were 11.9 million pounds worth \$6.3 million, for an average price of \$0.52 per pound. Overall haddock landings from May through September 2004 totaled 6.3 million lbs. worth \$6.4 million, for an average price of \$1.03 per pound.

The distribution of estimated revenues per trip shows that 80 percent of the identified trips earned more than \$15,000 and 20 percent earned more than \$30,000 (Table 3). Revenues per day absent may be a more informative estimate of the value of these trips. Estimated revenues for each trip were divided by the length of the trip. The length of the identified trips was calculated between the time the vessel crosses the VMS demarcation line outbound and inbound, rather than based on the DAS charged while fishing in the area. The distribution of revenues per day absent is shown in Table 4. About 80 percent of the trips earned more than \$2,000 per day absent, about 60 percent earned more than \$2,500 per day absent, and about 10 percent earned more than \$5,000 per day absent. In comparison, Amendment 13 estimated the mean revenue per day for trawl vessels on trips that were not in the Gulf of Maine. For vessels between 50 and 70 feet in length, the mean revenue was \$2,271 per day, while that for trawl vessels over 70 feet in length was \$3,571.

Figure 1 – DAS charged for trips in the CAII YTF SAP in FY-2004, by date of sailing

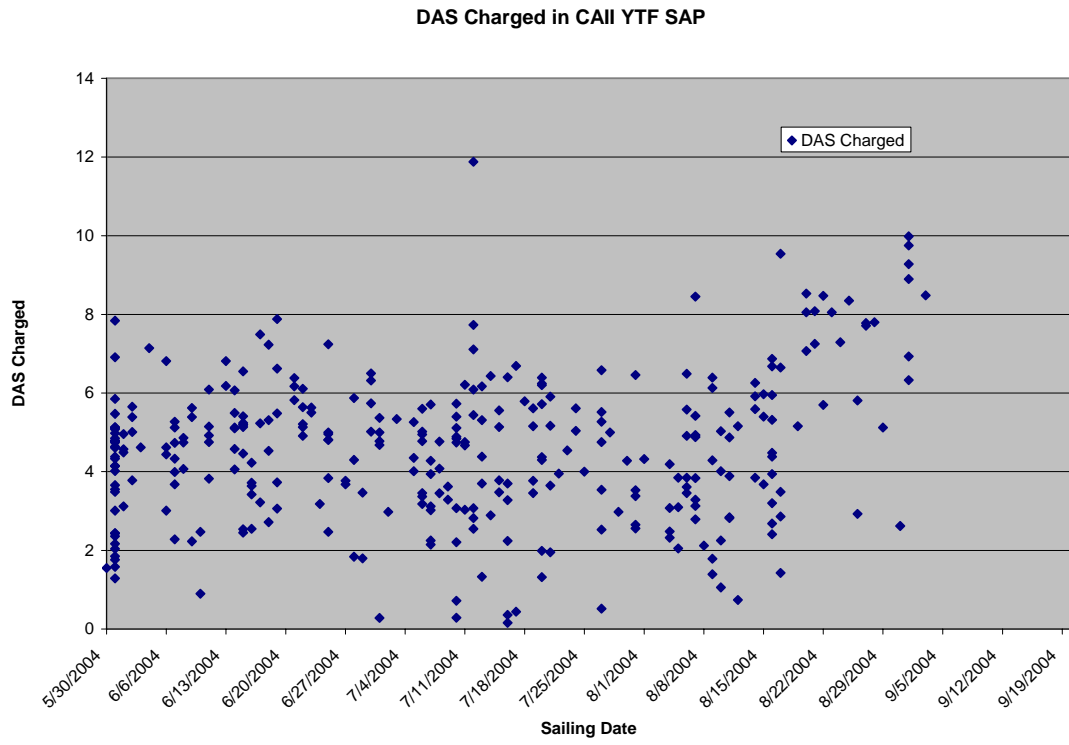


Table 1 - Pounds reported kept on 307 trips identified as CAII Yellowtail Flounder SAP Trips

SPPNAME	Month Landed				
	June	July	August	September	Total
BARNDOR SKATE					
BLACK SEA BASS	1,325		100		1,425
BLUEFISH			110		110
CLEARNOSE SKATE WINGS			1,260		1,260
COD	17,782	6,163	2,766	20	26,731
CUSK			10		10
FLOUNDER, AMERICAN PLAICE /DAB	106,938	39,349	21,971	3,305	171,563
FLOUNDER, WINDOWPANE	125	30	70		225
FLOUNDER, SPECIES NOT SPECIFIED		2,870			2,870
FLOUNDER, SUMMER / FLUKE	2,382	2,419	5,250	2,545	12,596
FLOUNDER, WINTER / BLACKBACK	295,096	110,383	161,111	55,690	622,280
FLOUNDER, WITCH / GRAY SOLE	118,228	70,375	37,604	300	226,507
FLOUNDER, YELLOWTAIL	2,816,400	2,810,365	2,255,008	194,205	8,075,978
HADDOCK	594,479	415,645	31,690	269	1,042,083
HAKE, MIX RED / WHITE, ROUND	8	5			13
HAKE, RED / LING	560	240			800
HAKE, SILVER / WHITING		80	2,978		3,058
HAKE, WHITE	50	10	5		65
HALIBUT, ATLANTIC	185				185
LITTLE SKATE					
LITTLE SKATE WINGS	4,385				4,385
LOBSTER, AMERICAN	16,404	73,083	49,813	19,996	159,296
MACKEREL, ATLANTIC		400			400
MONK LIVERS	955		665	600	2,220
MONK TAILS	46,859	40,589	36,190	20,870	144,508
MONKFISH / ANGLERFISH /	32,884	41,501	33,740	17,715	125,840
POLLOCK	129	30	8,685		8,844
REDFISH / OCEAN PERCH		5,500	5,200		10,700
SCALLOP, SEA	48,146	27,527	23,902	5,931	105,506
SCALLOPS/SHELLS		400			400
SCUP / PORGY	200				200
SHARK, PORBEAGLE			150		150
SKATE UNCLASSIFIED	279,340	93,455	79,730	39,625	492,150
SKATE WINGS UNCLASSIFIED	78,301	68,375	48,586	37,050	232,312
SQUID / ILLEX		280			280
SQUID / LOLIGO			50		50
STARFISH	20,200				20,200
WINTER SKATE					
WINTER SKATE WINGS	3,850	4,050	1,285	6,875	16,060
WOLFFISH / OCEAN CATFISH	10		75		85
Grand Total	4,485,221	3,813,124	2,808,004	404,996	11,511,345

Table 2 - Estimated revenues on 307 trips identified as CAII Yellowtail Flounder SAP Trips

SPPNAME	Month Landed				Total
	June	July	August	September	
BARNDOR SKATE					
BLACK SEA BASS	2,299		216		2,515
BLUEFISH			20		20
CLEARNOSE SKATE WINGS					
COD	25,488	9,264	4,969	33	39,754
CUSK			7		7
FLOUNDER, AMERICAN PLAICE /DAB	77,279	24,130	12,865	2,747	117,022
FLOUNDER, WINDOWPANE	16	27	13		56
FLOUNDER, SPECIES NOT SPECIFIED		4,305			4,305
FLOUNDER, SUMMER / FLUKE	4,054	4,486	9,258	3,318	21,116
FLOUNDER, WINTER / BLACKBACK	181,326	92,307	171,116	50,045	494,794
FLOUNDER, WITCH / GRAY SOLE	131,876	79,836	51,100	362	263,173
FLOUNDER, YELLOWTAIL	1,036,282	988,763	1,233,707	197,057	3,455,809
HADDOCK	531,959	362,390	34,498	256	929,103
HAKE, MIX RED / WHITE, ROUND	7	1			8
HAKE, RED / LING	224	83			307
HAKE, SILVER / WHITING		37	1,504		1,541
HAKE, WHITE	38	5	3		46
HALIBUT, ATLANTIC	747				747
LITTLE SKATE					
LITTLE SKATE WINGS	1,313				1,313
LOBSTER, AMERICAN	73,060	298,813	194,411	78,771	645,054
MACKEREL, ATLANTIC		0			0
MONK LIVERS	1,704		972	1,234	3,911
MONK TAILS	71,059	62,458	59,182	41,603	234,302
MONKFISH / ANGLERFISH / GOOSEFISH	49,268	61,112	56,036	36,083	202,500
POLLOCK	46	24	6,948		7,018
REDFISH / OCEAN PERCH		1,439	1,269		2,708
SCALLOP, SEA	218,388	121,909	130,897	30,729	501,923
SCALLOPS/SHELLS					
SCUP / PORGY	126				126
SHARK, PORBEAGLE			90		90
SKATE UNCLASSIFIED	93,660	29,292	26,596	11,219	160,767
SKATE WINGS UNCLASSIFIED	27,695	21,597	15,672	8,107	73,070
SQUID / ILLEX		112			112
SQUID / LOLIGO			48		48
STARFISH					
WINTER SKATE					
WINTER SKATE WINGS	1,674	1,620	503	2,514	6,310
WOLFFISH / OCEAN CATFISH	5		68		72
Grand Total	2,529,592	2,164,011	2,011,967	464,077	7,169,647

Table 3 – Estimated revenues per trip on 307 trips identified as CAII Yellowtail Flounder SAP trips

Revenue	Number of Trips	Cumulative %
0	0	0%
\$5,000	6	2%
\$10,000	13	6%
\$15,000	43	20%
\$20,000	87	49%
\$25,000	57	67%
\$30,000	36	79%
\$35,000	26	87%
\$40,000	12	91%
\$50,000	16	96%
More	11	100%

Table 4 – Estimated revenues per day absent on 307 trips identified as CAII Yellowtail Flounder SAP trips

Revenue per Day Absent	Frequency	Cumulative %
\$0	0	0%
\$500	4	1%
\$1,000	4	3%
\$1,500	11	6%
\$2,000	39	19%
\$2,500	65	40%
\$3,000	57	59%
\$3,500	37	71%
\$4,000	32	81%
\$4,500	13	85%
\$5,000	10	89%
More	35	100%

Discards

Observed trips taken in the SAP in 2004 were examined to determine species caught and discards. Thirty-one (out of 319, or 9.7 percent) trawl trips in the CAII Yellowtail Flounder SAP were observed. Species kept and discarded on those trips are shown in Table 2 and Table 3. Yellowtail flounder (600,805 lbs.), haddock (156,378 lbs.), sea scallops (88,634 lbs.), monkfish (68,417 lbs.), and winter skates (47,517 lbs.) were the top five kept species, by weight. The top discarded species were skates (704,205 lbs., all species), sea scallops (32,610 lbs.), yellowtail flounder (30,290 lbs.), and haddock (22,178 lbs.). The location of tows keeping or discarding yellowtail flounder are plotted in Figure 6.

The primary reason for yellowtail flounder discards on observed trips was that the fish were smaller than the regulatory minimum size (21,289 lbs., or 70 percent of observed discards). Vessels that had filled their quota discarded another 3,409 lbs. on observed trips, while 4,081 lbs. were discarded due to market conditions (Table 4). Average discard/kept ratios for each month are shown in Table 5.

The actual observed count of length frequencies for kept and discarded yellowtail flounder are shown in Figure 7. Using the ratio of each tow's live weight to sample weight, these counts were expanded to determine the length frequencies on observed trips (Figure 8). Most discarded fish were between 28 and 35 cm. Observers also report the codend mesh size (based on a random sample of ten meshes) and construction (diamond or square). The length of discards in diamond mesh between 160-169 cm is shown in Figure 9 and Figure 10, while square mesh discards are shown in Figure 12 and Figure 13.

Table 2 – Top twenty species kept on observed CAII yellowtail flounder SAP trips, FY 2004 (NMFS OBDBS, live weight)

SpeciesName	MONTHSAIL				
	05	06	07	08	Grand
ANGLER	1,037	30,656	13,669	23,054	68,417
BLUEFISH				134	134
COD	859	3,838	188	163	5,048
FLOUNDER, AM. PLAICE	694	4,012	2,668	319	7,693
FLOUNDER, FOURSPOT				84	84
FLOUNDER, SAND-DAB			28		28
FLOUNDER, SUMMER	14	148	319	3,521	4,002
FLOUNDER, WINTER	2,805	12,690	6,959	13,034	35,488
FLOUNDER, WITCH	623	8,469	5,304	1,893	16,289
FLOUNDER, YELLOWTAIL	18,865	168,775	216,273	196,892	600,805
FLOUNDERS (NK)		100	15		115
HADDOCK	12,813	135,756	6,324	1,486	156,378
HAKE, RED		20		7	27
HAKE, SILVER		30	33	148	211
HAKE, WHITE		59	11	12	82
HALIBUT, ATLANTIC		7	17		24
LOBSTER	10	5,013	4,598	6,814	16,435
POLLOCK		18			18
SCALLOP, SEA	1,595	33,279	27,804	25,956	88,634
SKATE, LITTLE		1,072			1,072
SKATE, THORNY			79		79
SKATE, WINTER(BIG)		20,883	10,224	16,410	47,517
SKATES		2,785	16,769	24,123	43,678
SQUID (ILLEX)		4	60		64
SQUIDS (NS)				20	20
Grand Total	39,315	427,614	311,342	314,070	1,092,341

Table 3 – Top twenty discarded species on observed CAII yellowtail flounder SAP trips, FY 2004 (NMFS OBDBS, live weight)

SpeciesName	MONTHS				Total
	05	06	07	08	
ANGLER	277	3,724	1,390	2,241	7,632
COD	773	1,105	39	13	1,930
CRAB, JONAH	21	499	985	1,619	3,124
FLOUNDER, FOURSPOT	89	2,224	1,702	2,103	6,117
FLOUNDER, SAND-DAB	12	369	600	590	1,571
FLOUNDER, SUMMER	3	104	33	1,136	1,276
FLOUNDER, WINTER	2	750	1	755	1,508
FLOUNDER, YELLOWTAIL	267	8,755	8,544	12,724	30,290
HADDOCK	1,049	18,504	1,095	1,530	22,178
HAKE, RED	77	1,087	3,451	2,445	7,060
HAKE, SILVER	15	2,316	1,633	956	4,920
HAKE, WHITE	9	1,418	40	151	1,617
LOBSTER	61	3,030	579	814	4,483
POUT, OCEAN	340	2,498	207	161	3,207
SCALLOP, SEA		18,943	3,332	10,335	32,610
SCULPINS		4,448	1,020		5,468
SEA RAVEN	1,235	10,538	2,463	843	15,079
SEA WEEDS, NK		1,916	1,262	3,456	6,634
SKATE, BARNDOR	1,698	9,593	3,313	3,082	17,686
SKATE, LITTLE	9,500	106,297	79,797	28,431	224,025
SKATE, WINTER(BIG)	17,700	21,169	55,916	38,185	132,970
SKATES	2,300	86,790	48,762	191,672	329,524
SQUID (ILLEX)		199	1,080	836	2,116
SQUIDS (NS)				820	820
STARFISH	2,230	11,656	1,351	7,287	22,525
Grand Total	37,659	317,933	218,593	312,183	886,367

Table 4 - CAII Yellowtail Flounder SAP trips – yellowtail flounder disposition

MONTH	Discarded								Total	Kept		Total	Grand Total
	No Market	No Market, Small	No Market	Small	Quota	Poor quality	Poor quality, gear damage	Retaining only certain size		Kept	Kept, transferred to other vessel		
	06	2,700	620		2,127			3					
07	136	216	6	6,355	1,218	20		350	8,301	240,258		240,258	248,559
08	96			12,515	2,100	136		10	14,857	221,152	750	221,902	236,759
09		313		292	91	5		982	1,683	20,551		20,551	22,234
Grand	2,932	1,149	6	21,289	3,409	161	3	1,342	30,290	600,055	750	600,805	631,095

Table 5 – Descriptive statistics for CAII yellowtail flounder SAP observed trips, discard/kept ratio of yellowtail flounder

<i>D/K</i>	<i>June</i>	<i>July</i>	<i>August</i>	<i>September</i>	<i>Overall</i>
Mean	0.165614	0.036199	0.074953	0.085577	0.088208
Standard Error	0.146722	0.008999	0.019468	0.049068	0.042455
Median	0.017438	0.020778	0.053945	0.085577	0.036509
Standard Deviation	0.440165	0.029845	0.058404	0.069393	0.236379
Sample Variance	0.193746	0.000891	0.003411	0.004815	0.055875
Minimum	0.00138	0.008952	0.029219	0.036509	0.00138
Maximum	1.33871	0.096896	0.21512	0.134646	1.33871
Sum	1.49053	0.398188	0.674575	0.171155	2.734449
Count	9	11	9	2	31

Table 5 – Monthly sum(discards)/sum(kept) for yellowtail flounder on observed trips in the CAII YTF SAP, FY 2004 (August and September combined because there were only two observed trips in September)

<i>June</i>	<i>July</i>	<i>Aug.-Sep</i>	<i>Total</i>
0.0462	0.0346	0.0682	0.0504

Figure 6 – Location of observed tows keeping (left) or discarding (right) yellowtail flounder in the CAII yellowtail flounder SAP, FY 2004

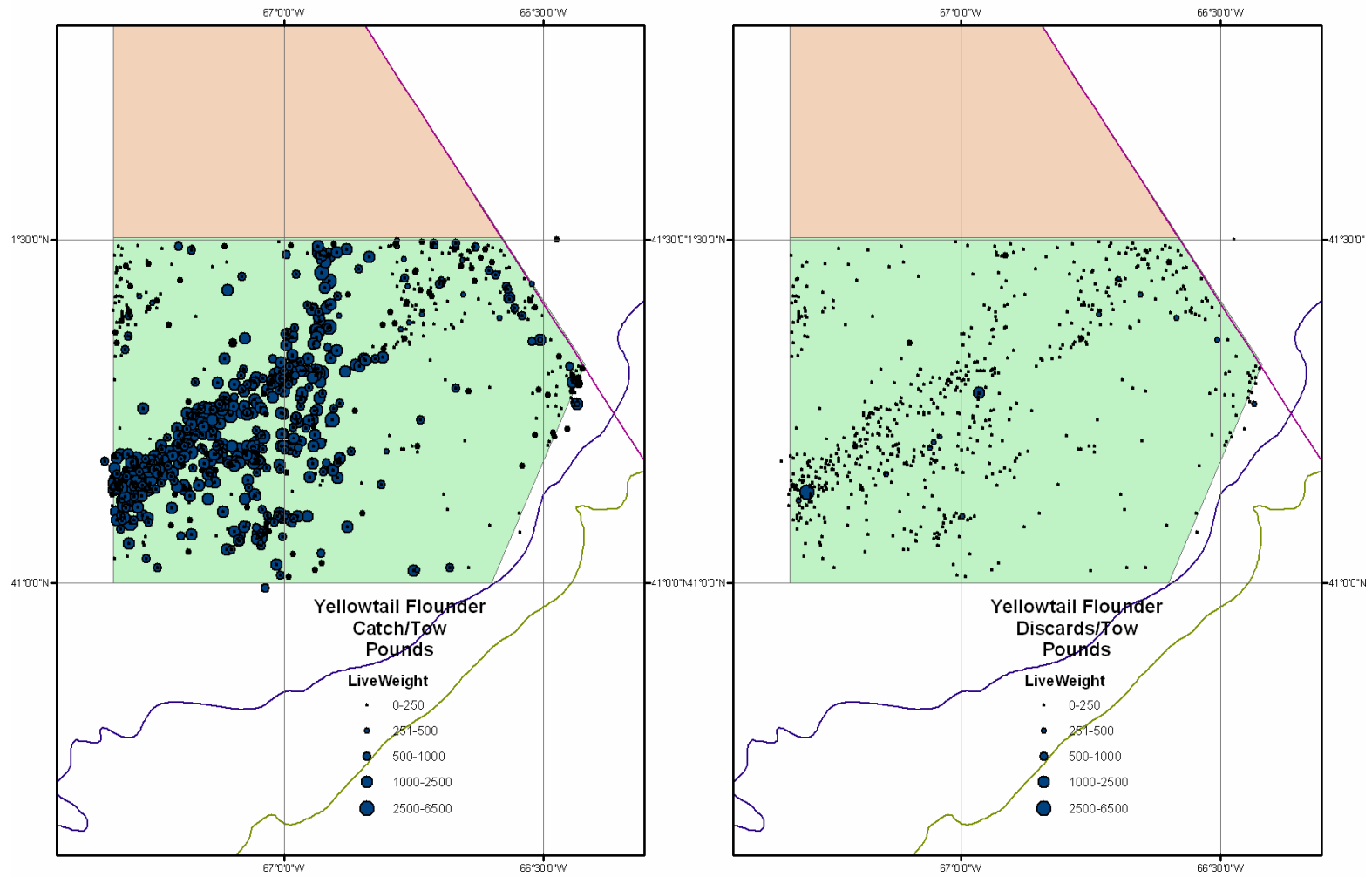


Figure 7 – Observed lengths of yellowtail flounder, CAII Yellowtail Flounder SAP, FY 2004

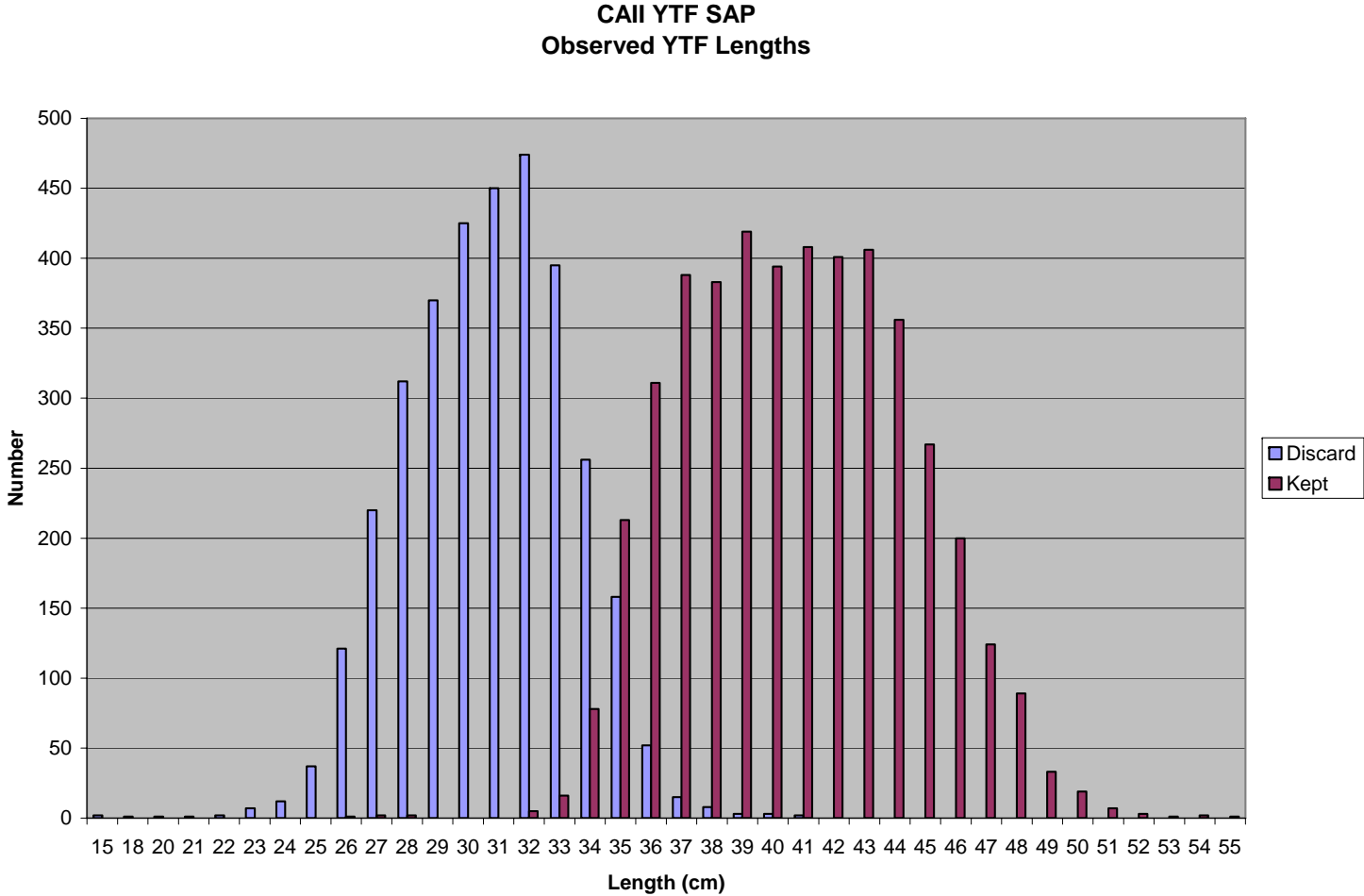


Figure 8 – Expanded number at length (cm) of kept and discarded yellowtail flounder on observed trips in FY 2004

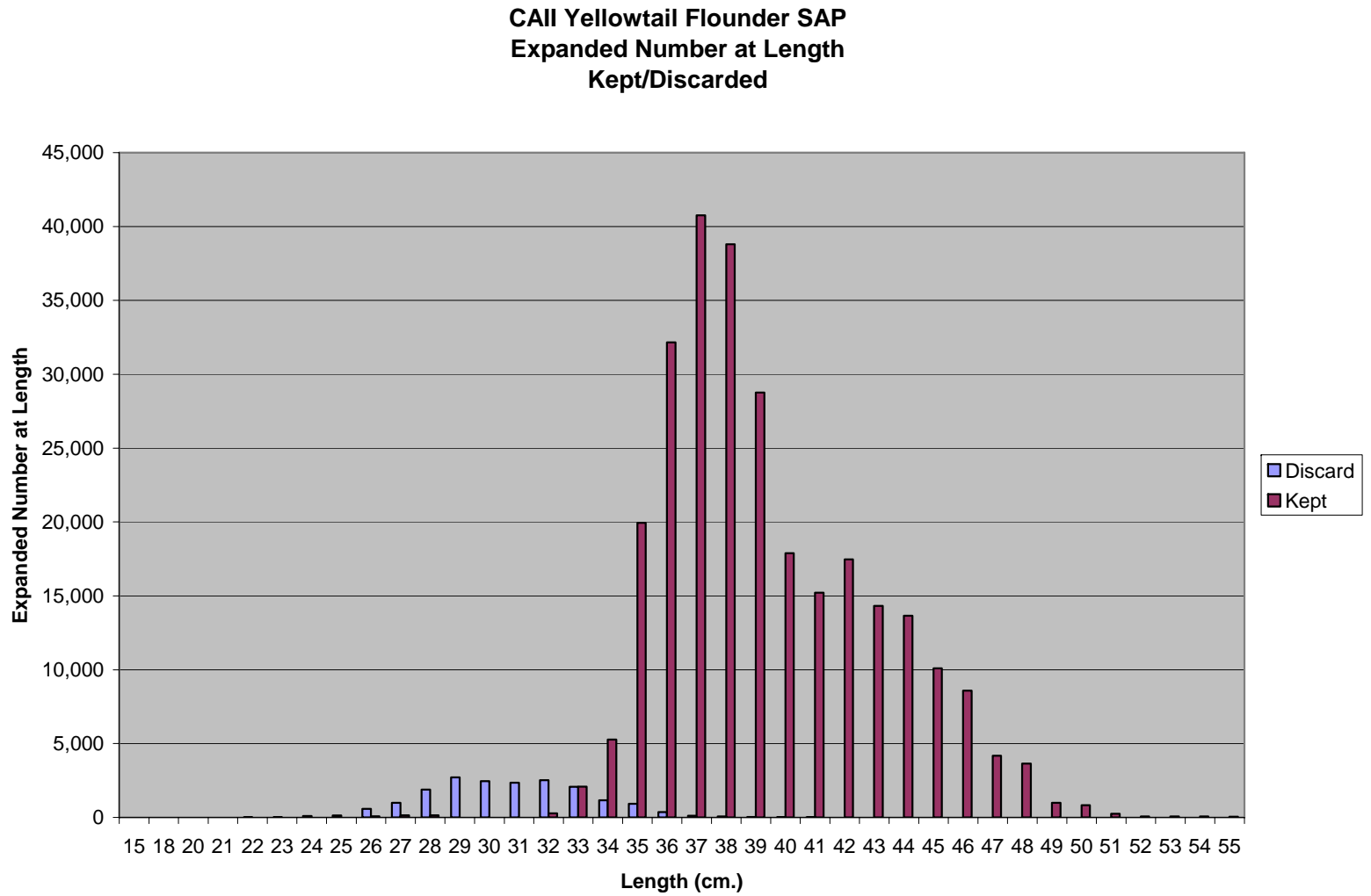


Figure 9 – Observed lengths, yellowtail flounder, CAII Yellowtail Flounder SAP, FY 2004: diamond mesh, 160-169 cm.

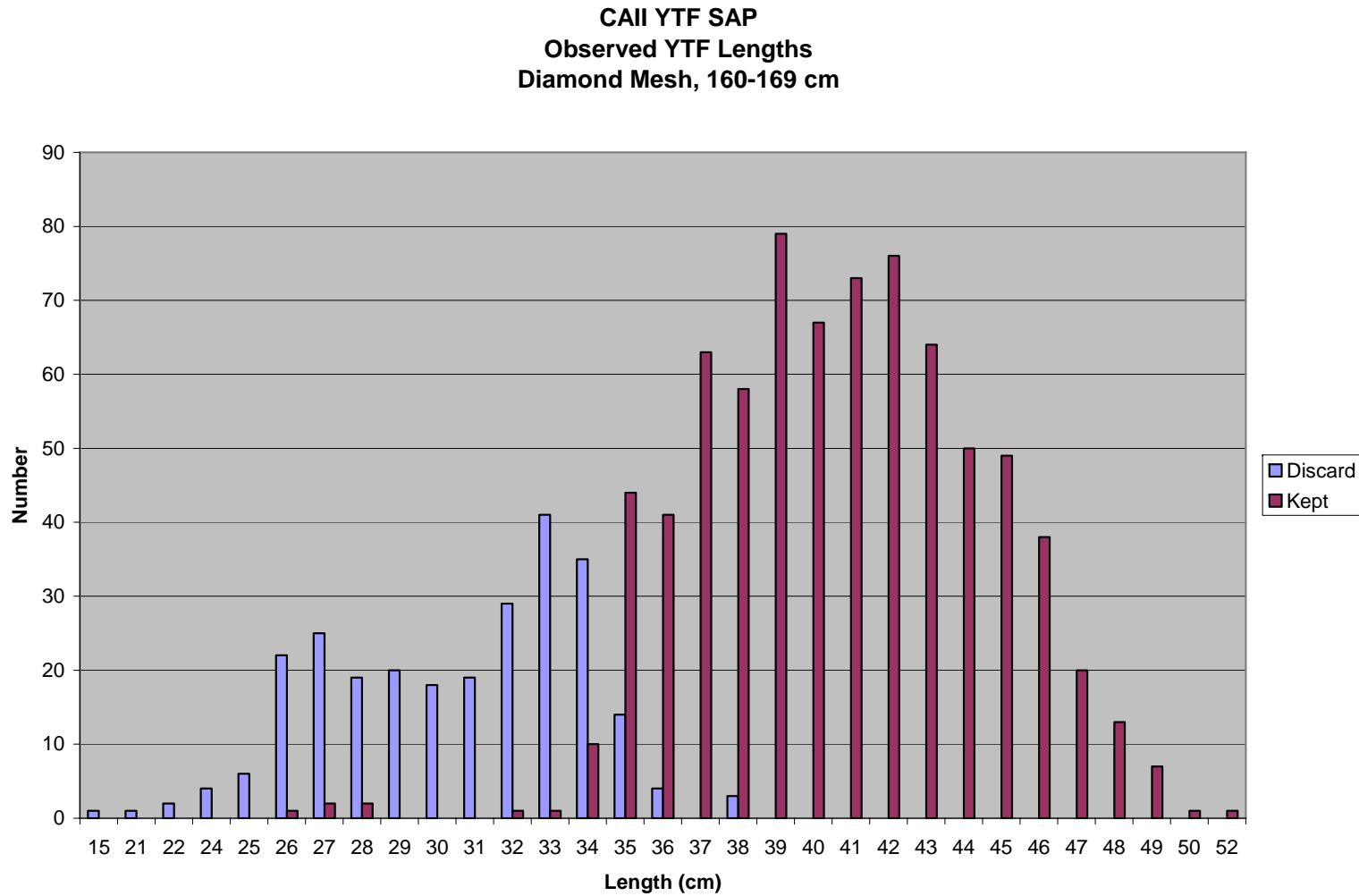


Figure 10 – Expanded number at length, diamond mesh (160-169 cm)

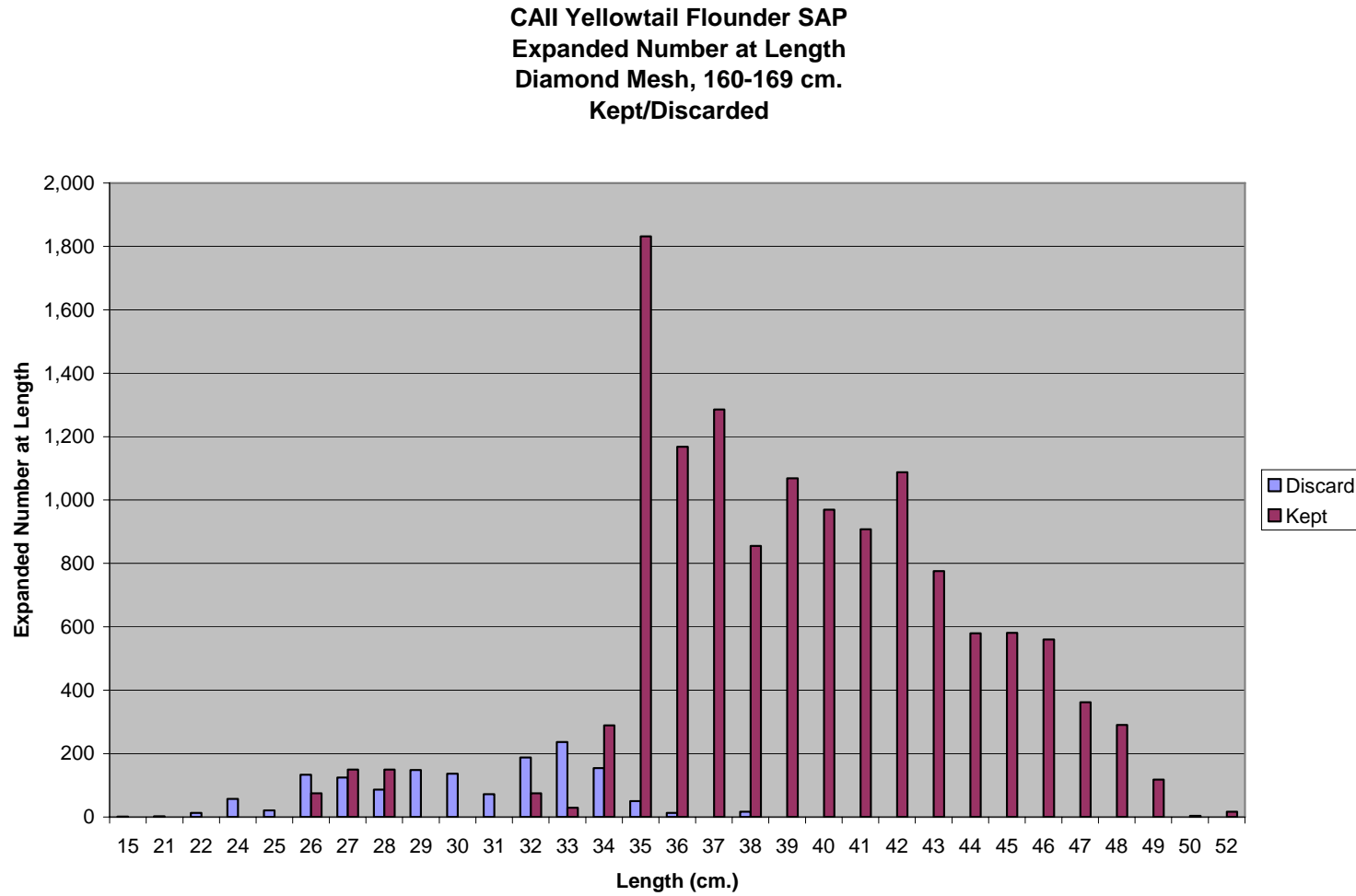


Figure 11 – Expanded number at length (percent of total), diamond mesh (160-169 cm.)

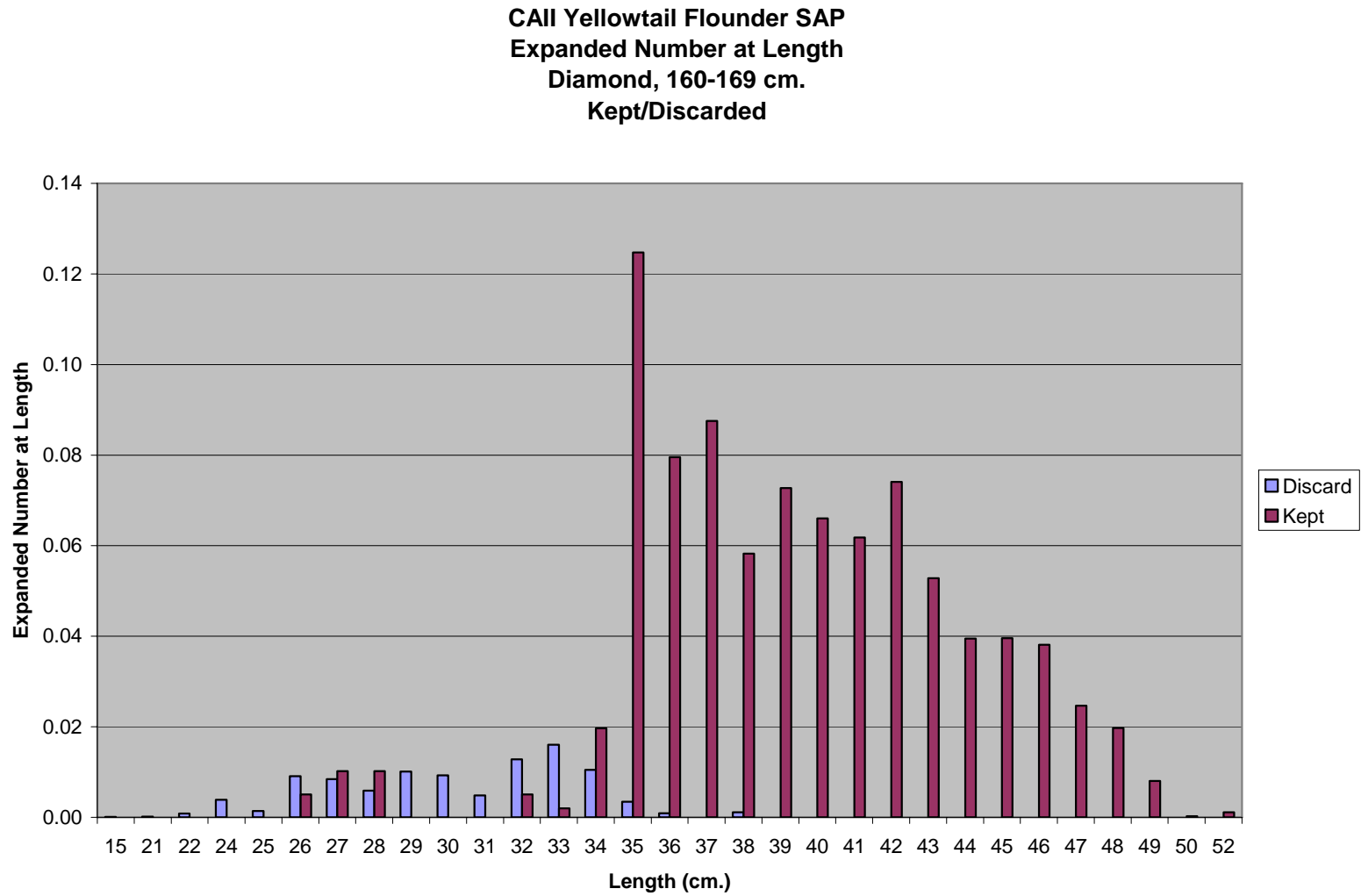


Figure 12 – Observed lengths, yellowtail flounder, CAII Yellowtail Flounder SAP, FY 2004: square mesh, 160-169 cm.

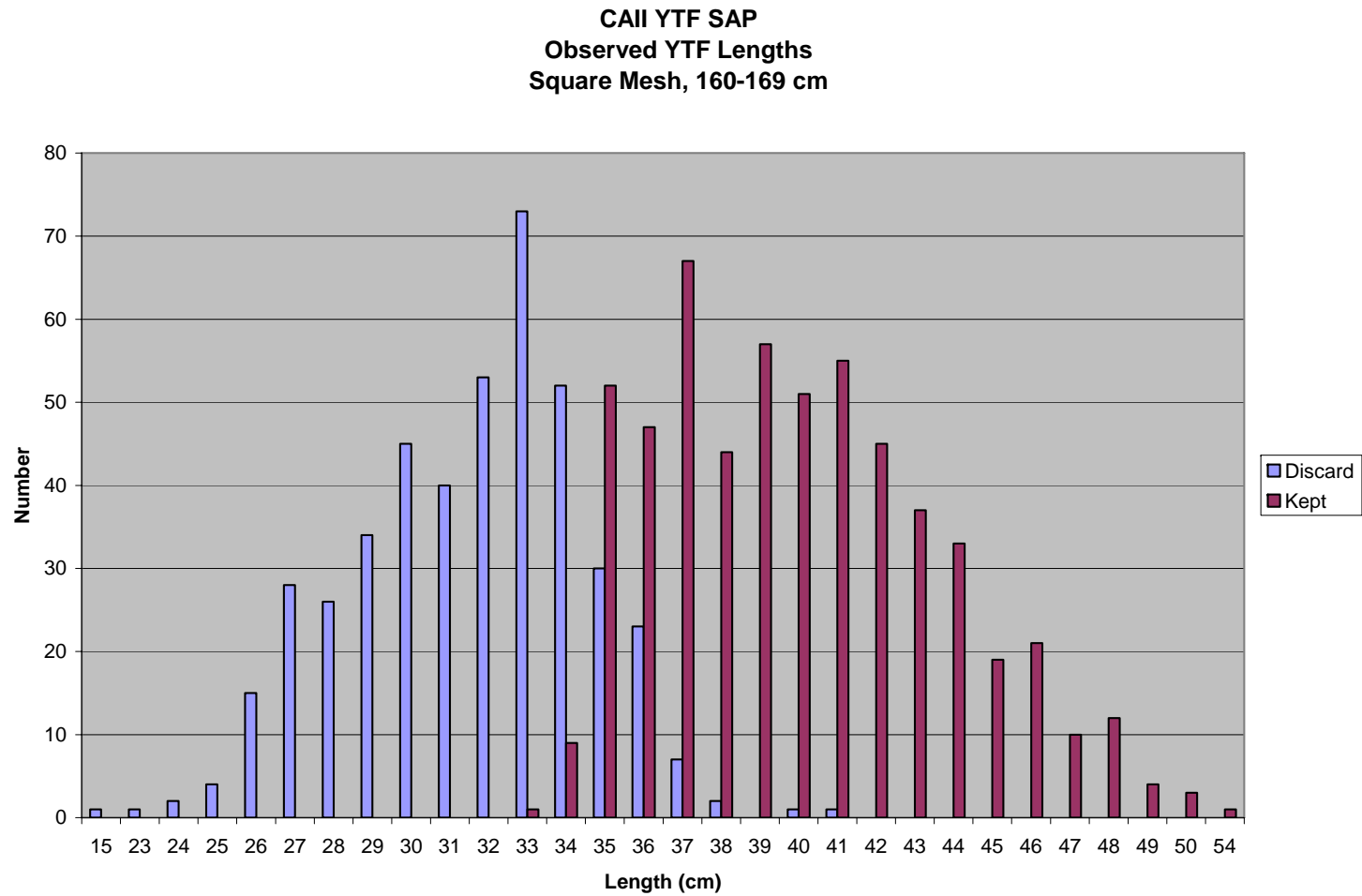


Figure 13 – Expanded number at length, square mesh (160-169 cm.) (numbers of fish)

**CAII Yellowtail Flounder SAP
Expanded Number at Length
Square Mesh, 160-169 cm.
Kept/Discarded**

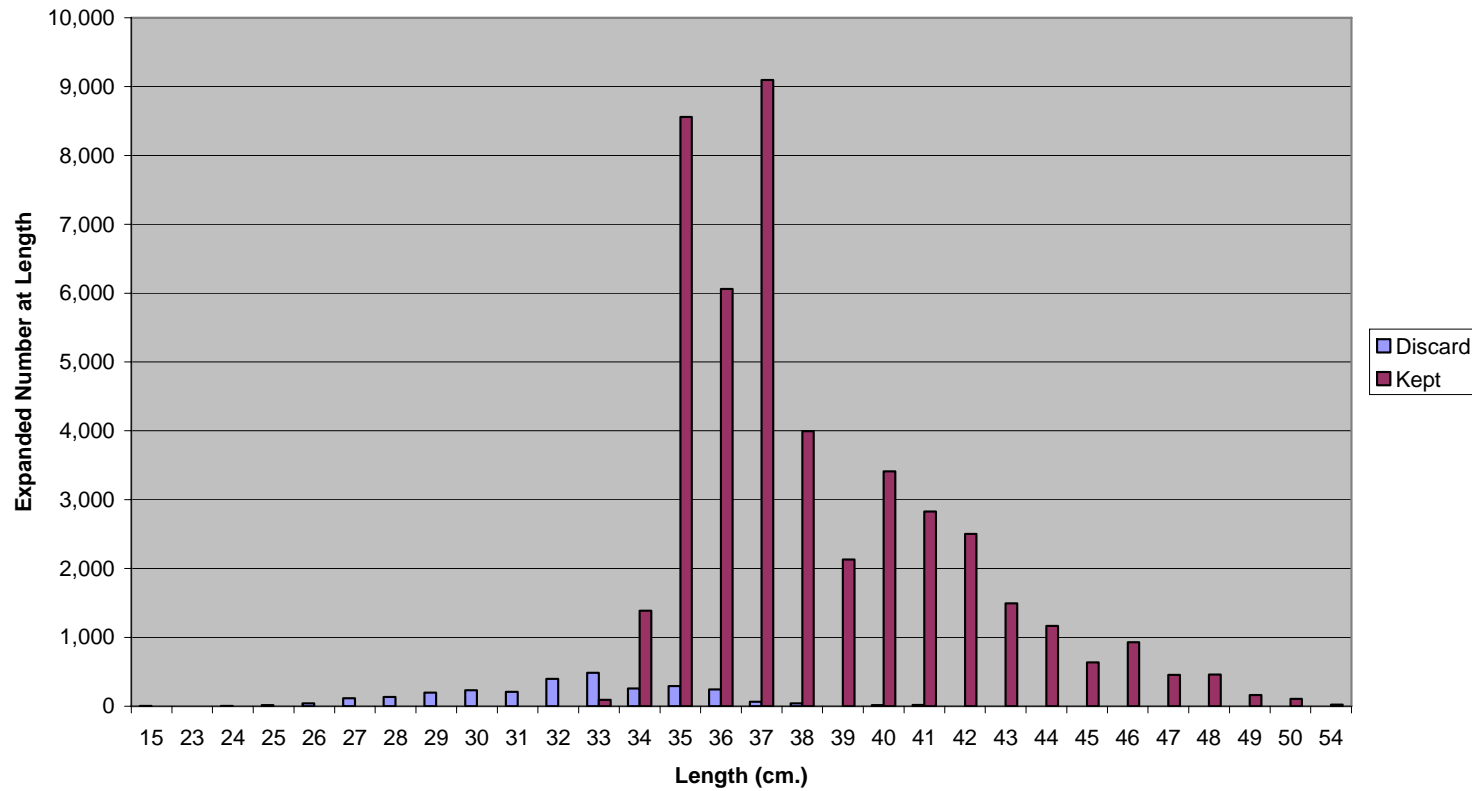
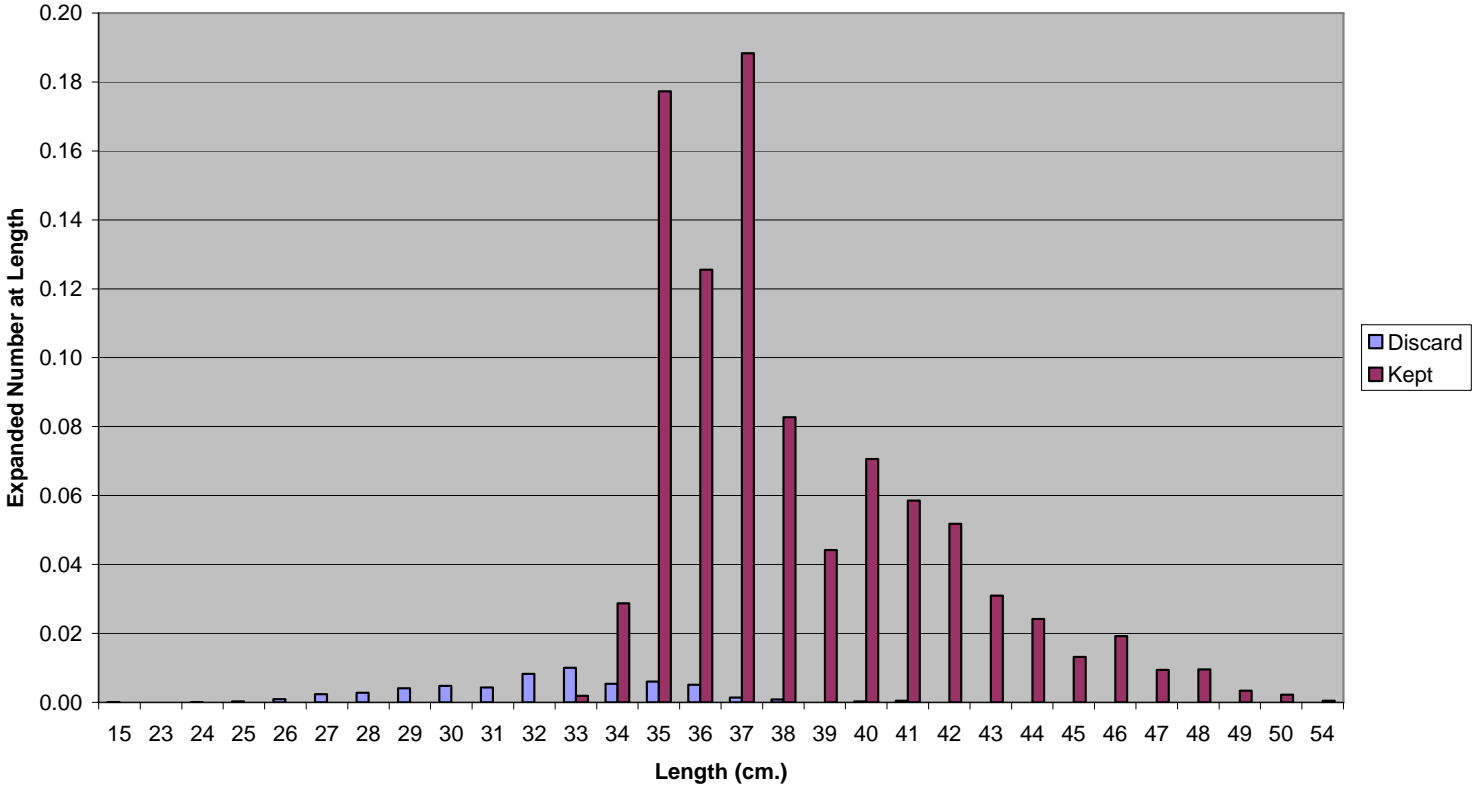


Figure 14 – Expanded number at length (percent of total), square mesh (160-169 cm.) (percent of total)

CAII Yellowtail Flounder SAP
 Expanded Number at Length
 Square Mesh, 160-169 cm.
 Kept/Discarded



Estimating Landings and Revenues for the CAII Yellowtail Flounder SAP in FY 2004

Three databases were used in order to estimate landings and revenues for the CAII Yellowtail Flounder SAP: the VTR, dealer, and DAS databases. Because there is no single field that directly links these databases, a logical link was created. The DAS database codes individual trips into the CAII Yellowtail SAP. By comparing the permit number, sailing, and landing date in this database with the same information in the VTR or dealer database, trips can be matched with reasonable certainty. In order to match the trips, sailing and landing dates were assumed to be for the same trip if they were within one day (either direction) to account for slight differences in reported sailing or landing times. This approach proved more successful when matching the VTR database (97 percent (307 of 316) of trips could be matched) than with the dealer database. Since this was the case, the identified trips in the dealer database were used to determine an average price for each landing date, species, and port. These were then applied to the landings from the VTR database to get an estimate of revenues. For the few VTR trips that could not be matched with a specific day/port/species price, the average daily price was used (without respect to port). In a small number of instances an average monthly price was used.

While there are a number of possible biases introduced by this approach, it should give a reasonably accurate picture of the returns from the SAP. Some possible errors include:

- The landings and revenues identified in the dealer database may not be representative of the overall SAP;
- Landings as reported by VTR may differ from the actual amounts sold;
- Average prices may not accurately represent the prices received, particularly for those few trips that could not be matched with a price for a day and port
- Since the VTR data does not show market category, it is not possible to use different prices for different products. While as a result the average price may present an adequate picture of overall revenues, it may distort trip level information.
- The landings and revenues are based on 97 percent of the trips.