

Alaska Fisheries Science Center  
Resource Ecology & Fisheries Management  
7600 Sand Point Way NE, Bldg. 4  
Seattle, WA 98115  
May 16, 2012

**Cruise Report**  
**F/T Seafisher Cruise**  
**SF201201 (March 27th – April 17<sup>th</sup>, 2012)**

**Project Title: Atka Mackerel Tag Recovery Seguam Pass, Tanaga Pass and Petrel Bank, Aleutian Islands Alaska**

Field Party Chief: Susanne McDermott  
Alaska Fisheries Science Center  
National Marine Fisheries Service  
7600 Sand Point Way NE, Bldg. 4  
Seattle, WA 98115-0070

**Scientific Purpose**

The objective of our tag release-recovery studies is to determine the efficacy of trawl exclusion zones as a management tool to maintain prey abundance/availability for Steller sea lions at local scales. Trawl exclusion zones were established around sea lion rookeries as a precautionary measure to protect critical sea lion habitat, including local populations of prey such as Atka mackerel. Localized fishing may affect Atka mackerel abundance and distribution near sea lion rookeries. Tagging experiments are being used to estimate abundance and movement between areas open and closed to the Atka mackerel fishery. In 2011, NMFS closed area 543 as a precautionary measure to prevent impacts of fishing on Steller Sea lion prey fields. This study was originally intended to examine areas of Atka mackerel abundance in area 543 but was shifted to local population centers in areas open to the fishery in NMFS area 542 in order to avoid any impacts of tag recovery on the local Atka mackerel prey field in the areas closed to commercial fishing.

From 1999-2006 approximately 80,000 tagged fish were released during NMFS chartered tag release cruises near Seguam Pass, Tanaga Pass, Amchitka Island, and Kiska Island. In May to June of 2011 a cooperative venture between the North Pacific Fisheries Foundation and NMFS released approximately 8,500 fish near the Seguam Pass area, 9,000 fish at Tanaga Pass, and 10,000 at Petrel Bank. Recovery of tagged fish is supplied by the tag recovery cruise and augmented by the fishery in the open areas outside the trawl exclusion zones. Even though tags were released inside the closed areas, during the current recovery cruises in 2011 and 2012 recoveries were not conducted inside the trawl exclusion zones to minimize potential negative impacts of Atka mackerel removal to the Steller sea lion prey fields inside the closed areas. Since 2006 NMFS has been working cooperatively with the North Pacific Fisheries Foundation

to conduct field work under a Memorandum of Agreement as a cooperative venture. Our tagging studies to date have focused on Atka mackerel movement and abundance in the presence of a fishery. In addition to the data gathered from the tag and release experiment, biological data such as stomachs, gonad samples, age structures, sexed length frequencies, genetics and catch composition are also collected for each haul during the tag recovery charter. The second objective of this study was to use catch composition data to estimate relative abundance indexes (CPUEs) for all major fish and invertebrate species present in the study areas. The third objective of this study was to characterize Atka mackerel habitat by conducting underwater camera tows at each area where fish were recaptured. In 2011 and 2012 we conducted underwater camera tows in the areas of tag release and recovery to define bottom characteristics of areas with high abundance of Atka mackerel and also to develop methods for estimating indices of abundance of Atka mackerel and other SSL prey species with non-extractive methods such as camera tows.

Additionally, we also had the opportunity to study the prey distribution of a Steller sea lion adult female that was tagged in November 2011 by the AFSC National Marine Mammal Laboratory. We are able to conduct a hydroacoustic transect, make species composition and camera tows in the area where the sea lion was feeding (South Petrel bank). This was a unique opportunity to obtain prey composition data during the same time and in the same location where this tagged Sea lion female was diving.

### **Personnel SF201101**

<u>Name</u>	<u>Sex/Natl.</u>	<u>Position</u>	<u>Organization</u>
1. S.McDermott	F/USA	Field Party Chief	AFSC
2. P. Munro	M/USA	Watch Leader	AFSC
3. Tom Holland	M/USA	Fish Biologist	NPFF
4. Joe Colling	M/USA	Fish Biologist	NPFF
5. Mike Levine	M/USA	Fish Biologist	NPFF
6. Ellen Seitz	F/USA	Fish Biologist	NPFF
7. Phil Dang	M/USA	Scientific Liaison	NPFF

AFSC = Alaska Fisheries Science Center

NPFF = North Pacific Fisheries Foundation

### **Cruise Schedule and Activities SF201201**

27 March	Board vessel @ 0900, Dutch Harbor, AK
28	Transit to Seguam Pass @ 10 pm
29-31	Recovery tows, Seguam Pass
1 April	Transit to Petrel Bank
1-2	Recovery tows, Petrel Bank
2	Sea lion prey hydroacoustic transects South Petrel Bank
3-4	Recovery tows, Petrel Bank
4	Recovery tows, South Petrel Bank
4-5	Recovery tows at Petrel Bank
6	Offload vessel, Adak Island, Transit to Tanaga
7-10	Recovery tows, Tanaga Pass
11	Half offload at Adak, Transit to Seguam Pass
12-14	Recovery tows Seguam Pass
15	Transit to Dutch Harbor
16	Offload vessel and debark @ 1900
17	Return to Seattle

## **Summary of Results**

During May/June 2011 NMFS released approximately 8,500 fish at Seguam Pass, 9,000 at Tanaga Island and 10,000 at Petrel Bank. The tag recovery effort in March/April 2012 was the second Tag recovery cruise of this study, but the first one to be conducted during the winter and spring months. The tag recovery was only conducted in areas open to the fishery, whereas tags were released in areas open and closed to the fishery. During the 2012 tag recovery cruise we examined 1,534 mt of Atka mackerel for tags. Of these we caught 782 mt at Seguam Pass, 346 mt at Tanaga Pass and 400 mt at Petrel Bank. Figures 1-3 show locations of tag release and recovery tows. Table 1 shows the number of tows, the total Atka mackerel catch, other species catch and grand total catch in each study area. The total catch of bycatch (species other than Atka mackerel) was 239 mt for a total of all species caught of 1,769 mt.

### ***Length-frequency distribution***

Approximately 100 fish were randomly collected, sexed and lengthed per haul in all study areas for a total of 4698 lengths collected (Table 2). Figure 4 illustrates the percent length frequency distributions for Atka mackerel in each study area by sex. Figure 5 summarizes the percent length frequencies for all areas and compares them with the recovery cruise in August 2011. In contrast to the tag recovery cruise in August 2011 where males dominated the population, females dominated the population at Seguam pass and both sexes were represented evenly at Petrel bank and Tanaga pass. The fish at Seguam pass were the largest with a mean length of 40.7 cm, in Tanaga fish were smaller with an average length of 36.8 cm, and fish were at Petrel bank were the smallest with an average of 31.2 cm, an almost 10 cm difference from Seguam pass.

### ***Wild tag recoveries***

A total of 49 wild tags were recovered, a substantial decrease from the 110 wild tags recovered during the August 2011 cruise. Tag recoveries are summarized by area and strata in Table 5. 'Wild tagged' fish are fish that have been tagged and released during a tag release cruise as opposed to tagged fish that were seeded into the catch already on board during the tag recovery cruise to obtain the tag reporting rate (see below).

### ***Tag reporting rate***

Reporting rate is defined as the proportion of tagged fish caught by the vessel that are actually found and reported. To determine tag reporting rate, scientists tagged 10 Atka mackerel per haul and distributed them randomly throughout the catch. Seeded tagged fish appeared identical to wild tagged fish and could only be distinguished by their tag number. This was done for all hauls during the cruise. These seeded tagged fish were recovered in the factory by the vessel and scientific crew. The tag reporting rate is summarized in Table 5. Tag reporting rates were approximately 97.5% for single tagged fish and 100% for double tagged fish.

### ***Biological samples***

Table 2 summarizes the biological samples taken from Atka mackerel during the tag recovery cruise. Gonads, stomachs and otoliths were randomly collected from 10 fish (5 females and 5 males) from almost every tow for a total of 420 biological samples collected. During this cruise we recorded males in spawning color separately to identify spawning habitat.

### ***Species Catch Composition***

Although the focus of the tag recovery cruise was to catch Atka mackerel, 89 other species were caught during the hauls in each of the study areas (Table 6). The most abundant bycatch species were Pacific Ocean perch (97.7 mt) Northern rockfish (51.55 mt), and Pacific cod (45.07 mt). 98% of the catch was distributed among the five most abundant species in the catch. The total catch of all species is summarized in Table 6. There were 72 species identified in the catches of which the weight was less than one mt.

### ***Underwater Camera tows***

During this cruise we conducted 12 underwater camera tows to examine bottom habitat, observe nest guarding, and establish methods for estimating relative fish abundance with non-extractive methods. The camera used was a towed single analog video camera with 2 lights (Figures 5 and 6). The camera had direct feed through a cable and the camera pictures could be directly observed from the vessel.

We attempted to tow the camera in approximately the same locations where we conducted tag recovery tows with the nets. For the most part we were able to drift over the locations of the net tows either before or after the towing was conducted. We were able to conduct 5 camera tows at Seguam pass, 4 camera tows at Tanaga Island, and 3 camera tows at Petrel bank. Locations of the camera tows are illustrated in Figure 7.

### ***Steller Sea Lion =24 prey study***

During November 2011, the NMFS marine mammal laboratory tagged a female adult Steller sea lion with a satellite tag. The female was also branded with the brand '=24', hence for the purposes of this report we will refer to her under this name.

The female =24 had been transmitting location data since November 2011. She was located at Semisnochnoi Island and travelled to the southern part of Petrel bank at regular intervals presumable to feed. We took the opportunity during this recovery cruise, to run a hydroacoustic transect at the southern end of Petrel bank. We conducted 5 tows in areas where the sea lion was frequently observed and where we found fish signal during the transects. We also conducted 2 camera tows in the vicinity of one of the feeding 'hot spots' of =24. The location of the transect, bottom and camera tows are presented in Figure 8. The location of the bottom tows are also presented in Figure 3 circled in red.

It appeared that the Sea lion was diving consistently in 2 locations, one close to the canyon edge (haul 21) and one in the flat area to the south of the edge (haul 16). The species compositions of all hauls conducted are summarized in Table 7. The future analysis of the hydroacoustic data will give further insight of the size of the fish aggregations in this area.

We conducted 2 tows in the vicinity of the canyon: At the canyon edge we found mostly Pacific Ocean perch (78%) and sponges (15%) with a trace of Atka mackerel (2%). In the canyon itself we found a mix of adult walleye Pollock (59%) and Pacific Ocean Perch (31%).

We conducted 2 tows in the flat area to the south of the canyon: in Haul 16 we found mostly Northern rockfish (50%) and Pacific Cod (30%) and in haul 20 we found mostly northern rockfish (65%) and Atka mackerel (18%).

We also conducted a tow along the eastern edge of the shelf (haul 22) where we found mostly Atka mackerel (75%) and Pacific Cod (12%).

---

For further information, contact Dr. Patricia Livingston, Director, Resource Ecology and Fisheries Management Division, Alaska Fisheries Science Center, National Marine Fisheries Service, 7600 Sand Point Way NE, Building 4, Seattle, WA 98115-6349, Telephone: (206)526-4172

---

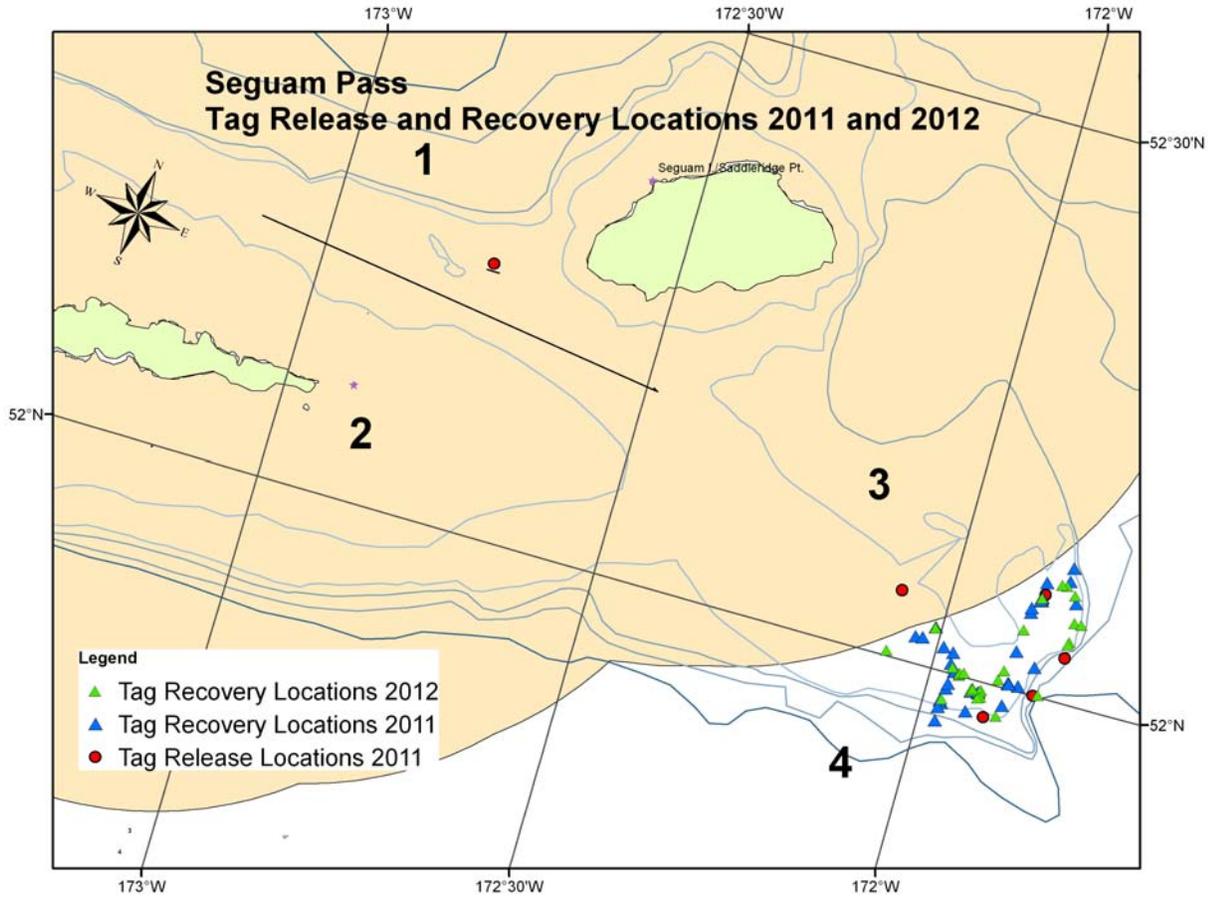


Figure 1. Tag release and recovery haul locations near Seguam Pass. Strata 1, 2 and 3 are inside the trawl exclusion zone and stratum 4 is outside the trawl exclusion zone. 13 tags were recovered at Seguam pass in 2012.

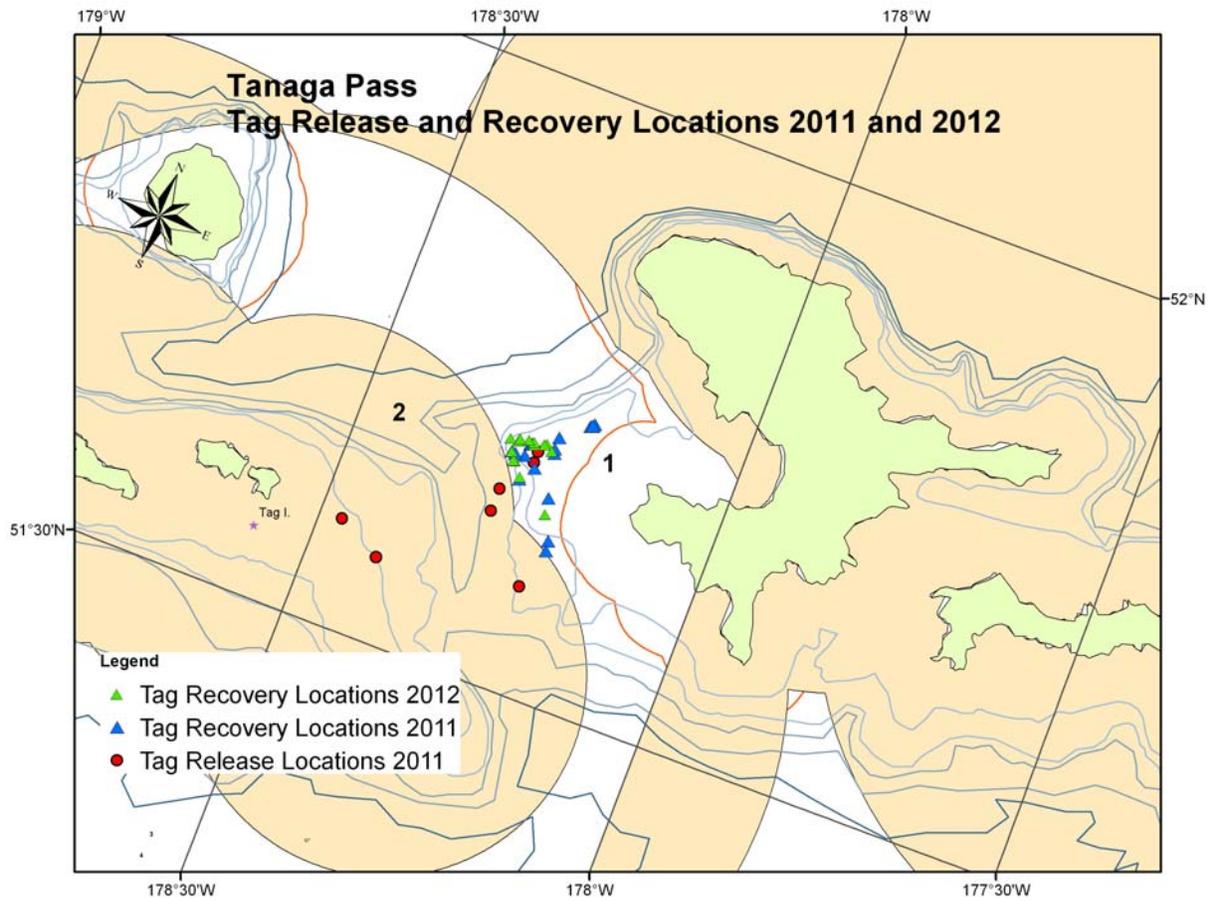


Figure 2. Tag release and recovery haul locations near Tanaga Island. Stratum 1 is outside the trawl exclusion zone, stratum 2 is inside the trawl exclusion zone. 25 tags were recovered in stratum 1 during the 2012 Atka mackerel tag recovery cruise.

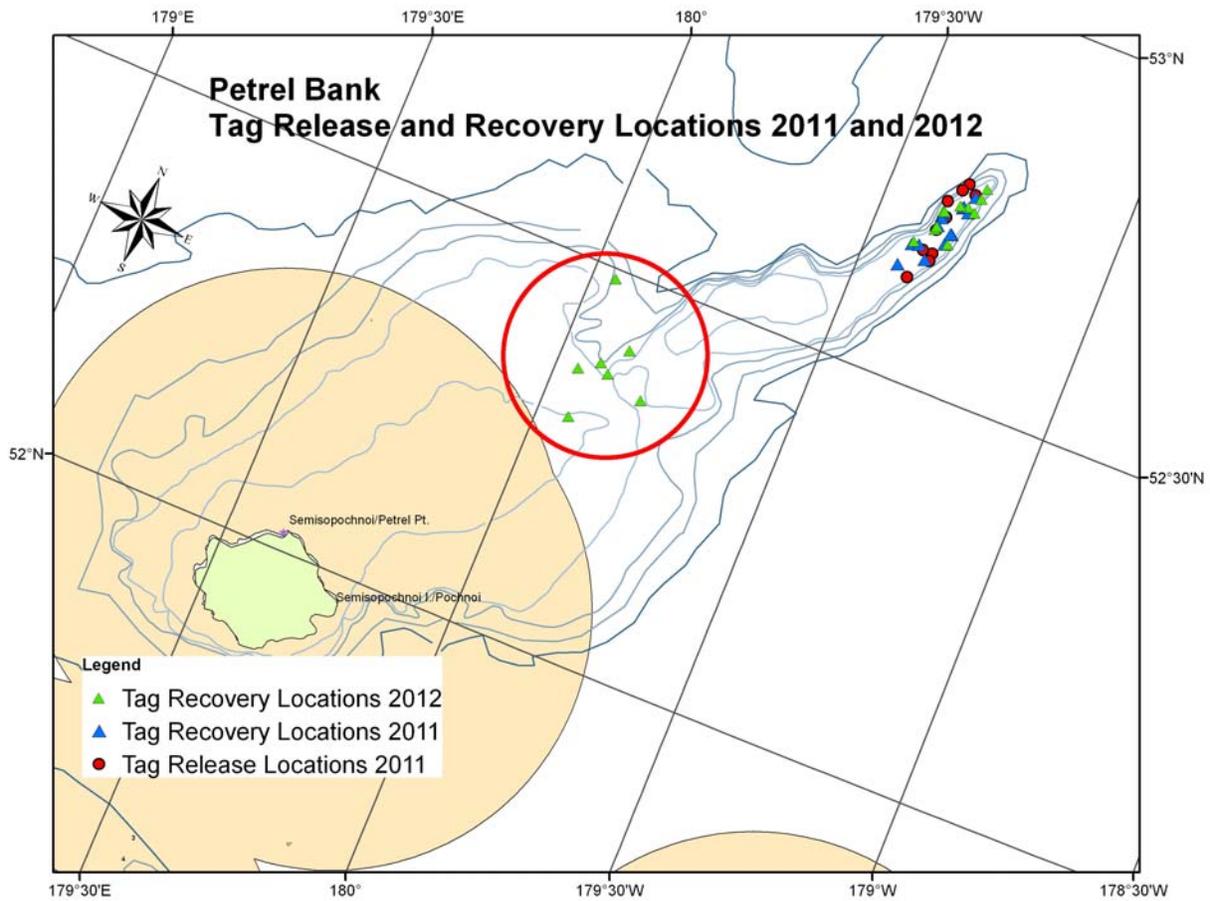


Figure 3. Tag release and recovery haul locations near Petrel Bank. 11 tags were recovered during the 2012 Atka mackerel tag recovery cruise. The hauls circled in red were the hauls conducted during the Steller sea lion prey study examining species composition at the dive locations for tagged Steller sea lion =24.

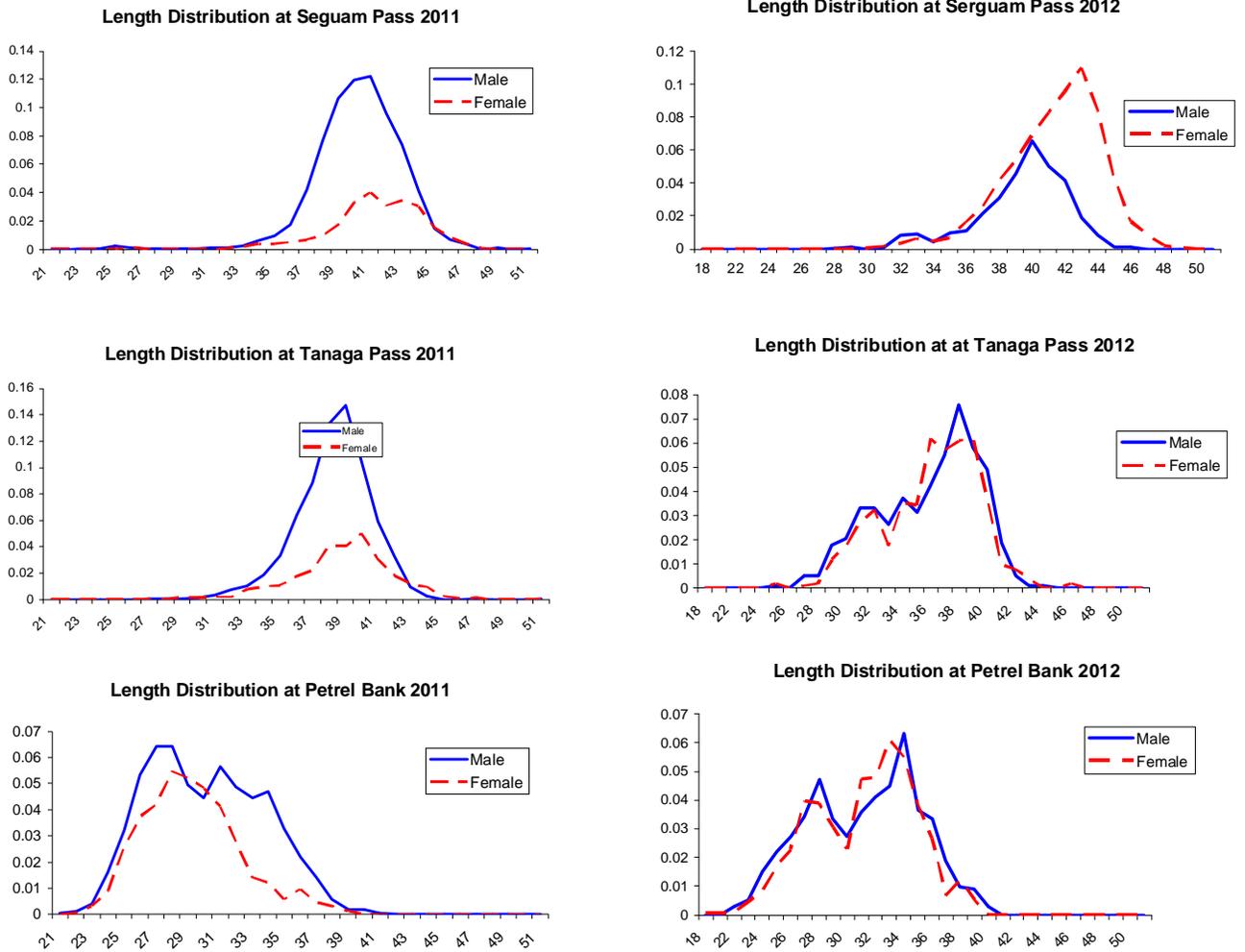
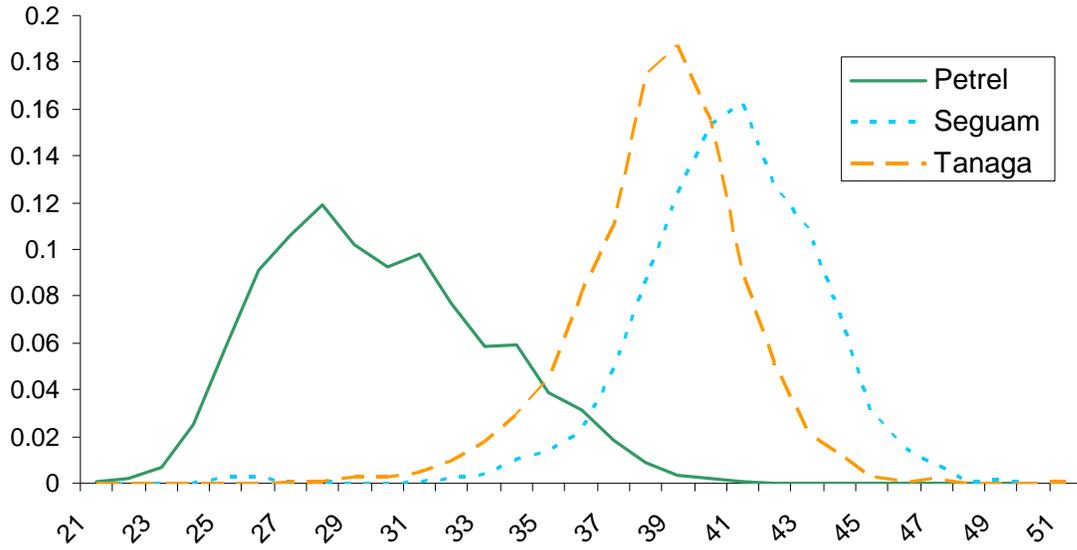


Figure 4: Length frequency distribution by sex in each study area and recovery year.

### Length Distribution in all study areas in 2011



### Length Distribution in all study areas in 2012

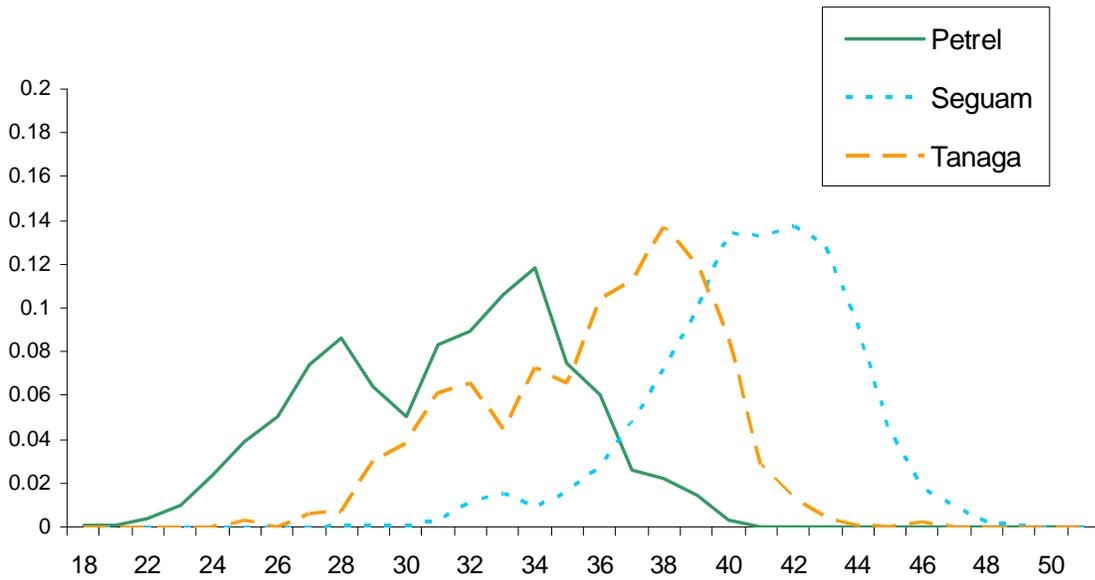


Figure 5: Length distribution both sexes combined for all three study areas in 2011 and 2012. Seguam Pass is in blue stippled, Tanaga pass in orange large stippled, and Petrel bank is the green solid line.

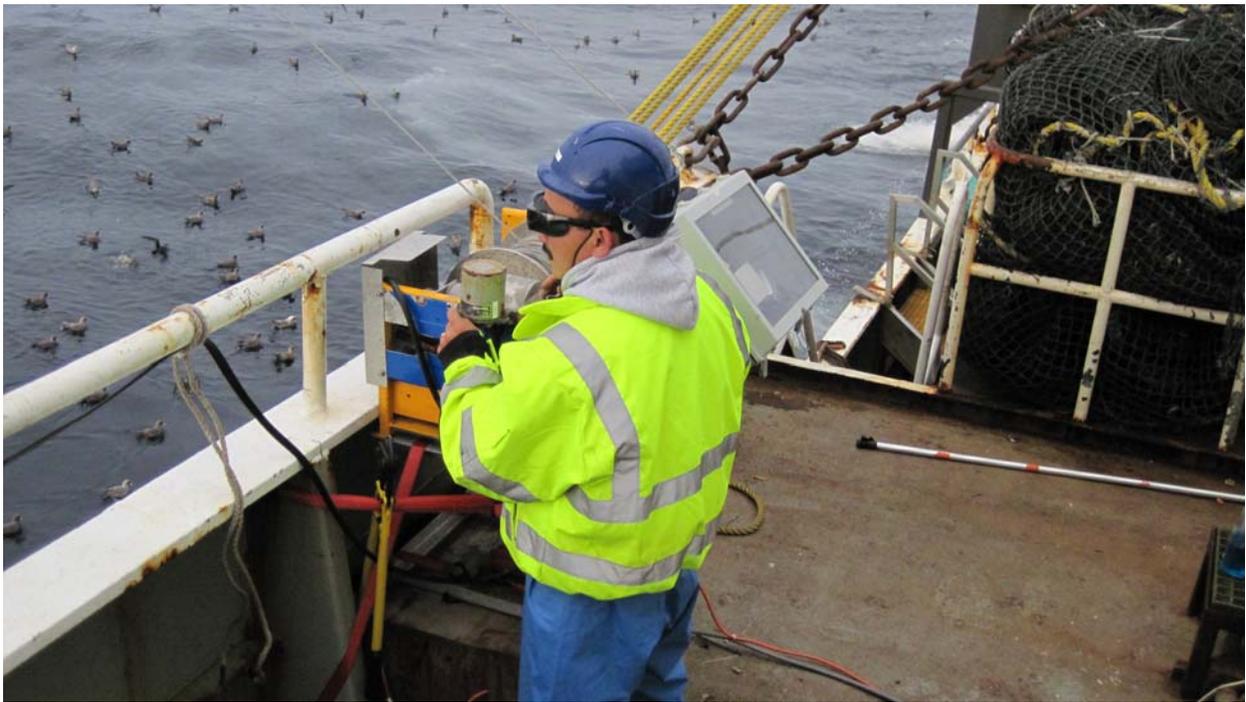


Figure 5: Underwater camera operation on board the Seafisher (Phil Dang observing live video image with video goggles while operating the winch).



Figure 6: Underwater camera retrieval. The camera wire hangs from a block that is attached to the ship's crane, the camera electronic box is attached to the winch on deck.

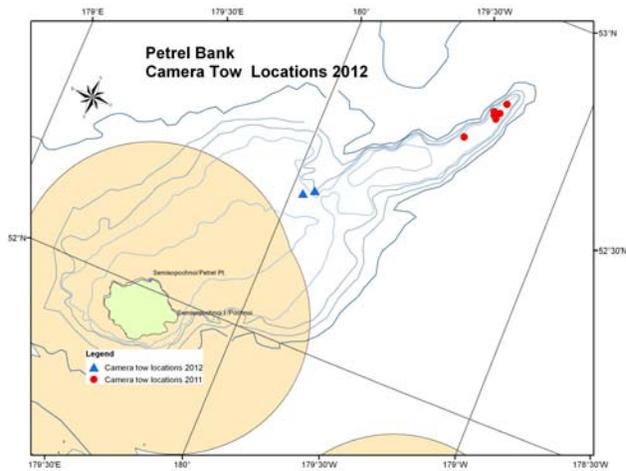
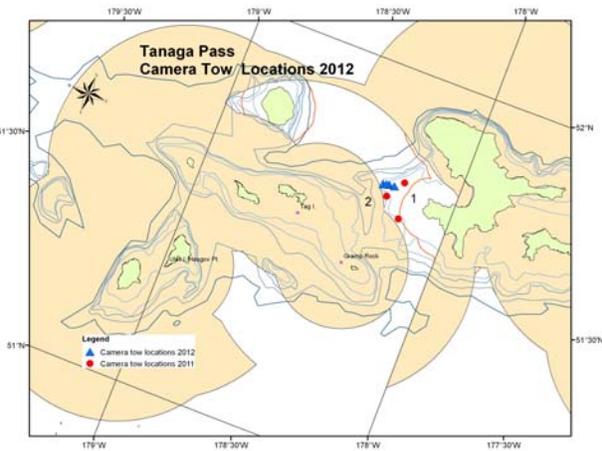
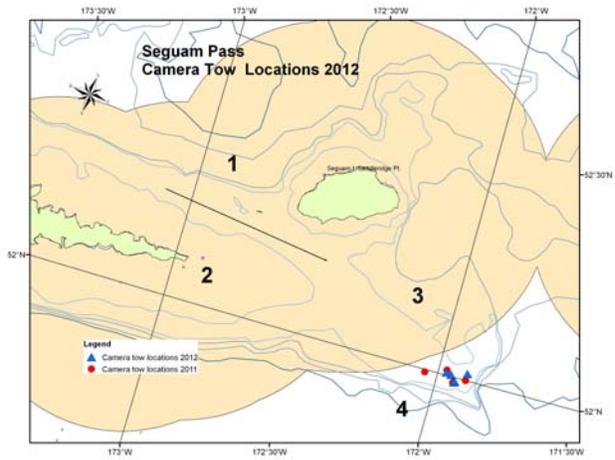


Figure 7: Camera tow locations in the three study areas in 2011 and 2012.

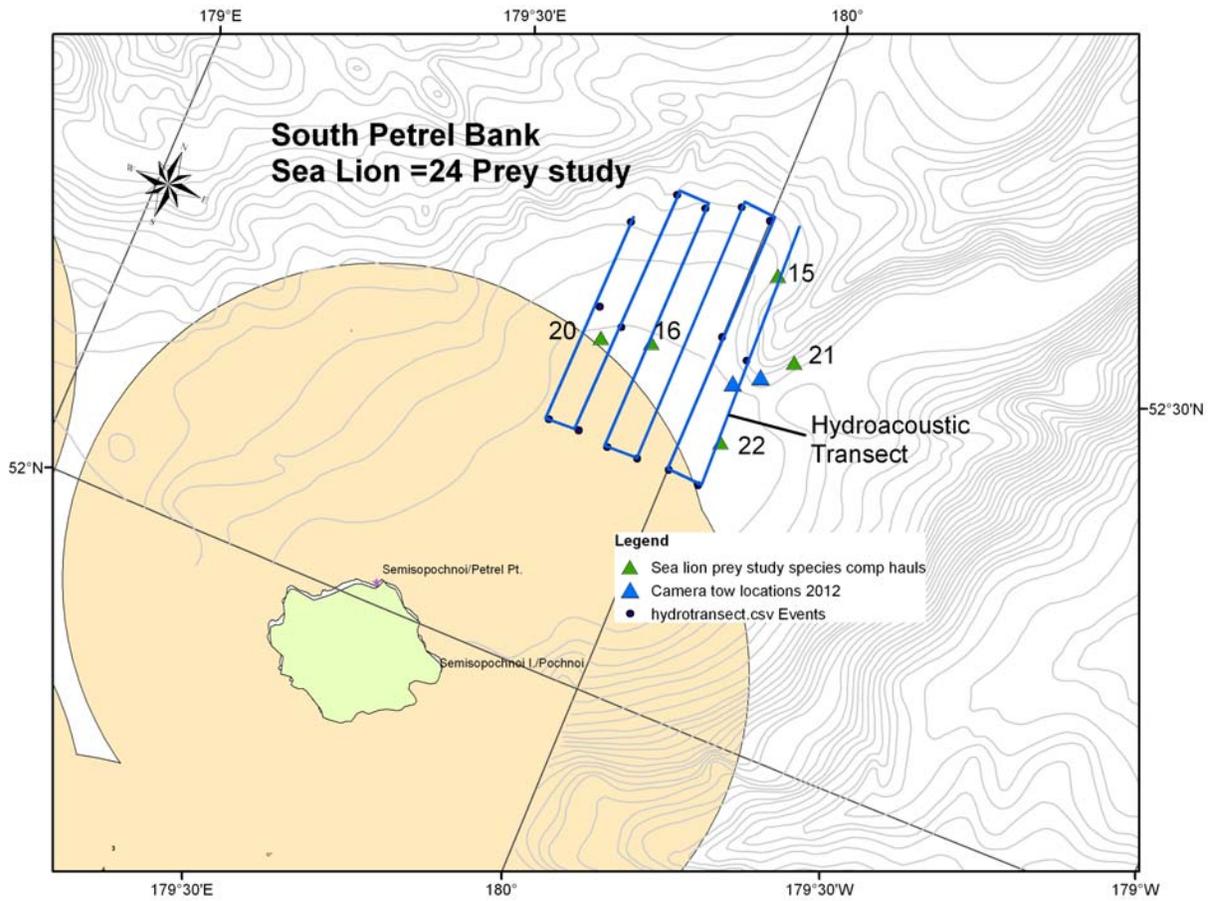


Figure 8: South Petrel Bank Steller sea lion prey study. Hydroacoustic transect in blue solid lines, camera tows in blue triangles and species composition bottom trawls in green triangles. Haul numbers of the species composition hauls are indicated in black numbers next to haul locations.

Table 1. *Haul numbers, Atka mackerel catch and other catch*

<b>Strata</b>	<b>Stratum</b>	<b>No. of Tows</b>	<b>Atka mackerel catch (mt)</b>	<b>Other Species (mt)</b>	<b>Total catch (mt)</b>	<b>% Atka mackerel in catch</b>
Seguam Pass	4	24	787	109	892	88%
Tanaga Pass	1	12	346	36	382	91%
Petrel Bank	1	18	400	94	495	81%
Total		54	1529	239	1769	86%

Table 2. *Total number of Atka mackerel biological samples collected*

<b>Samples Collected</b>	<b>Seguam Pass</b>	<b>Tanaga Pass</b>	<b>Petrel Bank</b>	<b>Total</b>
Gonads	210	100	110	420
Stomachs	210	100	110	420
Otoliths	210	100	110	420
Lengths	2362	1024	1311	4697

Table 3: Mean length, sex ratio and length count of Atka mackerel by sex for each area

	<b>Seguam</b>			<b>Tanaga</b>			<b>Petrel</b>			<b>Total</b>
	Male	Female	Combined	Male	Female	Combined	Male	Female	Combined	
Mean Length	39.36	41.35	40.70	35.78	35.94	35.85	31.19	31.20	31.20	36.99
Sex ratio	33%	67%		52%	48%		51%	49%		
Count	773	1583	2356	526	494	1020	672	639	1311	4687

Table 4. *Wild Tag recoveries by strata for each area*

<b>Area</b>	<b>Numbers recovered</b>	<b>Numbers released</b>	<b>Moved inside to outside</b>
<b>(same Stratum)</b>			
Seguam Pass	13	5,804	0
Tanaga Pass	25	5,820	0
Petrel Bank	11	9,977	
Total	49	21,601	

Table 5. *Tag reporting rate for all areas*

<b>Tags</b>	<b>Number released</b>	<b>Number recovered</b>	<b>Percent recovered</b>
Single Pink Tag	442	431	97.5%
Double Pink Tag	48	48	100%

Table 6. Total catch of 108 species caught at Seguam Pass, Tanaga Pass and Petrel Bank in metric tons (MT). A value of “0” indicates that species was not found in hauls in that area.

<b>Species Name</b>	<b>Seguam</b>	<b>Tanaga</b>	<b>Petrel</b>	<b>Grand Total</b>
Total Catch	<b>891.74</b>	<b>382.75</b>	<b>493.92</b>	<b>1,768.41</b>
Atka mackerel	<b>786.83</b>	<b>346.23</b>	<b>400.34</b>	<b>1,533.40</b>
Pacific ocean perch	62.21	0.08	35.45	97.73
northern rockfish	13.47	6.00	32.08	51.55
Pacific cod	13.42	23.06	8.59	45.07
whiteblotched skate	6.43	<1 MT	<1 MT	6.89
light dusky rockfish	2.28	<1 MT	<1 MT	2.99
yellow Irish lord	<1 MT	2.19	<1 MT	3.92
Blackspotted rockfish	<1 MT	0.0	<1 MT	1.01
Pacific halibut	<1 MT	<1 MT	0.0	<1 MT
harlequin rockfish	<1 MT	<1 MT	<1 MT	1.35
prowfish	<1 MT	<1 MT	<1 MT	2.02
northern rock sole	<1 MT	<1 MT	<1 MT	1.58
Kamchatka flounder	<1 MT	<1 MT	<1 MT	1.23
Aleutian skate	<1 MT	0.0	0.0	<1 MT
darkfin sculpin	<1 MT	<1 MT	<1 MT	<1 MT
dusky rockfish unident.	<1 MT	0.0	0.0	<1 MT
dark dusky rockfish	<1 MT	<1 MT	0.0	<1 MT
walleye pollock	<1 MT	0.0	7.66	7.91
sponge unident.	<1 MT	1.14	1.54	2.92
bigmouth sculpin	<1 MT	<1 MT	<1 MT	1.02
Alaska skate	<1 MT	<1 MT	2.65	3.42
sea anemone unident.	<1 MT	<1 MT	<1 MT	<1 MT
arrowtooth flounder	<1 MT	<1 MT	<1 MT	<1 MT
roughey rockfish	<1 MT	0.0	<1 MT	<1 MT
garbage	<1 MT	<1 MT	<1 MT	<1 MT
longfin Irish lord	<1 MT	<1 MT	<1 MT	<1 MT
sea urchin unident.	<1 MT	<1 MT	<1 MT	<1 MT
searcher	<1 MT	<1 MT	<1 MT	<1 MT
chinook salmon	<1 MT	0.0	0.0	<1 MT
basketstarfish unident.	<1 MT	<1 MT	<1 MT	<1 MT
octocoral unident.	<1 MT	<1 MT	<1 MT	<1 MT
Bering skate	<1 MT	0.0	<1 MT	<1 MT
starfish unident.	<1 MT	<1 MT	<1 MT	<1 MT
octopus unident.	<1 MT	0.0	0.0	<1 MT
shortraker rockfish	<1 MT	0.0	0.0	<1 MT
rock	<1 MT	<1 MT	<1 MT	<1 MT
bubblegum coral	<1 MT	<1 MT	<1 MT	<1 MT
squid unident.	<1 MT	0.0	0.0	<1 MT
ronquil unident.	<1 MT	<1 MT	<1 MT	<1 MT

<b>Species Name</b>	<b>Seguam</b>	<b>Tanaga</b>	<b>Petrel</b>	<b>Grand Total</b>
mud skate	<1 MT	0.0	0.0	<1 MT
roughskin sculpin	<1 MT	0.0	<1 MT	<1 MT
coral unident.	<1 MT	<1 MT	<1 MT	<1 MT
broadfin sculpin	<1 MT	0.0	0.0	<1 MT
hookear sculpin	<1 MT	0.0	0.0	<1 MT
shrimp unident.	<1 MT	<1 MT	<1 MT	<1 MT
snail unident.	<1 MT	<1 MT	<1 MT	<1 MT
sea cucumber unident.	<1 MT	<1 MT	<1 MT	<1 MT
Irish lord	<1 MT	0.0	0.0	<1 MT
Myctophidae	<1 MT	0.0	0.0	<1 MT
rock jingle	<1 MT	<1 MT	<1 MT	<1 MT
ball sponge	<1 MT	0.0	<1 MT	<1 MT
sea peach	<1 MT	0.0	0.0	<1 MT
red Irish lord	<1 MT	0.0	0.0	<1 MT
snailfish unident.	<1 MT	0.0	0.0	<1 MT
spiny lumpsucker	<1 MT	0.0	0.0	<1 MT
sculptured shirmp	<1 MT	<1 MT	0.0	<1 MT
nudibranch unident.	<1 MT	<1 MT	0.0	<1 MT
jellyfish unident.	<1 MT	0.0	0.0	<1 MT
fuzzy crab	<1 MT	0.0	0.0	<1 MT
viperfish unident.	<1 MT	0.0	0.0	<1 MT
champagne flute hydroid	<1 MT	0.0	0.0	<1 MT
sculpin unident.	<1 MT	0.0	0.0	<1 MT
scissortail sculpin	<1 MT	<1 MT	0.0	<1 MT
longfin sculpin	<1 MT	0.0	0.0	<1 MT
barnacle unident.	0.0	<1 MT	0.0	<1 MT
brittlestarfish unident.	0.0	0.0	<1 MT	<1 MT
crab unident.	0.0	0.0	<1 MT	<1 MT
eulachon	0.0	0.0	<1 MT	<1 MT
fish unident.	0.0	<1 MT	0.0	<1 MT
fourhorn poacher	0.0	<1 MT	0.0	<1 MT
Greenland turbot	0.0	0.0	<1 MT	<1 MT
hermit crab unident.	0.0	0.0	<1 MT	<1 MT
Lebbeus sp.	0.0	0.0	<1 MT	<1 MT
leech unident.	0.0	0.0	<1 MT	<1 MT
leister sculpin	0.0	<1 MT	0.0	<1 MT
redbanded rockfish	0.0	0.0	<1 MT	<1 MT
rex sole	0.0	0.0	<1 MT	<1 MT
rockfish unident.	0.0	0.0	<1 MT	<1 MT
sawback poacher	0.0	0.0	<1 MT	<1 MT
scaled crab	0.0	<1 MT	<1 MT	<1 MT
scallop unident.	0.0	0.0	<1 MT	<1 MT
Sea slug	0.0	<1 MT	<1 MT	<1 MT

<b>Species Name</b>	<b>Seguam</b>	<b>Tanaga</b>	<b>Petrel</b>	<b>Grand Total</b>
seaweed	0.0	<1 MT	0.0	<1 MT
shortspine thornyhead	0.0	0.0	<1 MT	<1 MT
skate egg case unident.	0.0	0.0	<1 MT	<1 MT
snail (gastropod) eggs	0.0	0.0	<1 MT	<1 MT
snail shell	0.0	<1 MT	0.0	<1 MT
unsorted shab	0.0	0.0	<1 MT	<1 MT

Table 7: Species composition for hauls conducted during the Steller Sea lion =24 prey study. Haul locations are illustrated in Figure 8.

SPECIES_NAME	HAUL					Grand Total
	15	16	20	21	22	
Atka mackerel	149.02	503.37	142.19	287.41	20,614.53	21,696.53
Pacific ocean perch	6,625.00	448.99	12.37	3,556.77	378.06	11,021.20
walleye pollock	44.88	62.01		6,676.73	176.73	6,960.35
northern rockfish	0.81	3,468.10	504.36	101.93	1,990.70	6,065.90
Pacific cod		2,006.16	57.90		3,330.69	5,394.76
sponge unident.	1,318.78	91.58		12.64	13.15	1,436.15
yellow Irish lord		49.29			404.75	454.04
bigmouth sculpin	157.03			219.83		376.86
Alaska skate	56.83			91.73	97.04	245.60
prowfish		117.34		40.88	68.63	226.85
northern rock sole		69.32		18.75	114.20	202.27
rock					87.70	87.70
darkfin sculpin	12.87	10.81	28.22	15.15	4.58	71.62
whiteblotched skate				60.00		60.00
Blackspotted rockfish				56.40		56.40
rougheye rockfish	28.47	20.67				49.14
arrowtooth flounder	1.11			36.83		37.94
shortspine thornyhead				34.65	1.91	36.56
Kamchatka flounder				35.33		35.33
sea anemone unident.	21.49					21.49
starfish unident.	15.83	0.64	0.09	0.38	1.33	18.27
light dusky rockfish			16.12			16.12
sea urchin unident.		0.64	0.55		8.77	9.96
rex sole				4.58	5.34	9.91
basketstarfish unident.		3.82		0.68	4.58	9.07
searcher			6.41			6.41
coral unident.				6.00		6.00
redbanded rockfish				5.48		5.48
brittlestarfish unident.	4.52			0.08		4.60
rockfish unident.			3.02			3.02
longfin Irish lord			0.37		2.29	2.65
snail (gastropod) eggs				2.03		2.03
Bering skate				1.80		1.80
roughskin sculpin		0.64		1.13		1.76
shrimp unident.					1.72	1.72
Sponge pieces			1.65			1.65
snail unident.			0.09		1.33	1.43
leech unident.	1.13					1.13
sea cucumber unident.	1.13					1.13
bubblegum coral				0.98		0.98
ronquil unident.					0.95	0.95
Sea slug					0.95	0.95
ball sponge				0.75		0.75
skate egg case unident.		0.64				0.64
octocoral unident.			0.09		0.38	0.47
scallop unident.			0.05	0.23		0.27
hermit crab unident.					0.19	0.19
rock jingle					0.19	0.19
scaled crab					0.19	0.19
<b>Grand Total</b>	<b>8,438.90</b>	<b>6,854.00</b>	<b>773.49</b>	<b>11,269.10</b>	<b>27,310.91</b>	<b>54,646.40</b>