

Supplementary Table S1. The numbers of individuals of fishes caught by the set net in the coastal waters of Yangyang from February 2007 to December 2008.

Species	2007									
	Feb.		Mar.		Apr.		May		Jun.	
	N	%	N	%	N	%	N	%	N	%
Fishes										
<i>Scyliorhinus torazame</i>			6	0.0					37	0.2
<i>Conger myriaster</i>			10	0.0						
<i>Engraulis japonicus</i>					250	0.5	500	0.8		
<i>Clupea pallasii</i>			106	0.1			426	0.6		
<i>Konosirus punctatus</i>					766	1.7	1,013	1.5		
<i>Tribolodon taczanowskii</i>			405	0.4	921	2.0	184	0.3	495	2.3
<i>Oncorhynchus keta</i>										
<i>Oncorhynchus masou</i>	69	0.0	6,023	58.5	535	1.2	1,062	1.6	290	1.3
<i>Gadus macrocephalus</i>	23	0.0	230	0.2			104	0.2	92	0.4
<i>Lophomus setigerus</i>	188	0.1	1,127	1.1	721	1.6	975	1.5	518	2.4
<i>Mugil cephalus</i>	103	0.0	2,751	2.7	5,889	12.8	11,627	17.5	3,682	17.0
<i>Cololabis saira</i>									1,997	9.2
<i>Cypselurus agoo</i>										
<i>Monocentris japonica</i>										
<i>Hypoptychus dybowskii</i>									240	1.1
<i>Sebastes schlegelii</i>	58	0.0	152	0.1	392	0.8	1,077	1.6	521	2.4
<i>Chelidonichthys spinosus</i>										
<i>Hexagrammos agrammus</i>										
<i>Pleurogrammus azonus</i>	33,486	26.4	71,176	69.2	10,375	22.5	10,583	15.9	483	2.2
<i>Eumicrotremus orbis</i>	127	0.1	475	0.5						
<i>Lateolabrax japonicus</i>	20	0.0			151	0.3	80	0.1		
<i>Coryphaena hippurus</i>										
<i>Kaiwarinus equula</i>										
<i>Seriola lalandi</i>					29	0.0	495	0.7	494	2.3
<i>Seriola quinqueradiata</i>							96	0.1	138	0.6
<i>Trachurus japonicus</i>										
<i>Lobotes surinamensis</i>										
<i>Acanthopagrus schlegelii</i>					847	1.8	542	0.8	69	0.3
<i>Dentex tumifrons</i>									23	0.1
<i>Pagrus major</i>			1,086	1.1	284	0.6	306	0.5	69	0.3
<i>Girella punctata</i>										
<i>Microcanthus strigatus</i>										
<i>Oplegnathus fasciatus</i>			311	0.3	110	0.2	190	0.3	140	0.6
<i>Ditrema temminckii</i>			115	0.1	602	1.3				
<i>Semicossyphus reticulatus</i>	5	0.0								
<i>Scomber japonicus</i>							23	0.0	242	1.1
<i>Scomberomorus niphonius</i>							66	0.0	30	0.1
<i>Hyperoglyphe japonica</i>	12	0.0								
<i>Psenopsis anomala</i>										
<i>Thunnus thynnus</i>										
<i>Pampus argenteus</i>			24	0.0						
<i>Paralichthys olivaceus</i>			278	0.3	1,667	3.6	2,149	3.2	279	1.3
<i>Pleuronectes schrenki</i>	24	0.0	393	0.4	449	0.9	460	0.7	311	1.4
<i>Pleuronichthys cornutus</i>			23	0.0	23	0.0				
<i>Stephanolepis cirrhifer</i>	70	0.0	271	0.3	754	1.6	2,842	4.3	368	1.7
<i>Thamnaconus modestus</i>										
<i>Takifugu chinensis</i>	15	0.0	15	0.0	316	0.7	631	0.9	735	3.4
<i>Mola mola</i>										
Cephalopods										
<i>Enterotopus dofleini</i>			12	0.0	36	0.0	12	0.0		
<i>Loligo chinesis</i>										
<i>Todarodes pacificus</i>	92,552	73.0	17,865	17.4	21,055	45.6	31,129	46.8	10,435	48.1
Total	126,752		102,854		46,172		66,572		21,688	
Number of fishing day	12		28		28		31		28	

Supplementary Table S1. Continued.

Species	2007									
	Jul.		Aug.		Sep.		Oct.		Nov.	
	N	%	N	%	N	%	N	%	N	%
Fishes										
<i>Scyliorhinus torazame</i>	24	0.1	12	0.0						
<i>Conger myriaster</i>	10	0.0							10	0.0
<i>Engraulis japonicus</i>										
<i>Clupea pallasii</i>										
<i>Konosirus punctatus</i>	45	0.3					270	0.1	180	1.0
<i>Tribolodon taczanowskii</i>	506	3.9	23	0.0			92	0.0	23	0.1
<i>Oncorhynchus keta</i>	20	0.1	1	0.0	25	0.8	1,793	1.3	112	0.6
<i>Oncorhynchus masou</i>	23	0.1					530	0.3		
<i>Gadus macrocephalus</i>										
<i>Lophomus setigerus</i>	30	0.2	75	0.1			75	0.0	90	0.5
<i>Mugil cephalus</i>	645	4.9	336	0.6	98	3.3	957	0.7	2,432	14.6
<i>Cololabis saira</i>	473	3.6								
<i>Cypselurus agoo</i>	150	1.1								
<i>Monocentris japonica</i>	7	0.0								
<i>Hypoptychus dybowskii</i>										
<i>Sebastes schlegelii</i>	92	0.7					23	0.0	523	3.1
<i>Chelidonichthys spinosus</i>									45	0.2
<i>Hexagrammos agrammus</i>									50	0.3
<i>Pleurogrammus azonus</i>										
<i>Eumicrotremus orbis</i>							1	0.0	46	0.2
<i>Lateolabrax japonicus</i>	20	0.1							123	0.7
<i>Coryphaena hippurus</i>	1	0.0								
<i>Kaiwarinus equula</i>	69	0.5	460	0.8						
<i>Seriola lalandi</i>	92	0.7	34	0.0			92	0.0	21	0.1
<i>Seriola quinqueradiata</i>	669	5.1	1,308	2.3	2,197	75.0	28,463	20.8	1,288	7.7
<i>Trachurus japonicus</i>			2,352	4.3			540	0.3	947	5.6
<i>Lobotes surinamensis</i>	25	0.1	69	0.1						
<i>Acanthopagrus schlegelii</i>	83	0.6			23	0.7	581	0.4	138	0.8
<i>Dentex tumifrons</i>										
<i>Pagrus major</i>	46	0.3	69	0.1			2,024	1.4	69	0.4
<i>Girella punctata</i>			23	0.0						
<i>Microcanthus strigatus</i>										
<i>Oplegnathus fasciatus</i>	24	0.1	46	0.0			138	0.1	276	1.6
<i>Ditrema temminckii</i>										
<i>Semicossyphus reticulatus</i>										
<i>Scomber japonicus</i>	138	1.0	24,686	45.1	23	0.7	1,961	1.4	2,032	12.2
<i>Scomberomorus niphonius</i>	9	0.0	349	0.6			1,275	0.9		
<i>Hyperoglyphe japonica</i>							36	0.0	79	0.4
<i>Psenopsis anomala</i>			1,288	2.3			414	0.3	115	0.6
<i>Thunnus thynnus</i>										
<i>Pampus argenteus</i>	23	0.1								
<i>Paralichthys olivaceus</i>	284	2.1	193	0.3	92	3.1	322	0.2	500	3.0
<i>Pleuronectes schrenki</i>	184	1.4	46	0.0						
<i>Pleuronichthys cornutus</i>									23	0.1
<i>Stephanolepis cirrifer</i>	127	0.9	14,957	27.3	297	10.1	7,104	5.2	3,993	24.0
<i>Thamnaconus modestus</i>							92	0.0	126	0.7
<i>Takifugu chinensis</i>	390	3.0	60	0.1			130	0.0	60	0.3
<i>Mola mola</i>									3	0.0
Cephalopods										
<i>Enteroctopus dofleini</i>									12	0.0
<i>Loligo chinensis</i>	70	0.5							71	0.4
<i>Todarodes pacificus</i>	8,684	66.9	8,283	15.1	173	5.9	89,616	65.6	3,237	19.4
Total	12,964		54,670		2,928	16,951.3	136,534	256,640.0	16,624	
Number of fishing day	25		29		2		30		17	

Supplementary Table S1. Continued.

Species	2007		2008							
	Dec.		Jan.		Feb.		Mar.		Apr.	
	N	%	N	%	N	%	N	%	N	%
Fishes										
<i>Scyliorhinus torazame</i>										
<i>Conger myriaster</i>	30	0.0					10	0.0		
<i>Engraulis japonicus</i>										
<i>Clupea pallasii</i>					23	0.1	69	0.1		
<i>Konosirus punctatus</i>	1,800	2.8								
<i>Tribolodon taczanowskii</i>			92	0.0	23	0.1	1,476	3.0	230	4.9
<i>Oncorhynchus keta</i>										
<i>Oncorhynchus masou</i>			133	0.1	6,853	42.2	11,123	22.8	212	4.5
<i>Gadus macrocephalus</i>			23	0.0	240	1.4	161	0.3	23	0.4
<i>Lophomus setigerus</i>	225	0.3	75	0.0	165	1.0	1,155	2.3	195	4.1
<i>Mugil cephalus</i>	706	1.1	502	0.4	175	1.0	3,756	7.7	1,498	31.9
<i>Cololabis saira</i>										
<i>Cypelurus agoo</i>										
<i>Monocentris japonica</i>										
<i>Hypoptychus dybowskii</i>										
<i>Sebastes schlegelii</i>	2,916	4.6	448	0.4	115	0.7	207	0.4	207	4.4
<i>Chelidonichthys spinosus</i>	45	0.0								
<i>Hexagrammos agrammus</i>										
<i>Pleurogrammus azonus</i>			23	0.0	69	0.4	27,302	56.1	161	3.4
<i>Eumicrotremus orbis</i>	207	0.3	552	0.5	230	1.4	184	0.3	23	0.4
<i>Lateolabrax japonicus</i>	102.0	0.1	28.0	0.0	20	0.1	162	0.3	80	1.7
<i>Coryphaena hippurus</i>										
<i>Kaiwarinus equula</i>	23	0.0								
<i>Seriola lalandi</i>	4	0.0								
<i>Seriola quinqueradiata</i>	10,210	16.2	4,882	4.7	2	0.0				
<i>Trachurus japonicus</i>										
<i>Lobotes surinamensis</i>										
<i>Acanthopagrus schlegelii</i>							1	0.0		
<i>Dentex tumifrons</i>										
<i>Pagrus major</i>	23	0.0	23	0.0					117	2.4
<i>Girella punctata</i>										
<i>Microcanthus strigatus</i>										
<i>Oplegnathus fasciatus</i>	161	0.2	46	0.0			23	0.0	47	1.0
<i>Ditrema temminckii</i>	69	0.1	69	0.0					115	2.4
<i>Semicossyphus reticulatus</i>										
<i>Scomber japonicus</i>	207	0.3	23	0.0						
<i>Scomberomorus niphonius</i>										
<i>Hyperoglyphe japonica</i>	116	0.1	380	0.3						
<i>Psenopsis anomala</i>										
<i>Thunnus thynnus</i>										
<i>Pampus argenteus</i>										
<i>Paralichthys olivaceus</i>	621	0.9	138	0.1			262	0.5	265	5.6
<i>Pleuronectes schrenki</i>	161	0.2	92	0.0	69	0.4	437	0.8	161	3.4
<i>Pleuronichthys cornutus</i>	23	0.0			23	0.1	184	0.3	23	0.4
<i>Stephanolepis cirrifer</i>	2,035	3.2	69	0.0	158	0.9	681	1.4	384	8.1
<i>Thamnaconus modestus</i>										
<i>Takifugu chinensis</i>	300	0.4			111	0.6	1,277	2.6	120	2.5
<i>Mola mola</i>	2	0.0								
Cephalopods										
<i>Enteroctopus dofleini</i>	41	0.0	24	0.0			41	0.0		
<i>Loligo chinensis</i>	70	0.1	140	0.1	210	1.2	70	0.1	70	1.4
<i>Todarodes pacificus</i>	42,832	68.0	95,440	92.4	7,751	47.7			759	16.1
Total	62,927		103,214		16,238		48,581		4,690	3,057.9
Number of fishing day	21		17		16		25		12	

Supplementary Table S1. Continued.

Species	2008									
	May		Jun.		Jul.		Aug.		Sep.	
	N	%	N	%	N	%	N	%	N	%
Fishes										
<i>Scyliorhinus torazame</i>					1	0.0	1	0.0	12	0.0
<i>Conger myriaster</i>									40	0.0
<i>Engraulis japonicus</i>										
<i>Clupea pallasii</i>										
<i>Konosirus punctatus</i>	90	0.0	1,176	4.1	1,080	6.3			270	0.1
<i>Tribolodon taczanowskii</i>	184	0.2	506	1.7	276	1.6	92	0.5		
<i>Oncorhynchus keta</i>									126	0.0
<i>Oncorhynchus masou</i>	46	0.0	47	0.1						
<i>Gadus macrocephalus</i>										
<i>Lophomus setigerus</i>	480	0.5	300	1.0	75	0.4				
<i>Mugil cephalus</i>	3,302	3.6	2,224	7.8	828	4.8	35	0.2	30	0.0
<i>Cololabis saira</i>	506	0.5	1,219	4.3	1,526	8.9				
<i>Cypselurus agoo</i>			50	0.1						
<i>Monocentris japonica</i>										
<i>Hypoptychus dybowskii</i>										
<i>Sebastes schlegelii</i>	828	0.9	483	1.7						
<i>Chelidonichthys spinosus</i>	855	0.9	1,139	4.0	765	4.4				
<i>Hexagrammos agrammus</i>										
<i>Pleurogrammus azonus</i>	150	0.1	23	0.0						
<i>Eumicrotremus orbis</i>										
<i>Lateolabrax japonicus</i>	20	0.0					1	0.0		
<i>Coryphaena hippurus</i>										
<i>Kaiwarinus equula</i>							23	0.1	23	0.0
<i>Seriola lalandi</i>	127	0.1	145	0.5	58	0.3	11	0.0	6	0.0
<i>Seriola quinqueradiata</i>	232	0.2	58	0.2	323	1.8	979	5.8	3,924	2.3
<i>Trachurus japonicus</i>										
<i>Lobotes surinamensis</i>					48	0.2				
<i>Acanthopagrus schlegelii</i>	971	1.0	207	0.7	138	0.8	46	0.2	69	0.0
<i>Dentex tumifrons</i>										
<i>Pagrus major</i>	122	0.1	8	0.0					46	0.0
<i>Girella punctata</i>										
<i>Microcanthus strigatus</i>									100	0.0
<i>Oplegnathus fasciatus</i>	207	0.2	115	0.4					69	0.0
<i>Ditrema temminckii</i>										
<i>Semicossyphus reticulatus</i>										
<i>Scomber japonicus</i>	184	0.2	269	0.9	173	1.0	13,074	78.7	53,184	31.4
<i>Scomberomorus niphonius</i>	113	0.1	251	0.8	93	0.5	3	0.0	1,171	0.6
<i>Hyperoglyphe japonica</i>									161	0.0
<i>Psenopsis anomala</i>										
<i>Thunnus thynnus</i>			3	0.0						
<i>Pampus argenteus</i>										
<i>Paralichthys olivaceus</i>	519	0.5	445	1.5	823	4.8	829	4.9	557	0.3
<i>Pleuronectes schrenki</i>	506	0.5	92	0.3	460	2.6	23	0.1		
<i>Pleuronichthys cornutus</i>	1	0.0								
<i>Stephanolepis cirrifer</i>	1,478	1.6	299	1.0	115	0.6	322	1.9	422	0.2
<i>Thamnaconus modestus</i>									110	0.0
<i>Takifugu chinensis</i>	573	0.6	770	2.7	270	1.5	60	0.3	120	0.0
<i>Mola mola</i>									1	0.0
Cephalopods										
<i>Enteroctopus dofleini</i>										
<i>Loligo chinensis</i>									70	0.0
<i>Todarodes pacificus</i>	78,806	87.2	18,404	65.1	10,081	58.8	1,035	6.2	108,431	64.1
Total	90,301		28,232		17,138		16,603		168,942	
Number of fishing day	21		22		6		21		12	

Supplementary Table S1. Continued.

Species	2008						Total	
	Oct.		Nov.		Dec.			
	N	%	N	%	N	%	N	%
Fishes								
<i>Scyliorhinus torazame</i>	2	0.0	12	0.0			107	0.0
<i>Conger myriaster</i>			20	0.0	20	0.0	150	0.0
<i>Engraulis japonicus</i>					4,167	14.0	4,917	0.3
<i>Clupea pallasii</i>							624	0.0
<i>Konosirus punctatus</i>	630	0.7	810	0.5			8,130	0.5
<i>Tribolodon taczanowskii</i>			23	0.0	92	0.3	5,643	0.4
<i>Oncorhynchus keta</i>	1,205	1.3	124	0.0			3,406	0.2
<i>Oncorhynchus masou</i>							26,947	1.9
<i>Gadus macrocephalus</i>			23	0.0			919	0.0
<i>Lophiomus setigerus</i>	135	0.1	287	0.2	255	0.8	7,146	0.5
<i>Mugil cephalus</i>	734	0.8	290	0.2	30	0.1	42,630	3.0
<i>Cololabis saira</i>							5,721	0.4
<i>Cypselurus agoo</i>							200	0.0
<i>Monocentris japonica</i>	13	0.0					20	0.0
<i>Hypoptychus dybowskii</i>							241	0.0
<i>Sebastes schlegelii</i>	23	0.0	2,568	1.8	1,024	3.4	11,657	0.8
<i>Chelidonichthys spinosus</i>	45	0.0	540	0.3	135	0.4	3,569	0.2
<i>Hexagrammos agrammus</i>							50	0.0
<i>Pleurogrammus azonus</i>			69	0.0			153,900	10.9
<i>Eumicrotremus orbis</i>	23	0.0	69	0.0	69	0.2	2,006	0.1
<i>Lateolabrax japonicus</i>	100	0.1	120	0.0	61	0.2	1,098	0.0
<i>Coryphaena hippurus</i>							1	0.0
<i>Kaiwarinus equula</i>			69	0.0			667	0.0
<i>Seriola lalandi</i>	106	0.1	18	0.0			1,732	0.1
<i>Seriola quinqueradiata</i>	13,284	15.3	23,391	16.4	5,310	17.9	96,759	6.8
<i>Trachurus japonicus</i>			56,880	40.0	45	0.1	60,764	4.3
<i>Lobotes surinamensis</i>	24	0.0					166	0.0
<i>Acanthopagrus schlegelii</i>	184	0.2	1,904	1.3	23	0.0	5,826	0.4
<i>Dentex tumifrons</i>							23	0.0
<i>Pagrus major</i>	70	0.0	605	0.4			4,967	0.3
<i>Girella punctata</i>			23	0.0	46	0.1	92	0.0
<i>Microcanthus strigatus</i>	300	0.3	80	0.0			480	0.0
<i>Oplegnathus fasciatus</i>	47	0.0	115	0.0	46	0.1	2,111	0.1
<i>Ditrema temminckii</i>							970	0.0
<i>Semicossyphus reticulatus</i>							5	0.0
<i>Scomber japonicus</i>	5,429	6.2	4,386	3.0	3,266	11.0	109,300	7.7
<i>Scomberomorus niphonius</i>	536	0.6	390	0.2			4,286	0.3
<i>Hyperoglyphe japonica</i>	623	0.7	8,459	5.9	757	2.5	10,623	0.7
<i>Psenopsis anomala</i>	69	0.0					1,955	0.1
<i>Thunnus thynnus</i>	3,590	4.1					3593	0.2
<i>Pampus argenteus</i>							47	0.0
<i>Paralichthys olivaceus</i>	483	0.5	3,633	2.5	345	1.1	14,688	1.0
<i>Pleuronectes schrenki</i>			23	0.0	69	0.2	3,960	0.2
<i>Pleuronichthys cornutus</i>			69	0.0			392	0.0
<i>Stephanolepis cirrifer</i>	2,790	3.2	8,223	5.7	492	1.6	48,251	3.4
<i>Thamnaconus modestus</i>	19,936	23.0	708	0.4	69	0.2	20.7	1.5
<i>Takifugu chinensis</i>	210	0.2	15,113	10.6	2,398	8.0	23,674	1.6
<i>Mola mola</i>	3	0.0	5	0.0	2	0.0	16	0.0
Cephalopods								
<i>Enteroctopus dofleini</i>					19	0.0	197	0.0
<i>Loligo chinensis</i>	140	0.1	210	0.1	70	0.2	1,191	0.0
<i>Todarodes pacificus</i>	35,791	41.3	12,667	8.9	10,823	36.5	705,851	50.3
Total	86,526		141,926		29,633		1,402,709	
Number of fishing day	27		23		18		471	