GLOBEC Northeast Pacific, Coastal Gulf of Alaska

Cruise Report, R/V *Pandalus* (G02-2)
(Alternate Cruise ID: PA0202)

18 - 25 August, 2002

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(Alternative Cruise ID: PA0202)

August 18 - 25, 2002

Chief Scientist:

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Port of Departure: Seward, Alaska
Port of Return: Seward, Alaska

Cruise Objectives

1. Determine distribution and abundance of fish along the Seward hydrographic transect and in southwest PWS and preserve samples for laboratory analysis (surface trawl (Trawl)).
2. Determine the distribution and species composition of net zooplankton in surface waters along the Seward hydrographic transect and in southwest PWS (Tucker).
3. Determine the temperature, salinity, density, and fluorescence of the water column along the Seward hydrographic transect and in southwest PWS (CTD).

Summaries of each of the GLOBEC projects may be found at the web site: http://globec.coas.oregonstate/edu/groups/nep/projs.html.

Table 1. GLOBEC Cruise Participants

Lew Haldorson	Juneau Center School of Fishery Ocean Sciences
Mikhail Blikshteyn	Juneau Center School of Fishery Ocean Sciences

Summary of Gear Deployments

See Appendix 1 (Event Log).

Daily Cruise Summary (Narrative)

18 August. Scientists arrived in Seward.

19 August. Loaded gear on R/V *Pandalus* at Seward Marine Station.

20 - 24 August. Sampled fish, surface plankton, and conducted CTD casts at 3 stations in PWS and 10 stations on the Seward line.

25 August. Offloaded gear, scientists left Seward.

Summary of Sampling Operations

A surface trawl (Trawl) was used to sample fish at GAK stations 1 - 10 and at three stations in PWS. Fish caught included juvenile pink, chum, and sockeye salmon. Fish were identified, sorted to species, measured and frozen in seawater.

Surface plankton was sampled at each station, using an NIO net (Tucker) (1m^2 mouth, 0.505 mm mesh) equipped with a flowmeter. Three replicate samples were collected at each station.

Surface zooplankton was also sampled with a Bongo net (Bongo) (60 cm diameter, 0.505 and 0.333 mm mesh) at two stations (GAK 2 and PWS 3). Three replicates of a horizontally-towed Bongo net were followed by 3 replicates of a vertically-towed Bongo net from 10 m depth. Plankton samples were preserved in 5% buffered formalin.

A Seabird Seacat SBE-19 CTD (CTD) was used to measure temperature, salinity, and fluorescence to 100 m depth at each station.

Relatively few pink salmon juveniles were present in PWS. On the Seward Line, catches of juvenile pink salmon peaked at GAK 6 and 7, and very few salmon were found seaward of GAK 8 (Figure 1).

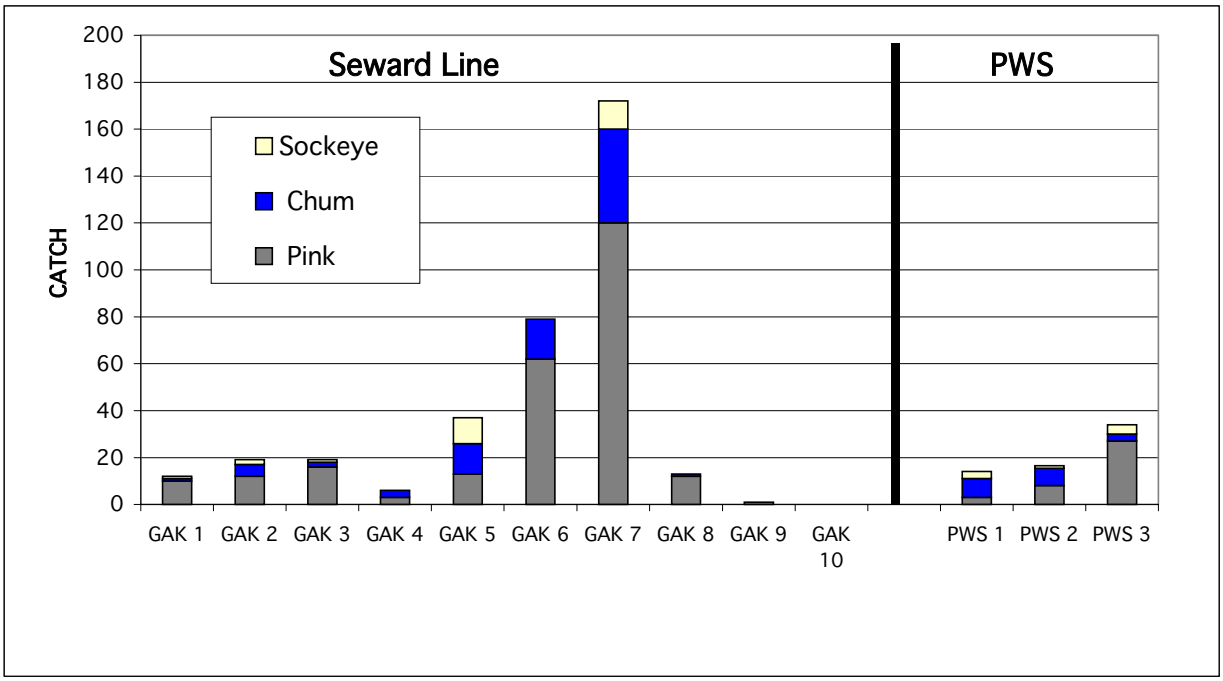

Figure 1. Catches of juvenile salmon on cruise G02-2

APPENDIX I

PA0202 EVENT LOG

EVENT LOG CONTENTS

Column Label	**Description**
Event#	Unique identifier for each line of event log.
Instrument (Instr)	Trawl: Surface Rope Trawl; 198-m long; 25-m wide; 35-m deep, 1.2 cm mesh liner in cod end; usually towed 30 minutes at surface. Tucker: NIO/Tucker Trawl; 1-m2 mouth opening; 0.505-mm mesh; equipped with flowmeter; towed 5 minutes at surface. Bongo: Bongo: 60 cm diameter, 0.505 mm and 0.333 mm mesh. CTD: Seabird Seacat SBE-19, with pump and Wetlabs fluorometer; lowered to 100-m depth at all fish stations.
Cast	Sequence # for gear deployed at current station
Station (Sta)	Sequence # for station occupied
Station Standard (Sta std)	
Day	Local time basis
Month (Mos)	Local time basis
Time	Local time
Start/End (S/E) flag	S=Start of event; E=End of event
Latitude (Lat)	Decimal degrees; north is positive
Longitude (Long)	Decimal degrees; east is positive
Water Depth	Depth of bottom
Cast Depth	Maximum depth of deployment
Haul	Cruise sequence number for a particular gear deployment
Comments	

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA02232.01	Trawl	1	1	PWS2	20	8	1213	S	60.1224	-147.8192	294	0	1	
PA02232.02	Trawl	1	1	PWS2	20	8	1233	E	60.1156	-147.7990	nd	nd	1	
PA02232.03	Tucker	2	1	PWS2	20	8	1327	S	60.1157	-147.8138	291	0	1	
PA02232.04	Tucker	2	1	PWS2	20	8	1332	E	60.1098	-147.8113	nd	nd	1	
PA02232.05	Tucker	3	1	PWS2	20	8	1335	S	60.1062	-147.8095	276	0	2	
PA02232.06	Tucker	3	1	PWS2	20	8	1340	E	60.1005	-147.8073	nd	nd	2	
PA02232.07	Tucker	4	1	PWS2	20	8	1341	S	60.0987	-147.8063	263	0	3	
PA02232.08	Tucker	4	1	PWS2	20	8	1346	E	60.0927	-147.8042	nd	nd	3	
PA02232.09	CTD	5	1	PWS2	20	8	nd	S	60.0915	-147.7965	231	100	1	Cast 00
PA02232.10	Trawl	1	2	PWS1	20	8	1537	S	60.1933	-147.9663	445	0	2	0.75 nmi; 1 pink; no zooplankton because of debris; will start over.
PA02232.11	Trawl	1	2	PWS1	20	8	1557	E	60.2035	-147.9798	nd	nd	2	
PA02232.12	Trawl	1	3	PWS1	20	8	1722	S	60.1837	-147.9806	296	0	3	0.71 nmi
PA02232.13	Trawl	1	3	PWS1	20	8	1744	E	60.1924	-147.9931	nd	nd	3	
PA02232.14	Tucker	2	3	PWS1	20	8	1816	S	60.2000	-147.9993	228	0	4	Only 2 zooplankton samples; 3rd had a lot of debris.
PA02232.15	Tucker	2	3	PWS1	20	8	1819	E	60.1982	-147.9963	nd	nd	4	
PA02232.16	Tucker	3	3	PWS1	20	8	1820	S	60.1968	-147.9937	171	0	5	
PA02232.17	Tucker	3	3	PWS1	20	8	1823	E	60.1945	-147.9893	nd	nd	5	
PA02232.18	CTD	4	3	PWS1	20	8	1839	S	60.1857	-147.9793	401	100	2	Cast 01
PA02233.01	Trawl	1	4	PWS2	21	8	0922	S	60.1006	-147.8191	271	0	4	1.5 nmi; only 2 pinks; no zooplankton or CTD.
PA02233.02	Trawl	1	4	PWS2	21	8	0954	E	60.1243	-147.8330	nd	nd	4	
PA02233.03	Trawl	1	5	PWS3	21	8	1145	S	60.0339	-147.6749	163	0	5	1.04 nmi; over 20 pinks.
PA02233.04	Trawl	1	5	PWS3	21	8	1205	E	60.0478	-147.6552	nd	nd	5	
PA02233.05	Tucker	2	5	PWS3	21	8	1316	S	60.0525	-147.6472	152	0	6	
PA02233.06	Tucker	2	5	PWS3	21	8	1319	E	60.0532	-147.6550	nd	nd	6	
PA02233.07	Tucker	3	5	PWS3	21	8	1320	S	60.0548	-147.6538	150	0	7	
PA02233.08	Tucker	3	5	PWS3	21	8	1322	E	60.0565	-147.6522	nd	nd	7	
PA02233.09	Tucker	4	5	PWS3	21	8	1323	S	60.0578	-147.6513	150	0	8	
PA02233.10	Tucker	4	5	PWS3	21	8	1325	E	60.0595	-147.6497	nd	nd	8	
PA02233.11	Bongo	5	5	PWS3	21	8	1336	S	60.0587	-147.6478	148	0	1	Horizontal
PA02233.12	Bongo	5	5	PWS3	21	8	1338	E	60.0575	-147.6483	nd	nd	1	
PA02233.13	Bongo	6	5	PWS3	21	8	1343	S	60.0548	-147.6485	150	0	2	Horizontal
PA02233.14	Bongo	6	5	PWS3	21	8	1345	E	60.0535	-147.6488	nd	nd	2	
PA02233.15	Bongo	7	5	PWS3	21	8	1350	S	60.0502	-147.6490	152	0	3	Horizontal
PA02233.16	Bongo	7	5	PWS3	21	8	1352	E	60.0492	-147.6488	nd	nd	3	
PA02233.17	Bongo	8	5	PWS3	21	8	1404	S	60.0605	-147.6435	149	10	4	Vertical
PA02233.18	Bongo	9	5	PWS3	21	8	1408	S	60.0523	-147.6407	147	10	5	Vertical
PA02233.19	Bongo	10	5	PWS3	21	8	1413	S	60.0535	-147.6385	145	10	6	Vertical
PA02233.20	CTD	11	5	PWS3	21	8	1423	S	60.0550	-147.6337	140	100	3	Cast 02
PA02234.01	Trawl	1	6	GAK4	22	8	1130	S	59.4087	-149.0488	199	0	6	1.35 nmi
PA02234.02	Trawl	1	6	GAK4	22	8	1202	E	59.4282	-149.0715	nd	nd	6	
PA02234.03	Tucker	2	6	GAK4	22	8	1230	S	59.4323	-149.0940	203	0	9	
PA02234.04	Tucker	2	6	GAK4	22	8	1233	E	59.4348	-149.0858	nd	nd	9	
PA02234.05	Tucker	3	6	GAK4	22	8	1235	S	59.4368	-149.0875	203	0	10	
PA02234.06	Tucker	3	6	GAK4	22	8	1238	E	59.4395	-149.0883	nd	nd	10	
PA02234.07	Tucker	4	6	GAK4	22	8	1240	S	59.4408	-149.0908	203	0	11	
PA02234.08	Tucker	4	6	GAK4	22	8	1243	E	59.4435	-149.0928	nd	nd	11	

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Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA02234.09	CTD	5	6	GAK4	22	8	1250	S	59.4468	-149.0977	204	100	4	Cast 03
PA02234.10	Trawl	1	7	GAK5	22	8	1506	S	59.2750	-148.9022	169	0	7	1.35 nmi
PA02234.11	Trawl	1	7	GAK5	22	8	1537	E	59.2973	-148.9047	nd	nd	7	
PA02234.12	Tucker	2	7	GAK5	22	8	1628	S	59.2872	-148.8875	166	0	12	
PA02234.13	Tucker	2	7	GAK5	22	8	1631	E	59.2897	-148.8877	nd	nd	12	
PA02234.14	Tucker	3	7	GAK5	22	8	1632	S	59.2907	-148.8882	164	0	13	
PA02234.15	Tucker	3	7	GAK5	22	8	1635	E	59.2933	-148.8892	nd	nd	13	
PA02234.16	Tucker	4	7	GAK5	22	8	1637	S	59.2945	-148.8897	161	0	14	
PA02234.17	Tucker	4	7	GAK5	22	8	1640	E	59.2970	-148.8907	nd	nd	14	
PA02234.18	CTD	5	7	GAK5	22	8	1648	S	59.2998	-148.8922	nd	100	5	Cast 04
PA02234.19	Trawl	1	8	GAK6	22	8	1840	S	59.1087	-148.7678	152	0	8	
PA02234.20	Trawl	1	8	GAK6	22	8	1911	E	59.1307	-148.7713	nd	nd	8	
PA02234.21	Tucker	2	8	GAK6	22	8	2003	S	59.1122	-148.7657	152	0	15	0.15 nmi
PA02234.22	Tucker	2	8	GAK6	22	8	2006	E	59.1147	-148.7653	nd	nd	15	
PA02234.23	Tucker	3	8	GAK6	22	8	2007	S	59.1160	-148.7657	150	0	16	0.15 nmi
PA02234.24	Tucker	3	8	GAK6	22	8	2010	E	59.1185	-148.7657	nd	nd	16	
PA02234.25	Tucker	4	8	GAK6	22	8	2012	S	59.1198	-148.7660	149	0	17	0.15 nmi
PA02234.26	Tucker	4	8	GAK6	22	8	2015	E	59.1223	-148.7662	nd	nd	17	
PA02234.27	CTD	5	8	GAK6	22	8	2021	S	59.1252	-148.7667	146	100	6	Cast 05
PA02235.01	Trawl	1	9	GAK10	23	8	0715	S	58.5448	-148.1975	1509	0	9	1.55 nmi; no salmon.
PA02235.02	Trawl	1	9	GAK10	23	8	0745	E	58.5707	-148.1855	nd	nd	9	
PA02235.03	Tucker	2	9	GAK10	23	8	0812	S	58.5672	-148.1847	1385	0	18	0.16 nmi
PA02235.04	Tucker	2	9	GAK10	23	8	0815	E	58.5698	-148.1832	nd	nd	18	
PA02235.05	Tucker	3	9	GAK10	23	8	0817	S	58.5717	-148.1825	1371	0	19	
PA02235.06	Tucker	3	9	GAK10	23	8	0820	E	58.5742	-148.1807	nd	nd	19	
PA02235.07	Tucker	4	9	GAK10	23	8	0822	S	58.5755	-148.1803	1365	0	20	
PA02235.08	Tucker	4	9	GAK10	23	8	0825	E	58.5782	-148.1788	nd	nd	20	
PA02235.09	CTD	5	9	GAK10	23	8	0833	S	58.5805	-148.1787	1370	100	7	Cast 06
PA02235.10	Trawl	1	10	GAK9	23	8	1011	S	58.6950	-148.3480	282	0	10	
PA02235.11	Trawl	1	10	GAK9	23	8	1041	E	58.7147	-148.3427	nd	nd	10	
PA02235.12	Tucker	2	10	GAK9	23	8	1104	S	58.7050	-148.3385	285	0	21	0.12 nmi
PA02235.13	Tucker	2	10	GAK9	23	8	1107	E	58.7068	-148.3377	nd	nd	21	
PA02235.14	Tucker	3	10	GAK9	23	8	1108	S	58.7078	-148.3375	283	0	22	0.12 nmi
PA02235.15	Tucker	3	10	GAK9	23	8	1111	E	58.7098	-148.3367	nd	nd	22	
PA02235.16	Tucker	4	10	GAK9	23	8	1113	S	58.7108	-148.3365	282	0	23	0.11 nmi
PA02235.17	Tucker	4	10	GAK9	23	8	1116	E	58.7125	-148.3365	nd	nd	23	
PA02235.18	CTD	5	10	GAK9	23	8	1116	S	58.7125	-148.3357	283	100	8	Cast 07
PA02235.19	Trawl	1	11	GAK8	23	8	1223	S	58.7857	-148.4985	281	0	11	1.49 nmi
PA02235.20	Trawl	1	11	GAK8	23	8	1256	E	58.8005	-148.5370	nd	nd	11	
PA02235.21	Tucker	2	11	GAK8	23	8	1340	S	58.7918	-149.3697	288	0	24	0.15 nmi
PA02235.22	Tucker	2	11	GAK8	23	8	1343	E	58.7942	-148.5185	nd	nd	24	
PA02235.23	Tucker	3	11	GAK8	23	8	1344	S	58.7955	-148.5185	296	0	25	0.14 nmi
PA02235.24	Tucker	3	11	GAK8	23	8	1347	E	58.7977	-148.5175	nd	nd	25	
PA02235.25	Tucker	4	11	GAK8	23	8	1348	S	58.7990	-148.5173	299	0	26	0.15 nmi
PA02235.26	Tucker	4	11	GAK8	23	8	1351	E	58.8013	-148.5163	nd	nd	26	
PA02235.27	CTD	5	11	GAK8	23	8	1358	S	58.8020	-148.5158	296	100	9	Cast 08
PA02235.28	Trawl	1	12	GAK7	23	8	1523	S	58.9542	-148.6452	258	0	12	1.48 nmi
PA02235.29	Trawl	1	12	GAK7	23	8	1553	E	58.9769	-148.6570	nd	nd	12	

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA02235.30	Tucker	2	12	GAK7	23	8	1656	S	58.9573	-148.6580	257	0	27	0.16 nmi
PA02235.31	Tucker	2	12	GAK7	23	8	1659	E	58.9598	-148.6570	nd	nd	27	
PA02235.32	Tucker	3	12	GAK7	23	8	1701	S	58.9613	-148.6563	256	0	28	0.16 nmi
PA02235.33	Tucker	3	12	GAK7	23	8	1704	E	58.9652	-148.6548	nd	nd	28	
PA02235.34	Tucker	4	12	GAK7	23	8	1705	S	58.9652	-148.6548	251	0	29	0.15 nmi
PA02235.35	Tucker	4	12	GAK7	23	8	1708	E	58.9677	-148.6535	nd	nd	29	
PA02235.36	CTD	5	12	GAK7	23	8	1716	S	58.9692	-148.6010	246	100	10	Cast 09
PA02236.01	Trawl	1	13	GAK1i	24	8	1032	S	59.7727	-149.3930	260	0	13	
PA02236.02	Trawl	1	13	GAK1i	24	8	1103	E	59.7505	-149.3835	nd	nd	13	
PA02236.03	Tucker	2	13	GAK1i	24	8	1133	S	59.8328	-149.3832	255	0	30	0.15 nmi
PA02236.04	Tucker	2	13	GAK1i	24	8	1136	E	59.7640	-149.3847	nd	nd	30	
PA02236.05	Tucker	3	13	GAK1i	24	8	1139	S	59.7625	-149.3855	254	0	31	0.15 nmi
PA02236.06	Tucker	3	13	GAK1i	24	8	1141	E	59.7602	-149.3875	nd	nd	31	
PA02236.07	Tucker	4	13	GAK1i	24	8	1143	S	59.7592	-149.3883	253	0	32	0.14 nmi
PA02236.08	Tucker	4	13	GAK1i	24	8	1146	E	59.7585	-149.3900	nd	nd	32	
PA02236.09	CTD	5	13	GAK1i	24	8	1154	S	59.7552	-149.3925	257	100	11	Cast 10
PA02236.10	Trawl	1	14	GAK2	24	8	1257	S	59.6905	-149.3350	233	0	14	1.44 nmi
PA02236.11	Trawl	1	14	GAK2	24	8	1328	E	59.7110	-149.3610	nd	nd	14	
PA02236.12	Tucker	2	14	GAK2	24	8	1419	S	59.7017	-149.3650	246	0	33	0.15 nmi
PA02236.13	Tucker	2	14	GAK2	24	8	1422	E	59.6993	-149.3673	nd	nd	33	
PA02236.14	Tucker	3	14	GAK2	24	8	1423	S	59.6983	-149.3682	245	0	34	0.15 nmi
PA02236.15	Tucker	3	14	GAK2	24	8	1426	E	59.6962	-149.3707	nd	nd	34	
PA02236.16	Tucker	4	14	GAK2	24	8	1427	S	59.6953	-149.3713	232	0	35	0.14 nmi
PA02236.17	Tucker	4	14	GAK2	24	8	1430	E	59.6933	-149.3738	nd	nd	35	
PA02236.18	CTD	5	14	GAK2	24	8	1445	S	59.7067	-149.3565	245	100	12	Cast 11
PA02236.19	Bongo	6	14	GAK2	24	8	1448	S	59.7068	-149.3585	245	0	7	0.15 nmi; horizontal.
PA02236.20	Bongo	6	14	GAK2	24	8	1451	E	59.7047	-149.3603	nd	nd	7	
PA02236.21	Bongo	7	14	GAK2	24	8	1455	S	59.7013	-149.3625	246	0	8	0.15 nmi; horizontal.
PA02236.22	Bongo	7	14	GAK2	24	8	1458	E	59.6990	-149.3643	nd	nd	8	
PA02236.23	Bongo	8	14	GAK2	24	8	1503	S	59.6950	-149.3672	242	0	9	0.15 nmi; horizontal.
PA02236.24	Bongo	8	14	GAK2	24	8	1506	E	59.6928	-149.3690	nd	nd	9	
PA02236.25	Bongo	9	14	GAK2	24	8	1513	S	59.6992	-149.3610	245	10	10	Vertical
PA02236.26	Bongo	10	14	GAK2	24	8	1517	S	59.6982	-149.3622	247	10	11	Vertical
PA02236.27	Bongo	11	14	GAK2	24	8	1521	S	59.6970	-149.3635	246	10	12	Vertical
PA02236.28	Trawl	1	15	GAK3	24	8	1651	S	59.5532	-149.1930	215	0	15	1.14 nmi
PA02236.29	Trawl	1	15	GAK3	24	8	1723	E	59.5722	-149.2192	nd	nd	15	
PA02236.30	Tucker	2	15	GAK3	24	8	1757	S	59.5622	-149.2132	217	0	36	0.21 nmi
PA02236.31	Tucker	2	15	GAK3	24	8	1800	E	59.5592	-149.2167	nd	nd	36	
PA02236.32	Tucker	3	15	GAK3	24	8	1802	S	59.5578	-149.2183	220	0	37	
PA02236.33	Tucker	3	15	GAK3	24	8	1805	E	59.5548	-149.2222	nd	nd	37	
PA02236.34	Tucker	4	15	GAK3	24	8	1806	S	59.5533	-149.2237	223	0	38	
PA02236.35	Tucker	4	15	GAK3	24	8	1809	E	59.5505	-149.2277	nd	nd	38	
PA02236.36	CTD	5	15	GAK3	24	8	1818	S	59.5475	-149.2358	231	100	13	Cast 12