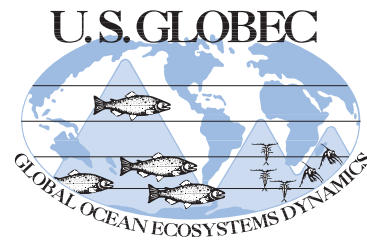


GLOBEC Northeast Pacific, Coastal Gulf of Alaska

**Cruise Report, R/V *Pandalus* (G01-2)
(Alternate Cruise ID, PA0102)**

11 – 19 August, 2001



**GLOBEC Northeast Pacific, Gulf of Alaska
Cruise Report, R/V *Pandalus* (G01-2)
(Alternate Cruise ID, PA0102)
11 - 19 August, 2001**

Chief Scientist:

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

Cruise Objectives

1. Determine distribution and abundance of surface fishes (surface trawl (Trawl) and gillnets (Gillnet)).
2. Sample surface zooplankton at all fish-sampled stations (NIO net/tucker trawl (Tucker)).
3. Conduct CTD (CTD) casts at fish collection stations.
4. Collect surface fishes and zooplankton over 24-hour periods.

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

Jennifer Boldt	Juneau Center School of Fishery Ocean Sciences
Jamal Moss	School of Aquatic and Fishery Sciences, University of Washington

Summary of Cruise

See Appendix 1 (Event Log).

Daily Cruise Summary (Narrative)

10 August. Scientists arrived in Seward. Sorted gear and prepared for cruise.

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

11 - 19 August. Sampled fish, surface plankton, and measured temperature during the day along the Seward transect and in PWS using the surface trawl, the NIO net, a CTD, and a thermometer.

16 -17 August. Completed a diel survey, with 4 samples in a 24-hour period at PWS 2.

19 August. Offloaded gear at the Seward Marine Station.

20 August. Scientists left Seward.

Summary of Sampling Operations

A surface trawl (Trawl) was used to sample fish at GAK stations 1 - 6, each at least twice. Three stations in PWS were also sampled with a surface trawl. Fish caught included juvenile pink, chum, and sockeye salmon, immature chinook, as well as some adult salmon of each species. The catches of pink salmon were similar in PWS and along the Seward transect. Fish were identified, sorted to species, and counted. Fish were measured and frozen in seawater. Large catches were subsampled.

A diel sample was taken at PWS 2 using the surface trawl. Samples were taken at 6:00, 12:00, 18:00, and 00:00.

Surface plankton was sampled at each station, for both daytime and diel sampling, using an NIO net (Tucker) (1m² mouth, 0.505-mm mesh) equipped with a flowmeter. The NIO net was towed for 5 minutes parallel to the surface trawl track. Three replicate samples were collected at each station. 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 where surface trawls and NIO trawls were conducted. A thermometer was used to measure the sea surface water temperature, and water samples were collected for turbidity measurements. Light intensity was measured with two Hobo light meters placed at 0.5 and 10 m depth at all stations where fish and plankton were sampled.

APPENDIX I

PA0102 EVENT LOG

EVENT LOG CONTENTS

Column Label

Event#

Instrument (Instr)

Cast

Station (Sta)

Station Standard (Sta std)

Day

Month (Mos)

Time

Start/End (S/E) flag

Latitude (Lat)

Longitude (Long)

Water Depth

Cast Depth

Haul

Comments

Description

Unique identifier for each line of event log.

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.

Gillnet: Floating gillnet; 200-m long; 3-m deep; comprised of four 50-m panels with mesh sizes 0.75, 1.0, 1.25 and 1.5" stretched; usually connect 2 or 3 nets together for one set and soak for 2-3 hours.

Tucker: NIO/Tucker Trawl; 1-m² mouth opening; 0.505-mm mesh; equipped with flowmeter; towed 5 minutes at surface.

CTD: Seabird Seacat SBE-19, with pump and Wetlabs fluorometer; lowered to 100-m depth at all fish stations.

Sequence # for gear deployed at current station

Sequence # for station occupied

Local time basis

Local time basis

Local time

S=Start of event; E=End of event

Decimal degrees; north is positive

Decimal degrees; east is positive

Depth of bottom

Maximum depth of deployment

Cruise sequence number for a particular gear deployment

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01223.01	Trawl	1	1	GAK2	11	8	1534	S	59.6954	-149.3298	227	nd	1	125 Fa wire out; heading at 165 deg.
PA01223.02	Trawl	1	1	GAK2	11	8	1555	E	59.6795	-149.3215	nd	nd	1	
PA01223.03	Tucker	2	1	GAK2	11	8	1621	S	59.6805	-149.3252	226	nd	1	
PA01223.04	Tucker	2	1	GAK2	11	8	1626	E	59.6842	-149.3272	nd	nd	1	
PA01223.05	Tucker	3	1	GAK2	11	8	1629	S	59.6867	-149.3287	227	nd	2	
PA01223.06	Tucker	3	1	GAK2	11	8	1634	E	59.6903	-149.3308	nd	nd	2	
PA01223.07	Tucker	4	1	GAK2	11	8	1636	S	59.6920	-149.3320	229	nd	3	
PA01223.08	Tucker	4	1	GAK2	11	8	1641	E	59.6957	-149.3338	nd	nd	3	
PA01223.09	CTD	5	1	GAK2	11	8	1650	S	59.6867	-149.3270	227	100	1	01215.hex.
PA01224.01	Trawl	1	2	GAK3	12	8	0923	S	59.5494	-149.1800	213	nd	2	Calm + partly overcast; 125 Fa wire out for all trawls unless otherwise noted.
PA01224.02	Trawl	1	2	GAK3	12	8	0943	E	59.5637	-149.1916	nd	nd	2	
PA01224.03	Tucker	2	2	GAK3	12	8	1012	S	59.5688	-149.1835	209	nd	4	Blue Copepods.
PA01224.04	Tucker	2	2	GAK3	12	8	1017	E	59.5647	-149.1842	nd	nd	4	
PA01224.05	Tucker	3	2	GAK3	12	8	1021	S	59.5607	-149.1842	211	nd	5	Lots of eelgrass.
PA01224.06	Tucker	3	2	GAK3	12	8	1026	E	59.5565	-149.1843	nd	nd	5	
PA01224.07	Tucker	4	2	GAK3	12	8	1029	S	59.5545	-149.1842	212	nd	6	
PA01224.08	Tucker	4	2	GAK3	12	8	1034	E	59.5493	-149.1843	nd	nd	6	
PA01224.09	CTD	5	2	GAK3	12	8	1043	S	59.5553	-149.1873	212	100	2	01225.hex.
PA01224.10	Trawl	1	3	GAK4	12	8	1220	S	59.4008	-149.0517	200	nd	3	Still, calm, + partly cloudy.
PA01224.11	Trawl	1	3	GAK4	12	8	1250	E	59.4210	-149.0340	nd	nd	3	
PA01224.12	Tucker	2	3	GAK4	12	8	1327	S	59.4238	-149.0282	195	nd	7	
PA01224.13	Tucker	2	3	GAK4	12	8	1332	E	59.4198	-149.0305	nd	nd	7	
PA01224.14	Tucker	3	3	GAK4	12	8	1334	S	59.4178	-149.0318	196	nd	8	
PA01224.15	Tucker	3	3	GAK4	12	8	1339	E	59.4138	-149.0357	nd	nd	8	
PA01224.16	Tucker	4	3	GAK4	12	8	1341	S	59.4118	-149.0370	197	nd	9	
PA01224.17	Tucker	4	3	GAK4	12	8	1346	E	59.4078	-149.0407	nd	nd	9	
PA01224.18	CTD	5	3	GAK4	12	8	1355	S	59.4103	-149.0415	198	100	3	100m depth; 01235.hex.
PA01224.19	Trawl	1	4	GAK5	12	8	1527	S	59.2653	-148.9191	169	nd	4	
PA01224.20	Trawl	1	4	GAK5	12	8	1557	E	59.2555	-148.9621	nd	nd	4	
PA01224.21	Tucker	2	4	GAK5	12	8	1632	S	59.2602	-148.9517	180	nd	10	
PA01224.22	Tucker	2	4	GAK5	12	8	1637	E	59.2620	-148.9467	nd	nd	10	
PA01224.23	Tucker	3	4	GAK5	12	8	1639	S	59.2627	-148.9443	181	nd	11	
PA01224.24	Tucker	3	4	GAK5	12	8	1644	E	59.2642	-148.9393	nd	nd	11	
PA01224.25	Tucker	4	4	GAK5	12	8	1646	S	59.2650	-148.9372	178	nd	12	
PA01224.26	Tucker	4	4	GAK5	12	8	1651	E	59.2667	-148.9318	nd	nd	12	
PA01224.27	CTD	5	4	GAK5	12	8	1659	S	59.2650	-148.9352	nd	100	4	01245.hex.
PA01225.01	Trawl	1	5	GAK6	13	8	0715	S	59.1168	-148.7854	146	nd	5	Clear but foggy; 125 Fa wire out--but can't see bouys--so bring in 25 Fa.
PA01225.02	Trawl	1	5	GAK6	13	8	0745	E	59.1132	-148.7535	nd	nd	5	
PA01225.03	Tucker	2	5	GAK6	13	8	0817	S	59.1155	-148.7948	144	nd	13	
PA01225.04	Tucker	2	5	GAK6	13	8	0822	E	59.1173	-148.7885	nd	nd	13	
PA01225.05	Tucker	3	5	GAK6	13	8	0824	S	59.1180	-148.7858	146	nd	14	
PA01225.06	Tucker	3	5	GAK6	13	8	0829	E	59.1198	-148.7793	nd	nd	14	
PA01225.07	Tucker	4	5	GAK6	13	8	0830	S	59.1207	-148.7768	145	nd	15	
PA01225.08	Tucker	4	5	GAK6	13	8	0835	E	59.1258	-148.7702	nd	nd	15	
PA01225.09	CTD	5	5	GAK6	13	8	0846	S	59.1208	-148.7710	nd	100	5	100m; 01255.hex; cast 0.
PA01225.10	Trawl	6	5	GAK6	13	8	0911	S	59.1144	-148.7831	147	nd	6	125 Fa wire out; foggy but can still see bouys.

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01225.11	Trawl	6	5	GAK6	13	8	0941	E	59.1283	-148.7467	nd	nd	6	
PA01225.12	Trawl	1	6	GAK5	13	8	1117	S	59.2546	-148.9139	169	nd	7	Fog!
PA01225.13	Trawl	1	6	GAK5	13	8	1147	E	59.2737	-148.8806	nd	nd	7	
PA01225.14	Tucker	2	6	GAK5	13	8	1220	S	59.2710	-148.8927	164	nd	16	
PA01225.15	Tucker	2	6	GAK5	13	8	1225	E	59.2685	-148.8967	nd	nd	16	
PA01225.16	Tucker	3	6	GAK5	13	8	1226	S	59.2675	-148.8982	164	nd	17	
PA01225.17	Tucker	3	6	GAK5	13	8	1231	E	59.2652	-148.9030	nd	nd	17	
PA01225.18	Tucker	4	6	GAK5	13	8	1241	S	59.2605	-148.9098	167	nd	18	Had to redo (this is 2nd 6-4N) because we got Bull Kelp in one.
PA01225.19	Tucker	4	6	GAK5	13	8	1246	E	59.2588	-148.9145	nd	nd	18	
PA01225.20	CTD	5	6	GAK5	13	8	1253	S	59.2575	-148.9093	nd	100	6	01265.hex; cast 1.
PA01225.21	Trawl	1	7	GAK4	13	8	1413	S	59.3976	-149.0440	199	nd	8	Fog, still
PA01225.22	Trawl	1	7	GAK4	13	8	1443	E	59.4174	-149.0608	nd	nd	8	
PA01225.23	Tucker	2	7	GAK4	13	8	1509	S	59.4180	-149.0590	200	nd	19	
PA01225.24	Tucker	2	7	GAK4	13	8	1514	E	59.4147	-149.0550	nd	nd	19	
PA01225.25	Tucker	3	7	GAK4	13	8	1515	S	59.4132	-149.0543	199	nd	20	
PA01225.26	Tucker	3	7	GAK4	13	8	1520	E	59.4090	-149.0547	nd	nd	20	
PA01225.27	Tucker	4	7	GAK4	13	8	1522	S	59.4075	-149.0545	200	nd	21	
PA01225.28	Tucker	4	7	GAK4	13	8	1527	E	59.4037	-149.0547	nd	nd	21	
PA01225.29	CTD	5	7	GAK4	13	8	1534	S	59.4020	-149.0513	nd	100	7	01275.hex; cast 2.
PA01226.01	Trawl	1	8	GAK1	14	8	0712	S	59.8442	-149.4778	280	nd	9	Fog.
PA01226.02	Trawl	1	8	GAK1	14	8	0742	E	59.8233	-149.4602	nd	nd	9	
PA01226.03	Tucker	2	8	GAK1	14	8	0808	S	59.8288	-149.4675	278	nd	22	
PA01226.04	Tucker	2	8	GAK1	14	8	0813	E	59.8325	-149.4712	nd	nd	22	
PA01226.05	Tucker	3	8	GAK1	14	8	0815	S	59.8340	-149.4730	272	nd	23	
PA01226.06	Tucker	3	8	GAK1	14	8	0820	E	59.8378	-149.4765	nd	nd	23	
PA01226.07	Tucker	4	8	GAK1	14	8	0822	S	59.8392	-149.4780	272	nd	24	
PA01226.08	Tucker	4	8	GAK1	14	8	0827	E	59.8430	-149.4815	nd	nd	24	
PA01226.09	CTD	5	8	GAK1	14	8	0833	S	59.8452	-149.4837	270	100	8	01285.hex; cast 0.
PA01226.10	Trawl	1	9	GAK2	14	8	1002	S	59.6922	-149.3175	225	nd	10	
PA01226.11	Trawl	1	9	GAK2	14	8	1032	E	59.6675	-149.3106	nd	nd	10	
PA01226.12	Tucker	2	9	GAK2	14	8	1116	S	59.6700	-149.3103	222	nd	25	
PA01226.13	Tucker	2	9	GAK2	14	8	1121	E	59.6732	-149.3102	nd	nd	25	
PA01226.14	Tucker	3	9	GAK2	14	8	1122	S	59.6743	-149.3102	222	nd	26	
PA01226.15	Tucker	3	9	GAK2	14	8	1127	E	59.6775	-149.3100	nd	nd	26	
PA01226.16	Tucker	4	9	GAK2	14	8	1128	S	59.6787	-149.3100	221	nd	27	
PA01226.17	Tucker	4	9	GAK2	14	8	1133	E	59.6818	-149.3100	nd	nd	27	
PA01226.18	CTD	5	9	GAK2	14	8	1139	S	59.6822	-149.3107	221	100	9	01295.hex; cast 1.
PA01226.19	Trawl	1	10	GAK3	14	8	1314	S	59.5498	-149.1956	215	nd	11	
PA01226.20	Trawl	1	10	GAK3	14	8	1344	E	59.5699	-149.2111	nd	nd	11	
PA01226.21	Tucker	2	10	GAK3	14	8	1410	S	59.5637	-149.2110	216	nd	28	
PA01226.22	Tucker	2	10	GAK3	14	8	1415	E	59.5597	-149.2085	nd	nd	28	
PA01226.23	Tucker	3	10	GAK3	14	8	1417	S	59.5585	-149.2075	217	nd	29	
PA01226.24	Tucker	3	10	GAK3	14	8	1422	E	59.5545	-149.2047	nd	nd	29	
PA01226.25	Tucker	4	10	GAK3	14	8	1423	S	59.5533	-149.2037	216	nd	30	
PA01226.26	Tucker	4	10	GAK3	14	8	1428	E	59.5493	-149.2010	nd	nd	30	
PA01226.27	CTD	5	10	GAK3	14	8	1434	S	59.5513	-149.1955	nd	100	10	012105.hex; cast 2.

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01227.01	Trawl	1	11	PWS2	15	8	0845	S	60.0989	-147.8260	267	nd	12	
PA01227.02	Trawl	1	11	PWS2	15	8	0905	E	60.1125	-147.8416	nd	nd	12	
PA01227.03	Tucker	2	11	PWS2	15	8	0948	S	60.1070	-147.8413	263	nd	31	Low cloud / fog.
PA01227.04	Tucker	2	11	PWS2	15	8	0953	E	60.1027	-147.8352	nd	nd	31	
PA01227.05	Tucker	3	11	PWS2	15	8	0955	S	60.1012	-147.8328	261	nd	32	
PA01227.06	Tucker	3	11	PWS2	15	8	1000	E	60.0972	-147.8275	nd	nd	32	
PA01227.07	Tucker	4	11	PWS2	15	8	1002	S	60.0960	-147.8253	267	nd	33	
PA01227.08	Tucker	4	11	PWS2	15	8	1007	E	60.0922	-147.8198	nd	nd	33	
PA01227.09	CTD	5	11	PWS2	15	8	1013	S	60.0945	-147.8187	nd	100	11	012115.hex; cast 0.
PA01227.10	Trawl	1	12	PWS1	15	8	1133	S	60.2018	-147.9940	208	nd	13	
PA01227.11	Trawl	1	12	PWS1	15	8	1159	E	60.2214	-147.9992	nd	nd	13	
PA01227.12	Tucker	2	12	PWS1	15	8	1223	S	60.2212	-147.9965	494	nd	34	
PA01227.13	Tucker	2	12	PWS1	15	8	1228	E	60.2165	-147.9960	nd	nd	34	
PA01227.14	Tucker	3	12	PWS1	15	8	1230	S	60.2147	-147.9952	465	nd	35	
PA01227.15	Tucker	3	12	PWS1	15	8	1235	E	60.2098	-147.9933	nd	nd	35	
PA01227.16	Tucker	4	12	PWS1	15	8	1236	S	60.2083	-147.9923	396	nd	36	
PA01227.17	Tucker	4	12	PWS1	15	8	1241	E	60.2037	-147.9903	nd	nd	36	
PA01227.18	CTD	5	12	PWS1	15	8	1245	S	60.2015	-147.9897	396	100	12	012125.hex; cast 1.
PA01227.19	Trawl	6	12	PWS1	15	8	1313	S	60.1925	-147.9785	435	nd	14	125 Fa wire out.
PA01227.20	Trawl	6	12	PWS1	15	8	1343	E	60.2081	-148.0127	nd	nd	14	
PA01227.21	Trawl	1	13	PWS3	15	8	1546	S	60.0440	-147.6854	123	nd	15	
PA01227.22	Trawl	1	13	PWS3	15	8	1616	E	60.0617	-147.6506	nd	nd	15	
PA01227.23	Tucker	2	13	PWS3	15	8	1643	S	60.0618	-147.6615	122	nd	37	
PA01227.24	Tucker	2	13	PWS3	15	8	1648	E	60.0588	-147.6663	nd	nd	37	
PA01227.25	Tucker	3	13	PWS3	15	8	1651	S	60.0578	-147.6675	105	nd	38	
PA01227.26	Tucker	3	13	PWS3	15	8	1656	E	60.0550	-147.6717	nd	nd	38	
PA01227.27	Tucker	4	13	PWS3	15	8	1657	S	60.0538	-147.6730	115	nd	39	
PA01227.28	Tucker	4	13	PWS3	15	8	1702	E	60.0510	-147.6768	nd	nd	39	
PA01227.29	CTD	5	13	PWS3	15	8	1706	S	60.0487	-147.6775	142	100	13	012135.hex; cast 2.
PA01228.01	Trawl	1	14	PWS2	16	8	0608	S	60.0968	-147.8090	261	nd	16	Start of diel sampling; low clouds.
PA01228.02	Trawl	1	14	PWS2	16	8	0638	E	60.1174	-147.8333	nd	nd	16	
PA01228.03	Tucker	2	14	PWS2	16	8	0707	S	60.1163	-147.8225	288	nd	40	
PA01228.04	Tucker	2	14	PWS2	16	8	0712	E	60.1130	-147.8187	nd	nd	40	
PA01228.05	Tucker	3	14	PWS2	16	8	0714	S	60.1117	-147.8170	285	nd	41	
PA01228.06	Tucker	3	14	PWS2	16	8	0719	E	60.1082	-147.8135	nd	nd	41	
PA01228.07	Tucker	4	14	PWS2	16	8	0720	S	60.1068	-147.8120	273	nd	42	
PA01228.08	Tucker	4	14	PWS2	16	8	0725	E	60.1030	-147.8087	nd	nd	42	
PA01228.09	CTD	5	14	PWS2	16	8	0730	S	60.1007	-147.8070	261	100	14	012145.hex; cast 0.
PA01228.10	Trawl	6	14	PWS2	16	8	1203	S	60.0922	-147.8100	254	nd	17	
PA01228.11	Trawl	6	14	PWS2	16	8	1233	E	60.1120	-147.7933	nd	nd	17	
PA01228.12	Tucker	7	14	PWS2	16	8	1304	S	60.1093	-147.7892	264	nd	43	
PA01228.13	Tucker	7	14	PWS2	16	8	1309	E	60.1060	-147.7932	nd	nd	43	
PA01228.14	Tucker	8	14	PWS2	16	8	1311	S	60.1047	-147.7943	263	nd	44	
PA01228.15	Tucker	8	14	PWS2	16	8	1316	E	60.1013	-147.7982	nd	nd	44	
PA01228.16	Tucker	9	14	PWS2	16	8	1317	S	60.1002	-147.7992	256	nd	45	
PA01228.17	Tucker	9	14	PWS2	16	8	1322	E	60.0968	-147.8028	nd	nd	45	
PA01228.18	CTD	10	14	PWS2	16	8	1327	S	60.0948	-147.8033	253	100	15	0121410.hex; cast 1.
PA01228.19	Trawl	11	14	PWS2	16	8	1806	S	60.0938	-147.8137	266	nd	18	

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01228.20	Trawl	11	14	PWS2	16	8	1836	E	60.1098	-147.8457	nd	nd	18	
PA01228.21	Tucker	12	14	PWS2	16	8	1900	S	60.1095	-147.8383	272	nd	46	
PA01228.22	Tucker	12	14	PWS2	16	8	1905	E	60.1065	-147.8328	nd	nd	46	
PA01228.23	Tucker	13	14	PWS2	16	8	1907	S	60.1057	-147.8307	273	nd	47	
PA01228.24	Tucker	13	14	PWS2	16	8	1912	E	60.1025	-147.8250	nd	nd	47	
PA01228.25	Tucker	14	14	PWS2	16	8	1914	S	60.1015	-147.8227	270	nd	48	
PA01228.26	Tucker	14	14	PWS2	16	8	1919	E	60.0985	-147.8168	nd	nd	48	
PA01228.27	CTD	15	14	PWS2	16	8	1922	S	60.0965	-147.8140	279	100	16	0121415.hex; cast 2.
PA01229.01	Trawl	16	14	PWS2	17	8	0003	S	60.1000	-147.8063	263	nd	19	
PA01229.02	Trawl	16	14	PWS2	17	8	0033	E	60.1103	-147.8408	nd	nd	19	
PA01229.03	Tucker	17	14	PWS2	17	8	0120	S	60.1115	-147.8368	281	nd	49	
PA01229.04	Tucker	17	14	PWS2	17	8	0125	E	60.1085	-147.8298	nd	nd	49	
PA01229.05	Tucker	18	14	PWS2	17	8	0126	S	60.1077	-147.8272	280	nd	50	
PA01229.06	Tucker	18	14	PWS2	17	8	0131	E	60.1045	-147.8192	nd	nd	50	
PA01229.07	Tucker	19	14	PWS2	17	8	0133	S	60.1038	-147.8165	274	nd	51	
PA01229.08	Tucker	19	14	PWS2	17	8	0138	E	60.1012	-147.8078	nd	nd	51	
PA01229.09	CTD	20	14	PWS2	17	8	0143	S	60.1015	-147.8048	260	100	17	0121420.hex; cast 3.
PA01229.10	Trawl	21	14	PWS2	17	8	0217	S	60.0918	-147.8140	251	nd	20	
PA01229.11	Trawl	21	14	PWS2	17	8	0247	E	60.1008	-147.8488	nd	nd	20	
PA01229.12	Trawl	1	15	GAK2	17	8	1729	S	59.6882	-149.3227	223	nd	21	
PA01229.13	Trawl	1	15	GAK2	17	8	1759	E	59.7095	-149.3388	nd	nd	21	
PA01230.01	Trawl	1	16	GAK3	18	8	0834	S	59.5510	-149.1912	212	nd	22	4-5' seas; mixed swells.
PA01230.02	Trawl	1	16	GAK3	18	8	0904	E	59.5275	-149.1838	nd	nd	22	
PA01230.03	Tucker	2	16	GAK3	18	8	0944	S	59.5475	-149.1953	213	nd	52	
PA01230.04	Tucker	2	16	GAK3	18	8	0949	E	59.5442	-149.1957	nd	nd	52	
PA01230.05	Tucker	3	16	GAK3	18	8	0950	S	59.5430	-149.1955	215	nd	53	
PA01230.06	Tucker	3	16	GAK3	18	8	0955	E	59.5395	-149.1957	nd	nd	53	
PA01230.07	Tucker	4	16	GAK3	18	8	0958	S	59.5377	-149.1953	215	nd	54	
PA01230.08	Tucker	4	16	GAK3	18	8	1003	E	59.5340	-149.1953	nd	nd	54	
PA01230.09	CTD	5	16	GAK3	18	8	1007	S	59.5323	-149.1930	216	100	18	012165.hex; cast 0.
PA01230.10	Trawl	1	17	GAK4	18	8	1234	S	59.4152	-149.0628	201	nd	23	
PA01230.11	Trawl	1	17	GAK4	18	8	1304	E	59.3977	-149.0447	nd	nd	23	
PA01230.12	Tucker	2	17	GAK4	18	8	1331	S	59.4157	-149.0600	201	nd	55	
PA01230.13	Tucker	2	17	GAK4	18	8	1336	E	59.4127	-149.0567	nd	nd	55	
PA01230.14	Tucker	3	17	GAK4	18	8	1338	S	59.4117	-149.0552	201	nd	56	
PA01230.15	Tucker	3	17	GAK4	18	8	1343	E	59.4088	-149.0513	nd	nd	56	
PA01230.16	Tucker	4	17	GAK4	18	8	1344	S	59.4080	-149.0502	201	nd	57	
PA01230.17	Tucker	4	17	GAK4	18	8	1349	E	59.4053	-149.0475	nd	nd	57	
PA01230.18	CTD	5	17	GAK4	18	8	1354	S	59.4032	-149.0453	201	100	19	012175.hex; cast 1.
PA01230.19	Trawl	1	18	GAK1i	18	8	1652	S	59.7585	-149.3918	256	nd	24	
PA01230.20	Trawl	1	18	GAK1i	18	8	1722	E	59.7790	-149.4102	nd	nd	24	
PA01230.21	Tucker	2	18	GAK1i	18	8	1749	S	59.7772	-149.4053	266	nd	58	
PA01230.22	Tucker	2	18	GAK1i	18	8	1754	E	59.7737	-149.4013	nd	nd	58	
PA01230.23	Tucker	3	18	GAK1i	18	8	1755	S	59.7727	-149.4000	263	nd	59	
PA01230.24	Tucker	3	18	GAK1i	18	8	1800	E	59.7693	-149.3965	nd	nd	59	
PA01230.25	Tucker	4	18	GAK1i	18	8	1802	S	59.7682	-149.3948	259	nd	60	
PA01230.26	Tucker	4	18	GAK1i	18	8	1807	E	59.7648	-149.3912	nd	nd	60	
PA01230.27	CTD	5	18	GAK1i	18	8	1811	S	59.7632	-149.3920	255	100	20	

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01231.01	Trawl	1	19	GAK1	19	8	0620	S	59.8325	-149.4577	275	nd	25	12 Pinks.
PA01231.02	Trawl	1	19	GAK1	19	8	0650	E	59.8483	-149.4778	nd	nd	25	
PA01231.03	Tucker	2	19	GAK1	19	8	0732	S	59.8482	-149.4733	266	nd	61	
PA01231.04	Tucker	2	19	GAK1	19	8	0737	E	59.8445	-149.4703	nd	nd	61	
PA01231.05	Tucker	3	19	GAK1	19	8	0738	S	59.8432	-149.4690	268	nd	62	
PA01231.06	Tucker	3	19	GAK1	19	8	0743	E	59.8392	-149.4655	nd	nd	62	
PA01231.07	Tucker	4	19	GAK1	19	8	0745	S	59.8382	-149.4643	268	nd	63	
PA01231.08	Tucker	4	19	GAK1	19	8	0750	E	59.8345	-149.4615	nd	nd	63	
PA01231.09	CTD	5	19	GAK1	19	8	0753	S	59.8330	-149.4593	270	100	21	012195.hex;cast 0.