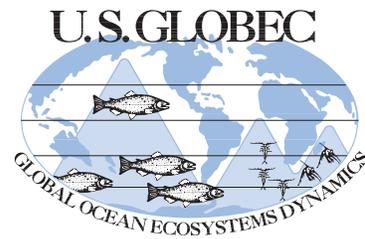


GLOBEC Northeast Pacific, Coastal Gulf of Alaska

Cruise Report, R/V *Pandalus* (G01-1)
(Alternate Cruise ID: PA0101)

7 - 15 July, 2001



**GLOBEC Northeast Pacific, Gulf of Alaska
Cruise Report, R/V *Pandalus* (G01-1)
(Alternate Cruise ID: PA0101)**

July 7 - 15, 2001

Chief Scientist:

Lew Haldorson
Juneau Center School of Fishery Ocean Sciences
University of Alaska, Fairbanks
Juneau, AK 99801
907-465-6441
lew.haldorson@uaf.edu

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 collection 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

Lew Haldorson	Juneau Center School of Fishery Ocean Sciences
Jennifer Boldt	Juneau Center School of Fishery Ocean Sciences
Kate Myers	School of Aquatic and Fishery Sciences, University of Washington

Summary of Gear Deployments

See Appendix 1 (Event Log).

Daily Cruise Summary (Narrative)

5 July. Scientists arrived in Seward.

6 July. Sorted gear and prepared for cruise.

7 July. Loaded gear on R/V *Pandalus* at Seward Marine Station.

8 - 14 July. 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.

12 - 13 July. Completed a diel survey, with 4 samples in a 24-hour period at PWS 1.

15 July. Offloaded gear at the Seward Marine Station.

16 July. 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 much higher in PWS than along the Seward transect. Fish were identified, sorted to species, and counted. Fish were measured and frozen in seawater. Large catches were subsampled.

A gillnet (Gillnet) was set immediately after a surface trawl was conducted at PWS 1. Two small-mesh gillnets (each 200m long; one with mesh sizes ranging from 0.75 - 1.25" and one with mesh sizes ranging from 1.0 - 1.5") were tied together and soaked for approximately two hours. No juvenile pink salmon were caught with the gillnets; whereas, 22 juvenile pink salmon were caught with the surface trawl. Also, a set of diel samples was taken at PWS 1 using the surface trawl. Samples were taken at 8:00, 15:00, 22:00, and 04:00.

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

PA0101 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
PA01189.01	Trawl	1	1	GAK1	8	7	0752	S	59.8430	-149.4675	272	nd	1	
PA01189.02	Trawl	1	1	GAK1	8	7	0812	E	59.8582	-149.4698	nd	nd	1	
PA01189.03	Trawl	2	1	GAK1	8	7	nd	S	59.8552	-149.4704	266	nd	2	Aborted.
PA01189.04	Trawl	3	1	GAK1	8	7	0915	S	59.8435	-149.4792	268	nd	3	100Fa wire out; 0925 put another 25 Fa wire out;
PA01189.05	Trawl	3	1	GAK1	8	7	0947	E	59.8262	-149.5105	nd	nd	3	put 1 Fa more out on port side to keep door down; @220 deg.T heading, going SW.
PA01189.06	Tucker	4	1	GAK1	8	7	1021	S	59.8345	-149.4917	nd	nd	1	
PA01189.07	Tucker	4	1	GAK1	8	7	1027	E	59.8310	-149.4971	nd	nd	1	
PA01189.08	Tucker	5	1	GAK1	8	7	1029	S	59.8290	-149.5010	nd	nd	2	
PA01189.09	Tucker	5	1	GAK1	8	7	1035	E	59.8260	-149.5086	nd	nd	2	
PA01189.10	Tucker	6	1	GAK1	8	7	1037	S	59.8250	-149.5113	nd	nd	3	
PA01189.11	Tucker	6	1	GAK1	8	7	1042	E	59.8225	-149.5188	nd	nd	3	
PA01189.12	CTD	7	1	GAK1	8	7	1103	S	59.8335	-149.4994	268	100	1	Cast 00 to 100m depth.
PA01189.13	Trawl	1	2	GAK2	8	7	1243	S	59.6919	-149.3269	227	nd	4	Put out 125 Fa.
PA01189.14	Trawl	1	2	GAK2	8	7	1314	E	59.6691	-149.3068	nd	nd	4	
PA01189.15	Trawl	2	2	GAK2	8	7	1431	S	59.6858	-149.3264	214	nd	5	Put out 125 Fa.
PA01189.16	Trawl	2	2	GAK2	8	7	1501	E	59.6926	-149.3693	nd	nd	5	
PA01189.17	Tucker	3	2	GAK2	8	7	1528	S	59.6908	-149.3589	nd	nd	4	Lots of fucus in samples.
PA01189.18	Tucker	3	2	GAK2	8	7	1534	E	59.6927	-149.3649	nd	nd	4	
PA01189.19	Tucker	4	2	GAK2	8	7	1535	S	59.6937	-149.3683	nd	nd	5	Lots of fucus in samples.
PA01189.20	Tucker	4	2	GAK2	8	7	1540	E	59.6959	-149.3752	nd	nd	5	
PA01189.21	Tucker	5	2	GAK2	8	7	1542	S	59.6968	-149.3781	nd	nd	6	Lots of fucus in samples.
PA01189.22	Tucker	5	2	GAK2	8	7	1547	E	59.6988	-149.3843	nd	nd	6	
PA01189.23	CTD	6	2	GAK2	8	7	1603	S	59.6919	-149.3564	243	100	2	Cast 01 to 100m.
PA01190.01	Trawl	1	3	GAK3	9	7	0927	S	59.5508	-149.1949	214	nd	6	125 Fa wire out.
PA01190.02	Trawl	1	3	GAK3	9	7	0957	E	59.5637	-149.1519	nd	nd	6	
PA01190.03	Tucker	2	3	GAK3	9	7	1036	S	59.5545	-149.1810	209	nd	7	
PA01190.04	Tucker	2	3	GAK3	9	7	1041	E	59.5567	-149.1731	nd	nd	7	
PA01190.05	Tucker	3	3	GAK3	9	7	1043	S	59.5581	-149.1689	206	nd	8	
PA01190.06	Tucker	3	3	GAK3	9	7	1048	E	59.5607	-149.1608	nd	nd	8	
PA01190.07	Tucker	4	3	GAK3	9	7	1050	S	59.5619	-149.1569	203	nd	9	
PA01190.08	Tucker	4	3	GAK3	9	7	1055	E	59.5643	-149.1485	nd	nd	9	
PA01190.09	CTD	5	3	GAK3	9	7	1059	S	59.5636	-149.1469	201	100	3	
PA01190.10	Trawl	1	4	GAK4	9	7	1231	S	59.4053	-149.0554	200	nd	7	125 Fa wire out.
PA01190.11	Trawl	1	4	GAK4	9	7	1258	E	59.4164	-149.0146	nd	nd	7	
PA01190.12	Tucker	2	4	GAK4	9	7	1327	S	59.4081	-149.0439	198	nd	10	
PA01190.13	Tucker	2	4	GAK4	9	7	1332	E	59.4108	-149.0372	nd	nd	10	
PA01190.14	Tucker	3	4	GAK4	9	7	1334	S	59.4123	-149.0344	197	nd	11	
PA01190.15	Tucker	3	4	GAK4	9	7	1339	E	59.4153	-149.0285	nd	nd	11	
PA01190.16	Tucker	4	4	GAK4	9	7	1342	S	59.4168	-149.0260	196	nd	12	
PA01190.17	Tucker	4	4	GAK4	9	7	1345	E	59.4186	-149.0220	nd	nd	12	
PA01190.18	CTD	5	4	GAK4	9	7	1349	S	59.4192	-149.0207	196	100	4	
PA01190.19	Trawl	1	5	GAK5	9	7	1539	S	59.2525	-148.9297	173	nd	8	
PA01190.20	Trawl	1	5	GAK5	9	7	1612	E	59.2645	-148.8901	nd	nd	8	
PA01190.21	Tucker	2	5	GAK5	9	7	1643	S	59.2552	-148.9228	174	nd	13	
PA01190.22	Tucker	2	5	GAK5	9	7	1648	E	59.2583	-148.9165	nd	nd	13	
PA01190.23	Tucker	3	5	GAK5	9	7	1651	S	59.2606	-148.9117	169	nd	14	
PA01190.24	Tucker	3	5	GAK5	9	7	1656	E	59.2637	-148.9048	nd	nd	14	

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01190.25	Tucker	4	5	GAK5	9	7	1702	S	59.2676	-148.8963	165	nd	15	
PA01190.26	Tucker	4	5	GAK5	9	7	1707	E	59.2707	-148.8895	nd	nd	15	
PA01190.27	CTD	5	5	GAK5	9	7	1712	S	59.2725	-148.8874	165	100	5	
PA01191.01	Trawl	1	6	GAK6	10	7	0716	S	59.1160	-148.7822	146	nd	9	125 Fa wire out.
PA01191.02	Trawl	1	6	GAK6	10	7	0745	E	59.1370	-148.7596	nd	nd	9	
PA01191.03	Tucker	2	6	GAK6	10	7	0813	S	59.1229	-148.7718	146	nd	16	
PA01191.04	Tucker	2	6	GAK6	10	7	0818	E	59.1269	-148.7678	nd	nd	16	
PA01191.05	Tucker	3	6	GAK6	10	7	0820	S	59.1285	-148.7663	144	nd	17	
PA01191.06	Tucker	3	6	GAK6	10	7	0825	E	59.1322	-148.7620	nd	nd	17	
PA01191.07	Tucker	4	6	GAK6	10	7	0827	S	59.1336	-148.7608	144	nd	18	
PA01191.08	Tucker	4	6	GAK6	10	7	0832	E	59.1371	-148.7568	nd	nd	18	
PA01191.09	CTD	5	6	GAK6	10	7	0835	S	59.1373	-148.7546	146	100	6	
PA01191.10	Trawl	1	7	GAK5	10	7	1029	S	59.2517	-148.9146	170	nd	10	Had to haul back to get bouys untangled—no Pinks, so didn't take zooplankton or CTD—125 Fa wire out.
PA01191.11	Trawl	1	7	GAK5	10	7	1059	E	59.2428	-148.9534	nd	nd	10	
PA01191.12	Trawl	1	8	GAK4	10	7	1249	S	59.4059	-149.0304	197	nd	11	125 Fa wire out.
PA01191.13	Trawl	1	8	GAK4	10	7	1319	E	59.4076	-149.0805	nd	nd	11	
PA01191.14	Trawl	1	9	GAK3	10	7	1521	S	59.5548	-149.1607	207	nd	12	
PA01191.15	Trawl	1	9	GAK3	10	7	1552	E	59.5750	-149.1692	nd	nd	12	
PA01192.01	Trawl	1	10	PWS2	11	7	0855	S	60.0981	-147.8306	256	nd	13	Doors riding @ surface & port bouys underwater, so brought back in @ 9 a.m. 60.1015N P104147.8338W
PA01192.02	Trawl	1	10	PWS2	11	7	0900	E	60.1015	-147.8338	nd	nd	13	—net wasn't spreading. Aborted. Currents are strong & mixed, so will go to PWS #3 instead.
PA01192.03	Trawl	1	11	PWS3	11	7	1034	S	60.0502	-147.6482	149	nd	14	Tried putting wing tip bouys closer to wire bridle further from net)— as seen in R/V Cobb video.
PA01192.04	Trawl	1	11	PWS3	11	7	1243	E	60.0471	-147.6775	nd	nd	14	
PA01192.05	Tucker	2	11	PWS3	11	7	1119	S	60.0503	-147.6472	149	nd	19	
PA01192.06	Tucker	2	11	PWS3	11	7	1124	E	60.0489	-147.6543	nd	nd	19	
PA01192.07	Tucker	3	11	PWS3	11	7	1127	S	60.0481	-147.6575	156	nd	20	Pulled early due to debris.
PA01192.08	Tucker	3	11	PWS3	11	7	1129	E	60.0474	-147.6612	nd	nd	20	
PA01192.09	Tucker	4	11	PWS3	11	7	1131	S	60.0468	-147.6632	159	nd	21	
PA01192.10	Tucker	4	11	PWS3	11	7	1136	E	60.0450	-147.6697	nd	nd	21	
PA01192.11	CTD	5	11	PWS3	11	7	1142	S	60.0455	-147.6693	167	100	7	
PA01192.12	Trawl	1	12	PWS2	11	7	1239	S	60.1015	-147.8341	259	nd	15	Put back center bouy along w/4 hard bouys —125 Fa wire out.
PA01192.13	Trawl	1	12	PWS2	11	7	1309	E	60.1144	-147.8768	nd	nd	15	
PA01192.14	Tucker	2	12	PWS2	11	7	1333	S	60.1125	-147.8677	230	nd	22	
PA01192.15	Tucker	2	12	PWS2	11	7	1338	E	60.1104	-147.8602	nd	nd	22	
PA01192.16	Tucker	3	12	PWS2	11	7	1343	S	60.1090	-147.8548	238	nd	23	
PA01192.17	Tucker	3	12	PWS2	11	7	1348	E	60.1068	-147.8482	nd	nd	23	
PA01192.18	Tucker	4	12	PWS2	11	7	1349	S	60.1062	-147.8457	248	nd	24	
PA01192.19	Tucker	4	12	PWS2	11	7	1354	E	60.1040	-147.8383	nd	nd	24	
PA01192.20	CTD	5	12	PWS2	11	7	1405	S	60.1036	-147.8333	265	100	8	011125.hex.
PA01192.21	Trawl	1	13	PWS1	11	7	1524	S	60.1952	-147.9923	161	nd	16	125 Fa wire out.
PA01192.22	Trawl	1	13	PWS1	11	7	1554	E	60.2118	-147.0198	nd	nd	16	
PA01192.23	Tucker	2	13	PWS1	11	7	1618	S	60.2146	-148.0197	332	nd	25	

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01192.24	Tucker	2	13	PWS1	11	7	1623	E	60.2121	-148.0150	nd	nd	25	
PA01192.25	Tucker	3	13	PWS1	11	7	1625	S	60.2108	-148.0120	209	nd	26	
PA01192.26	Tucker	3	13	PWS1	11	7	1630	E	60.2072	-148.0068	nd	nd	26	
PA01192.27	Tucker	4	13	PWS1	11	7	1631	S	60.2056	-148.0038	182	nd	27	
PA01192.28	Tucker	4	13	PWS1	11	7	1636	E	60.2023	-147.9988	nd	nd	27	
PA01192.29	CTD	5	13	PWS1	11	7	1647	S	60.1984	-147.9952	163	100	9	011135.hex.
PA01193.01	Trawl	1	14	PWS1	12	7	0843	S	60.1890	-147.9593	412	nd	17	125 Fa wire out.
PA01193.02	Trawl	1	14	PWS1	12	7	0853	E	60.1936	-147.9679	nd	nd	17	
PA01193.03	Gillnet	2	14	PWS1	12	7	0952	S	60.2080	-147.9713	nd	nd	1	
PA01193.04	Gillnet	2	14	PWS1	12	7	1200	E	60.1813	-147.9740	nd	nd	1	
PA01193.05	Tucker	3	14	PWS1	12	7	1008	S	60.1984	-147.9712	445	nd	28	
PA01193.06	Tucker	3	14	PWS1	12	7	1013	E	60.1928	-147.9716	nd	nd	28	
PA01193.07	Tucker	4	14	PWS1	12	7	1015	S	60.1906	-147.9714	427	nd	29	
PA01193.08	Tucker	4	14	PWS1	12	7	1020	E	60.1849	-147.9716	nd	nd	29	
PA01193.09	Tucker	5	14	PWS1	12	7	1021	S	60.1826	-147.9712	381	nd	30	
PA01193.10	Tucker	5	14	PWS1	12	7	1026	E	60.1768	-147.9713	nd	nd	30	
PA01193.11	CTD	6	14	PWS1	12	7	1052	S	60.1895	-147.9690	441	100	10	011146.hex.
PA01193.12	Trawl	7	14	PWS1	12	7	1509	S	60.1918	-147.9625	429	nd	18	125 Fa wire out.
PA01193.13	Trawl	7	14	PWS1	12	7	1523	E	60.1975	-147.9794	nd	nd	18	
PA01193.14	Trawl	8	14	PWS1	12	7	1633	S	60.2018	-148.0096	239	nd	19	125 Fa wire—need to bring it in & straighten out center bouy & bridle —9am/9pm = max. Ebb Flow.
PA01193.15	Trawl	8	14	PWS1	12	7	1653	E	60.2123	-148.0307	nd	nd	19	
PA01193.16	Tucker	9	14	PWS1	12	7	1718	S	60.2148	-148.0275	411	nd	31	
PA01193.17	Tucker	9	14	PWS1	12	7	1723	E	60.2114	-148.0234	nd	nd	31	
PA01193.18	Tucker	10	14	PWS1	12	7	1725	S	60.2100	-148.0210	393	nd	32	
PA01193.19	Tucker	10	14	PWS1	12	7	1730	E	60.2065	-148.0164	nd	nd	32	
PA01193.20	Tucker	11	14	PWS1	12	7	1732	S	60.2017	-148.0138	299	nd	33	
PA01193.21	Tucker	11	14	PWS1	12	7	1737	E	60.2017	-148.0081	nd	nd	33	
PA01193.22	CTD	12	14	PWS1	12	7	1742	S	60.1999	-148.0024	240	100	11	0111412.hex.
PA01193.23	Trawl	13	14	PWS1	12	7	2153	S	60.2065	-147.9803	461	nd	20	125 Fa wire out.
PA01193.24	Trawl	13	14	PWS1	12	7	2213	E	60.2140	-147.9996	nd	nd	20	
PA01193.25	Tucker	14	14	PWS1	12	7	2241	S	60.2148	-147.9916	493	nd	34	
PA01193.26	Tucker	14	14	PWS1	12	7	2246	E	60.2114	-147.9853	nd	nd	34	
PA01193.27	Tucker	15	14	PWS1	12	7	2248	S	60.2100	-147.9818	470	nd	35	
PA01193.28	Tucker	15	14	PWS1	12	7	2253	E	60.2069	-147.9750	nd	nd	35	
PA01193.29	Tucker	16	14	PWS1	12	7	2255	S	60.2054	-147.9711	447	nd	36	
PA01193.30	Tucker	16	14	PWS1	12	7	2300	E	60.2023	-147.9643	nd	nd	36	
PA01193.31	CTD	17	14	PWS1	12	7	2308	S	60.2003	-147.9642	451	100	12	0111417.hex.
PA01194.01	Trawl	18	14	PWS1	13	7	0410	S	60.2023	-147.9843	452	nd	21	125 Fa wire out.
PA01194.02	Trawl	18	14	PWS1	13	7	0429	E	60.2108	-148.0005	nd	nd	21	
PA01194.03	Tucker	19	14	PWS1	13	7	0459	S	60.2110	-147.9940	438	nd	37	
PA01194.04	Tucker	19	14	PWS1	13	7	0504	E	60.2067	-147.9874	nd	nd	37	
PA01194.05	Tucker	20	14	PWS1	13	7	0507	S	60.2044	-147.9819	457	nd	38	
PA01194.06	Tucker	20	14	PWS1	13	7	0512	E	60.2007	-147.9740	nd	nd	38	
PA01194.07	Tucker	21	14	PWS1	13	7	0515	S	60.1990	-147.9691	449	nd	39	
PA01194.08	Tucker	21	14	PWS1	13	7	0520	E	60.1959	-147.9612	nd	nd	39	
PA01194.09	CTD	22	14	PWS1	13	7	0527	S	60.1937	-147.9592	438	100	13	0111422.hex.

Appendix I: Event Log

Event#	Instr	Cast	Sta	Sta std	Day	Mos	Time	S/E flag	Lat	Long	Water Depth	Cast Depth	Haul	Comments
PA01194.10	Trawl	1	15	DAY1	13	7	1749	S	59.9423	-149.1490	205	nd	22	At mouth of Day Harbor; 125 Fa wire out.
PA01194.11	Trawl	1	15	DAY1	13	7	1809	E	59.9278	-149.1457	nd	nd	22	
PA01195.01	Trawl	1	16	GAK1	14	7	0444	S	59.8488	-149.4826	268	nd	23	125 Fa wire out.
PA01195.02	Trawl	1	16	GAK1	14	7	0514	E	59.8321	-149.4571	nd	nd	23	
PA01195.03	Trawl	1	17	GAK2	14	7	0659	S	59.6844	-149.3372	230	nd	24	
PA01195.04	Trawl	1	17	GAK2	14	7	0729	E	59.7017	-149.3152	nd	nd	24	
PA01195.05	Trawl	1	18	GAK3	14	7	0935	S	59.5566	-149.1922	213	nd	25	125 Fa wire out.
PA01195.06	Trawl	1	18	GAK3	14	7	1005	E	59.5562	-149.1429	nd	nd	25	
PA01195.07	Trawl	1	19	GAK2	14	7	1155	S	59.6811	-149.3601	228	nd	26	
PA01195.08	Trawl	1	19	GAK2	14	7	1225	E	59.6877	-149.3212	nd	nd	26	
PA01195.09	Trawl	1	20	GAK1	14	7	1433	S	59.8361	-149.4551	269	nd	27	Center buoy got tangled.
PA01195.10	Trawl	1	20	GAK1	14	7	1503	E	59.8198	-149.4257	nd	nd	27	