

CRUISE REPORT

Cruise Number: MF-01-05

FOCI Number: 2MF01

Ship:

Miller Freeman

Area of Operations:

Gulf of Alaska

Itinerary:

Date depart / port: April 28, 2001 / Dutch Harbor, AK

Date arrive / port: May 8, 2001 / Kodiak, AK

Participating organizations:

NOAA - Alaska Fisheries Science Center (AFSC)

NOAA - Pacific Marine Environmental Laboratory (PMEL)

University of Alaska Fairbanks (UAF)

Chief Scientist:

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Personnel:

Annette Brown	F / AFSC
Rachael Cartwright	F / AFSC
Liz Dobbins	F / PMEL
Jennifer Lanksbury	F / AFSC
Kathy Mier	F / AFSC
David Walsh	M / UAF
Matt Wilson	M / AFSC

Cruise Objectives:

The objectives of the cruise were to conduct a broad scale ichthyoplankton survey and a process-oriented study in the region between Kennedy Entrance to Shelikof Strait and the Semidi Islands to estimate the abundance of walleye pollock larvae, their transport, and factors influencing their survival. The latter study combined MOCNESS sampling with a micro-structure profiler (SCAMP) supplied by the University of Alaska to provide fine scale measurements of larval fish distribution and microturbulence. In addition, Line 8 was occupied to continue our 15 yr. time series of environmental and biological conditions in Shelikof Strait.

Summary of Operations:

Operation	Tows
20cm bongo (20Bon)	6
60cm bongo (60Bon)	148
CalCOFI vertical egg tow net (CalVET)	6
Seabird SeaCat CTD (CAT)	154
CTD with bottle samples (CTDB)	9
1m_ MOCNESS (MOC1)	3
Deployment of satellite buoy (SatBuoy)	3
Radar tracked drifter buoy deployment or recovery (ShipBuoy)	2

Samples Collected

	Tows	Number
Seabird SeaCat CTD (CAT)	154	
Extracted chlorophyll (Chlor)	6	36

SeaBird CTD (CTD)	9	
Deployment of buoy or mooring (Deploy)	4	4
K. Bailey request (DMS-phyt)	1	
Stimulated fluorescence collected during CTD casts (Fluor)	8	
Juvenile pollock collected for otolith analysis (J-Oto)	1	1
Larval pollock collected for gut analysis (L-Gut)	6	146
Larval pollock collected for histological analysis (L-Hist)	3	25
Larval pollock collected for otolith analysis (L-Oto)	90	1085
Microzooplankton samples preserved in formalin (MZ)	9	60
Nutrient samples collected from CTD casts (Nut)	6	65
Photosynthetically Active Radiation data collected during CTD casts (PAR)	8	
Quantitative tow preserved in formalin (QTowF)	175	182
Quantitative tow preserved in Stockard's (QTowS)	1	1
Rough count of pollock larvae (RCountL)	136	1865
Recovery of buoy or mooring (Recovery)	1	1

Summary of Cruise:

Narrative:

Bongo net tows were conducted on the northeast side of Kodiak and then proceeded down Shelikof Strait to the Semidi Islands (FOCI grid lines 205 – 155). A satellite-tracked drifter (#13126) was deployed near stations of high larval abundance. The process-oriented study was conducted near the entrance to Shelikof Strait where sufficient numbers of were encountered in the bongo tows. Three MOCNESS tows, CTD casts for microzooplankton, and live tows (for samples of larval gut contents) were obtained in conjunction with 13 SCAMP profiles before the sea state prohibited further operations. Sampling at Line 8 was then conducted using 60 cm and 20 cm bongo tows and CTD casts to bottom. We next went to Uyak Bay to attempt further process-oriented studies with the MOCNESS and SCAMP. However, larval abundances were low and the sea state unsuitable for SCAMP profiling. Three scientists debarked at Larsen Bay and the ship proceeded to Dutch Harbor, sampling en route additional bongo stations below the Semidi Island (FOCI grid lines 153 – 147) and in the Shumagin area (FOCI grid lines 139 – 125).

Days Lost to Weather:

None

Days Lost to Equipment Failure:

None

Recommendations:

None

Acknowledgments:

We thank the command and crew of the R/V Miller Freeman for their capable support during the cruise.

Attachments:

Table 1. Cruise Summary

Figure 1. Station Map

Table 1. Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	HaulComments
29-Apr-01	2:46	1	1	HD197		106	58 28.61 N	152 00.75 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	2:46	1	1	HD197		106	58 28.61 N	152 00.75 W	CAT	CAT	
29-Apr-01	4:08	2	1	HD199		180	58 35.75 N	151 47.34 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	4:08	2	1	HD199		180	58 35.75 N	151 47.34 W	CAT	CAT	
29-Apr-01	5:32	3	1	HD201		175	58 42.84 N	151 34.17 W	60Bon	QTowF, RCountL	
29-Apr-01	5:32	3	1	HD201		175	58 42.84 N	151 34.17 W	CAT	CAT	
29-Apr-01	7:01	4	1	HD203		125	58 50.16 N	151 20.79 W	60Bon	QTowF, RCountL	
29-Apr-01	7:01	4	1	HD203		125	58 50.16 N	151 20.79 W	CAT	CAT	
29-Apr-01	8:39	5	1	HD205		172	58 57.59 N	151 07.73 W	60Bon	QTowF, RCountL	
29-Apr-01	8:39	5	1	HD205		172	58 57.59 N	151 07.73 W	CAT	CAT	
29-Apr-01	10:11	6	1	HB203		90	58 57.23 N	151 33.06 W	60Bon	L-Oto, QTowF, RCountL	wire angle vertical as returned to surface
29-Apr-01	10:11	6	1	HB203		90	58 57.23 N	151 33.06 W	CAT	CAT	wire angle vertical as returned to surface
29-Apr-01	12:22	7	1	HB199		143	58 42.52 N	151 59.43 W	60Bon	L-Oto, QTowF, RCountL	stopwatch got knocked and stopped during ascent. Watch restarted but tow time is short by about 1 minute. Exact time is
29-Apr-01	12:22	7	1	HB199		143	58 42.52 N	151 59.43 W	CAT	CAT	stopwatch got knocked and stopped during ascent. Watch restarted but tow time is short by about 1 minute. Exact time is
29-Apr-01	13:25	8	1	GZ199		122	58 49.30 N	152 12.23 W	60Bon	J-Oto, QTowF, RCountL	
29-Apr-01	13:25	8	1	GZ199		122	58 49.30 N	152 12.23 W	CAT	CAT	
29-Apr-01	14:32	9	1	GX199		104	58 56.33 N	152 24.39 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	14:32	9	1	GX199		104	58 56.33 N	152 24.39 W	CAT	CAT	
29-Apr-01	15:46	10	1	GX201		145	59 03.60 N	152 11.18 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	15:46	10	1	GX201		145	59 03.60 N	152 11.18 W	CAT	CAT	
29-Apr-01	16:59	11	1	GX203		87	59 10.65 N	151 57.29 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	16:59	11	1	GX203		87	59 10.65 N	151 57.29 W	CAT	CAT	
29-Apr-01	18:10	12	1	GV203		87	59 17.54 N	152 09.89 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	18:10	12	1	GV203		87	59 17.54 N	152 09.89 W	CAT	CAT	
29-Apr-01	19:16	13	1	GV201		103	59 10.25 N	152 23.27 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	19:16	13	1	GV201		103	59 10.25 N	152 23.27 W	CAT	CAT	
29-Apr-01	20:26	14	1	GV199		139	59 03.02 N	152 36.88 W	60Bon	QTowF, RCountL	
29-Apr-01	20:26	14	1	GV199		139	59 03.02 N	152 36.88 W	CAT	CAT	
29-Apr-01	21:42	15	1	GT199		135	59 10.34 N	152 49.41 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	21:42	15	1	GT199		135	59 10.34 N	152 49.41 W	CAT	CAT	
29-Apr-01	22:54	16	1	GT197		143	59 02.69 N	153 03.20 W	60Bon	L-Oto, QTowF, RCountL	
29-Apr-01	22:54	16	1	GT197		143	59 02.69 N	153 03.20 W	CAT	CAT	
29-Apr-01	22:54	16	1	GT197		177	58 56.17 N	152 50.81 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	0:10	17	1	GV197		177	58 56.17 N	152 50.81 W	CAT	CAT	
30-Apr-01	0:10	17	1	GV197		177	58 56.17 N	152 50.81 W	60Bon	L-Oto, QTowF, RCountL	1/2 mile off station
30-Apr-01	1:35	18	1	GX197		200	58 49.03 N	152 38.46 W	60Bon	L-Oto, QTowF, RCountL	1/2 mile off station
30-Apr-01	1:35	18	1	GX197		200	58 49.03 N	152 38.46 W	CAT	CAT	

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
30-Apr-01	3:06	19	1	GZ197		160	58 42.12 N	152 25.38 W	60Bon	QTowF, RCountL	
30-Apr-01	3:06	19	1	GZ197		160	58 42.12 N	152 25.38 W	CAT	CAT	
30-Apr-01	4:33	20	1	GX195		160	58 41.86 N	152 50.98 W	60Bon	QTowF, RCountL	
30-Apr-01	4:33	20	1	GX195		160	58 41.86 N	152 50.98 W	CAT	CAT	
30-Apr-01	5:43	21	1	GV195		158	58 48.63 N	153 03.41 W	60Bon	QTowF, RCountL	
30-Apr-01	5:43	21	1	GV195		158	58 48.63 N	153 03.41 W	CAT	CAT	
30-Apr-01	6:50	22	1	GV193		106	58 41.12 N	153 16.87 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	6:50	22	1	GV193		106	58 41.12 N	153 16.87 W	CAT	CAT	
30-Apr-01	8:02	23	1	GX193		164	58 34.64 N	153 03.86 W	60Bon	QTowF, RCountL	
30-Apr-01	8:02	23	1	GX193		164	58 34.64 N	153 03.86 W	CAT	CAT	
30-Apr-01	9:13	24	1	GZ193		54	58 27.58 N	152 51.72 W	60Bon	QTowF, RCountL	
30-Apr-01	9:13	24	1	GZ193		54	58 27.58 N	152 51.72 W	60Bon	QTowF, RCountL	
<p>sat at bottom for a moment sat at bottom for a moment</p>											
<p>Net 2 has a ~2 inch hole along a patch near the mouth. It has probably been there the entire cruise, because it looks frayed and marked over. We replaced Net 2 after this</p>											
30-Apr-01	9:13	24	1	GZ193		54	58 27.58 N	152 51.72 W	CAT	CAT	
30-Apr-01	10:22	25	1	GZ191		146	58 20.60 N	153 04.43 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	10:22	25	1	GZ191		146	58 20.60 N	153 04.43 W	CAT	CAT	
30-Apr-01	11:33	26	1	GX191		178	58 27.38 N	153 17.84 W	60Bon	QTowF, RCountL	
30-Apr-01	11:33	26	1	GX191		178	58 27.38 N	153 17.84 W	CAT	CAT	
30-Apr-01	12:39	27	1	GV191		116	58 33.96 N	153 29.95 W	60Bon	L-Oto, QTowF, RCountL	
<p>watch got knocked and accidentally turned off at 5:14 when bongo was at bottom (or just coming up); 5:14+7 min = 12:14 (bottom @12:39, surface@12:46)</p>											
30-Apr-01	12:39	27	1	GV191		116	58 33.96 N	153 29.95 W	CAT	CAT	
<p>watch got knocked and accidentally turned off at 5:14 when bongo was at bottom (or just coming up); 5:14+7 min = 12:14 (bottom @12:39, surface@12:46)</p>											
30-Apr-01	13:44	28	1	GV189		150	58 27.01 N	153 42.88 W	60Bon	QTowF, RCountL	
<p>Net 1 had a hole in collar. Used net 2 for QTowF this time. Fixed after this cast was finished.</p>											
30-Apr-01	13:44	28	1	GV189		150	58 27.01 N	153 42.88 W	60Bon	QTowF, RCountL	
<p>Net 1 had a hole in collar. Used net 2 for QTowF this time. Fixed after this cast was finished. Unsure about wire out.</p>											
30-Apr-01	13:44	28	1	GV189		150	58 27.01 N	153 42.88 W	CAT	CAT	
<p>Net 1 had a hole in collar. Used net 2 for QTowF this time. Fixed after this cast was finished.</p>											
30-Apr-01	14:57	29	1	GX189		172	58 20.03 N	153 30.75 W	60Bon	QTowF, RCountL	
30-Apr-01	14:57	29	1	GX189		172	58 20.03 N	153 30.75 W	CAT	CAT	
30-Apr-01	16:12	30	1	GZ189		205	58 13.19 N	153 17.78 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	16:12	30	1	GZ189		205	58 13.19 N	153 17.78 W	CAT	CAT	
30-Apr-01	17:32	31	1	GZ187		222	58 06.00 N	153 30.71 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	17:32	31	1	GZ187		222	58 06.00 N	153 30.71 W	CAT	CAT	

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	HaulComments
30-Apr-01	18:54	32	1	GX187		191	58 12.77 N	153 43.55 W	60Bon	QTowF, RCountL	
30-Apr-01	18:54	32	1	GX187		191	58 12.77 N	153 43.55 W	CAT	CAT	
30-Apr-01	20:08	33	1	GX185		199	58 05.37 N	153 56.06 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	20:08	33	1	GX185		199	58 05.37 N	153 56.06 W	60Bon	L-Oto, QTowF, RCountL	
30-Apr-01	20:08	33	1	GX185		199	58 05.37 N	153 56.06 W	CAT	CAT	SCAMP profile done after Bongo.
01-May-01	1:34	34	1	GZ185		194	57 59.06 N	153 43.29 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	1:34	34	1	GZ185		194	57 59.06 N	153 43.29 W	CAT	CAT	
01-May-01	3:04	35	1	GZ183		180	57 51.35 N	153 56.51 W	60Bon	QTowF, RCountL	
01-May-01	3:04	35	1	GZ183		180	57 51.35 N	153 56.51 W	CAT	CAT	
01-May-01	4:34	36	1	GX183		209	57 58.20 N	154 09.82 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	4:34	36	1	GX183		209	57 58.20 N	154 09.82 W	CAT	CAT	
01-May-01	6:06	37	1	GX181		215	57 51.14 N	154 22.51 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	6:06	37	1	GX181		215	57 51.14 N	154 22.51 W	CAT	CAT	
01-May-01	7:27	38	1	GZ181		56	57 44.22 N	154 09.30 W	60Bon	QTowF, RCountL	
01-May-01	7:27	38	1	GZ181		56	57 44.22 N	154 09.30 W	CAT	CAT	
01-May-01	9:14	39	1	GX179		215	57 43.65 N	154 35.75 W	60Bon	QTowF, RCountL	
01-May-01	9:14	39	1	GX179		215	57 43.65 N	154 35.75 W	CAT	CAT	
01-May-01	10:35	40	1	GV179		278	57 50.81 N	154 48.29 W	60Bon	QTowF, RCountL	
01-May-01	10:35	40	1	GV179		278	57 50.81 N	154 48.29 W	CAT	CAT	
01-May-01	11:59	41	1	GV177		273	57 43.16 N	155 01.63 W	60Bon	QTowF, RCountL	
01-May-01	11:59	41	1	GV177		273	57 43.16 N	155 01.63 W	CAT	CAT	
01-May-01	13:20	42	1	GX177		222	57 36.63 N	154 47.89 W	60Bon	QTowF, RCountL	
01-May-01	13:20	42	1	GX177		222	57 36.63 N	154 47.89 W	CAT	CAT	
01-May-01	15:02	43	1	GV173		283	57 36.35 N	155 14.75 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	15:02	43	1	GV173		283	57 36.35 N	155 14.75 W	CAT	CAT	
01-May-01	15:59	44	1	GT173		55	57 37.04 N	155 27.93 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	15:59	44	1	GT173		55	57 37.04 N	155 27.93 W	CAT	CAT	
01-May-01	16:59	45	1	GV173		294	57 28.77 N	155 27.35 W	60Bon	QTowF, RCountL	
01-May-01	16:59	45	1	GV173		294	57 28.77 N	155 27.35 W	CAT	CAT	
01-May-01	18:17	46	1	GX173		246	57 22.17 N	155 14.06 W	60Bon	QTowF, RCountL	
01-May-01	18:17	46	1	GX173		246	57 22.17 N	155 14.06 W	CAT	CAT	
01-May-01	19:34	47	1	GX171		261	57 14.75 N	155 26.85 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	19:34	47	1	GX171		261	57 14.75 N	155 26.85 W	CAT	CAT	
01-May-01	20:57	48	1	GV171		280	57 21.56 N	155 40.27 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	20:57	48	1	GV171		280	57 21.56 N	155 40.27 W	CAT	CAT	
01-May-01	21:56	49	1	GT171		112	57 27.06 N	155 45.63 W	60Bon	L-Oto, QTowF, RCountL	
01-May-01	21:56	49	1	GT171		112	57 27.06 N	155 45.63 W	CAT	CAT	
01-May-01	23:07	50	1	GT169		82	57 21.45 N	156 01.42 W	60Bon	L-Oto, QTowF, RCountL	Moved station 1/2 mile
01-May-01	23:07	50	1	GT169		82	57 21.45 N	156 01.42 W	CAT	CAT	Moved station 1/2 mile

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	HaulComments
02-May-01	1:05	51	1	GV169		249	57 14.36 N	155 52.87 W	60Bon	QTowF, RCountL	
02-May-01	1:05	51	1	GV169		249	57 14.36 N	155 52.87 W	CAT	CAT	
02-May-01	2:52	52	1	GX169		276	57 07.47 N	155 39.85 W	60Bon	QTowF, RCountL	
02-May-01	2:52	52	1	GX169		276	57 07.47 N	155 39.85 W	CAT	CAT	
02-May-01	4:30	53	1	GX167		306	57 00.37 N	155 51.90 W	60Bon	QTowF, RCountL	
02-May-01	4:30	53	1	GX167		306	57 00.37 N	155 51.90 W	CAT	CAT	
02-May-01	5:33	54	1	GV167		83	57 06.92 N	156 05.76 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	5:33	54	1	GV167		83	57 06.92 N	156 05.76 W	CAT	CAT	
02-May-01	6:40	55	1	GV165		79	56 59.91 N	156 18.05 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	6:40	55	1	GV165		79	56 59.91 N	156 18.05 W	CAT	CAT	
02-May-01	7:57	56	1	GX165		212	56 53.08 N	156 04.38 W	60Bon	QTowF, RCountL	
02-May-01	7:57	56	1	GX165		212	56 53.08 N	156 04.38 W	CAT	CAT	SEACAT computer would not turn off. SEACAT computer would not turn off.
02-May-01	9:23	57	1	GX163		187	56 45.82 N	156 17.41 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	9:23	57	1	GX163		187	56 45.82 N	156 17.41 W	CAT	CAT	SeaCat casts for stations 1-56 were logged to SCS only, hex files were not saved. Hereafter, the data were logged to the local hard drive and to SCS, as per usual
02-May-01	10:37	58	1	GV163		73	56 52.58 N	156 30.59 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	10:37	58	1	GV163		73	56 52.58 N	156 30.59 W	CAT	CAT	
02-May-01	11:49	59	1	GV161		145	56 45.15 N	156 43.40 W	60Bon	QTowF, RCountL	
02-May-01	11:49	59	1	GV161		145	56 45.15 N	156 43.40 W	CAT	CAT	
02-May-01	13:09	60	1	GX161		184	56 38.41 N	156 30.11 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	13:09	60	1	GX161		184	56 38.41 N	156 30.11 W	CAT	CAT	
02-May-01	14:19	61	1	GX159		161	56 31.09 N	156 42.37 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	14:19	61	1	GX159		161	56 31.09 N	156 42.37 W	CAT	CAT	
02-May-01	15:32	62	1	GV159		92	56 38.06 N	156 55.45 W	60Bon	QTowF, RCountL	
02-May-01	15:32	62	1	GV159		92	56 38.06 N	156 55.45 W	CAT	CAT	
02-May-01	16:39	63	1	GU158		137	56 40.29 N	157 12.92 W	60Bon	QTowF, RCountL	
02-May-01	16:39	63	1	GU158		137	56 40.29 N	157 12.92 W	CAT	CAT	
02-May-01	18:42	64	1	GV155		56	56 23.44 N	157 20.77 W	60Bon	QTowF, RCountL	
02-May-01	18:42	64	1	GV155		56	56 23.44 N	157 20.77 W	CAT	CAT	
02-May-01	19:51	65	1	GX155		116	56 16.60 N	157 06.69 W	60Bon	L-Oto, QTowF, RCountL	
02-May-01	19:51	65	1	GX155		116	56 16.60 N	157 06.69 W	CAT	CAT	
02-May-01	21:02	66	1	GZ155		80	56 09.75 N	156 53.86 W	60Bon	QTowF, RCountL	
02-May-01	21:02	66	1	GZ155		80	56 09.75 N	156 53.86 W	CAT	CAT	
03-May-01	0:00	67	1	HD155		210	55 55.70 N	156 27.69 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	0:00	67	1	HD155		210	55 55.70 N	156 27.69 W	CAT	CAT	
03-May-01	1:27	68	1	HF155		230	55 49.06 N	156 15.05 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	1:27	68	1	HF155		230	55 49.06 N	156 15.05 W	CAT	CAT	

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
03-May-01	2:55	69	1	HH155		213	55 42.30 N	156 01.29 W	60Bon	QTowF, RCountL	
03-May-01	2:55	69	1	HH155		213	55 42.30 N	156 01.29 W	CAT	CAT	
03-May-01	4:28	70	1	HJ155		193	55 35.44 N	155 47.41 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	4:28	70	1	HJ155		193	55 35.44 N	155 47.41 W	CAT	CAT	
03-May-01	6:41	71	1	HH157		58	55 49.61 N	155 49.11 W	60Bon	QTowF, RCountL	
03-May-01	6:41	71	1	HH157		58	55 49.61 N	155 49.11 W	CAT	CAT	
03-May-01	8:32	72	1	HF157		94	55 56.22 N	156 01.80 W	60Bon	QTowF, RCountL	
03-May-01	8:32	72	1	HF157		94	55 56.22 N	156 01.80 W	CAT	CAT	
03-May-01	10:25	73	1	HD157		214	56 03.26 N	156 15.30 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	10:25	73	1	HD157		214	56 03.26 N	156 15.30 W	CAT	CAT	
03-May-01	11:55	74	1	HB157		232	56 10.37 N	156 28.31 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	11:55	74	1	HB157		232	56 10.37 N	156 28.31 W	CAT	CAT	
03-May-01	13:18	75	1	GZ157		109	56 17.05 N	156 41.29 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	13:18	75	1	GZ157		109	56 17.05 N	156 41.29 W	CAT	CAT	
03-May-01	14:30	76	1	GX157		122	56 23.93 N	156 54.35 W	60Bon	QTowF, RCountL	
03-May-01	14:30	76	1	GX157		122	56 23.93 N	156 54.35 W	CAT	CAT	
03-May-01	16:05	77	1	GZ159		218	56 24.51 N	156 29.02 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	16:05	77	1	GZ159		218	56 24.51 N	156 29.02 W	CAT	CAT	
03-May-01	17:25	78	1	HB159		273	56 17.52 N	156 15.66 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	17:25	78	1	HB159		273	56 17.52 N	156 15.66 W	CAT	CAT	
03-May-01	17:54	78	2	HB159		275	56 17.61 N	156 16.50 W	SatBuoy	Deploy	deployed drifter # 13126
03-May-01	19:02	79	1	HD159		231	56 10.59 N	156 02.57 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	20:17	80	1	HF159		66	56 03.44 N	155 49.32 W	60Bon	QTowF, RCountL	
03-May-01	20:17	80	1	HF159		66	56 03.44 N	155 49.32 W	CAT	CAT	
03-May-01	21:24	81	1	HF161		60	56 10.72 N	155 36.98 W	60Bon	QTowF, RCountL	
03-May-01	21:24	81	1	HF161		60	56 10.72 N	155 36.98 W	CAT	CAT	
03-May-01	22:47	82	1	HD161		98	56 17.84 N	155 50.10 W	60Bon	L-Oto, QTowF, RCountL	
03-May-01	22:47	82	1	HD161		98	56 17.84 N	155 50.10 W	CAT	CAT	
04-May-01	0:18	83	1	HB161		245	56 24.56 N	156 03.55 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	0:18	83	1	HB161		245	56 24.56 N	156 03.55 W	CAT	CAT	
04-May-01	1:59	84	1	GZ161		235	56 31.32 N	156 16.38 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	1:59	84	1	GZ161		235	56 31.32 N	156 16.38 W	CAT	CAT	
04-May-01	3:30	85	1	GZ163		294	56 38.86 N	156 04.21 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	3:30	85	1	GZ163		294	56 38.86 N	156 04.21 W	CAT	CAT	
04-May-01	5:05	86	1	HB163		232	56 31.99 N	155 50.89 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	5:05	86	1	HB163		232	56 31.99 N	155 50.89 W	CAT	CAT	
04-May-01	6:30	87	1	HD163		77	56 24.97 N	155 37.67 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	6:30	87	1	HD163		77	56 24.97 N	155 37.67 W	CAT	CAT	

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	FOCI Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
04-May-01	7:36	88	1	HD165		71	56 32.38 N	155 25.45 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	7:36	88	1	HD165		71	56 32.38 N	155 25.45 W	CAT	CAT	
04-May-01	9:05	89	1	HB165		236	56 39.16 N	155 38.46 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	9:05	89	1	HB165		236	56 39.16 N	155 38.46 W	CAT	CAT	
04-May-01	10:44	90	1	GZ165		295	56 46.02 N	155 51.44 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	10:44	90	1	GZ165		295	56 46.02 N	155 51.44 W	CAT	CAT	
04-May-01	12:15	91	1	GZ167		281	56 53.31 N	155 38.99 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	12:15	91	1	GZ167		281	56 53.31 N	155 38.99 W	CAT	CAT	
04-May-01	13:32	92	1	HB167		237	56 46.51 N	155 26.58 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	13:32	92	1	HB167		237	56 46.51 N	155 26.58 W	CAT	CAT	
04-May-01	14:48	93	1	HD167		74	56 39.70 N	155 13.46 W	60Bon	QTowF, RCountL	
04-May-01	14:48	93	1	HD167		74	56 39.70 N	155 13.46 W	CAT	CAT	
04-May-01	16:26	94	1	HB169		217	56 53.67 N	155 13.45 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	16:26	94	1	HB169		217	56 53.67 N	155 13.45 W	CAT	CAT	
04-May-01	17:48	95	1	GZ169		266	57 00.71 N	155 26.34 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	17:48	95	1	GZ169		266	57 00.71 N	155 26.34 W	CAT	CAT	
04-May-01	19:04	96	1	GZ171		243	57 08.01 N	155 13.79 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	19:04	96	1	GZ171		243	57 08.01 N	155 13.79 W	CAT	CAT	
04-May-01	20:26	97	1	HB171		148	57 00.73 N	155 00.83 W	60Bon	L-Oto, QTowF, RCountL	
04-May-01	20:26	97	1	HB171		148	57 00.73 N	155 00.83 W	CAT	CAT	
04-May-01	21:39	98	1	HB173		79	57 08.09 N	154 48.12 W	60Bon	L-Hist, L-Oto, QTowF, RCountL	
04-May-01	21:39	98	1	HB173		79	57 08.09 N	154 48.12 W	CAT	CAT	
04-May-01	22:51	99	1	GZ173		213	57 14.97 N	155 00.94 W	60Bon	L-Hist, L-Oto, QTowF, RCountL	
04-May-01	22:51	99	1	GZ173		213	57 14.97 N	155 00.94 W	CAT	CAT	
05-May-01	0:36	100	1	GX175		231	57 29.31 N	155 01.30 W	60Bon	L-Oto, QTowF, RCountL	
05-May-01	0:36	100	1	GX175		231	57 29.31 N	155 01.30 W	CAT	CAT	
05-May-01	3:44	101	1	GX181		212	57 50.98 N	154 22.69 W	60Bon	L-Oto, QTowF, RCountL	
05-May-01	3:44	101	1	GX181		212	57 50.98 N	154 22.69 W	CAT	CAT	
05-May-01	4:57	102	1			198	57 45.37 N	154 12.52 W	60Bon	Discard	
05-May-01	4:57	102	1			198	57 45.37 N	154 12.52 W	CAT	CAT	
05-May-01	9:22	103	1	GZ173		209	57 15.03 N	155 00.32 W	60Bon	DMS-phyt, L-Oto	

Bridge's SCS crashed so there is no MOA mark. Approximate lat/long/time/bottom depth taken from displays in Dataplot. Also, nets spent ~1.5 minutes at ~100 depth as they were coming up.

Bridge's SCS crashed so there is no MOA mark. Approximate lat/long/time/bottom depth taken from displays in Dataplot. Also, nets spent ~1.5 minutes at ~100 depth as they were coming up.

Looking for larvae. Net depth, wire out, and tow times are dummy values

Looking for larvae. Net depth, wire out, and tow times are dummy values

Net 1 - Phytoplankton in z-fix, 10%, and 3% HCHO for K. Bailey

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
05-May-01	9:22	103	1	GZ173		209	57 15.03 N	155 00.32 W	60Bon	DMS-phyt, L-Oto	Net 2 - approximately one-half sample sorted for L-oto, no rough count
05-May-01	9:22	103	1	GZ173		209	57 15.03 N	155 00.32 W	CAT	CAT	We'll follow drifter to sample same water parcel. Mocness/scamp sampling MOCNESS/SCAMP sampling. Flying at 30 degrees. Filtered goin negative. Mocness/scamp sampling. Bongo w/ 2 min stops at depths 80, 70, 60, 50, 40, 30, 20, and 10m on the way up. Total number from both nets was 53. Numbers for each net is approximate cause both were dumped and picked together. Bongo w/ 2 min stops at depths 80, 70, 60, 50, 40, 30, 20, and 10m on the way up. 5 min at each depth interval cause vol filtered not right. Net 1 wide depth range cause trouble w/ ship speed (too fast). Net 1 wide depth range cause trouble with ship speed (too fast).
05-May-01	10:49	104	1	NONE		205	57 08.03 N	155 01.27 W	60Bon	L-Oto, RCountL	
05-May-01	10:49	104	1	NONE		205	57 08.03 N	155 01.27 W	CAT	CAT	
05-May-01	13:00	104	2	NONE		204	57 06.04 N	155 01.78 W	ShipBuoy	Deploy	
05-May-01	13:08	104	3		MOC001	205	57 05.88 N	155 01.98 W	MOC1	QTowF	
05-May-01	14:52	104	4	NONE	CTD0001	209	57 05.15 N	155 03.63 W	CTDB	CTD, Fluor, MZ, PAR	
05-May-01	15:51	104	5	NONE		208	57 05.14 N	155 03.62 W	60Bon	L-Gut	
05-May-01	15:51	104	5	NONE		208	57 05.14 N	155 03.62 W	CAT	CAT	
05-May-01	17:57	104	6		MOC002	221	57 05.43 N	155 06.32 W	MOC1	QTowF	
05-May-01	17:57	104	6		MOC002	221	57 05.43 N	155 06.32 W	MOC1	QTowF	
05-May-01	19:15	104	7	NONE	CTD0002	221	57 05.60 N	155 05.92 W	CTDB	CTD, MZ	
05-May-01	20:06	104	8			225	57 05.59 N	155 06.59 W	60Bon	L-Gut	
05-May-01	20:06	104	8			225	57 05.59 N	155 06.59 W	CAT	CAT	
05-May-01	21:57	104	9		MOC003	223	57 07.25 N	155 05.59 W	MOC1	QTowF	
05-May-01	22:30	104	10		CTD0003	227	57 06.10 N	155 07.58 W	CTDB	CTD, Fluor, MZ, PAR	
05-May-01	22:59	104	11			228	57 05.89 N	155 07.58 W	60Bon	L-Gut	
05-May-01	22:59	104	11			228	57 05.89 N	155 07.58 W	CAT	CAT	
06-May-01	0:43	104	12			220	57 05.49 N	155 08.80 W	ShipBuoy	Recovery	
06-May-01	5:04	105	1	FOX061		135	57 43.22 N	155 15.84 W	20Bon	QTowF	
06-May-01	5:04	105	1	FOX061		135	57 43.22 N	155 15.84 W	60Bon	QTowF	
06-May-01	5:04	105	1	FOX061		135	57 43.22 N	155 15.84 W	CAT	CAT	

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
06-May-01	5:39	105	2	FOX061	CTD004	170	57 43.27 N	155 15.45 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
06-May-01	6:07	105	3	FOX061		183	57 43.26 N	155 15.42 W	CalVET	QTowF	
06-May-01	6:07	105	3	FOX061		183	57 43.26 N	155 15.42 W	CAT	CAT	
06-May-01	6:47	106	1	FOX060		288	57 41.09 N	155 09.88 W	CalVET	QTowF	
06-May-01	6:47	106	1	FOX060		288	57 41.09 N	155 09.88 W	CAT	CAT	
06-May-01	7:06	106	2	FOX060	CTD005	288	57 41.33 N	155 09.46 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
06-May-01	7:47	106	3	FOX060		290	57 41.10 N	155 09.92 W	20Bon	QTowF	
06-May-01	7:47	106	3	FOX060		290	57 41.10 N	155 09.92 W	60Bon	QTowF	
06-May-01	7:47	106	3	FOX060		290	57 41.10 N	155 09.92 W	CAT	CAT	
06-May-01	7:47	106	3	FOX060		290	57 41.10 N	155 09.92 W	20Bon	QTowF	
06-May-01	8:46	107	1	FOX059		255	57 38.36 N	155 04.60 W	20Bon	QTowF	
06-May-01	8:46	107	1	FOX059		255	57 38.36 N	155 04.60 W	60Bon	QTowF	
06-May-01	8:46	107	1	FOX059		255	57 38.36 N	155 04.60 W	CAT	CAT	
06-May-01	9:42	107	2	FOX59	CTD006	255	57 38.38 N	155 04.11 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
06-May-01	10:18	107	3	FOX059		257	57 38.73 N	155 04.48 W	CalVET	QTowF	45-degree wire angle onboard; wind high
06-May-01	10:18	107	3	FOX059		257	57 38.73 N	155 04.48 W	CAT	CAT	CAL004-started time few seconds too late. Tried to estimate correct time.
06-May-01	11:23	108	1	FOX058		239	57 36.46 N	155 00.98 W	CalVET	QTowF	
06-May-01	11:23	108	1	FOX058		239	57 36.46 N	155 00.98 W	CAT	CAT	
06-May-01	20:01	108	2	FOX058	CTD007	237	57 36.15 N	155 00.43 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
06-May-01	12:49	108	3	FOX058		238	57 36.32 N	155 00.91 W	20Bon	QTowF	
06-May-01	12:49	108	3	FOX058		238	57 36.32 N	155 00.91 W	60Bon	QTowF	
06-May-01	12:49	108	3	FOX058		238	57 36.32 N	155 00.91 W	CAT	CAT	
06-May-01	13:52	109	1	FOX057		228	57 33.29 N	154 52.69 W	20Bon	QTowF	
06-May-01	13:52	109	1	FOX057		228	57 33.29 N	154 52.69 W	60Bon	QTowF	
06-May-01	13:52	109	1	FOX057		228	57 33.29 N	154 52.69 W	CAT	CAT	
06-May-01	14:33	109	2	FOX057	CTD008	228	57 32.85 N	154 52.59 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	started time late; tried to estimate correct time; spilled net 1
06-May-01	15:06	109	3	FOX057		226	57 33.13 N	154 52.82 W	CalVET	QTowF	
06-May-01	15:06	109	3	FOX057		226	57 33.13 N	154 52.82 W	CAT	CAT	
06-May-01	16:08	110	1	FOX056		200	57 30.91 N	154 47.26 W	CalVET	QTowF	
06-May-01	16:08	110	1	FOX056		200	57 30.91 N	154 47.26 W	CAT	CAT	
06-May-01	16:37	110	2	FOX056	CTD009	211	57 30.78 N	154 47.04 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
06-May-01	17:17	110	3	FOX056		209	57 30.99 N	154 47.01 W	20Bon	QTowF	
06-May-01	17:17	110	3	FOX056		209	57 30.99 N	154 47.01 W	60Bon	QTowF	
06-May-01	17:17	110	3	FOX056		209	57 30.99 N	154 47.01 W	CAT	CAT	
06-May-01	20:47	111	1	GZ181		235	57 41.58 N	153 58.71 W	60Bon	Discard	
06-May-01	20:47	111	1	GZ181		235	57 41.58 N	153 58.71 W	CAT	CAT	
07-May-01	12:15	112	1	NONE		310	57 00.04 N	155 52.46 W	SatBuoy	Deploy	SATBUOY #13155
07-May-01	18:28	113	1	GX153		150	56 09.42 N	157 19.88 W	60Bon	QTowF, RCountL	BON0115

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
07-May-01	18:28	113	1	GX153		150	56 09.42 N	157 19.88 W	CAT	CAT	BON0115
07-May-01	19:45	114	1	GZ153		105	56 02.53 N	157 06.06 W	60Bon	L-Oto, QTowF, RCountL	BON0116
07-May-01	19:45	114	1	GZ153		105	56 02.53 N	157 06.06 W	60Bon	L-Oto, QTowF, RCountL	BON0117
07-May-01	19:45	114	1	GZ153		105	56 02.53 N	157 06.06 W	CAT	CAT	BON0117
07-May-01	20:59	115	1	HB153		156	55 55.59 N	156 52.65 W	60Bon	L-Oto, QTowF, RCountL	BON0117
07-May-01	20:59	115	1	HB153		156	55 55.59 N	156 52.65 W	CAT	CAT	BON0117
07-May-01	21:20	115	2	HB153		154	55 55.65 N	156 52.99 W	SatBuoy	Deploy	Drifter #13148
07-May-01	22:26	116	1	HD153		227	55 48.78 N	156 39.71 W	60Bon	L-Hist, L-Oto, QTowF, RCountL	BON0118
07-May-01	22:26	116	1	HD153		227	55 48.78 N	156 39.71 W	CAT	CAT	BON0118
07-May-01	23:52	117	1	HF153		241	55 41.49 N	156 26.50 W	60Bon	L-Oto, QTowF, RCountL	BON0119
07-May-01	23:52	117	1	HF153		241	55 41.49 N	156 26.50 W	CAT	CAT	BON0119
08-May-01	1:13	118	1	HH153		239	55 34.92 N	156 12.67 W	60Bon	L-Oto, QTowF, RCountL	BON0120
08-May-01	1:13	118	1	HH153		239	55 34.92 N	156 12.67 W	60Bon	L-Oto, QTowF, RCountL	BON0120--REMOVED 2 JELLYFISH FROM NET 1
08-May-01	1:13	118	1	HH153		239	55 34.92 N	156 12.67 W	CAT	CAT	BON0120
08-May-01	2:25	119	1	HH151		199	55 27.46 N	156 24.93 W	60Bon	L-Oto, QTowF, RCountL	BON0121
08-May-01	2:25	119	1	HH151		199	55 27.46 N	156 24.93 W	CAT	CAT	BON0121
08-May-01	3:54	120	1	HF151		223	55 34.49 N	156 38.54 W	60Bon	L-Oto, QTowF, RCountL	BON0122
08-May-01	3:54	120	1	HF151		223	55 34.49 N	156 38.54 W	CAT	CAT	BON0122
08-May-01	5:51	121	1	HD151		95	55 41.64 N	156 51.99 W	60Bon	L-Oto, QTowS, RCountL	BON0123
08-May-01	5:51	121	1	HD151		95	55 41.64 N	156 51.99 W	CAT	CAT	BON0123
08-May-01	6:54	122	1	HB151		95	55 48.43 N	157 05.04 W	60Bon	L-Oto, QTowF, RCountL	BON0124
08-May-01	6:54	122	1	HB151		95	55 48.43 N	157 05.04 W	CAT	CAT	BON0124
08-May-01	8:02	123	1	GZ151		104	55 55.28 N	157 18.59 W	60Bon	QTowF, RCountL	BON0125
08-May-01	8:02	123	1	GZ151		104	55 55.28 N	157 18.59 W	CAT	CAT	BON0125
08-May-01	9:09	124	1	GZ149		110	55 48.30 N	157 30.78 W	60Bon	L-Oto, QTowF, RCountL	BON0126
08-May-01	9:09	124	1	GZ149		110	55 48.30 N	157 30.78 W	CAT	CAT	BON0126
08-May-01	10:25	125	1	HB149		96	55 41.39 N	157 17.55 W	60Bon	L-Oto, QTowF, RCountL	BON0127
08-May-01	10:25	125	1	HB149		96	55 41.39 N	157 17.55 W	CAT	CAT	BON0127
08-May-01	11:40	126	1	HD149		87	55 34.33 N	157 03.98 W	60Bon	L-Oto, QTowF, RCountL	BON0128
08-May-01	11:40	126	1	HD149		87	55 34.33 N	157 03.98 W	CAT	CAT	BON0128
08-May-01	12:51	127	1	HF149		96	55 27.20 N	156 50.66 W	60Bon	L-Oto, QTowF, RCountL	wire angle fluxed bet. 22-57 degrees,
08-May-01	12:51	127	1	HF149		96	55 27.20 N	156 50.66 W	CAT	CAT	wire angle fluxed bet. 22-57 degrees,
08-May-01	14:00	128	1	HH149		134	55 20.19 N	156 37.21 W	60Bon	L-Oto, QTowF, RCountL	bon0130
08-May-01	14:00	128	1	HH149		134	55 20.19 N	156 37.21 W	CAT	CAT	bon0130
08-May-01	15:10	129	1	HJ149		210	55 13.41 N	156 24.18 W	60Bon	L-Oto, QTowF, RCountL	bon0131
08-May-01	15:10	129	1	HJ149		210	55 13.41 N	156 24.18 W	CAT	CAT	bon0131
08-May-01	17:30	130	1	HF147		95	55 20.08 N	157 02.78 W	60Bon	L-Oto, QTowF, RCountL	BON0132
08-May-01	17:30	130	1	HF147		95	55 20.08 N	157 02.78 W	CAT	CAT	BON0132

Table 1 (continued). Cruise Summary For FOCI Cruise 2MF01 (MF-01-05)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	HaulComments
08-May-01	18:33	131	1	HD147		88	55 27.02 N	157 16.37 W	60Bon	L-Oto, QTowF, RCountL	BON0133
08-May-01	18:33	131	1	HD147		88	55 27.02 N	157 16.37 W	CAT	CAT	BON0133
08-May-01	19:36	132	1	HB147		98	55 33.93 N	157 29.65 W	60Bon	L-Oto, QTowF, RCountL	BON0134
08-May-01	19:36	132	1	HB147		98	55 33.93 N	157 29.65 W	CAT	CAT	BON0134
08-May-01	20:44	133	1	GZ147		136	55 40.89 N	157 43.66 W	60Bon	L-Oto, QTowF, RCountL	BON0135
08-May-01	20:44	133	1	GZ147		136	55 40.89 N	157 43.66 W	CAT	CAT	BON0135
09-May-01	1:20	134	1	GT139		100	55 32.33 N	159 12.45 W	60Bon	L-Oto, QTowF, RCountL	BON0136
09-May-01	1:20	134	1	GT139		100	55 32.33 N	159 12.45 W	CAT	CAT	BON0136
09-May-01	2:27	135	1	GV139		160	55 25.46 N	158 59.29 W	60Bon	QTowF, RCountL	BON0137
09-May-01	2:27	135	1	GV139		160	55 25.46 N	158 59.29 W	CAT	CAT	BON0137
09-May-01	3:38	136	1	GX139		185	55 18.71 N	158 45.67 W	60Bon	L-Oto, QTowF, RCountL	BON0136
09-May-01	3:38	136	1	GX139		185	55 18.71 N	158 45.67 W	60Bon	L-Oto, QTowF, RCountL	BON0138
09-May-01	3:38	136	1	GX139		185	55 18.71 N	158 45.67 W	CAT	CAT	BON0138
09-May-01	4:47	137	1	GX137		178	55 11.38 N	158 57.40 W	60Bon	L-Oto, QTowF, RCountL	BON0139
09-May-01	4:47	137	1	GX137		178	55 11.38 N	158 57.40 W	CAT	CAT	BON0139
09-May-01	6:04	138	1	GV137		184	55 18.32 N	159 11.22 W	60Bon	L-Oto, QTowF, RCountL	BON0140
09-May-01	6:04	138	1	GV137		184	55 18.32 N	159 11.22 W	CAT	CAT	BON0140
09-May-01	7:17	139	1	GT137		137	55 25.11 N	159 24.98 W	60Bon	QTowF, RCountL	BON0141
09-May-01	7:17	139	1	GT137		137	55 25.11 N	159 24.98 W	CAT	CAT	BON0141
09-May-01	8:49	140	1	GR135		111	55 24.65 N	159 51.04 W	60Bon	L-Oto, QTowF, RCountL	BON0142
09-May-01	8:49	140	1	GR135		111	55 24.65 N	159 51.04 W	CAT	CAT	BON0142
09-May-01	10:51	141	1	GR131		179	55 10.57 N	160 15.18 W	60Bon	QTowF, RCountL	BON0143
09-May-01	10:51	141	1	GR131		179	55 10.57 N	160 15.18 W	CAT	CAT	BON0143
09-May-01	12:01	142	1	GR129		142	55 03.31 N	160 27.01 W	60Bon	QTowF, RCountL	BON0144
09-May-01	12:01	142	1	GR129		142	55 03.31 N	160 27.01 W	CAT	CAT	BON0144
09-May-01	13:39	143	1	GP127		85	55 02.49 N	160 53.35 W	60Bon	QTowF, RCountL	BON0145
09-May-01	13:39	143	1	GP127		85	55 02.49 N	160 53.35 W	CAT	CAT	BON0145
09-May-01	14:49	144	1	GR127		91	54 55.58 N	160 39.29 W	60Bon	QTowF, RCountL	on upcast, wire angle reached 59 degrees, BON0146
09-May-01	14:49	144	1	GR127		91	54 55.58 N	160 39.29 W	CAT	CAT	BON0146
09-May-01	16:00	145	1	GT127		92	54 48.86 N	160 25.08 W	60Bon	QTowF, RCountL	BON0147
09-May-01	16:00	145	1	GT127		92	54 48.86 N	160 25.08 W	CAT	CAT	BON0147
09-May-01	17:12	146	1	GV127		86	54 41.99 N	160 11.15 W	60Bon	L-Oto, QTowF, RCountL	bon0148
09-May-01	17:12	146	1	GV127		86	54 41.99 N	160 11.15 W	CAT	CAT	bon0148

