

FINAL CRUISE REPORT

Cruise Number: MF05-12

FOCI Number: 7MF05

Ship:

NOAA Ship Miller Freeman

Area of Operations:

Gulf of Alaska

Itinerary:

Date depart / port: September 5, 2005 / Kodiak, AK

Date arrive / port: September 19, 2005 / Dutch Harbor, AK

Participating organizations:

University of Alaska Fairbanks (UAF)

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Steve Porter

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Cruise Objectives: The primary objective was to better understand geographic variation in the productivity of fishes in the western Gulf of Alaska (GOA). The cruise focused on the geographic distribution and size of age-0 walleye pollock and other small pelagic fishes in relation to zooplankton and physical oceanography. To accomplish this, a two-part grid of 67 stations was occupied. The first part was along the Gulf-side of Kodiak Island. The second part was in the south Semidi Islands vicinity. The Kodiak grid included nearshore areas previously shown to be pollock nurseries. Occupation of the Semidi grid extended a 3-year time series, which began September 2000.

Secondary cruise objectives were as follows:

- 1) Collect midwater fishes, plankton, acoustic, and CTD samples/data in Barnabas Gully to determine if previously observed spatial separation of capelin and juvenile walleye pollock can be ascribed to a difference in prey associated with a hydrographic front. Previously, the front has formed in the mid-shelf region of the gully.

- 2) Sample opportunistically to identify patches of strong acoustic back-scatter.
- 3) Sample opportunistically with a bottom trawl to collect piscivorous fishes for preliminary indication of predation on age-0 pollock.

Summary of Operations:

Operation	Tows
Anchovy trawl (Ancho)	85
Seabird SeaCAT CTD (CAT)	85
CTD without bottle samples (CTD)	1
CTD with bottle samples (CTDB)	11
10" inner diameter modified Clarke-Bumpus (LG-CB)	85
Deployment of satellite buoy (SatBuoy)	4
Shrimp Trawl (Shrimp)	1
1m ² Tucker trawl (Tuck1)	85

Samples Collected	Tows	Number
Adult pollock collected for gut analysis (A-Gut)	4	175
Adult pollock length measurements (A-Length)	6	18
SeaBird SeaCat CTD (CAT)	85	
Extracted chlorophyll (Chlor)	11	65
SeaBird CTD (CTD)	12	
Deployment of buoy or mooring (Deploy)	4	4
Stimulated fluorescence collected during CTD casts (Fluor)	12	
Frank Morado AFSC genetics and pathology samples. (FMGen)	13	514
Furuno attached to net (Furuno)	85	
Juvenile pollock collected for gut analysis (J-Gut)	51	1692
Juvenile pollock length measurements (J-Length)	51	4934
Juvenile pollock collected for otolith analysis (J-Oto)	51	1692
Nutrient samples collected from CTD casts (Nut)	11	73
Photosynthetically Active Radiation data collected during CTD casts (PAR)	12	
Quantitative tow preserved in formalin (QTowF)	224	245

Summary of Cruise:

Narrative: Progression over the sampling grid was as planned, from northeast to southwest (Figure 1, Table 1. All 67 grid stations were successfully occupied. Designation of the Tucker trawl nets was altered from that described in the Final Cruise Instructions: the drogue was designated net 1, the first messenger opened net 2, and the upper 40 m of water was sampled with net 3.

Several measurements were made continuously during the cruise. Acoustic data were collected along ca. 2300 nmi of trackline at 18, 38, 120, and 200 kHz using the Simrad ER60 (APC 10) echo-sounder. The acoustic-doppler current profiler was off only during acoustic noise experiments (see below), and temperature, salinity, and fluorescence were measured via the ship's uncontaminated seawater system. The shipboard computer system (SCS) was used to record time, position, and environmental information during the cruise, but all recorded sounder readings (EQ-50 depth, m) were not adjusted to account for the ca. 5 m transducer-mount depth.

Considerable effort was made to address secondary cruise objectives. Most daylight and some nighttime hours during 10-13 September were spent sampling in Barnabus sea valley (L. Logerwell, AFSC). This included CTD casts at 11 stations, and ca. 150 nmi of acoustic data along parallel tracklines spaced ca. 6 nmi apart. Water column nutrient and chlorophyll samples were collected during each CTD cast, and the light (PAR) and fluorescence sensors were mounted on the rosette. Most net sampling along the tracklines was conducted to identify echo-layers (9 Stauffer trawl tows) and collect potential fish prey (9 Tucker trawl tows). The underway nutrient analyzer system was not available so water samples were frequently collected from the flow-through system. Other secondary cruise objectives that were addressed include 7 opportunistic midwater tows to identify echo-sign, and the stomach contents of 152 fish were scanned for evidence of predation on age-0 pollock and capelin. In addition, approximately 3 hrs of acoustic data were collected to evaluate a noise removal method (A. deRobertis, AFSC), and fish and invertebrate samples were collected out of the Stauffer trawl and drogue net of the Tucker by F. Morado (AFSC) for his genetics and other pathological studies.

Some operations failed to collect quantitative samples or data and had to be redone. Failed operations were due to Tucker trawl nets that did not open, flowmeter readings that were spurious, or nets contacting the seafloor.

Days Lost to Weather:

None

Days Lost to Equipment Failure:

None

Recommendations:

- 1) Confirm that the depth reading from the SCS sensor labeled "EQ50-Corrected-M (Meters)" is an estimate of the distance between the sea surface and sea floor (i.e. water depth). If confirmed, omit the "EQ50-DEPTH-M (Meters)" from the list of available SCS sensors, and re-label the "EQ50-Corrected (Meters)" to "EQ50-DEPTH-M (Meters)".
- 2) Inability to transfer files and access SCS was frequent and severe. Make it possible to transfer files electronically among all onboard scientific computers including SCS, resident shipboard computers (i.e. Dataplot, Chief Scientist's) as well as any guest computers.
- 3) Set up science snap files to log date, time, and position information in Dataplot, the Trawlhouse, and possibly in the Chemlab. It would be best if the scientists were directly responsible for collecting this information.

Acknowledgments:

The scientific party would like to acknowledge the hard work and support of the officers and crew of NOAA Ship *Miller Freeman*. We are especially indebted to the Captain and Officers for efficient navigation that enabled us to occupy all stations including those tucked in bays and behind islands – a clean sweep. Mark Miller was definitely Mr. FOO – thanks for making the science-ship coms so easy. Survey helped plan for development of a “science snap” on future surveys. And, the Deck Crew knew when to patch ‘em, when to trash ‘em, and how to haul ‘em back at 10 m min⁻¹ (average retrieval rate for all oblique trawl tows = 9.987 m min⁻¹!). In short, to all, thanks for getting us where we needed to go, helping us do what we needed to do, and feeding us well.

Attachments:

Table 1. Cruise Summary for FOCI Cruise 7MF05 (MF05-12).

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
06-Sep-05	07:34	1	1	F29	CTD001	195	57 46.66 N	150 04.13 W	CTD	CTD, Fluor, PAR	
06-Sep-05	08:20	1	2	F29		195	57 46.58 N	150 04.35 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Low flowmeter revs on net 3 repeat tow
06-Sep-05	08:20	1	2	F29		195	57 46.58 N	150 04.35 W	LG-CB	Discard	Tucker net 1=drogue. LG-CB in net 1. Low flowmeter revs on net 3 repeat tow
06-Sep-05	08:20	1	2	F29		195	57 46.58 N	150 04.35 W	Tuck1	FMGen	Tucker net 1=drogue. LG-CB in net 1. Low flowmeter revs on net 3 repeat tow
06-Sep-05	08:53	1	3	F29		195	57 46.85 N	150 04.51 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	08:53	1	3	F29		195	57 46.85 N	150 04.51 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	08:53	1	3	F29		195	57 46.85 N	150 04.51 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	08:53	1	3	F29		195	57 46.85 N	150 04.51 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Low revs net 3.
06-Sep-05	09:52	1	4	F29		197	57 47.03 N	150 04.52 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
06-Sep-05	13:18	2	1	G29		140	58 03.69 N	150 34.35 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	13:18	2	1	G29		140	58 03.69 N	150 34.35 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	13:18	2	1	G29		140	58 03.69 N	150 34.35 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	14:07	2	2	G29		140	58 03.83 N	150 33.97 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
06-Sep-05	17:32	3	1	H29		75	58 18.80 N	150 59.77 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Net 2 codend blew. Redid tow with haul 2.
06-Sep-05	17:32	3	1	H29		75	58 18.80 N	150 59.77 W	LG-CB	Discard	Tucker net 1=drogue. LG-CB in net 1. Net 2 cod end blew out. Will redo tow with haul 2.
06-Sep-05	17:32	3	1	H29		75	58 18.80 N	150 59.77 W	Tuck1	Discard	Tucker net 1=drogue. LG-CB in net 1. Net 2 cod end blew out. Will redo tow with haul 2.
06-Sep-05	18:00	3	2	H29		99	58 18.74 N	151 00.80 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	18:00	3	2	H29		99	58 18.74 N	151 00.80 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	18:00	3	2	H29		99	58 18.74 N	151 00.80 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	18:00	3	2	H29		99	58 18.74 N	151 00.80 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Removed 6 large jellies from net 3.
06-Sep-05	18:49	3	3	H29		108	58 16.54 N	151 00.81 W	Ancho	Furuno	
06-Sep-05	21:51	4	1	I29		153	58 33.11 N	151 26.74 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	21:51	4	1	I29		153	58 33.11 N	151 26.74 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	21:51	4	1	I29		153	58 33.11 N	151 26.74 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
06-Sep-05	22:34	4	2	I29		164	58 33.34 N	151 26.08 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
07-Sep-05	00:30	5	1	I28		60	58 22.68 N	151 45.62 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	00:30	5	1	I28		60	58 22.68 N	151 45.62 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	00:30	5	1	I28		60	58 22.68 N	151 45.62 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	00:52	5	2	I28		65	58 22.58 N	151 45.29 W	Ancho	Furuno	net torn on rocks.
07-Sep-05	03:02	5	3	I28		65	58 22.70 N	151 45.62 W	Ancho	Furuno	
07-Sep-05	05:16	6	1	H28		130	58 07.11 N	151 21.72 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	05:16	6	1	H28		130	58 07.11 N	151 21.72 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	05:16	6	1	H28		130	58 07.11 N	151 21.72 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
07-Sep-05	06:10	6	2	H28		134	58 06.83 N	151 22.52 W	Ancho	A-Gut, Furuno, J-Gut, J-Length,	
07-Sep-05	07:55	7	1			165	58 09.50 N	151 26.20 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	Opportunistic tow.
07-Sep-05	11:30	8	1	G28		71	57 53.10 N	150 53.33 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Removed 1 jelly from net 3.
07-Sep-05	11:30	8	1	G28		71	57 53.10 N	150 53.33 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1. Removed 1 jelly from net 3.
07-Sep-05	11:30	8	1	G28		71	57 53.10 N	150 53.33 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Removed 1 jelly from net 3.
07-Sep-05	12:10	8	2	G28		79	57 53.00 N	150 53.29 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
07-Sep-05	14:43	9	1	F28		98	57 38.33 N	150 25.34 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	14:43	9	1	F28		98	57 38.33 N	150 25.34 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	14:43	9	1	F28		98	57 38.33 N	150 25.34 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	14:43	9	1	F28		98	57 38.33 N	150 25.34 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Large jelly in net 3.
07-Sep-05	14:43	9	1	F28		98	57 38.33 N	150 25.34 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Net 2 hung at about 60m for a long time when they were adjusting ship position and speed.
07-Sep-05	15:24	9	2	F28		101	57 38.38 N	150 24.42 W	Ancho	Furuno	
07-Sep-05	18:02	10	1	E28		798	57 25.87 N	150 00.52 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	18:02	10	1	E28		798	57 25.87 N	150 00.52 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	18:02	10	1	E28		798	57 25.87 N	150 00.52 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	18:54	10	2	E28		800	57 26.00 N	150 00.66 W	Ancho	Furuno	
07-Sep-05	21:18	11	1			508	57 21.49 N	150 07.84 W	Ancho	Furuno	Opportunistic haul targeted at 55m.
07-Sep-05	23:14	12	1	E27		980	57 13.43 N	150 23.69 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	23:14	12	1	E27		980	57 13.43 N	150 23.69 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
07-Sep-05	23:14	12	1	E27		980	57 13.43 N	150 23.69 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	00:06	12	2	E27		860	57 13.40 N	150 24.30 W	Ancho	Furuno	
08-Sep-05	03:22	13	1	F27		95	57 27.76 N	150 48.36 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	03:22	13	1	F27		95	57 27.76 N	150 48.36 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	03:22	13	1	F27		95	57 27.76 N	150 48.36 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	04:11	13	2	F27		92	57 27.50 N	150 48.70 W	Ancho	Furuno	Pacific Saury frozen.
08-Sep-05	06:57	14	1	G27		61	57 44.08 N	151 12.53 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	06:57	14	1	G27		61	57 44.08 N	151 12.53 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	06:57	14	1	G27		61	57 44.08 N	151 12.53 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	07:31	14	2	G27		67	57 43.80 N	151 11.70 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
08-Sep-05	10:02	15	1	H27		92	57 57.75 N	151 40.85 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	10:02	15	1	H27		92	57 57.75 N	151 40.85 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	10:02	15	1	H27		92	57 57.75 N	151 40.85 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	10:50	15	2	H27		96	57 57.80 N	151 40.70 W	Ancho	Furuno	
08-Sep-05	13:06	16	1	I27		55	58 07.35 N	152 04.26 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Failed due to low flowmeter revs on Net 1

Sunday, September 18, 2005

Page 2 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
08-Sep-05	13:06	16	1	I27		55	58 07.35 N	152 04.26 W	Lg-CB	Discard	Tucker net 1=drogue. LG-CB in net 1. Failed due to low flowmeter revs on Net 1
08-Sep-05	13:06	16	1	I27		55	58 07.35 N	152 04.26 W	Tuck1	Discard	Tucker net 1=drogue. LG-CB in net 1. Failed due to low flowmeter revs on Net 1
08-Sep-05	13:41	16	2	I27		57	58 07.14 N	152 04.60 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	13:41	16	2	I27		57	58 07.14 N	152 04.60 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	13:41	16	2	I27		57	58 07.14 N	152 04.60 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	14:11	16	3	I27		63	58 07.14 N	152 04.57 W	Ancho	Furuno	
08-Sep-05	15:35	17	1	I26		193	58 02.58 N	152 21.73 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	15:35	17	1	I26		193	58 02.58 N	152 21.73 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	15:35	17	1	I26		193	58 02.58 N	152 21.73 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	16:22	17	2	I26		211	58 02.38 N	152 22.15 W	Ancho	Furuno	
08-Sep-05	19:24	18	1	H26		93	57 46.66 N	152 02.78 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	19:24	18	1	H26		93	57 46.66 N	152 02.78 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	19:24	18	1	H26		93	57 46.66 N	152 02.78 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	20:05	18	2	H26		102	57 46.90 N	152 03.21 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
08-Sep-05	22:15	19	1	H25		60	57 37.98 N	152 24.62 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	22:15	19	1	H25		60	57 37.98 N	152 24.62 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	22:15	19	1	H25		60	57 37.98 N	152 24.62 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
08-Sep-05	22:49	19	2	H25		69	57 38.30 N	152 23.99 W	Ancho	Furuno	
09-Sep-05	01:35	20	1			133	57 46.20 N	152 08.00 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	Opportunistic trawl...90 meters target depth
09-Sep-05	04:32	21	1			107	57 38.33 N	151 47.51 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
09-Sep-05	06:21	22	1	G26		152	57 31.19 N	151 34.37 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	06:21	22	1	G26		152	57 31.19 N	151 34.37 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	06:21	22	1	G26		152	57 31.19 N	151 34.37 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	07:12	22	2	G26		153	57 31.40 N	151 34.10 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
09-Sep-05	10:33	23	1	F26		87	57 17.07 N	151 10.92 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	10:33	23	1	F26		87	57 17.07 N	151 10.92 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	10:33	23	1	F26		87	57 17.07 N	151 10.92 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	11:08	23	2	F26		92	57 17.10 N	151 10.70 W	Ancho	Furuno	
09-Sep-05	13:14	24	1	F25		135	57 06.95 N	151 30.04 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	13:14	24	1	F25		135	57 06.95 N	151 30.04 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	13:14	24	1	F25		135	57 06.95 N	151 30.04 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	13:54	24	2	F25		140	57 06.83 N	151 30.05 W	Ancho	Furuno	
09-Sep-05	16:26	25	1	G25		65	57 21.05 N	151 54.17 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	16:26	25	1	G25		65	57 21.05 N	151 54.17 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	16:26	25	1	G25		65	57 21.05 N	151 54.17 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	17:06	25	2	G25		68	57 21.21 N	151 53.95 W	Ancho	Furuno	
09-Sep-05	20:02	26	1	F24		65	56 58.47 N	151 48.42 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.

Sunday, September 18, 2005

Page 3 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
09-Sep-05	20:02	26	1	F24		65	56 58.47 N	151 48.42 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	20:02	26	1	F24		65	56 58.47 N	151 48.42 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	20:41	26	2	F24		66	56 58.25 N	151 48.57 W	Ancho	Furuno	
09-Sep-05	21:43	27	1			81	57 01.76 N	151 55.19 W	SatBuoy	Deploy	drifter # 57878
09-Sep-05	23:11	28	1	G24		77	57 11.71 N	152 12.25 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	23:11	28	1	G24		77	57 11.71 N	152 12.25 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	23:11	28	1	G24		77	57 11.71 N	152 12.25 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
09-Sep-05	23:44	28	2	G24		82	57 11.70 N	152 12.50 W	Ancho	Furuno	
10-Sep-05	00:44	28	3	G24		82	57 11.80 N	152 12.50 W	Ancho	Furuno	opportunistic...target depth at 25 meters
10-Sep-05	02:20	29	1			62	57 17.97 N	152 22.83 W	SatBuoy	Deploy	Drifter # 57880
10-Sep-05	03:19	30	1	H24		69	57 23.54 N	152 31.39 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	03:19	30	1	H24		69	57 23.54 N	152 31.39 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	03:19	30	1	H24		69	57 23.54 N	152 31.39 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	03:57	30	2	H24		76	57 23.55 N	152 31.72 W	Ancho	Furuno	
10-Sep-05	05:51	31	1	I24		75	57 29.43 N	152 51.29 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	05:51	31	1	I24		75	57 29.43 N	152 51.29 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	05:51	31	1	I24		75	57 29.43 N	152 51.29 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	06:35	31	2	I24		80	57 29.40 N	152 51.10 W	Ancho	A-Gut, A-Length, Furuno, J-Gut, J-Length, J-Oto	
10-Sep-05	09:07	32	1		CTD002	28	57 16.19 N	152 40.75 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	10:08	33	1		CTD003	83	57 10.35 N	152 38.16 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	10:49	34	1		CTD004	78	57 07.15 N	152 36.47 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	11:40	35	1		CTD005	124	57 04.15 N	152 35.66 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	12:26	36	1		CTD006	140	57 01.12 N	152 34.87 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	13:16	37	1		CTD007	157	56 57.73 N	152 35.06 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	14:25	38	1		CTD008	159	56 52.10 N	152 30.60 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
10-Sep-05	15:25	39	1			116	56 50.11 N	152 21.12 W	SatBuoy	Deploy	Drifter #57876 deployed
10-Sep-05	17:30	40	1			161	56 52.35 N	152 29.04 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
10-Sep-05	19:23	40	2			161	56 52.75 N	152 26.92 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. hit
10-Sep-05	19:23	40	2			161	56 52.75 N	152 26.92 W	Lg-CB	Discard	Tucker net 1=drogue. LG-CB in net 1. hit
10-Sep-05	19:23	40	2			161	56 52.75 N	152 26.92 W	Tuck1	Discard	Tucker net 1=drogue. LG-CB in net 1. hit
10-Sep-05	19:23	40	3			161	56 52.75 N	152 26.92 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	19:23	40	3			161	56 52.75 N	152 26.92 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	19:23	40	3			161	56 52.75 N	152 26.92 W	Tuck1	FMGen, QTowF	Tucker net 1=drogue. LG-CB in net 1.
10-Sep-05	22:53	41	1			174	56 46.90 N	152 25.26 W	Ancho	A-Gut, A-Length, Furuno, J-Gut, J-Length, J-Oto	opportunistic
11-Sep-05	00:13	41	2			159	56 47.23 N	152 23.55 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	00:13	41	2			159	56 47.23 N	152 23.55 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	00:13	41	2			159	56 47.23 N	152 23.55 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
11-Sep-05	00:47	41	3			159	56 47.35 N	152 23.75 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
11-Sep-05	04:04	42	1			170	56 39.69 N	152 29.76 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	04:04	42	1			170	56 39.69 N	152 29.76 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	04:04	42	1			170	56 39.69 N	152 29.76 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	04:42	42	2		CTD010	169	56 39.62 N	152 29.93 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
11-Sep-05	06:30	43	1	F23		96	56 48.64 N	152 07.03 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	06:30	43	1	F23		96	56 48.64 N	152 07.03 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	06:30	43	1	F23		96	56 48.64 N	152 07.03 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	07:10	43	2	F23		100	56 48.70 N	152 07.20 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
11-Sep-05	09:39	44	1	G23		132	57 02.49 N	152 31.48 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Removed 4 large jellies from net 3.
11-Sep-05	09:39	44	1	G23		132	57 02.49 N	152 31.48 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	09:39	44	1	G23		132	57 02.49 N	152 31.48 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	09:39	44	1	G23		132	57 02.49 N	152 31.48 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Removed 4 large jellies from net 3.
11-Sep-05	10:20	44	2	G23		135	57 02.30 N	152 31.30 W	Ancho	A-Length, Furuno, J-Gut, J-Length, J-Oto	
11-Sep-05	12:35	45	1	H23		120	57 12.41 N	152 48.97 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Removed 2 jellies from net 3.
11-Sep-05	12:35	45	1	H23		120	57 12.41 N	152 48.97 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	12:35	45	1	H23		120	57 12.41 N	152 48.97 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	12:35	45	1	H23		120	57 12.41 N	152 48.97 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Removed 2 jellies from net 3.
11-Sep-05	13:12	45	2	H23		128	57 12.01 N	152 48.52 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
11-Sep-05	15:51	46	1	I23		62	57 18.70 N	153 07.83 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1. Removed 7 jellies from net 3.
11-Sep-05	15:51	46	1	I23		62	57 18.70 N	153 07.83 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	15:51	46	1	I23		62	57 18.70 N	153 07.83 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	15:51	46	1	I23		62	57 18.70 N	153 07.83 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1. Removed 7 jellies from net 3.
11-Sep-05	16:29	46	2	I23		62	57 18.95 N	153 08.91 W	Ancho	A-Length, Furuno, J-Gut, J-Length, J-Oto	
11-Sep-05	18:39	47	1		CTD011	119	57 14.37 N	152 48.97 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
11-Sep-05	20:48	48	1			97	57 12.64 N	152 25.93 W	SatBuoy	Deploy	Drifter # 57881
11-Sep-05	21:53	49	1			99	57 12.41 N	152 26.41 W	Ancho	Furuno	
11-Sep-05	23:05	49	2			94	57 12.83 N	152 26.32 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	23:05	49	2			94	57 12.83 N	152 26.32 W	LG-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.
11-Sep-05	23:05	49	2			94	57 12.83 N	152 26.32 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
12-Sep-05	01:07	50	1			121	57 09.46 N	152 40.18 W	Ancho	Furuno	
12-Sep-05	02:17	50	2			106	57 09.67 N	152 39.78 W	CAT	CAT	Tucker net 1=drogue. LG-CB in net 1.
12-Sep-05	02:17	50	2			106	57 09.67 N	152 39.78 W	Lg-CB	QTowF	Tucker net 1=drogue. LG-CB in net 1.

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
12-Sep-05	02:17	50	2			106	57 09.67 N	152 39.78 W	Tuck1	QTowF	Tucker net 1=drogue. LG-CB in net 1.
12-Sep-05	03:53	51	1		CTD012	130	57 11.70 N	152 45.14 W	CTDB	Chlor, CTD, Fluor, Nut, PAR	
12-Sep-05	05:32	52	1	H22		43	57 02.43 N	153 06.51 W	CAT	CAT	
12-Sep-05	05:32	52	1	H22		43	57 02.43 N	153 06.51 W	Lg-CB	QTowF	
12-Sep-05	05:32	52	1	H22		43	57 02.43 N	153 06.51 W	Tuck1	QTowF	
12-Sep-05	06:05	52	2	H22		40	57 02.40 N	153 06.40 W	Ancho	Furuno	centerboard up
12-Sep-05	07:31	53	1			106	56 59.40 N	153 00.40 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	Opportunistic.
12-Sep-05	08:58	54	1	G22		98	56 54.22 N	152 48.95 W	CAT	CAT	
12-Sep-05	08:58	54	1	G22		98	56 54.22 N	152 48.95 W	LG-CB	QTowF	
12-Sep-05	08:58	54	1	G22		98	56 54.22 N	152 48.95 W	Tuck1	QTowF	
12-Sep-05	09:36	54	2	G22		97	56 53.90 N	152 49.30 W	Ancho	Furuno	
12-Sep-05	11:31	55	1	F-G22		104	56 44.83 N	152 35.88 W	CAT	CAT	Libby Logerwell study.
12-Sep-05	11:31	55	1	F-G22		104	56 44.83 N	152 35.88 W	LG-CB	QTowF	Libby Logerwell study.
12-Sep-05	11:31	55	1	F-G22		104	56 44.83 N	152 35.88 W	Tuck1	QTowF	Libby Logerwell study.
12-Sep-05	12:10	55	2	F-G22		107	56 44.66 N	152 36.02 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	Libby Logerwell study.
12-Sep-05	13:46	56	1	F22		158	56 39.83 N	152 26.28 W	CAT	CAT	
12-Sep-05	13:46	56	1	F22		158	56 39.83 N	152 26.28 W	LG-CB	QTowF	
12-Sep-05	13:46	56	1	F22		158	56 39.83 N	152 26.28 W	Tuck1	QTowF	
12-Sep-05	14:29	56	2	F22		159	56 39.44 N	152 26.81 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
12-Sep-05	18:17	57	1			150	56 57.07 N	152 37.12 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
12-Sep-05	19:32	57	2			151	56 57.04 N	152 36.57 W	CAT	CAT	
12-Sep-05	19:32	57	2			151	56 57.04 N	152 36.57 W	Lg-CB	QTowF	
12-Sep-05	19:32	57	2			151	56 57.04 N	152 36.57 W	Tuck1	QTowF	
12-Sep-05	21:28	58	1			114	57 00.01 N	152 23.97 W	Ancho	Furuno	
12-Sep-05	22:33	58	2			87	57 00.09 N	152 23.29 W	CAT	CAT	
12-Sep-05	22:33	58	2			87	57 00.09 N	152 23.29 W	LG-CB	QTowF	
12-Sep-05	22:33	58	2			87	57 00.09 N	152 23.29 W	Tuck1	QTowF	
13-Sep-05	01:01	59	1			140	57 06.91 N	152 24.46 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
13-Sep-05	02:07	59	2			144	57 06.71 N	152 25.06 W	CAT	CAT	
13-Sep-05	02:07	59	2			144	57 06.71 N	152 25.06 W	Lg-CB	QTowF	
13-Sep-05	02:07	59	2			144	57 06.71 N	152 25.06 W	Tuck1	QTowF	
13-Sep-05	04:43	60	1			100	57 06.99 N	152 50.41 W	CAT	CAT	
13-Sep-05	04:43	60	1			100	57 06.99 N	152 50.41 W	Lg-CB	QTowF	
13-Sep-05	04:43	60	1			100	57 06.99 N	152 50.41 W	Tuck1	QTowF	
13-Sep-05	05:20	60	2			102	57 07.00 N	152 50.80 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
13-Sep-05	08:05	61	1	H21		120	56 57.43 N	153 25.65 W	CAT	CAT	Removed 2 jellies from net 3.
13-Sep-05	08:05	61	1	H21		120	56 57.43 N	153 25.65 W	LG-CB	QTowF	
13-Sep-05	08:05	61	1	H21		120	56 57.43 N	153 25.65 W	Tuck1	QTowF	
13-Sep-05	08:05	61	1	H21		120	56 57.43 N	153 25.65 W	Tuck1	QTowF	Removed 2 jellies from net 3.

Sunday, September 18, 2005

Page 6 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
13-Sep-05	08:44	61	2	H21		127	56 57.50 N	153 26.30 W	Ancho	A-Length, Furuno, J-Gut, J-Length, J-Oto	
13-Sep-05	11:05	62	1	G21		146	56 44.30 N	153 11.01 W	CAT	CAT	Removed 2 jellies from net 3.
13-Sep-05	11:05	62	1	G21		146	56 44.30 N	153 11.01 W	LG-CB	QTowF	
13-Sep-05	11:05	62	1	G21		146	56 44.30 N	153 11.01 W	Tuck1	QTowF	
13-Sep-05	11:05	62	1	G21		146	56 44.30 N	153 11.01 W	Tuck1	QTowF	Removed 2 jellies from net 3.
13-Sep-05	11:05	62	1	G21		146	56 44.30 N	153 11.01 W	Tuck1	QTowF	Removed 2 shrimp and one strand of seaweed from net 2.
13-Sep-05	11:49	62	2	G21		147	56 44.35 N	153 11.75 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
13-Sep-05	14:38	63	1	F21		47	56 28.31 N	152 44.46 W	CAT	CAT	Two jellies removed from net 2.
13-Sep-05	14:38	63	1	F21		47	56 28.31 N	152 44.46 W	LG-CB	QTowF	
13-Sep-05	14:38	63	1	F21		47	56 28.31 N	152 44.46 W	Tuck1	QTowF	
13-Sep-05	14:38	63	1	F21		47	56 28.31 N	152 44.46 W	Tuck1	QTowF	Two jellies removed from net 2.
13-Sep-05	15:04	63	2	F21		50	56 28.08 N	152 45.29 W	Ancho	Furuno	
13-Sep-05	17:53	64	1	F20		134	56 19.15 N	153 04.85 W	CAT	CAT	
13-Sep-05	17:53	64	1	F20		134	56 19.15 N	153 04.85 W	LG-CB	QTowF	Removed 1 large jelly from net 1.
13-Sep-05	17:53	64	1	F20		134	56 19.15 N	153 04.85 W	Tuck1	QTowF	
13-Sep-05	18:40	64	2	F20		125	56 19.16 N	153 04.26 W	Ancho	Furuno	
13-Sep-05	21:22	65	1	G20		122	56 34.92 N	153 30.33 W	CAT	CAT	
13-Sep-05	21:22	65	1	G20		122	56 34.92 N	153 30.33 W	Lg-CB	QTowF	
13-Sep-05	21:22	65	1	G20		122	56 34.92 N	153 30.33 W	Tuck1	QTowF	
13-Sep-05	22:08	65	2	G20		122	56 34.58 N	153 30.72 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
13-Sep-05	23:33	65	3	G20		125	56 34.69 N	153 30.98 W	Shrimp	A-Gut, Furuno	stomach scans...halibut, ATF, flathead sole, Pcod
14-Sep-05	01:27	66	1	H20		38	56 43.99 N	153 47.46 W	CAT	CAT	
14-Sep-05	01:27	66	1	H20		38	56 43.99 N	153 47.46 W	Lg-CB	QTowF	
14-Sep-05	01:27	66	1	H20		38	56 43.99 N	153 47.46 W	Tuck1	QTowF	
14-Sep-05	01:57	66	2	H20		53	56 43.78 N	153 47.43 W	Ancho	Furuno	
14-Sep-05	09:25	67	1	C10		244	56 36.09 N	155 48.90 W	CAT	CAT	Removed 3 jellies from net 3.
14-Sep-05	09:25	67	1	C10		244	56 36.09 N	155 48.90 W	LG-CB	QTowF	
14-Sep-05	09:25	67	1	C10		244	56 36.09 N	155 48.90 W	Tuck1	QTowF	
14-Sep-05	09:25	67	1	C10		244	56 36.09 N	155 48.90 W	Tuck1	QTowF	Removed 3 jellies from net 3.
14-Sep-05	10:16	67	2	C10		245	56 35.90 N	155 49.20 W	Ancho	A-Length, Furuno, J-Gut, J-Length, J-Oto	
14-Sep-05	13:32	68	1	D10		189	56 51.70 N	156 11.48 W	CAT	CAT	
14-Sep-05	13:32	68	1	D10		189	56 51.70 N	156 11.48 W	LG-CB	QTowF	
14-Sep-05	13:32	68	1	D10		189	56 51.70 N	156 11.48 W	Tuck1	QTowF	
14-Sep-05	13:32	68	1	D10		189	56 51.70 N	156 11.48 W	Tuck1	QTowF	Removed 2 jellies and 1 shrimp from net 3.
14-Sep-05	13:32	68	1	D10		189	56 51.70 N	156 11.48 W	Tuck1	QTowF	Removed one large jelly from net 2.
14-Sep-05	14:18	68	2	D10		194	56 51.58 N	156 11.31 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	

Sunday, September 18, 2005

Page 7 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
14-Sep-05	16:21	69	1	E10		72	56 58.87 N	156 23.19 W	CAT	CAT	
14-Sep-05	16:21	69	1	E10		72	56 58.87 N	156 23.19 W	LG-CB	QTowF	Because of very uneven bottom topography the ship said to consider 65 m as bottom depth even though it may have been
14-Sep-05	16:21	69	1	E10		72	56 58.87 N	156 23.19 W	Tuck1	QTowF	Because of very uneven bottom topography the ship said to consider 65 m as bottom depth even though it may have been something to do with depth
14-Sep-05	16:21	69	1	E10		72	56 58.87 N	156 23.19 W	Tuck1	QTowF	
14-Sep-05	17:04	69	2	E10		82	56 58.65 N	156 23.26 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
14-Sep-05	19:54	70	1	E9		140	56 51.23 N	156 51.56 W	CAT	CAT	
14-Sep-05	19:54	70	1	E9		140	56 51.23 N	156 51.56 W	Lg-CB	QTowF	
14-Sep-05	19:54	70	1	E9		140	56 51.23 N	156 51.56 W	Tuck1	QTowF	
14-Sep-05	20:33	70	2	E9		142	56 51.00 N	156 51.47 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
14-Sep-05	22:55	71	1	D9		172	56 41.63 N	156 34.94 W	CAT	CAT	
14-Sep-05	22:55	71	1	D9		172	56 41.63 N	156 34.94 W	Lg-CB	QTowF	
14-Sep-05	22:55	71	1	D9		172	56 41.63 N	156 34.94 W	Tuck1	QTowF	
14-Sep-05	23:31	71	2	D9		172	56 41.40 N	156 35.00 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
15-Sep-05	02:23	72	1	C9		258	56 25.29 N	156 12.73 W	CAT	CAT	
15-Sep-05	02:23	72	1	C9		258	56 25.29 N	156 12.73 W	Lg-CB	QTowF	
15-Sep-05	02:23	72	1	C9		258	56 25.29 N	156 12.73 W	Tuck1	QTowF	
15-Sep-05	03:12	72	2	C9		264	56 25.10 N	156 12.70 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
15-Sep-05	06:58	73	1	B8		92	55 55.40 N	156 01.90 W	CAT	CAT	
15-Sep-05	06:58	73	1	B8		92	55 55.40 N	156 01.90 W	Lg-CB	QTowF	
15-Sep-05	06:58	73	1	B8		92	55 55.40 N	156 01.90 W	Tuck1	QTowF	
15-Sep-05	07:36	73	2	B8		95	55 55.20 N	156 01.80 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
15-Sep-05	11:04	74	1	C8		193	56 16.26 N	156 32.22 W	CAT	CAT	Net 3 did not trip.
15-Sep-05	11:04	74	1	C8		193	56 16.26 N	156 32.22 W	LG-CB	Discard	Net 3 did not trip.
15-Sep-05	11:04	74	1	C8		193	56 16.26 N	156 32.22 W	Tuck1	Discard	Net 3 did not trip.
15-Sep-05	11:44	74	2	C8		190	56 16.35 N	156 32.77 W	CAT	CAT	Huge amount of copepods in nets 2 and 3. Two jellies removed from net 3.
15-Sep-05	11:44	74	2	C8		190	56 16.35 N	156 32.77 W	LG-CB	QTowF	
15-Sep-05	11:44	74	2	C8		190	56 16.35 N	156 32.77 W	Tuck1	QTowF	Huge amount of copepods in nets 2 and 3.
15-Sep-05	11:44	74	2	C8		190	56 16.35 N	156 32.77 W	Tuck1	QTowF	Huge amount of copepods in nets 2 and 3. Two jellies removed from net 3.
15-Sep-05	12:29	74	3	C8		194	56 16.01 N	156 32.49 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
15-Sep-05	15:24	75	1	D8		47	56 30.55 N	156 54.27 W	CAT	CAT	Net 1 stayed at bottom for a while longer than usual.
15-Sep-05	15:24	75	1	D8		47	56 30.55 N	156 54.27 W	LG-CB	QTowF	Net 1 stayed at bottom for a while longer than usual.
15-Sep-05	15:24	75	1	D8		47	56 30.55 N	156 54.27 W	Tuck1	QTowF	

Sunday, September 18, 2005

Page 8 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
15-Sep-05	15:24	75	1	D8		47	56 30.55 N	156 54.27 W	Tuck1	QTowF	Net 1 stayed at bottom for a while longer than usual.
15-Sep-05	15:56	75	2	D8		53	56 30.08 N	156 54.47 W	Ancho	Furuno	
15-Sep-05	18:17	76	1	E8		73	56 40.82 N	157 15.98 W	CAT	CAT	
15-Sep-05	18:17	76	1	E8		73	56 40.82 N	157 15.98 W	LG-CB	QTowF	
15-Sep-05	18:17	76	1	E8		73	56 40.82 N	157 15.98 W	Tuck1	QTowF	
15-Sep-05	18:45	76	2	E8		83	56 40.74 N	157 16.01 W	Ancho	Furuno	
15-Sep-05	21:47	77	1	E6		30	56 35.75 N	157 47.98 W	CAT	CAT	
15-Sep-05	21:47	77	1	E6		30	56 35.75 N	157 47.98 W	Lg-CB	QTowF	
15-Sep-05	21:47	77	1	E6		30	56 35.75 N	157 47.98 W	Tuck1	QTowF	
15-Sep-05	22:14	77	2	E6		34	56 35.50 N	157 48.04 W	Ancho	Furuno	
16-Sep-05	00:31	78	1	D6		117	56 20.15 N	157 25.22 W	CAT	CAT	
16-Sep-05	00:31	78	1	D6		117	56 20.15 N	157 25.22 W	Lg-CB	QTowF	
16-Sep-05	00:31	78	1	D6		117	56 20.15 N	157 25.22 W	Tuck1	QTowF	
16-Sep-05	01:18	78	2	D6		125	56 19.66 N	157 25.83 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
16-Sep-05	03:58	79	1	C6		78	56 01.89 N	157 01.76 W	CAT	CAT	
16-Sep-05	03:58	79	1	C6		78	56 01.89 N	157 01.76 W	Lg-CB	QTowF	
16-Sep-05	03:58	79	1	C6		78	56 01.89 N	157 01.76 W	Tuck1	QTowF	
16-Sep-05	04:38	79	2	C6		85	56 01.80 N	157 01.90 W	Ancho	Furuno	
16-Sep-05	07:46	80	1	B6		227	55 41.83 N	156 31.89 W	CAT	CAT	
16-Sep-05	07:46	80	1	B6		227	55 41.83 N	156 31.89 W	LG-CB	QTowF	
16-Sep-05	07:46	80	1	B6		227	55 41.83 N	156 31.89 W	Tuck1	QTowF	
16-Sep-05	08:34	80	2	B6		230	55 41.80 N	156 32.00 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
16-Sep-05	12:19	81	1	C5		86	55 52.13 N	157 21.00 W	CAT	CAT	
16-Sep-05	12:19	81	1	C5		86	55 52.13 N	157 21.00 W	LG-CB	QTowF	
16-Sep-05	12:19	81	1	C5		86	55 52.13 N	157 21.00 W	Tuck1	QTowF	
16-Sep-05	12:19	81	1	C5		86	55 52.13 N	157 21.00 W	Tuck1	QTowF	Removed 1 jelly from net 2. Removed 2 jellies from net 3.
16-Sep-05	12:54	81	2	C5		93	55 52.23 N	157 21.09 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
16-Sep-05	15:26	82	1	D5		153	56 09.27 N	157 46.28 W	CAT	CAT	
16-Sep-05	15:26	82	1	D5		153	56 09.27 N	157 46.28 W	LG-CB	QTowF	
16-Sep-05	15:26	82	1	D5		153	56 09.27 N	157 46.28 W	Tuck1	QTowF	
16-Sep-05	16:11	82	2	D5		154	56 09.01 N	157 47.44 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
16-Sep-05	18:38	83	1	E5		125	56 25.75 N	158 07.02 W	CAT	CAT	
16-Sep-05	18:38	83	1	E5		125	56 25.75 N	158 07.02 W	Lg-CB	QTowF	
16-Sep-05	18:38	83	1	E5		125	56 25.75 N	158 07.02 W	Tuck1	QTowF	
16-Sep-05	19:16	83	2	E5		130	56 25.84 N	158 06.80 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
16-Sep-05	22:01	84	1	E4		53	56 06.94 N	158 18.70 W	CAT	CAT	
16-Sep-05	22:01	84	1	E4		53	56 06.94 N	158 18.70 W	Lg-CB	QTowF	

Sunday, September 18, 2005

Page 9 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
16-Sep-05	22:01	84	1	E4		53	56 06.94 N	158 18.70 W	Tuck1	QTowF	
16-Sep-05	22:33	84	2	E4		67	56 06.60 N	158 18.69 W	Ancho	Furuno	
16-Sep-05	23:59	85	1	D4		111	55 58.16 N	158 07.00 W	CAT	CAT	delay in triggering of net1
16-Sep-05	23:59	85	1	D4		111	55 58.16 N	158 07.00 W	Lg-CB	QTowF	delay in triggering of net1
16-Sep-05	23:59	85	1	D4		111	55 58.16 N	158 07.00 W	Tuck1	QTowF	delay in triggering of net1
17-Sep-05	00:43	85	2	D4		115	55 58.20 N	158 07.00 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
17-Sep-05	02:57	86	1	C4		127	55 43.32 N	157 42.42 W	CAT	CAT	
17-Sep-05	02:57	86	1	C4		127	55 43.32 N	157 42.42 W	Lg-CB	QTowF	
17-Sep-05	02:57	86	1	C4		127	55 43.32 N	157 42.42 W	Tuck1	QTowF	
17-Sep-05	03:35	86	2	C4		131	55 43.30 N	157 42.40 W	Ancho	J-Gut, J-Length, J-Oto	
17-Sep-05	06:38	87	1	B4		86	55 22.31 N	157 14.94 W	CAT	CAT	
17-Sep-05	06:38	87	1	B4		86	55 22.31 N	157 14.94 W	Lg-CB	QTowF	
17-Sep-05	06:38	87	1	B4		86	55 22.31 N	157 14.94 W	Tuck1	QTowF	
17-Sep-05	07:19	87	2	B4		90	55 22.10 N	157 14.90 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
17-Sep-05	10:22	88	1	C3		127	55 32.62 N	158 01.52 W	CAT	CAT	
17-Sep-05	10:22	88	1	C3		127	55 32.62 N	158 01.52 W	LG-CB	QTowF	
17-Sep-05	10:22	88	1	C3		127	55 32.62 N	158 01.52 W	Tuck1	QTowF	
17-Sep-05	10:22	88	1	C3		127	55 32.62 N	158 01.52 W	Tuck1	QTowF	Removed 1 shrimp from net 2.
17-Sep-05	10:22	88	1	C3		127	55 32.62 N	158 01.52 W	Tuck1	QTowF	Removed 2 large and 2 small jellies from
17-Sep-05	11:05	88	2	C3		130	55 32.20 N	158 01.10 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
17-Sep-05	13:45	89	1	D3		102	55 49.00 N	158 26.99 W	CAT	CAT	
17-Sep-05	13:45	89	1	D3		102	55 49.00 N	158 26.99 W	LG-CB	QTowF	
17-Sep-05	13:45	89	1	D3		102	55 49.00 N	158 26.99 W	Tuck1	QTowF	
17-Sep-05	14:18	89	2	D3		104	55 49.16 N	158 26.55 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
17-Sep-05	15:40	90	1	E3		73	55 55.94 N	158 38.39 W	CAT	CAT	
17-Sep-05	15:40	90	1	E3		73	55 55.94 N	158 38.39 W	LG-CB	QTowF	
17-Sep-05	15:40	90	1	E3		73	55 55.94 N	158 38.39 W	Tuck1	QTowF	
17-Sep-05	16:18	90	2	E3		75	55 56.42 N	158 38.40 W	Ancho	Furuno	
17-Sep-05	18:13	91	1	E2		78	55 53.74 N	159 05.74 W	CAT	CAT	
17-Sep-05	18:13	91	1	E2		78	55 53.74 N	159 05.74 W	LG-CB	QTowF	
17-Sep-05	18:13	91	1	E2		78	55 53.74 N	159 05.74 W	Tuck1	QTowF	
17-Sep-05	18:41	91	2	E2		86	55 53.65 N	159 05.31 W	Ancho	Furuno	
17-Sep-05	20:46	92	1	D2		98	55 38.86 N	158 45.26 W	CAT	CAT	
17-Sep-05	20:46	92	1	D2		98	55 38.86 N	158 45.26 W	Lg-CB	QTowF	
17-Sep-05	20:46	92	1	D2		98	55 38.86 N	158 45.26 W	Tuck1	QTowF	
17-Sep-05	21:24	92	2	D2		105	55 39.00 N	158 45.78 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
17-Sep-05	23:49	93	1	C2		134	55 22.14 N	158 21.52 W	CAT	CAT	
17-Sep-05	23:49	93	1	C2		134	55 22.14 N	158 21.52 W	Lg-CB	QTowF	
17-Sep-05	23:49	93	1	C2		134	55 22.14 N	158 21.52 W	Tuck1	QTowF	

Sunday, September 18, 2005

Page 10 of 11

Cruise Summary For FOCI Cruise 7MF05 (MF05-12)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
18-Sep-05	00:30	93	2	C2		139	55 22.17 N	158 22.10 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
18-Sep-05	02:56	94	1	B2		76	55 05.15 N	157 58.87 W	CAT	CAT	
18-Sep-05	02:56	94	1	B2		76	55 05.15 N	157 58.87 W	Lg-CB	QTowF	
18-Sep-05	02:56	94	1	B2		76	55 05.15 N	157 58.87 W	Tuck1	QTowF	
18-Sep-05	03:37	94	2	B2		79	55 05.00 N	157 59.10 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
18-Sep-05	06:46	95	1	C1		191	55 11.39 N	158 44.18 W	CAT	CAT	
18-Sep-05	06:46	95	1	C1		191	55 11.39 N	158 44.18 W	Lg-CB	QTowF	
18-Sep-05	06:46	95	1	C1		191	55 11.39 N	158 44.18 W	Tuck1	QTowF	
18-Sep-05	07:33	95	2	C1		196	55 11.40 N	158 44.30 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
18-Sep-05	10:23	96	1	D1		136	55 28.19 N	159 06.87 W	CAT	CAT	
18-Sep-05	10:23	96	1	D1		136	55 28.19 N	159 06.87 W	LG-CB	QTowF	
18-Sep-05	10:23	96	1	D1		136	55 28.19 N	159 06.87 W	Tuck1	QTowF	
18-Sep-05	11:00	96	2	D1		140	55 28.20 N	159 07.30 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	
18-Sep-05	13:16	97	1	E1		104	55 42.01 N	159 26.56 W	CAT	CAT	Net 2 flowmeter failed.
18-Sep-05	13:16	97	1	E1		104	55 42.01 N	159 26.56 W	LG-CB	Discard	Net 2 flowmeter failed.
18-Sep-05	13:16	97	1	E1		104	55 42.01 N	159 26.56 W	Tuck1	Discard	Net 2 flowmeter failed.
18-Sep-05	13:45	97	2	E1		104	55 41.90 N	159 26.64 W	CAT	CAT, QTowF	
18-Sep-05	13:45	97	2	E1		104	55 41.90 N	159 26.64 W	LG-CB	QTowF	
18-Sep-05	13:45	97	2	E1		104	55 41.90 N	159 26.64 W	Tuck1	QTowF	
18-Sep-05	14:15	97	3	E1		107	55 41.97 N	159 26.54 W	Ancho	Furuno, J-Gut, J-Length, J-Oto	

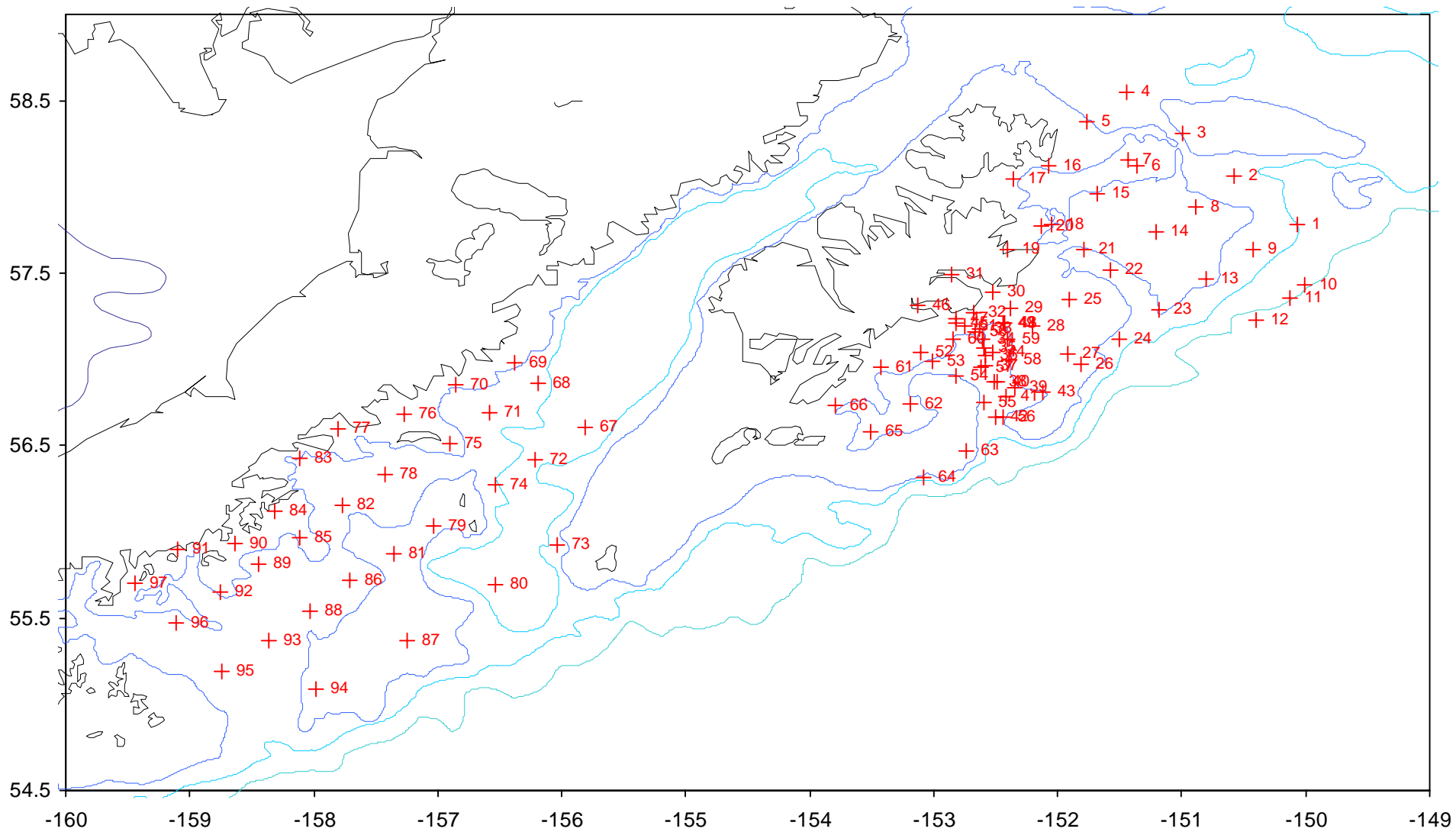


Figure 1. Station number and location of sampling operations occupied during MF05-12, 5-18 September 2005.