

## EXPEDITION PLAN AND ITINERARY

**DEPARTMENT:** DFO, Ocean Sciences Division

**MISSION NO:** 2020-001

**CCG PATROL NO:** 19-12

**MISSION AREA:** Line P, Station Papa, Saanich Inlet, Juan de Fuca St, Haro St, St of Georgia, Dixon Entrance, Chatham Sound

**MISSION OBJECTIVE:** Repeat hydrography section, repeat zooplankton section, deploy 4 Argo floats for IOS, deploy Glider for IOS (will need 753), winter nutrient budget in Chatham Sound.

**SHIP:** John P. Tully

**DATE, FROM:** 07 February 2020

**TO:** 25 February 2020

**SENIOR SCIENTIST:** Marie Robert 363.6612 marie.robert@dfo-mpo.gc.ca

**SCIENTIFIC PERSONNEL:** 12 berths required

Female	Male
Danielle Caleb (IOS)	Mike Arychuk (IOS)
Sophia Johannessen (IOS)	Mark Belton (IOS)
Sile Kafriksen (UVic)	Michael Livingston (UVic)
Racquelle Mangahas (UBC)	Hugh Maclean (IOS)
Jyotsnamani Mohanta (U Sask)	
Marie Robert (IOS)	
Xuan Zheng (MUN)	

**SHIP EQUIPMENT REQUIRED:** EK60 functioning, EA600 functioning, EA600 remote display available from the bridge and the CTD lab, GPS in lab/CTD lab functioning, “DD20s” (or equivalent) functioning in the main lab, sea water supply to lab, heli-deck and aft-deck, heave compensator, tugger winch, LARS, 753.

### DECK MACHINERY REQUIRED:

**Note:** The details are on the deck plan, coming soon.

Hawboldt on Boat Deck (main CTD winch) and Pad E aft-deck (Spare)

Bongo winch on Pad I

Hydro-winch with Kevlar line and boom extension on boat deck

20' container and Trace Metal container on aft-deck; Rad-Van on boat deck.

**OTHER EQUIPMENT TO BE LOADED:** Scientific gear (lab instruments, sampling equipment, etc.), rosettes, incubators on heli-deck, dust collector on Monkey Island.

**ANTICIPATED LOADING TIME:** A day. Loading of scientific gear/winch will start on Friday February 7 at 1200, earlier if possible. Departure Saturday, earlier if possible.

## DANGEROUS CHEMICALS:

Separate list to follow, to be handed to the Chief Officer before departure. Radioisotopes will be used during this cruise.

### STATION LIST:

Station	Latitude N deg min	Longitude W deg min	Bottom depth m	Sampling
Saanich Inlet				
SI03	48°35.5	123°30.3	~210	Rosette to 200 m
Haro Strait				
59	48°36.85	123°14.86	~230	Rosette and bongo to B-10
Juan de Fuca Strait				
JF1	48 16.0	123 30.0	150	under way
JF2	48 18.0	124 00.0	180	under way
JF3	48 27.0	124 30.0	230	under way
JF4	48 32.3	125 00.0	60	under way
Line P CTD and water sampling survey				
P1	48 34.5	125 30.0	120	CTD B-10
P2	48 36.0	126 00.0	114	Rosette B-10, bongo
P3	48 37.5	126 20.0	730	CTD B-10
P4	48 39.0	126 40.0	1300	Rosettes, bongos, TM
P5	48 41.5	127 10.0	2100	CTD 2000 m
P6	48 44.6	127 40.0	2500	CTD 2000 m
P7	48 46.6	128 10.0	2450	CTD 2000 m
P8	48 49.0	128 40.0	2440	Rosette 2000 m, bongos, TM
P9	48 51.4	129 10.0	2340	CTD 2000 m
P10	48 53.6	129 40.0	2660	CTD 2000 m
P11	48 56.0	130 10.0	2700	CTD 2000 m
P12	48 58.2	130 40.0	3300	Rosettes, bongos, TM
P13	49 02.6	131 40.0	2875	CTD 2000 m
P14	49 07.4	132 40.0	3275	Rosette 3360 m
P15	49 12.0	133 40.0	3200	CTD 2000 m
P16	49 17.0	134 40.0	3550	Rosettes, bongos, TM
P17	49 21.0	135 40.0	3200	CTD 2000 m
P18	49 26.0	136 40.0	3775	Rosette 3890 m
P19	49 30.0	137 40.0	3850	CTD 2000 m
P20	49 34.0	138 40.0	3890	Rosettes, bongos, TM
P21	49 38.0	139 40.0	3840	CTD 2000 m
P22	49 42.0	140 40.0	3880	Rosette 4000 m
P23	49 46.0	141 40.0	3970	CTD 2000 m
P24	49 50.2	142 40.0	3910	Rosette 4000 m
P25	50 00.0	143 36.3	3890	Rosette 2000 m
P35	50 00.0	144 18.2	4170	Rosette 2000 m
P26	50 00.0	145 00.0	4250	Rosettes, bongos, TM
PA-013	50°07.7	144°50.3	~4250	Rosette to 350 m
DIX5	54 20.0	133 20.0	~465	Rosette and bongo to 455 m
DIX4	54 28.74	132 42.77	375	CTD to 365 m
DIX3	54 28.72	132 18.0	365	Rosette and bongo to 355 m
DIX2	54 25.46	131 56.64	285	CTD to 275 m
DIX1	54 25.70	131 30.92	270	Rosette to 260 m
HECS4	53 48.29	130 49.40	117	Rosette to 112 m
HECS5	53 56.10	131 00.48	95	CTD to 85 m

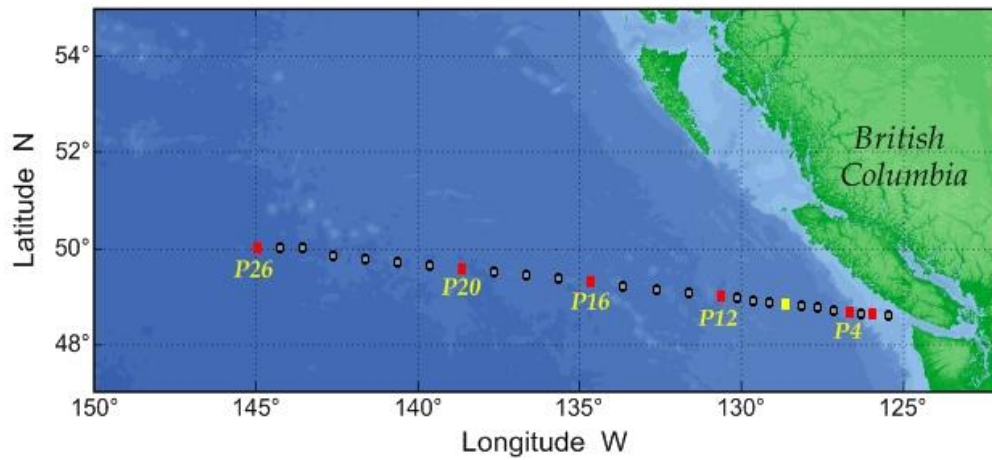
HECS6	54 07.38	131 02.58	115	CTD to 105 m
HECS7	54 13.68	131 02.16	130	Rosette to 120 m
HECS8	54 23.16	131 05.34	120	Rosette and bongo to 110 m
EDR	54 40.86	131 12.60	340	CTD to 330 m
CH3	54 41.40	130 55.50	580	Rosette to 570 m
AB1	54 42.12	130 38.34	200	CTD to 190 m
CH2	54 39.78	130 38.16	315	Rosette to 305 m
CH1	54 41.76	130 27.18	620	Rosette and bongo to 610 m
CH6	54 34.86	130 31.92	255	Rosette to 245 m
CH5	54 33.72	130 37.56	145	Rosette to 135 m
CH4	54 32.46	130 43.50	85	Rosette to 75 m
CH8	54 31.22	130 35.02	135	Rosette to 130
CHAT3	54 31.59	130 32.59	155	Rosette to 150
CH7	54 31.51	130 30.90	85	Rosette to 80
CH11	54 29.94	130 33.60	130	Rosette to 120 m
CH10	54 26.82	130 39.24	85	Rosette to 75 m
CH12	54 23.70	130 33.96	150	Rosette to 140 m
CH13	54 23.10	130 39.00	160	Rosette to 150 m
CH14	54 20.58	130 49.68	135	Rosette to 125 m
CHAT2	54 16.14	130 46.64	190	Rosette to 180 m
CH15	54 18.42	130 42.48	195	Rosette to 185 m
CH16	54 19.82	130 37.50	210	Rosette to 205 m
CH17	54 20.52	130 33.30	100	Rosette to 90 m
CH18	54 16.32	130 29.16	45	Rosette to 35 m
CH19	54 15.24	130 35.58	95	Rosette and bongo to 85 m
CH20	54 13.50	130 43.86	165	Rosette to 155 m
CH21	54 12.00	130 39.24	130	Rosette to 120 m
CH22	54 10.02	130 34.92	130	Rosette to 120 m
CH24	54 07.62	130 34.08	95	Rosette to 85 m
CH25	54 08.88	130 26.22	120	Rosette to 110 m
CHAT1	54 12.07	130 27.26	120	Rosette to 110 m
PRHR74	54 13.56	130 21.06	40	Rosette to 30 m
CH23	54 11.46	130 23.46	105	Rosette to 95 m
CH26	54 08.76	130 21.42	70	Rosette to 60 m
CH27	54 06.54	130 16.26	55	Rosette to 45 m
CH29	54 05.33	130 19.37	80	Rosette to 75 m
MP55	54 04.20	130 16.14	115	Rosette to 105 m
CH31	54 01.86	130 14.04	95	Rosette to 85 m
OGCH50	53 59.34	130 12.54	140	Rosette to 130 m
OGCH46	53 55.38	130 13.08	160	Rosette and bongo to 150 m
GRC43	53 54.29	130 08.62	85	Rosette to 80 m
HAK1-C	51 42.71	128 14.15	140	CTD to 135 m
CPE1	51 00.00	127 50.00	160	Rosette and bongo to 150 m

**Note: Order of stations will be depending on weather. Some work will be done on the way back before heading north. More stations might be added in Hecate Strait and the Strait of Georgia at the end of the cruise depending on timing.**  
**NOTE: CHAT1, CHAT2, CHAT3 are mooring stations. The positions given in the table above are the locations for the casts. The moorings are at:**  
**CHAT1: 54 12.06 130 26.88**  
**CHAT2: 54 16.02 130 46.80**  
**CHAT3: 54 31.64 130 32.48**

## ITINERARY

Feb 7	Start loading at 1200, earlier if possible. Leave as soon as ready.
Feb 8	Leave IOS (if still there), Saanich Inlet, 59, JF2, then off to Line P.
~Feb 16	Arrive at Station Papa.
~Feb 17	Leave Station Papa.
~Feb 19	Arrive in Dixon Entrance.
Feb 24	Arrive at IOS and offload. Ship to be clear by late afternoon.

## CRUISE TRACK



## Dixon Entrance and Chatham Sound stations

