



Regional Operations Centre, Canadian Coast Guard Western



Science Cruise Report: PAC 2023-025

Report last updated: 2023-07-20 19:48:03

<https://www.waterproperties.ca/requests/cruiseplanview.php?cruiseid=2023-025>

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Department/Group: Fisheries and Oceans Canada, OSD
Other Participating Groups:
Science Cruise Number: PAC 2023-025
Alternative Cruise Number:
Ship's Patrol Number: 23-04
Name of Vessel/Platform: Vector
Dates: From: Saturday 24-Jun-2023 To: Thursday 29-Jun-2023
Chief Scientist: Sebastien Donnet, 250-363-6750, sebastien.donnet@dfo-mpo.gc.ca
Master: Allan, William
Fishing Master:
Appropriateness of Vessel: Excellent

Time Allocations

Originally Allocated Days 5.00

Accounting below is given in days and should match the originally allocated days above.

Weather	+ 0.00	
SAR	+ 0.00	
CCG Refueling	+ 0.00	
CCG Ship Repair & Maintenance	+ 0.50	hydraulic on main winch. Some delay upfront + need to go back to IOS wharf to repair following Monday
CCG Crew Changes	+ 0.00	
CCG Other	+ 0.00	
Science Operations	+ 3.75	
Science Equipment Loading/Unloading	+ 0.75	a little more testing/troubleshooting time needed due to CTD deckbox issues.
Science Other	+ 0.00	
Days Gained	+ 0.00	none
Days Grand Total	= 5.00	

Time Allocation Comments: 5 days are too tight for a full Salish Sea survey; 6 days are necessary, assuming no major weather or technical setback.
 Some stations could be done by next cruise (O'Neil moorings), however, and as anticipated during planning.

A number of little technical issues also impacted time available to make observations and to take samples. Namely:
 boat hydraulic preventing use of main winch (and thus, rosette) before Monday 26. TSG not working until Monday 26 due to outflow pipe plugged (biofouling suspected). CTD mounted on rosette not communicating (needed a swap). NMEA feed setup difficulties (CTD rosette). CTD deckbox failure on early hours of Tuesday 27.

Cruise Events

Areas of Operations

Juan de Fuca, Strait of Georgia

Scientific Personnel

Name	Notes (Affiliation, Watches, Duties, etc)
Scott Rose	
Kenny Scozzafava	
Chloe Immonen	
Francesca Loro	
Erinn Raftery	
Caitlin O'Neill	
Sebastien Donnet	

Event Log

Day 1 (Sat 24): loading + equipment testing (~0.66 d); transit to Northern end of Strait of Georgia.

Day 2 (Sun 25): sampling from the Northern end of Strait of Georgia; focus on stations with scor Net and surface bottles sampling due to lack of rosette (bottles on wire used instead).

Day 3 (Mon 26): return at IOS wharf (end AM), repair hydraulic, repair TSG and test CTD rosette (0.34 d); start sampling (Satellite Channel, Swanson Channel and Haro Strait).

Day 4 (Tue 27): Sampling from Western-end of Juan de Fuca; swell conditions not optimum. CTD deckbox failure. Progress eastward and then into Haro Strait.

Day 5 (Wed 28): Sampling northwards along the main thalweg and then back south once station 12 reached.

Day 6 (Thu 29): Sampling southward in early AM while transiting towards IOS wharf. Unloading and unpacking (~0.25 d).

Scientific Equipment Report

Successes:

"on the fly" construction of bottle handler for manual bottle sampling on wire (special credits: S. Rose - handler on table- and E. Raftery - bottles and messenger last minute dig-up and setup). TSG outflow "by-pass in a sink" (credits: S. Rose ; S. Donnet - assist). "on the fly BULK analysis" of DO due to rosette sampling focus of the cruise (credits: K. Scozzafava). "MEGA-intense Chito analysis" (credits: F. Loro and E. Raftery). CTD rosette "rapid swap" and trouble shooting (credits: C. Immonen and S. Rose). "have chief scientist's back at all time" special credits (K. Scozzafava and F. Loro, day shift).

Failures:

a number of small ones occurred but none that could not be addressed as seen above (to the notable exception of the on-board sounder). addressed issues: hydraulics (CCG), CTD on rosette, CTD deckbox, TSG outflow and NMEA feed (to CTD). the electronic logging system is really handy but we couldn't get the rosette part to work well (requiring manual editing).

Radioisotope Report

[Not Entered]

Scientific Successes and Concerns

Given the challenges listed above, it is my view that this field work was a success.

A total of 22 rosettes out of 28 were sampled; i.e. ~79 %.

All DIC stations (5) and bio-toxins stations (12) were sampled; i.e. 100%

All but one Net station were sampled (17/18); i.e. ~94%

Only 15 single CTD were sampled out of a total of 48 (~31%) but a number of them were tackled on the following cruise (~8); leading to a coverage of ~48%.

All together, the large majority of bio-chem data and physical data located at the bio-chem stations were collected. The main thalweg was also surveyed almost entirely (some stations, 9 out of a total of 25 were omitted to favour extent vs resolution).

Platform Successes and Concerns

[Not Entered]

Safety Concerns

[Not Entered]

Hazardous Occurrences

[Not Entered]

Other Comments

Thanks to all the Vector crew for being such good host.;

On a personal note, it was a real pleasure to work with Captain Will and adjust the program 'on the fly'; I'll keep good memories of our time calculations done in the darkest hours to try to fit as many stations as possible under shrinking time constraints.



Images

[No Alternative Image Provided]

Image notes:

Other Supporting Documents:

Note that some of these files may not load correctly in your browser when clicked, but you can right-click on them and save them to your local machine to view.

Filename	Type	Size	Modified
 2023-025_deckplan.docx	file	42K	Thursday 11 May 2023 10:44
 2023-025plan1.jpg	file	77K	Thursday 11 May 2023 10:44

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