



Regional Operations Centre, Canadian Coast Guard Western



Science Cruise Report: PAC 2018-104

Report last updated: 2018-09-13 16:22:21

Link to Original Plan: [https://www.waterproperties.ca/requests/cruiseplanview.php?](https://www.waterproperties.ca/requests/cruiseplanview.php?cruiseid=2018-104)

cruiseid=2018-104

Department/Group:	Fisheries and Oceans Canada, OSD
Other Participating Groups:	UBC
Science Cruise Number:	PAC 2018-104
Alternative Cruise Number:	
Ship's Patrol Number:	
Name of Vessel/Platform:	Nordic Pearl
Dates:	From: Monday 30-Jul-2018 To: Friday 31-Aug-2018
Chief Scientist:	Stephane Gauthier, 250-363-6587, Stephane.Gauthier@dfo-mpo.gc.ca
Master:	Joey Green
Fishing Master:	
Appropriateness of Vessel:	Excellent

Time Allocations

Originally Allocated Days **32.00**

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

Weather	+ 1.00	Bad weather prevented survey on a few occasions (15-27 Aug)
SAR	+ 0.00	
CCG Refueling	+ 0.25	Fueling in Port Hardy and Ucluelet
CCG Ship Repair & Maintenance	+ 0.25	Main generator issues (1 tow aborted)
CCG Crew Changes	+ 0.00	
CCG Other	+ 0.00	
Science Operations	+ 27.00	
Science Equipment Loading/Unloading	+ 2.50	
Science Other	+ 1.00	Ended survey 1 day early - used to load/prepare next survey
Days Gained	+ 0.00	
Days Grand Total	= 32.00	

Time Allocation Comments:

Cruise Events

Areas of Operations

Juan de Fuca, Johnstone Strait, Washington State, West Coast Vancouver Island, Northwest Coast Vancouver Island

Scientific Personnel

Male - Name	Notes (Affiliation, Watches, Duties, etc)
Stephane Gauthier	
Benjamin Snow	
Grant Garner	
Kieran Forge	
Andrew Trites	
Wade Smith	Typically don't eat red meat but flexible on a cruise
Boris Espinasse	
Zack Scherker	
Female - Name	Notes (Affiliation, Watches, Duties, etc)
Mei Sato	Prefer rice
Chelsea Stanley	
Shani Rousseau	
Maria Surry	
Maegan Long	
Lauren Portner	Reduced gluten and dairy, but no allergy to these

Event Log

30-July-2018: Loading of scientific gear and survey preparation, depart Nanaimo at 20:00.

31-July-2018: Transit to Port Hardy for fueling, depart 18:00.

01-Aug-2018 to 05-Aug-2018: Acoustic-trawl survey operations in southern Queen Charlotte Strait and Johnstone Strait, depart 16:00 on Aug 5th.

06-Aug-2018: Transit to Nanaimo, arrive 08:00 for scientific crew change. Depart 18:00.

07-Aug-2018: Acoustic calibration in Coles Bay, depart 13:00 to transit to Juan de Fuca Strait.

08-Aug-2018 to 13-Aug-2018: Acoustic-trawl survey operations in Juan de Fuca Strait.

14-Aug-2018: Scientific crew change in Ucluelet.

15-Aug-2018 to 19-Aug-2018: Depart Ucluelet 05:30 on August 15th. Recovery and re-deployment of sub-surface acoustic moorings off WCVI (Barkley Sound, Clayoquot Sound, Brooks Peninsula). Acoustic-trawl survey at and in-between mooring sites. Depart to Ucluelet at 18:00, August 19th.

20-Aug-2018: Scientific crew change in Ucluelet. Depart 16:00.

21-Aug-2018 to 25-Aug-2018: Acoustic-trawl survey operations in northern WCVI, Scott Islands area, and off Goose Bank. Return to Ucluelet on evening of Aug 25th.

26-Aug-2018: Scientific crew change in Ucluelet, depart at 20:00.

27-Aug-2018 to 28-Aug-2018: Acoustic-trawl survey operations in La Perouse bank area and off Barkley Sound.

29-Aug-2018: Acoustic-trawl survey operations in Juan de Fuca Strait. Transit back to Nanaimo.

30-Aug-2018: Arrive Nanaimo 09:00, unloading of scientific gear.

Scientific Equipment Report

- Acoustic systems worked well throughout the survey.
- Scientific trawl and associated equipment (trawl sonar, trawl-mounted CTD, trawl-mounted camera systems) worked well throughout the survey.

- GFBIO network had some issues. There were also issues with some of the scales. One of the issue eventually resolved with washing/flushing with water, but one of the larger scale stopped working (suspected damaged connection), while one of the smaller scale never worked (was not able to calibrate).
- The Seabird 404 CTD was damaged by the vessel's propeller on August 12th. This happened as a results of strong surface counter-current. The Niskin water sampling bottle was lost during this incident.
- The BONGO net weights were lost upon retrieval on August 13th. The net or its frame did not suffer any damage.
- Acoustic sub-surface moorings were all released and recovered successfully and all equipment worked well, except for the XMi-11k recovery beacons, 2/3 had flooded and damaged battery compartments.

Radioisotope Report

n/a

Scientific Successes and Concerns

The survey was a success and all scientific objectives were met. For the first two legs (dedicated to survey Northern and Southern resident killer whale's foraging fields) the platform was successfully used to carry out acoustic-trawl surveys in all identified areas, collecting oceanographic and biological samples, as well as locating and following pods of resident killer whales (focal follow). For the Pacific Hake related research, we successfully retrieved and re-deployed three sub-surface acoustic moorings, and carried out acoustic-trawl surveys along the WCVI, from Barkley Sound all the way to the Scott Islands area and the western side of Goose Bank, including offshore areas. Aggregations of Pacific Hake encountered were successfully mapped and sampled.

Platform Successes and Concerns

The Nordic Pearl is an excellent platform to conduct large scale acoustic-trawl surveys off the coast. The vessel also proved to be a good platform to retrieve and deploy sub-surface moorings such as the ones used by the Pacific Hake program. Using the third-wire winch off the stern to deploy scientific equipment (e.g. CTD, BONGO net) was successful but not optimal. Perhaps another winch operating off the side of the vessel would be more efficient and safer.

Safety Concerns

As mentioned above, the deployment of instruments off the stern is not optimal, and it would be safer to operate such equipment from the side of the vessel.

Hazardous Occurrences

n/a

Other Comments

We would like to thank the Captain and the crew of the Nordic Pearl for all of their help and for making this survey a success. We are grateful to the cook (Paula) for keeping us (very) well-fed during the survey.

Images

[No Alternative Image Provided]

Image notes:

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