

FLIGHT REPORT
ShoreZone Aerial Video Imaging (AVI) Survey
Team Dundas (DD)
July 4-5, 2019



North entrance to Edith Harbour, Dundas Island (bc19_dd_00297)

Prepared for:
Department of Fisheries and Oceans
Pacific Biological Station, Nanaimo

Prepared by:
Coastal & Ocean Resources
Victoria, BC

This flight report summarizes the field activities of the ShoreZone aerial video imaging survey conducted out of Prince Rupert, British Columbia on July 4-5, 2019. The survey was conducted by Coastal & Ocean Resources for the Department of Fisheries and Oceans (Contract F5211-180119, Amend No. 2). Table 1 provides a summary of field crew affiliations and responsibilities.

The tables and figures on the following pages summarize the extent and location of the 251 km of shoreline imagery completed on British Columbia's north coast under this contract.

A Bell Long Ranger 206 helicopter chartered from HeliJet based in Prince Rupert, BC was utilized by the team. All imagery was collected according to the latest ShoreZone protocol (Cook et al. 2017). Imagery was collected looking at the shoreline from the left side of the aircraft with the doors removed for better field of view. The helicopter maintained a speed of approximately 100km/hour at an elevation of 100m while at a distance of 100m from the low water line so the imagery was collected at an oblique angle to the intertidal.

A total of 3 HD videos and 2,730 high resolution photos were collected during the survey. This report contains a summary table and map for these videos, illustrating their location, length, and key geographic points. All videos and photos for this survey were supplied to DFO on a hard drive organized by video number and named consistent with the ShoreZone image library data schema. The GIS data that accompanied the imagery on the hard drive illustrate the flight trackline positions at 1-second intervals while data and imagery are linked by a date-time code (yyyymmddhhmmss). At the time of this report, all imagery is posted online on the [Coastal and Ocean Resources ArcGIS webpage](#).

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Team Dundas Survey Data

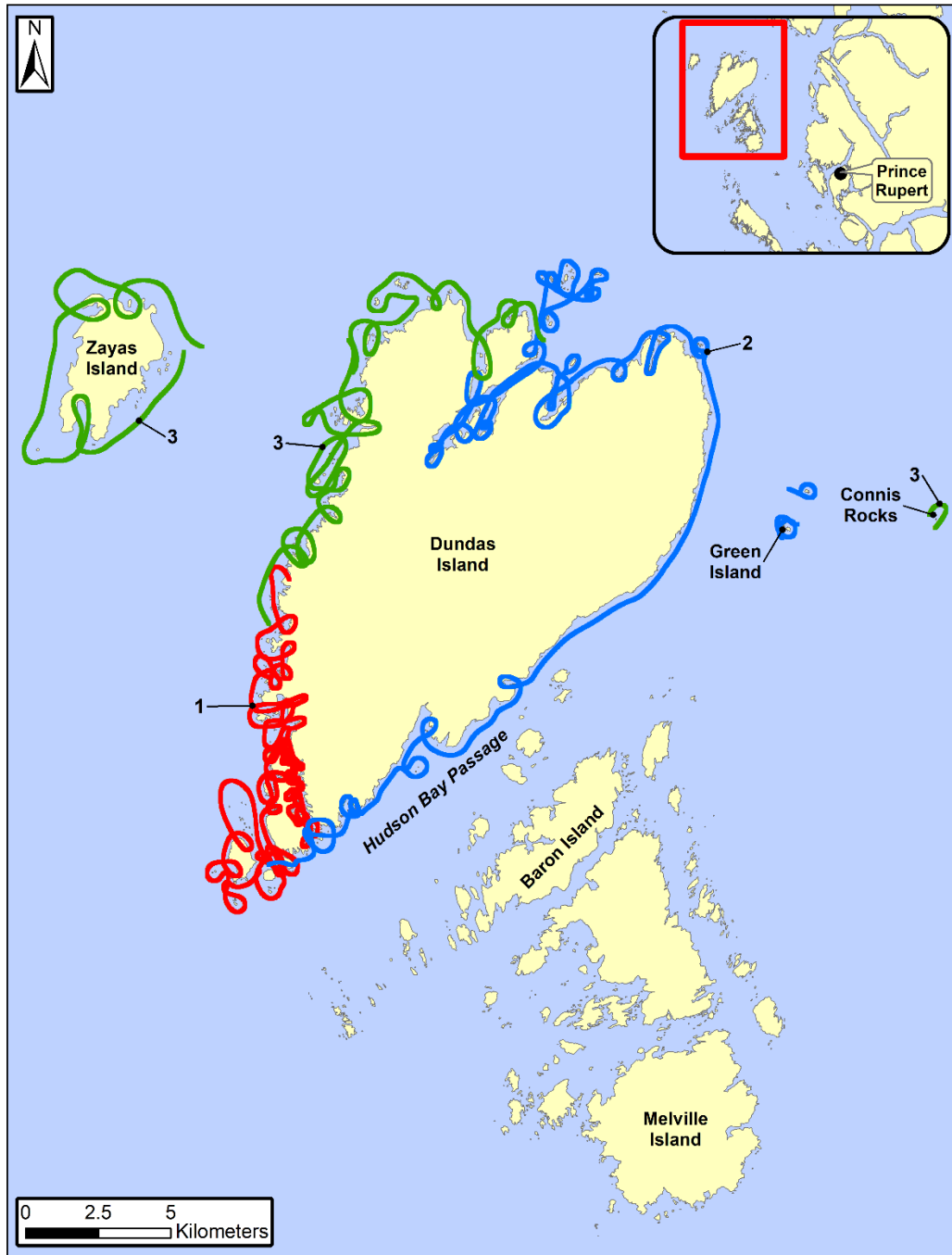
Table 1. Flight Personnel and Responsibilities for Team Dundas (DD).

Crew Member	Individual / Affiliation	Responsibilities
<i>Geomorphologist</i>	Kalen Morrow Coastal and Ocean Resources, Victoria, BC	Videography, geomorphic commentary, survey planning & coordination, post-flight data processing
<i>Coastal Ecologist</i>	Sarah Cook Coastal and Ocean Resources, Victoria, BC	Digital photography, biologic commentary, post-flight data processing
<i>In-Flight Navigator</i>	Sean Daley Coastal and Ocean Resources, Victoria, BC	In-flight navigation, post-flight data processing
<i>Pilot</i>	Kim Edmonds HeliJet Prince Rupert, BC	Bell Long Ranger 206 aircraft operation

Table 2. Survey Videos: Team Dundas (DD)

Video Number	Location
BC19_DD_01	Dundas Island, Edith Harbour, Prince Leebo Island
BC19_DD_02	Dundas Island, Brundige Inlet, Gnarled Islands
BC19_DD_03	Dundas Island, Boat Harbour, Zayas Island

ShoreZone Aerial Video Imaging (AVI) Survey
Team Dundas (DD) July 4-5, 2019
Survey Maps and Video Logs
Videos: BC19_DD_01 to BC19_DD_03



Video location map for the July 4-5, 2019 Team Dundas (DD) survey conducted out of Prince Rupert, BC.

**2019 British Columbia Aerial Video Imaging Survey
Team Dundas (DD)**

Video: BC19_DD_01

Date: 04 July 2019

General Location: Dundas Island, Edith Harbour, Prince Leebo Island

Time Start (UTC): 15:10:36

Geo: Morrow

Time End (UTC): 16:10:50

Bio: Cook

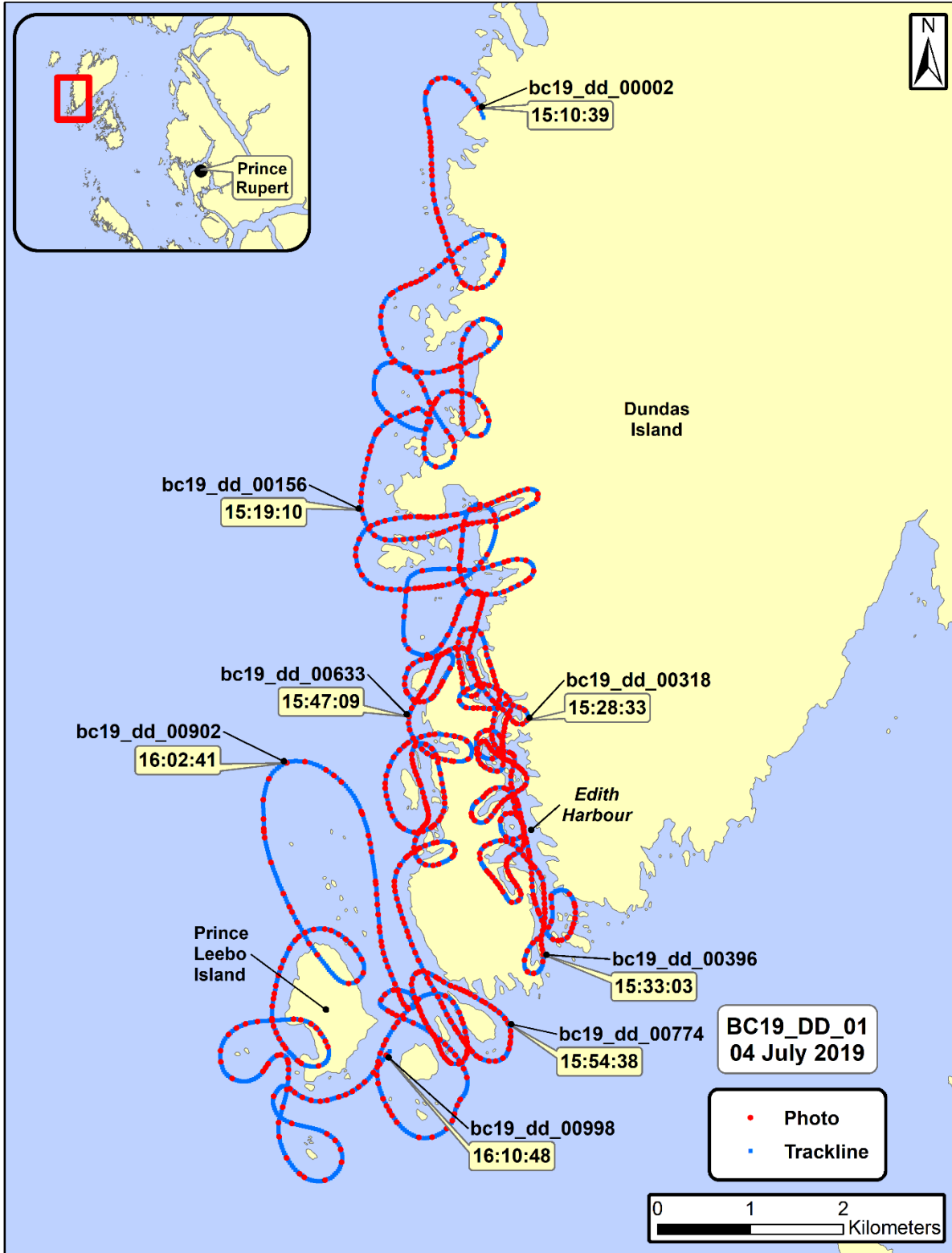
Video Length: 60 min 15 sec

Nav: Daley

Weather: High Overcast, Sun

Pilot: Edmonds

Time (UTC)	Location	Photo
15:10:39	West Dundas Island	bc19_dd_00002
15:19:10	West Dundas Island	bc19_dd_00156
15:28:33	Edith Harbour	bc19_dd_00318
15:33:03	South entrance to Edith Harbour	bc19_dd_00396
15:47:09	Southwest Dundas Island group	bc19_dd_00633
15:54:38	Southwest Dundas Island group	bc19_dd_00774
16:02:41	Reefs north of Prince Leebo Island	bc19_dd_00902
16:10:48	Prince Leebo Island	bc19_dd_00998



**2019 British Columbia Aerial Video Imaging Survey
Team Dundas (DD)**

Video: BC19_DD_02

Date: 04 July 2019

General Location: Dundas Island, Brundige Inlet, Gnarled Islands

Time Start (UTC): 16:11:02

Geo: Morrow

Time End (UTC): 17:21:40

Bio: Cook

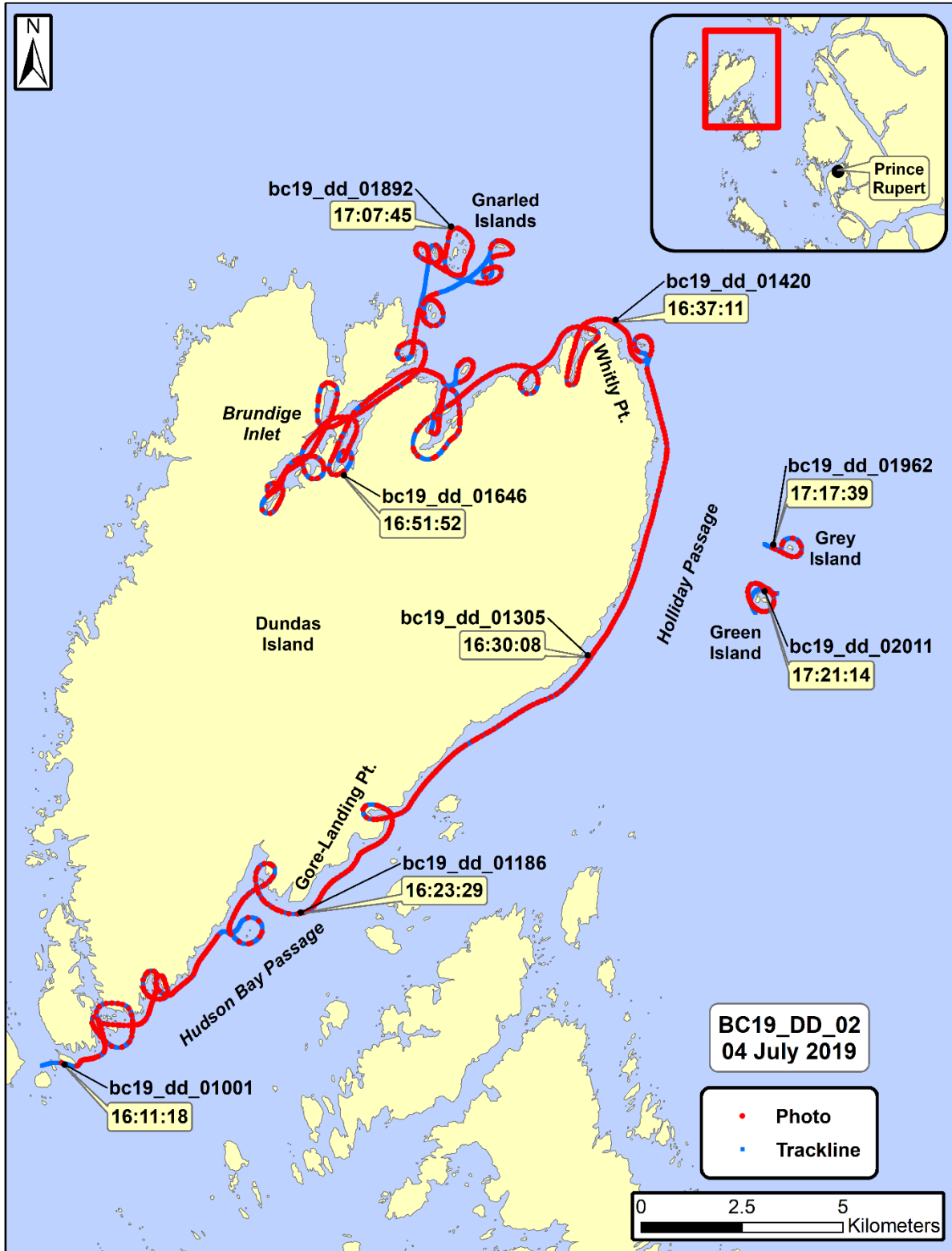
Video Length: 66 min 0 sec

Nav: Daley

Weather: High Overcast, Sun

Pilot: Edmonds

Time (UTC)	Location	Photo
16:11:18	South Dundas Island	bc19_dd_01001
16:23:29	Gore-Landing Point	bc19_dd_01186
16:30:08	Holliday Passage, East Dundas Island	bc19_dd_01305
16:37:11	Whitly Point	bc19_dd_01420
16:51:52	Brundige Inlet	bc19_dd_01646
17:07:45	Gnarled Islands	bc19_dd_01892
Video Break: 17:13:30 to 17:17:31		
17:17:39	Grey Island	bc19_dd_01962
Video Break: 17:18:48 to 17:19:25		
17:21:14	Green Island	bc19_dd_02011



**2019 British Columbia Aerial Video Imaging Survey
Team Dundas (DD)**

Video: BC19_DD_03

Date: 05 July 2019

General Location: Dundas Island, Boat Harbour, Zayas Island

Time Start (UTC): 16:01:40

Geo: Morrow

Time End (UTC): 17:01:53

Bio: Cook

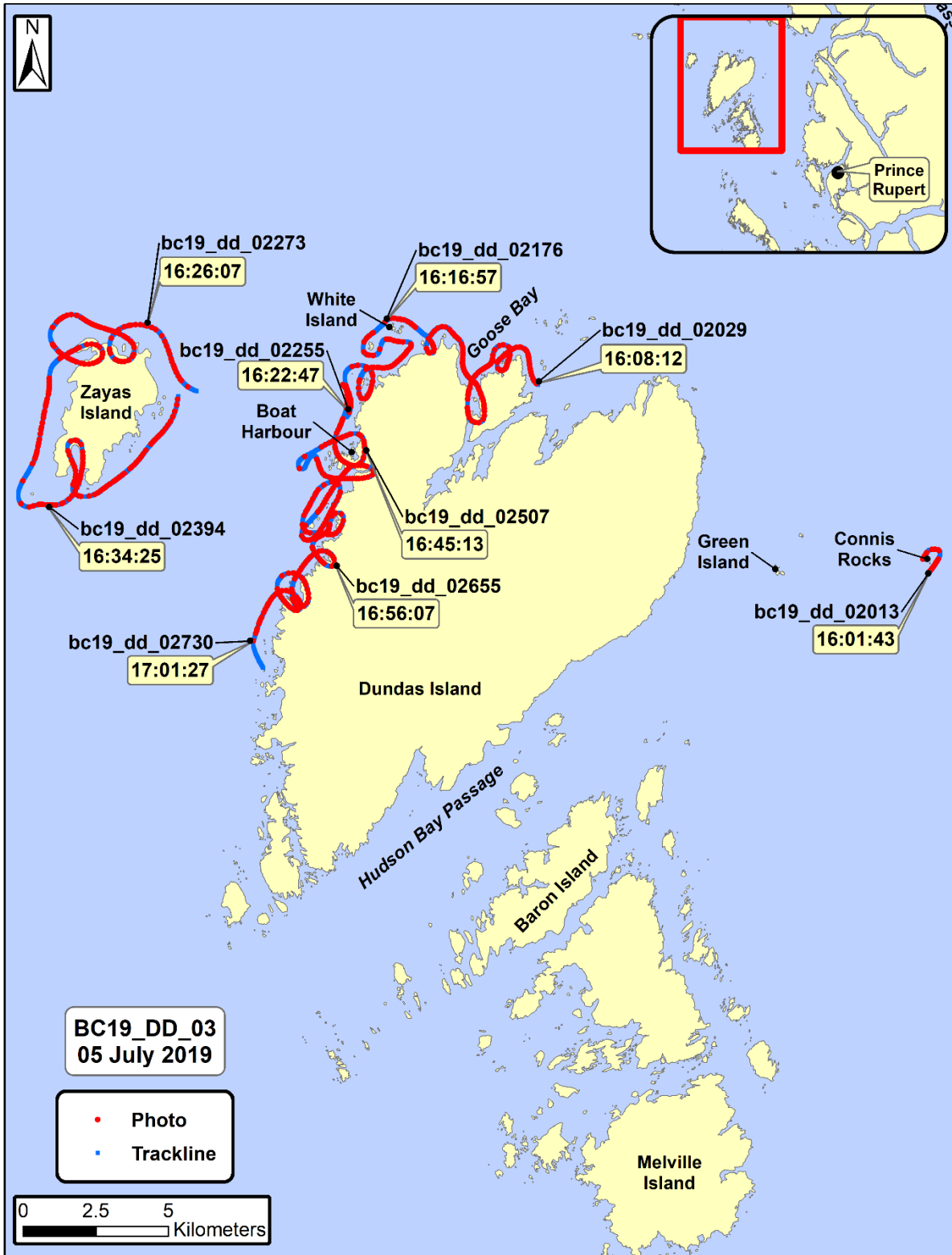
Video Length: 49 min 59 sec

Nav: Daley

Weather: Sun

Pilot: Edmonds

Time (UTC)	Location	Photo
16:01:43	Connis Rocks	bc19_dd_02013
	Video Break: 16:02:43 to 16:08:09	
16:08:12	Prospector Point, Dundas Island	bc19_dd_02029
16:16:57	White Island	bc19_dd_02176
16:22:47	West Dundas Island	bc19_dd_02255
	Video Break: 16:22:53 to 16:24:43	
16:26:07	North Zayas Island	bc19_dd_02273
16:34:25	South Zayas Island	bc19_dd_02394
	Video Break: 16:40:15 to 16:43:11	
16:45:13	Boat Harbour, Dundas Island	bc19_dd_02507
16:56:07	West Dundas Island	bc19_dd_02655
17:01:27	West Dundas Island	bc19_dd_02730



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References

Cook, S.E., Daley, S., Morrow, K. and Ward, S. 2017. ShoreZone Coastal Imaging and Habitat Mapping Protocol. Prepared for NOAA Fisheries, Alaska Regional Office, Juneau, Alaska. 78p.

Acknowledgments

The ShoreZone program is a partnership of scientists, GIS specialists, web specialists, non-profit organizations, and governmental agencies. We gratefully acknowledge the support of organizations working in partnership for the British Columbian ShoreZone effort, including: Department of Fisheries and Oceans, Ministry of Environment & Climate Change Strategy, Prince Rupert Port Authority, Pacific Northwest LNG, Tsleil-Waututh Nation, Musqueam Indian Band, Metlakatla First Nation, Nisga'a Lisims Government and the Gitxaala Nation.

Access and Use Constraints

Protocols for data access and distribution are established by the program partner agencies. Please see www.shorezone.org for a list of partner agencies and related web sites. Video imagery can be viewed and digital stills downloaded online at: <http://www.coastalandoceans.com/Core-Services/Imaging/>

Any hardcopies or published data sets utilizing ShoreZone products shall clearly indicate their source. To ensure distribution of the most current public information or for correct interpretation, contact the ShoreZone project manager at Coastal and Ocean Resources, Inc. At the time of publication, that person is Sarah Cook (sarah@coastalandoceans.com).

To effectively and appropriately use ShoreZone data, the user shall refer to the ShoreZone Coastal Imaging and Habitat Mapping Protocol (Cook *et al.* 2017).

Data provided are derived from large, regional databases that are continually being updated and modified. The accuracy of some information is subject to change. Any published data sets utilizing ShoreZone products (printed, digital, or online) shall clearly indicate their source. If the user has modified the data in any way, the user is obligated to describe the types of modifications performed. The user specifically agrees not to misrepresent these data, nor to imply that changes made were approved by the ShoreZone program or its partners.



Green Island lighthouse (bc19_dd_02010)

