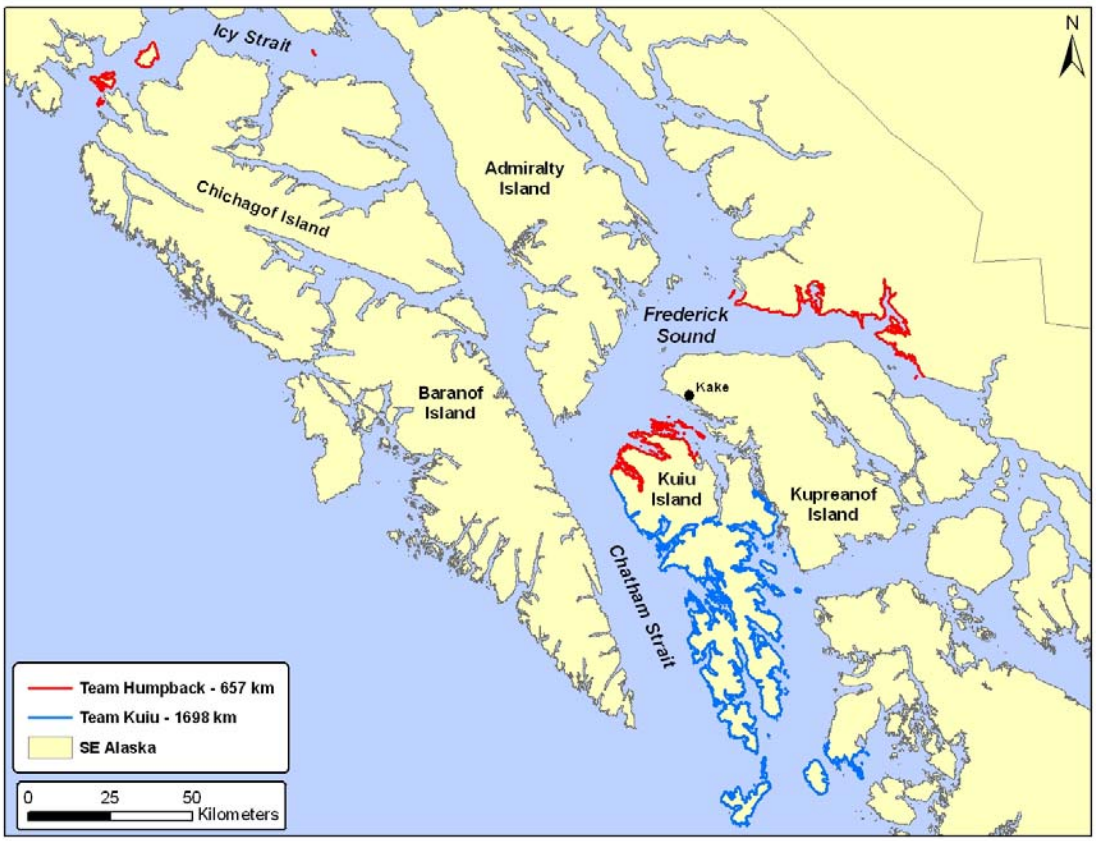
CORI Project: 2010-11 **July 2010**

FLIGHT REPORT
ShoreZone Aerial Video Imaging (AVI) Survey
Southeast Alaska
May 27-29, 2010
Team Humpback (HB)
June 11-16, 2010
Team Kuiu (KU)



Coastal & Ocean Resources Inc.

Prepared for:
NOAA National Marine Fisheries Service
The Nature Conservancy
Alaska State Department of Natural Resources

ShoreZone

By:

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SUMMARY

ShoreZone is a coastal habitat mapping and classification system in which georeferenced aerial imagery is collected specifically for the interpretation and integration of geological and biological features of the intertidal zone and nearshore environment. Oblique low-altitude aerial video and digital still imagery of the coastal zone is collected during summer low tides (zero tide level or lower), usually from a helicopter flying at <100 m altitude. The flight trackline is recorded at 1-second intervals using Fugawi electronic navigation software and is continuously monitored in-flight to ensure all shorelines have been imaged. Video and still imagery collected are georeferenced and time-synchronized. Video imagery is accompanied by continuous, simultaneous commentary by a geologist and a biologist aboard the aircraft. The imagery and commentary are later used in the definition of discrete along-shore coastal habitat units and the "mapping" of observed physical, geomorphic, sedimentary, and biological features in those units. More than 20 agencies and groups support the ShoreZone Coastal Habitat Mapping Program in Alaska. For more information on the ShoreZone program and its partners, please visit Coastal and Ocean Resources, Inc. web site at http://www.coastalandoceans.com.

The purpose of this flight report is to summarize the field activities of the ShoreZone aerial video imaging (AVI) survey conducted out of **Juneau and around Kuiu Island, Southeast Alaska** during the low-tide windows of **May 27-29 and June 11-16 respectively, 2010**. The survey was conducted by Coastal & Ocean Resources Inc. (CORI) under contract with NOAA National Marine Fisheries Service, the Alaska State Department of Natural Resources, and The Nature Conservancy. A coastal ecologist from Archipelago Marine Resources (AMR) provided biological observations during the flights. Tables 2 & 3 provide a summary of crew affiliations and responsibilities.

The tables and figures on the following pages summarize the extent and location of the AVI data and imagery collected by each team, a total of **2,355 km of shoreline**. The teams utilized helicopters charted from Coastal Helicopters in Juneau, Alaska. Imagery was collected looking at the shoreline from the left side of the aircraft with the rear door removed. A total of 29 mini DV master tapes were collected during the survey and recorded to DVDs (20 tapes for team Kuiu and 9 for team Humpback). This report contains a summary table for each tape, illustrating its location, length, and key geographic points. Maps for each tape are annotated with representative geographic names, trackline times (in hh:mm:ss UTC in 24-hour clock time; UTC time is 8 hours ahead of Alaska Daylight Time), and photo numbers. The six-digit UTC time is also imprinted on the video imagery that is provided on DVDs with this report.

Representative digital still photos from each day of the surveys are provided in the last section of this report. All photos are supplied on DVD, organized by tape number for each team, consistent with the image library. More than 19,100 photos were collected by the team. The shapefiles and GIS data that accompany this report on DVD illustrate the flight trackline positions at 1-second intervals (displayed by tape number), as well as the digital shoreline segments flown. Within each survey, data and imagery are linked by a date time code (yyyymmddhhmmss). When processing is complete, all imagery will be posted online at the NOAA ShoreZone web site (http://www.fakr.noaa.gov/maps/szintro.htm).

Table 1. Survey teams and flight report contents.

Team	Details	Pages
Humpback (HB)	Tapes: SE10_HB_01 to SE10_HB_09	5 - 24
Kuiu (KU)	Tapes: SE10_KU_01 to SE10_KU_20	25 - 66
Daily sample photos		67 - 75
References, Acknowledgments, and Use Constraints		76

Table 2. ShoreZone AVI Flight Personnel and Responsibilities: Team Humpback (HB)

Crew Member	Individual / Affiliation	Responsibilities
Geomorphologist	Kalen Morrow CORI, Sidney, BC	survey coordination, videography, geomorphic commentary, post-flight data processing, project reporting
Coastal Ecologist	Mandy Lindeburg NOAA, Juneau, AK	digital photography, biologic commentary
Navigator	Steve Lewis NOAA, Juneau, AK	in-flight navigation, post-flight data processing
Pilot	Bill Snider Coastal Helicopters Juneau, Alaska	

Table 3. ShoreZone AVI Flight Personnel and Responsibilities: Team Kuiu (KU)

Crew Member	Individual / Affiliation	Responsibilities
Geomorphologist	John Harper / Sean Daley CORI, Sidney, BC	survey coordination, videography, geomorphic commentary, post-flight data processing, project reporting
Coastal Ecologist	Mary Morris AMR, Victoria, BC	digital photography, biologic commentary
Navigators	John Harper / Sean Daley CORI, Sidney, BC	in-flight navigation, post-flight data processing
Pilot	Bill Snider Coastal Helicopters Juneau, Alaska	

Table 4. Survey Tapes for Team Humpback (HB).

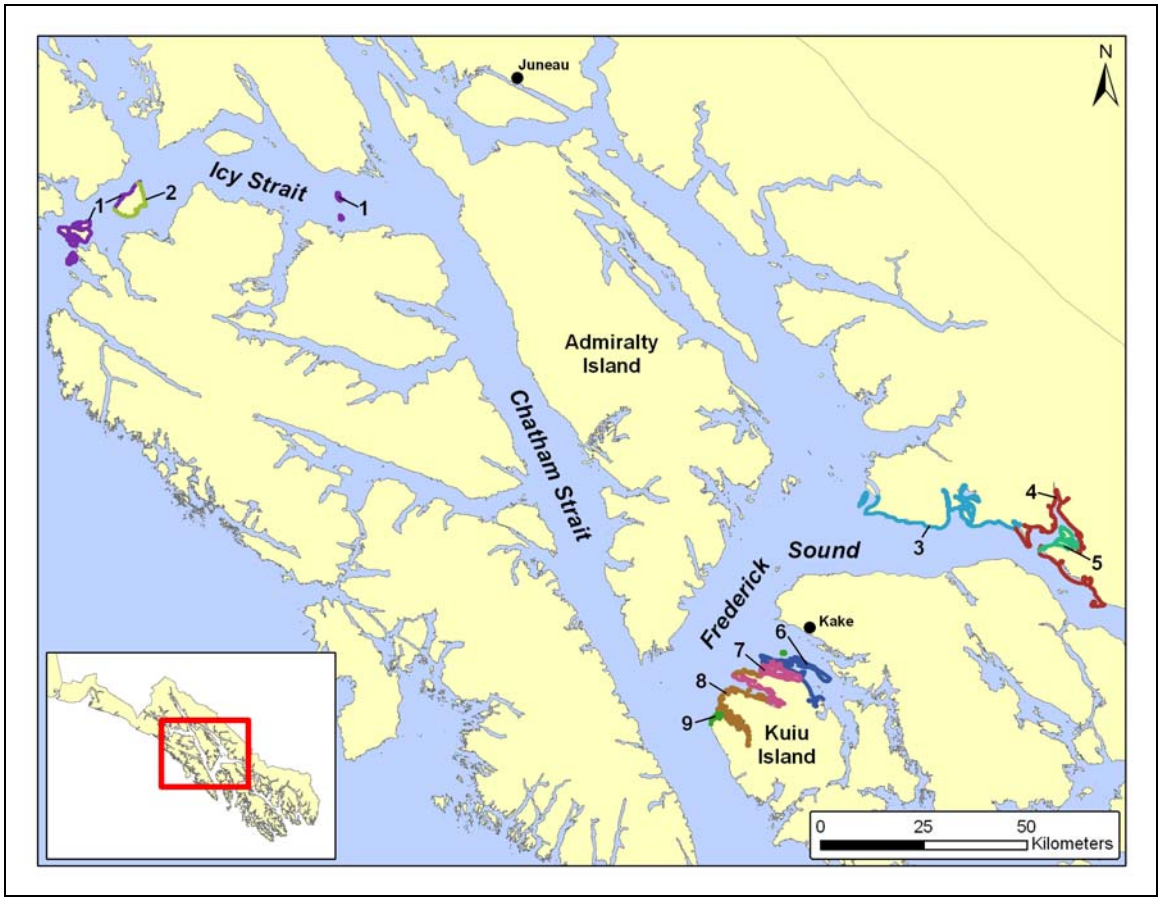
Team	Tape	Location
Humpback	SE10_HB_01	Lemesurier, Inian Islands, Icy Strait
(HB)	SE10_HB_02	Lemesurier Island, Icy Strait
	SE10_HB_03	Cape Fanshaw, Farragut Bay, Frederick Sound
	SE10_HB_04	Thomas Bay, Frederick Sound
	SE10_HB_05	Ruth Island, Bock Bight, Thomas Bay
	SE10_HB_06	Keku Islands, Keku Strait
	SE10_HB_07	Keku Islands, Saginaw Bay, North Kuiu Island
	SE10_HB_08	Saginaw Bay, Security Bay, North Kuiu Island
	SE10_HB_09	North Kuiu Island, Frederick Sound, Keku Strait

Table 5. Survey Tapes for Team Kuiu (KU).

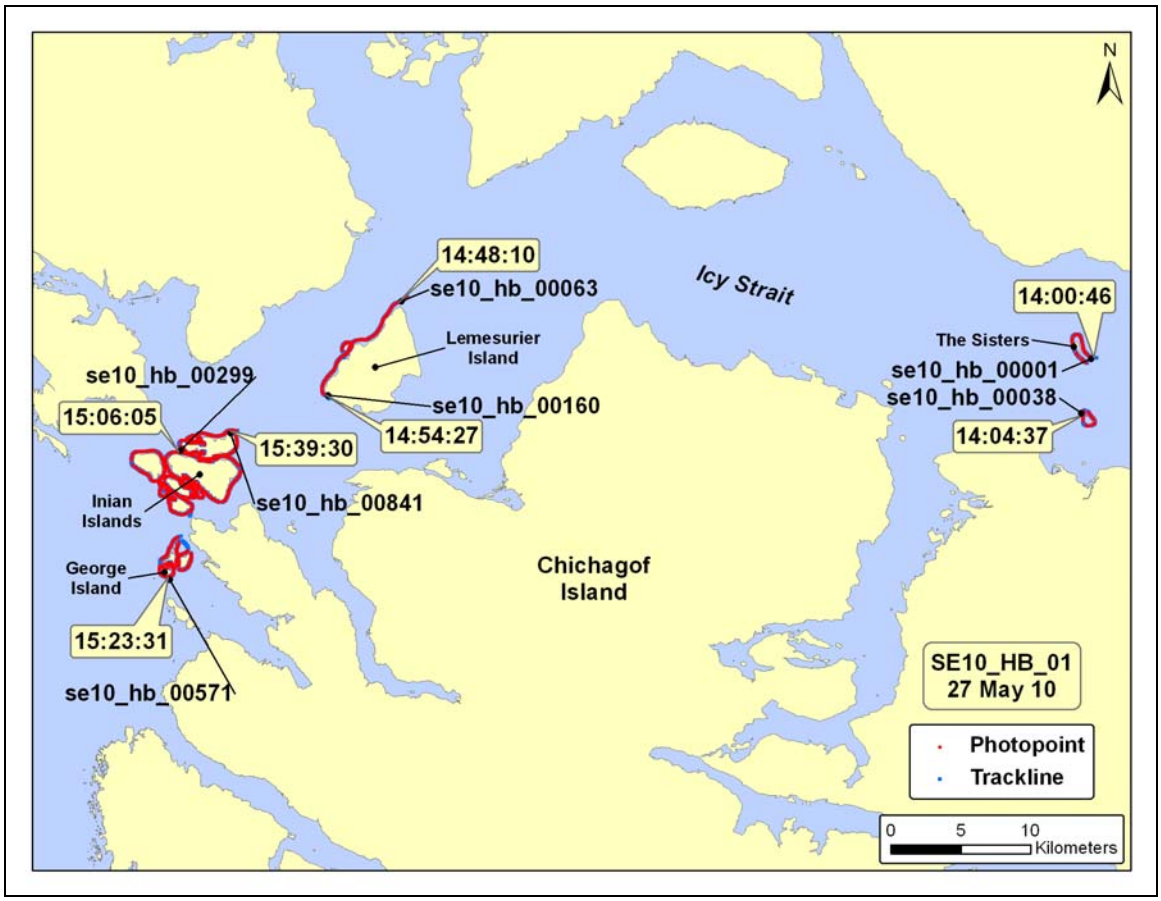
Team	Tape	Location
Kuiu	SE10_KU_01	Washington Bay, Rowan Bay
(KU)	SE10_KU_02	Bay of Pillars, Pt Ellis, Happy Cove
	SE10_KU_03	Elana Bay, Tebenkof Bay
	SE10_KU_04	Tebenkof Bay, Honeymoon Basin (Bay of Pillars)
	SE10_KU_05	Tebenkof Bay, Petrof Bay
	SE10_KU_06	Tebenkof Bay, Thetis Bay, Troller Islands
	SE10_KU_07	Chatham Strait, Port Malsmesbury
	SE10_KU_08	Chatham Strait, Table Bay
	SE10_KU_09	Sumner Island, Conclusion Island, No Name Bay
	SE10_KU_10	No Name Bay, Seclusion Harbor, Threemile Arm
	SE10_KU_11	Threemile Arm, Rocky Pass
	SE10_KU_12	Rocky Pass, Port Camden, Alvin Bay
	SE10_KU_13	Chatham Strait, Cape Decision, Port McArthur
	SE10_KU_14	Kell Bay, Bear Harbor, Affleck Canal
	SE10_KU_15	Affleck Canal, Sumner Strait, Louise Cove
	SE10_KU_16	Port Beauclerc, Edwards Island
	SE10_KU_17	Spanish Islands, Coronation Island
	SE10_KU_18	Warren Island, Kosciusko Island
	SE10_KU_19	Kosciusko Island, Green Island, Edna Bay
	SE10_KU_20	Sumner Strait, Reid Bay

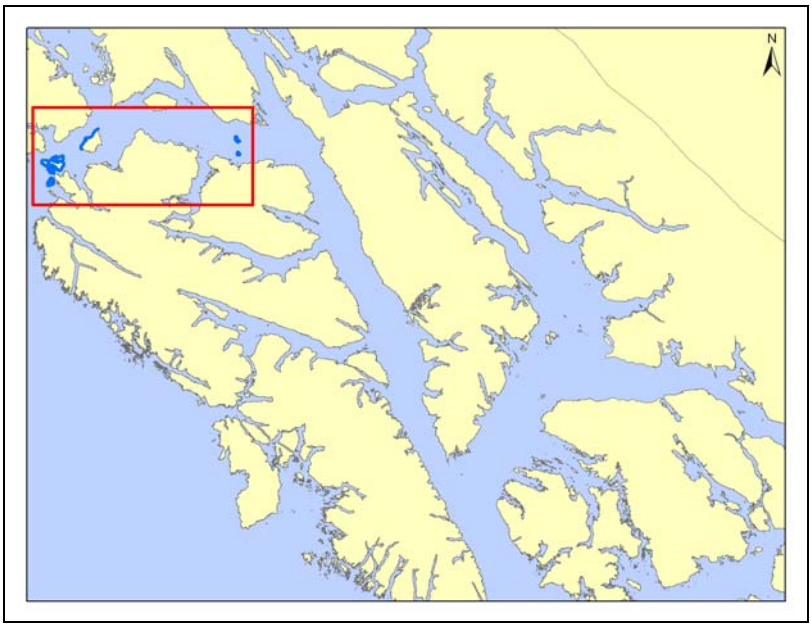
ShoreZone Aerial Video Imaging (AVI) Survey
Southeast Alaska
May 27-29, 2010

Team Humpback (HB)
Survey Maps and Tape Logs
DVDs: SE10_HB_01 to SE10_HB_09



Flight trackline map showing the location and extent of specific videotapes (DVDs) for the May 27-29, 2010 **Team Humpback** survey in Southeast Alaska


N
14:48:10
se10_hb_00063
Icy Strait
14:00:46
Lemesurier Island
The Sisters
se10_hb_00001
se10_hb_00299
se10_hb_00160
se10_hb_00038
15:06:05
15:39:30
14:54:27
14:04:37
Inian Islands
se10_hb_00841
George Island
Chichagof Island
15:23:31
se10_hb_00571
SE10_HB_01
27 May 10
Photopoint
Trackline
0 5 10
Kilometers

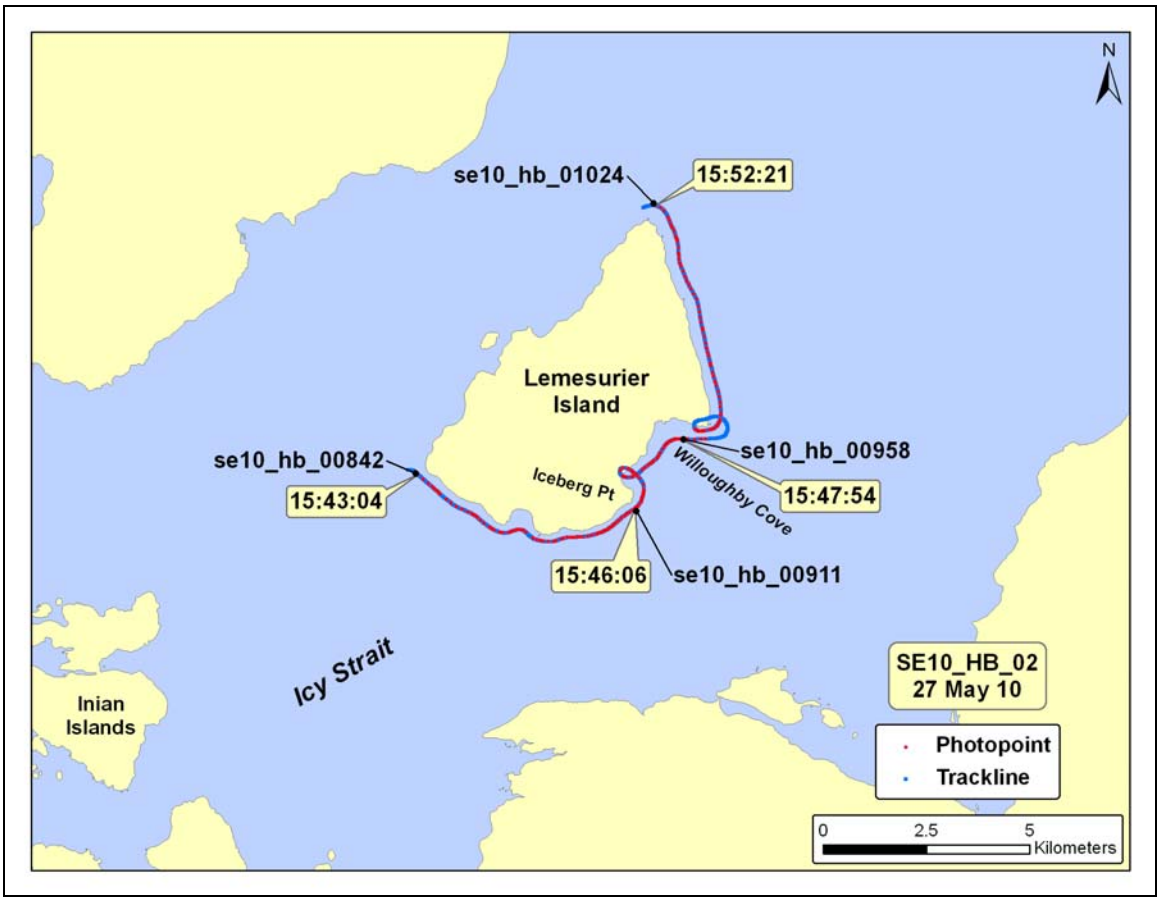

N

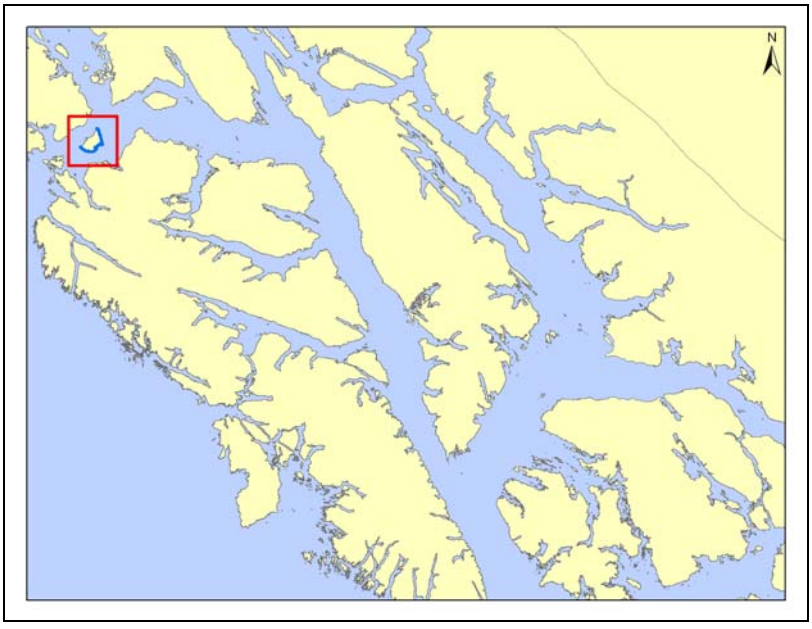
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_01 **Date: 27 May 2010**

General Location: Lemesurier, Inian Islands, Icy Strait
Time Start (UTC): 14:00:40 **Geo:** Morrow
Fuel Break: 14:05:49 to 14:47:47 **Bio:** Lindeberg
Time End (UTC): 15:39:30 **Nav:** Lewis
Tape Length: 49 min 59 sec **Pilot:** Snider
Weather: Sunny and clear

Time (UTC)	Location	Photo
14:00:46	The Sisters, Icy Strait	se10_hb_00001
	Transit to Spasski Island 14:02:58 to 14:04:27	
14:04:37	Spasski Island, Icy Strait	se10_hb_00038
	Fuel Break 14:05:49 to 14:47:47	
14:48:10	North Pt. of Lemesurier Island	se10_hb_00063
14:54:27	West Pt. of Lemesurier Island	se10_hb_00160
	Transit to Inian Islands 14:54:39 to 14:57:37	
15:06:05	Inian Cove, Inian Islands	se10_hb_00299
	Transit to George Island 15:19:57 to 15:21:01	
15:23:31	George Island, Cross Sound	se10_hb_00571
	Transit to Inian Islands 15:27:51 to 15:29:03	
15:39:30	NE corner of the Inian Islands	se10_hb_00841


N
se10_hb_01024
15:52:21
Lemesurier
Island
se10_hb_00842
15:43:04
Iceberg Pt
Willoughby Cove
se10_hb_00958
15:47:54
15:46:06
se10_hb_00911
Icy Strait
Inian
Islands
SE10_HB_02
27 May 10
Photopoint
Trackline
0
2.5
5
Kilometers

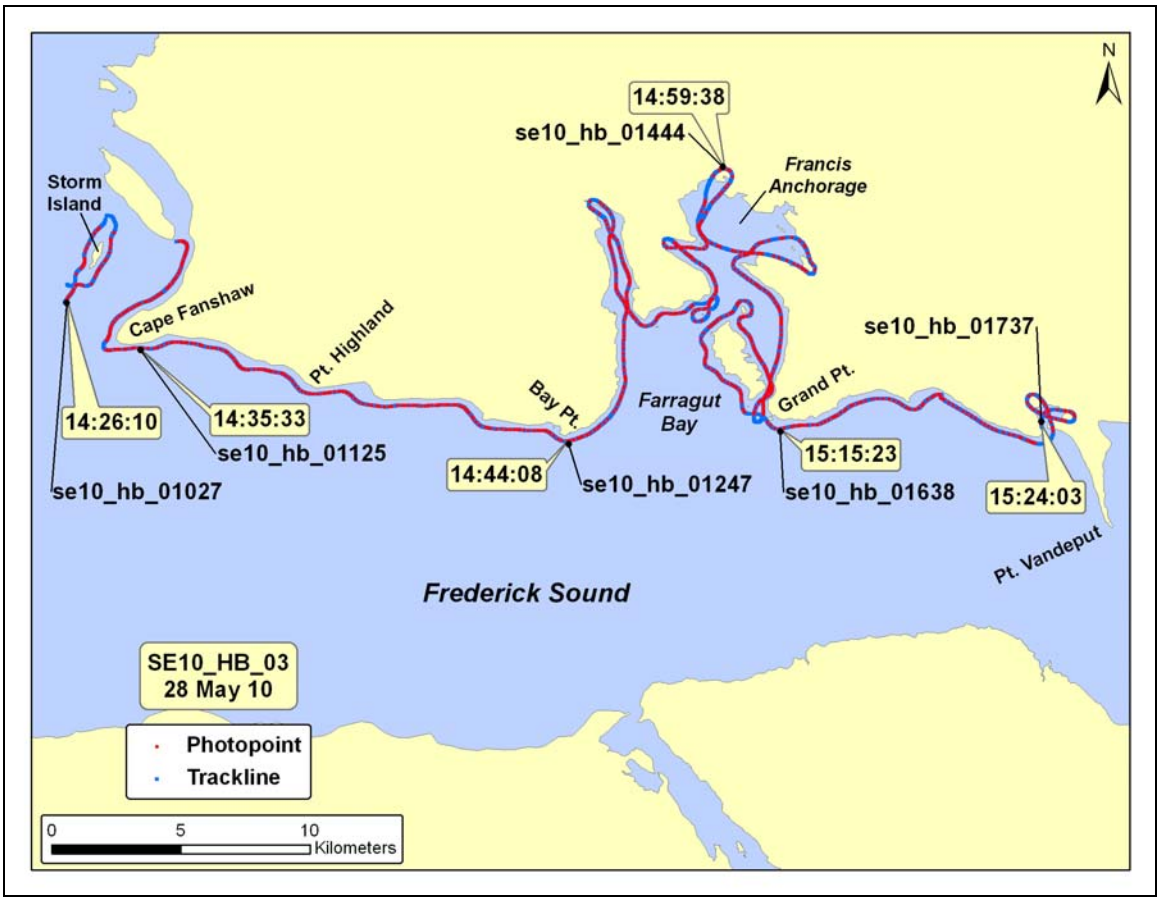

N

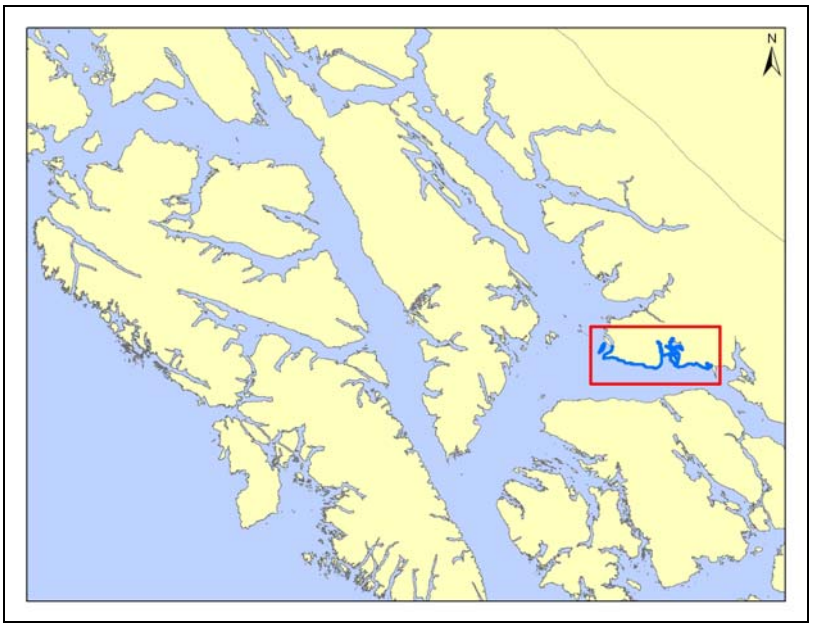
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_02 **Date: 27 May 2010**

General Location: Lemesurier Island, Icy Strait
Time Start (UTC): 15:42:55 **Geo:** Morrow
Fuel Break: None **Bio:** Lindeberg
Time End (UTC): 15:52:30 **Nav:** Lewis
Tape Length: 9 min 35 sec **Pilot:** Snider
Weather: Sunny and clear

Time (UTC)	Location	Photo
15:43:04	West Pt. of Lemesurier Island	se10_hb_00842
15:46:06	Iceberg Pt., Lemesurier Island	se10_hb_00911
15:47:54	Willoughby Cove, Lemesurier Island	se10_hb_00958
15:52:21	North Pt. of Lemesurier Island	se10_hb_01024


N
14:59:38
se10_hb_01444
Francis Anchorage
Storm Island
Cape Fanshaw
Pt. Highland
Bay Pt.
Farragut Bay
Grand Pt.
se10_hb_01737
14:26:10
14:35:33
se10_hb_01125
14:44:08
se10_hb_01247
15:15:23
se10_hb_01638
15:24:03
se10_hb_01027
Pt. Vandeput
Frederick Sound
SE10_HB_03
28 May 10
Photopoint
Trackline
0
5
10
Kilometers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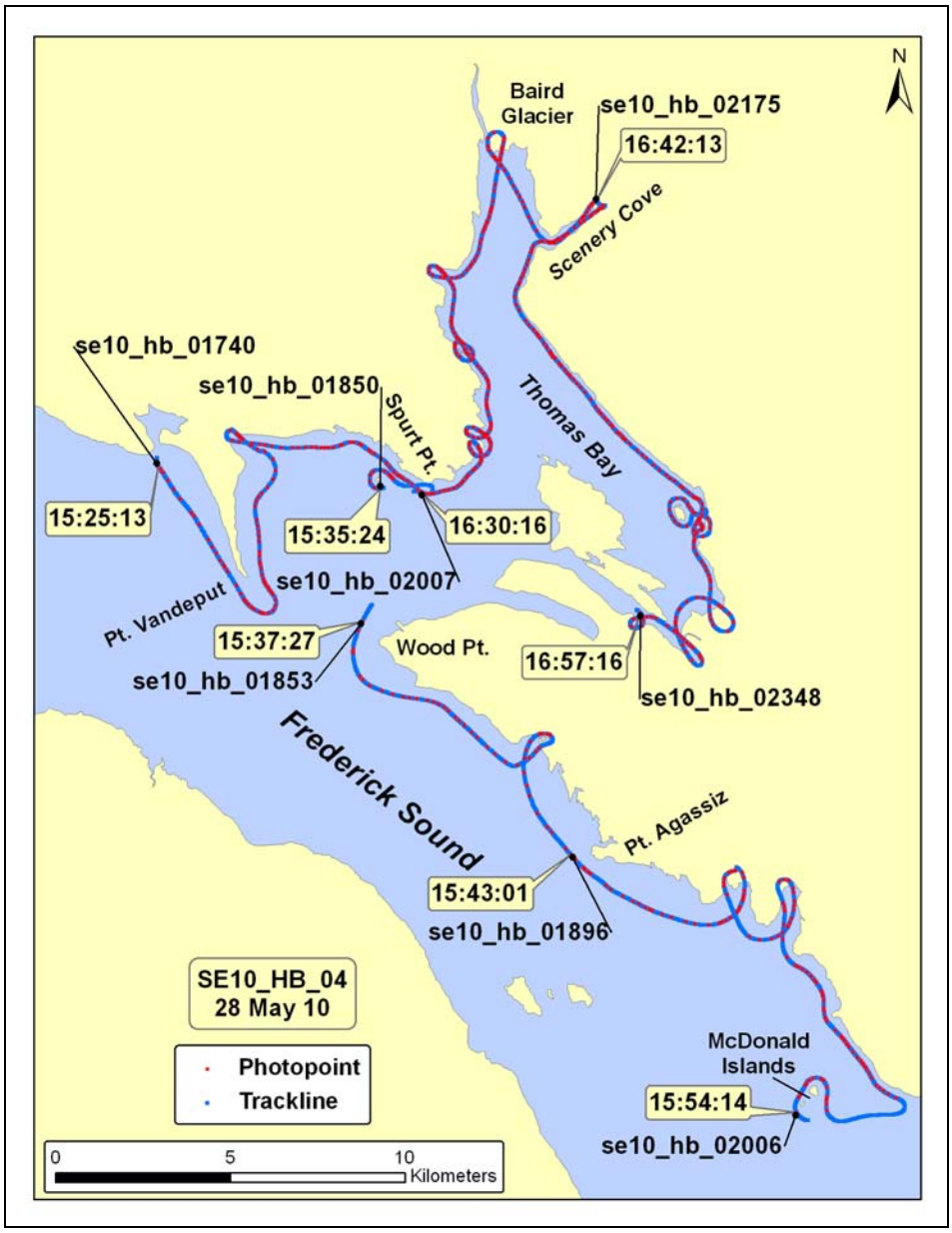
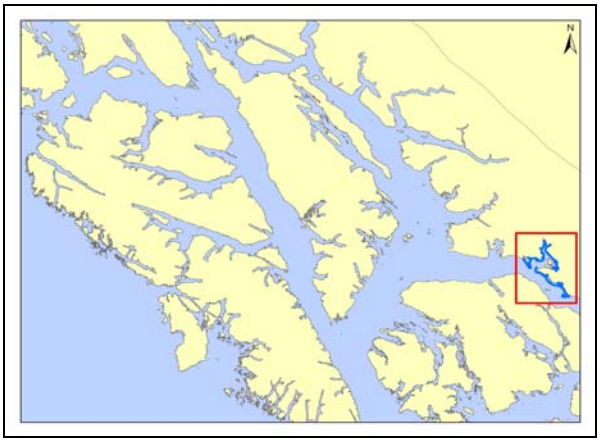
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_03 **Date: 28 May 2010**

General Location: Cape Fanshaw, Farragut Bay, Frederick Sound
Time Start (UTC): 14:26:06 **Geo:** Morrow
Fuel Break: None **Bio:** Lindeberg
Time End (UTC): 15:24:06 **Nav:** Lewis
Tape Length: 55 min 41 sec **Pilot:** Snider
Weather: Sunny, high overcast

Time (UTC)	Location	Photo
14:26:10	Storm Island reefs	se10_hb_01027
	Transit to Fanshaw Bay 14:29:40 to 14:31:57	
14:35:33	Cape Fanshaw	se10_hb_01125
14:44:08	Bay Pt., Farragut Bay	se10_hb_01247
14:59:38	Francis Anchorage, Farragut Bay	se10_hb_01444
15:15:23	Grand Pt., Farragut Bay	se10_hb_01638
15:24:03	Lagoon north of Pt. Vandeput	se10_hb_01737


N
Baird Glacier
se10_hb_02175
16:42:13
Scenery Cove
se10_hb_01740
se10_hb_01850
Spurt Pt.
Thomas Bay
15:25:13
15:35:24
16:30:16
se10_hb_02007
Pt. Vandeput
15:37:27
Wood Pt.
16:57:16
se10_hb_01853
se10_hb_02348
Frederick Sound
Pt. Agassiz
15:43:01
se10_hb_01896
SE10_HB_04
28 May 10
Photopoint
Trackline
McDonald Islands
15:54:14
se10_hb_02006
0
5
10
Kilometers

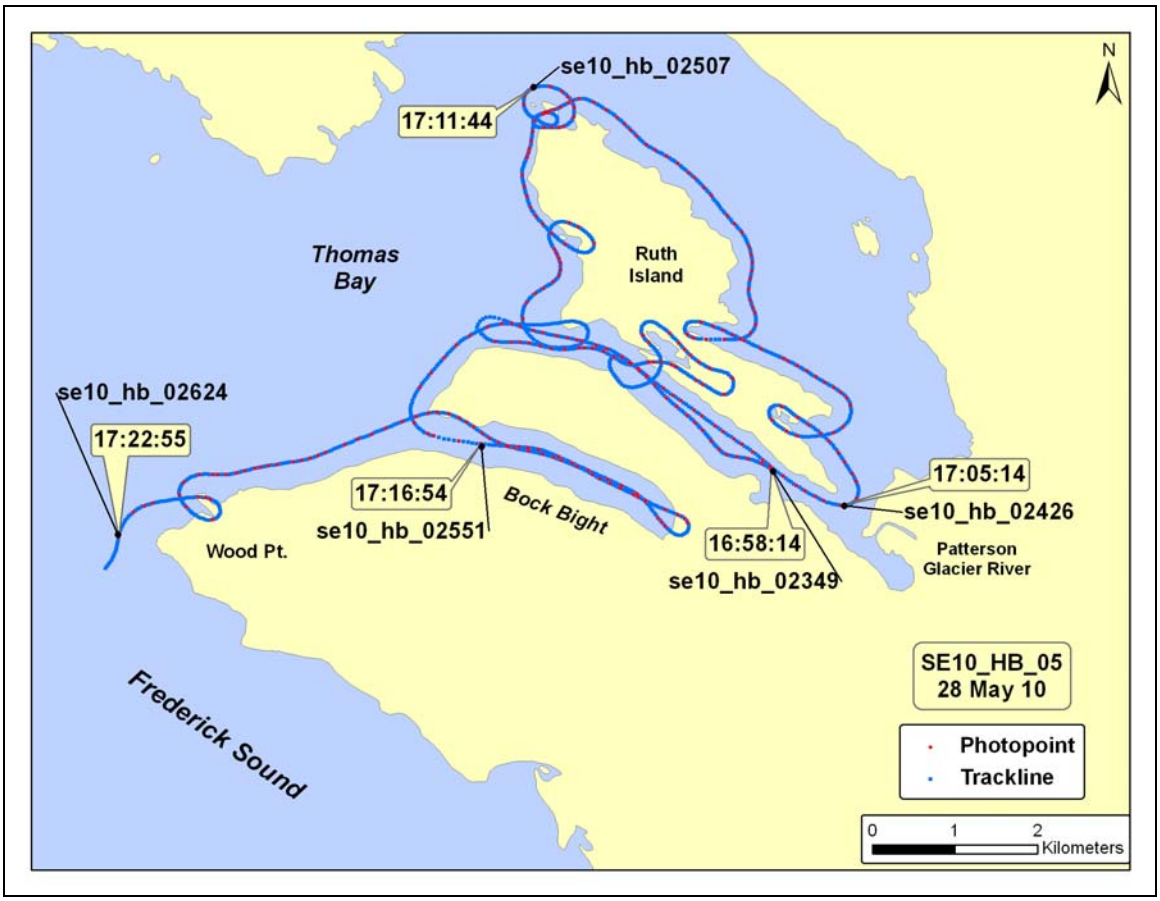


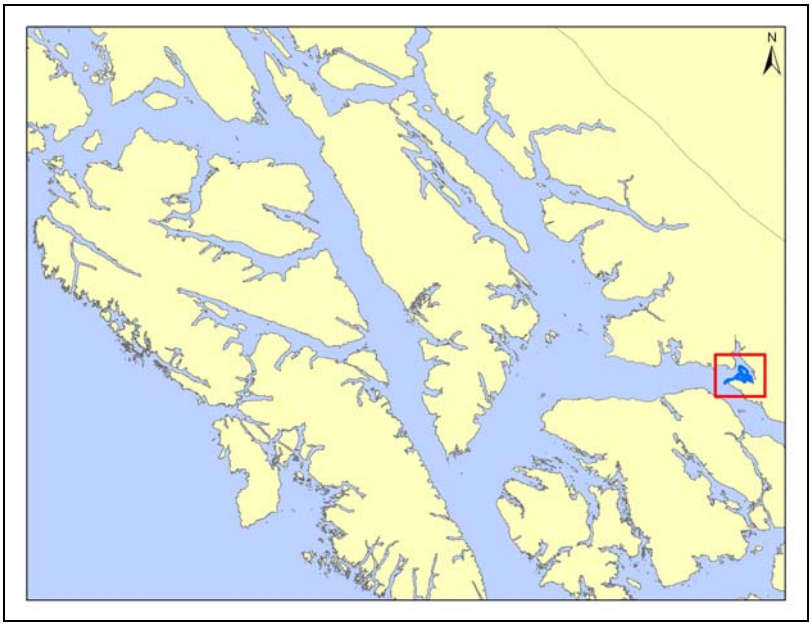
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_04 **Date: 28 May 2010**

General Location: Thomas Bay, Frederick Sound
Time Start (UTC): 15:25:00 **Geo:** Morrow
Fuel Break: ` 15:54:31 to 16:30:09 **Bio:** Lindeberg
Time End (UTC): 16:57:20 **Nav:** Lewis
Tape Length: 54 min 54 sec **Pilot:** Snider
Weather: Sunny, high overcast

Time (UTC)	Location	Photo
15:25:13	North of Pt. Vandeput, Frederick Sound	se10_hb_01740
15:35:24	Spurt Pt., Thomas Bay	se10_hb_01850
	Transit to Wood Pt. 15:35:29 to 15:37:13	
15:37:27	Wood Pt., Frederick Sound	se10_hb_01853
15:43:01	Pt. Agassiz, Frederick Sound	se10_hb_01896
15:54:14	McDonald Islands, Frederick Sound	se10_hb_02006
	Fuel Break 15:54:31 to 16:30:09	
16:30:16	Spurt Pt., Thomas Bay	se10_hb_02007
16:42:13	Scenery Cove, Thomas Bay	se10_hb_02175
16:57:16	Thomas Bay near Patterson Glacier River terminal	se10_hb_02348


N
se10_hb_02507
17:11:44
Thomas Bay
Ruth Island
se10_hb_02624
17:22:55
17:16:54
se10_hb_02551
Bock Bight
Wood Pt.
17:05:14
se10_hb_02426
16:58:14
se10_hb_02349
Patterson Glacier River
Frederick Sound
SE10_HB_05
28 May 10
Photopoint
Trackline
0
1
2
Kilometers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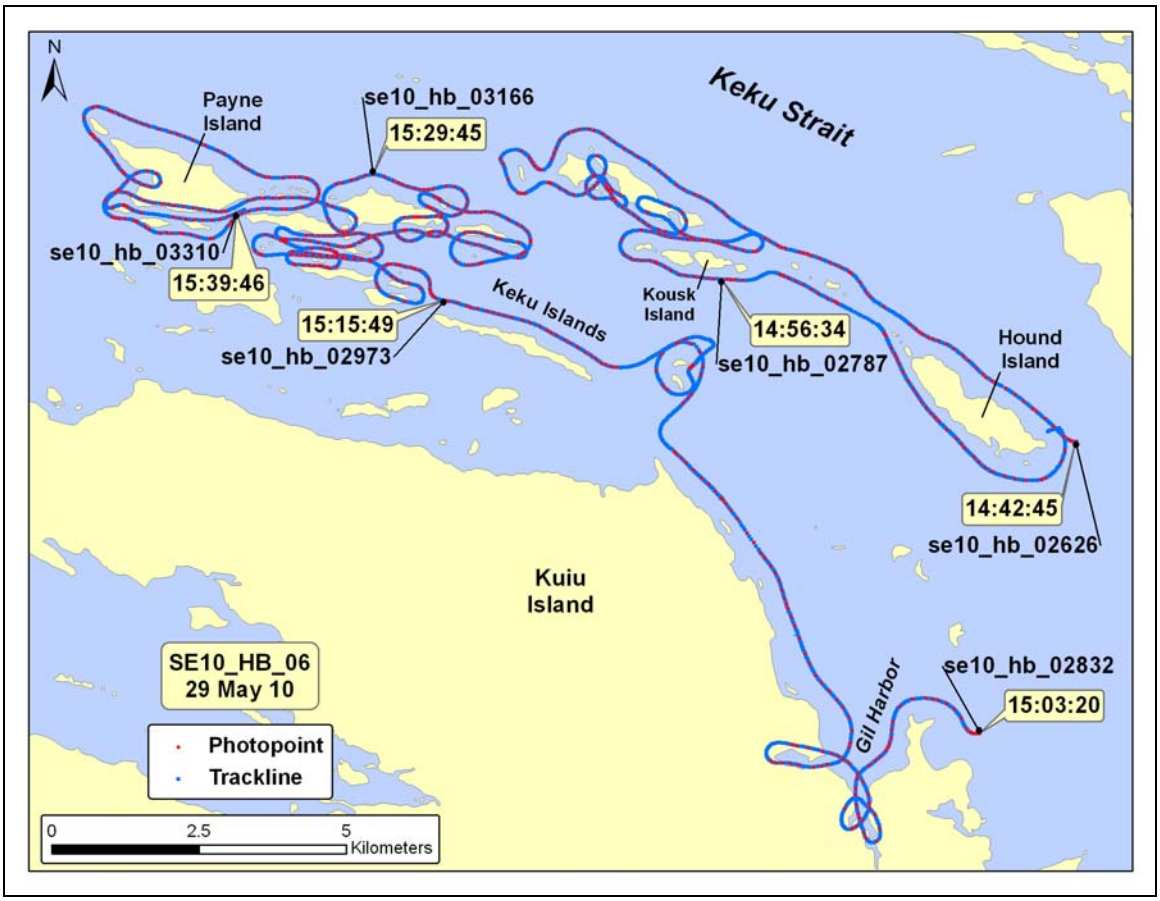
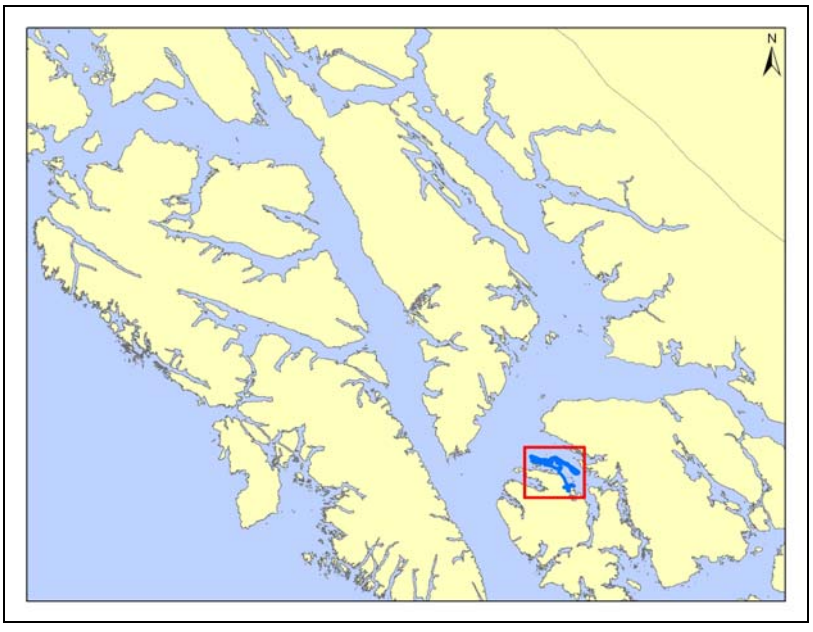
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_05 **Date: 28 May 2010**

General Location: Ruth Island, Bock Bight, Thomas Bay
Time Start (UTC): 16:58:12 **Geo:** Morrow
Fuel Break: None **Bio:** Lindeberg
Time End (UTC): 17:23:08 **Nav:** Lewis
Tape Length: 24 min 56 sec **Pilot:** Snider
Weather: Sunny, high overcast

Time (UTC)	Location	Photo
16:58:14	Thomas Bay near Patterson Glacier River terminal	se10_hb_02349
17:05:14	South Ruth Island, Thomas Bay	se10_hb_02426
17:11:44	North Ruth Island, Thomas Bay	se10_hb_02507
17:16:54	Bock Bight	se10_hb_02551
17:22:55	Wood Pt., Frederick Sound	se10_hb_02624


N
Payne Island
se10_hb_03166
15:29:45
Keku Strait
se10_hb_03310
15:39:46
15:15:49
se10_hb_02973
Keku Islands
Kousk Island
14:56:34
se10_hb_02787
Hound Island
14:42:45
se10_hb_02626
Kuiu Island
SE10_HB_06
29 May 10
Photopoint
Trackline
0
2.5
5
Kilometers
Gil Harbor
se10_hb_02832
15:03:20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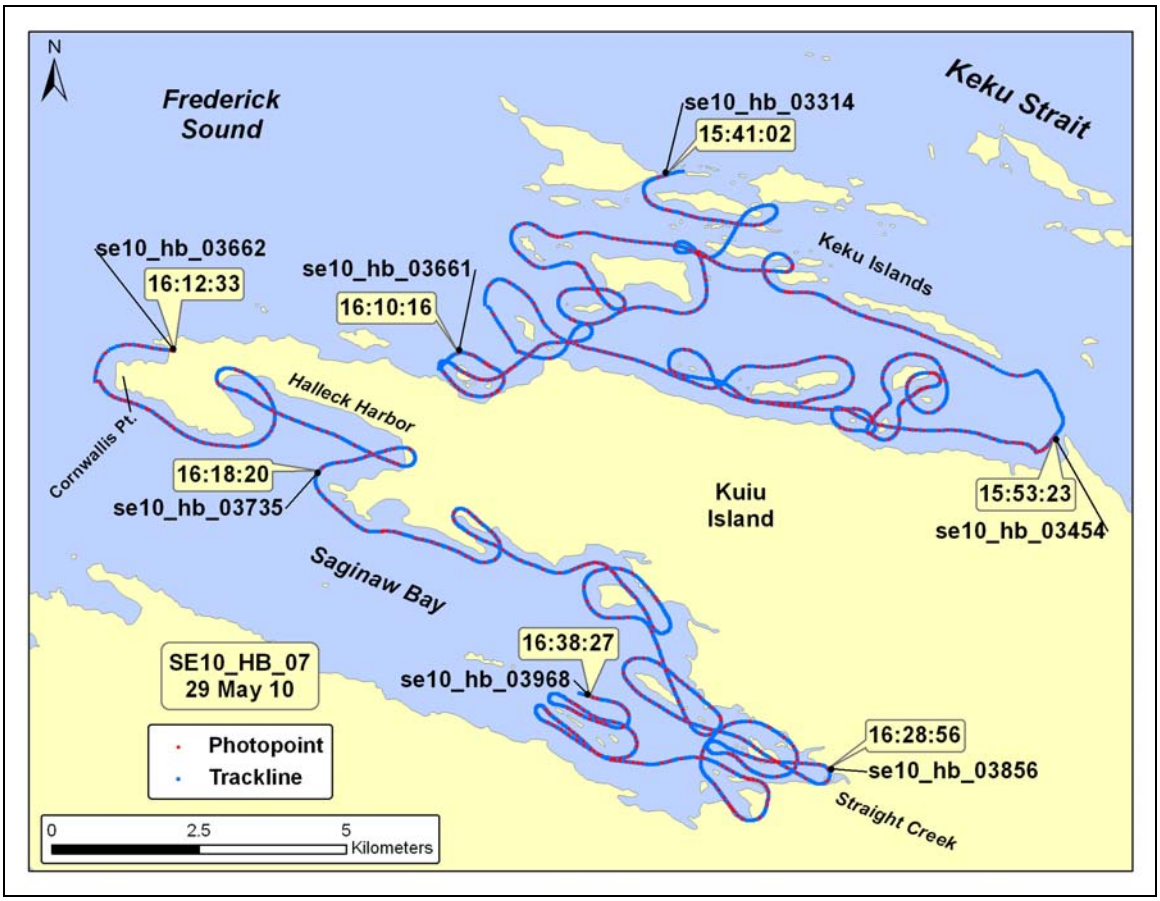
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

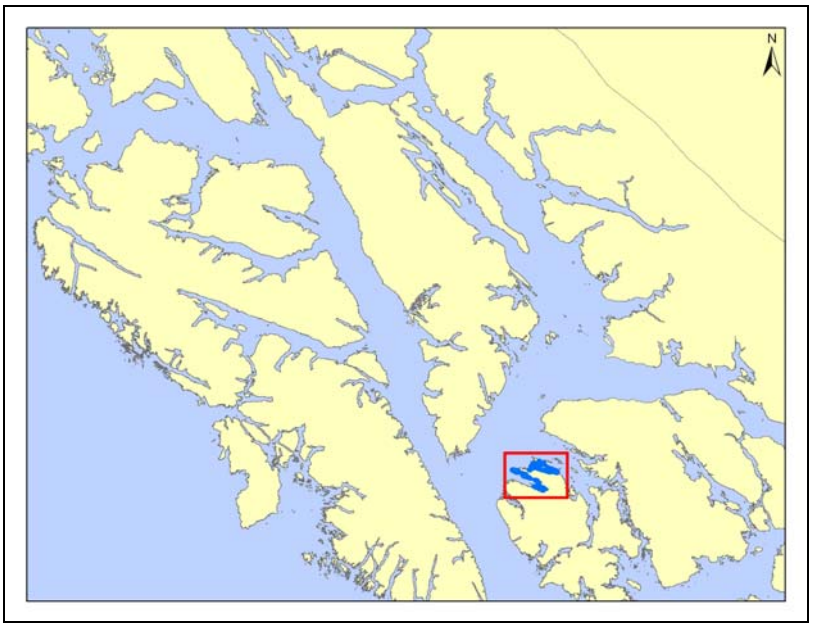
Tape: SE10_HB_06 **Date: 29 May 2010**

General Location: Keku Islands, Keku Strait
Time Start (UTC): 14:42:44
Fuel Break: None
Time End (UTC): 15:39:50
Tape Length: 54 min 30 sec
Weather: Sunny, scattered low lying fog

Geo: Morrow
Bio: Lindeberg
Nav: Lewis
Pilot: Snider

Time (UTC)	Location	Photo
14:42:45	Hound Island, Keku Strait	se10_hb_02626
14:56:34	Kousk Island, Keku Strait	se10_hb_02787
	Transit to Gil Harbor 15:00:45 to 15:03:19	
15:03:20	Gil Harbor, North Kuiu Island	se10_hb_02832
15:15:49	Keku Islands, Keku Strait	se10_hb_02973
15:29:45	Keku Islands, Keku Strait	se10_hb_03166
15:39:46	Payne Island, Keku Strait	se10_hb_03310


N
Frederick Sound
Keku Strait
se10_hb_03314
15:41:02
Keku Islands
se10_hb_03662
16:12:33
se10_hb_03661
16:10:16
Halleck Harbor
Cornwallis Pt.
16:18:20
se10_hb_03735
Kuiu Island
15:53:23
se10_hb_03454
Saginaw Bay
16:38:27
se10_hb_03968
SE10_HB_07
29 May 10
Photopoint
Trackline
16:28:56
se10_hb_03856
Straight Creek
0
2.5
5
Kilometers

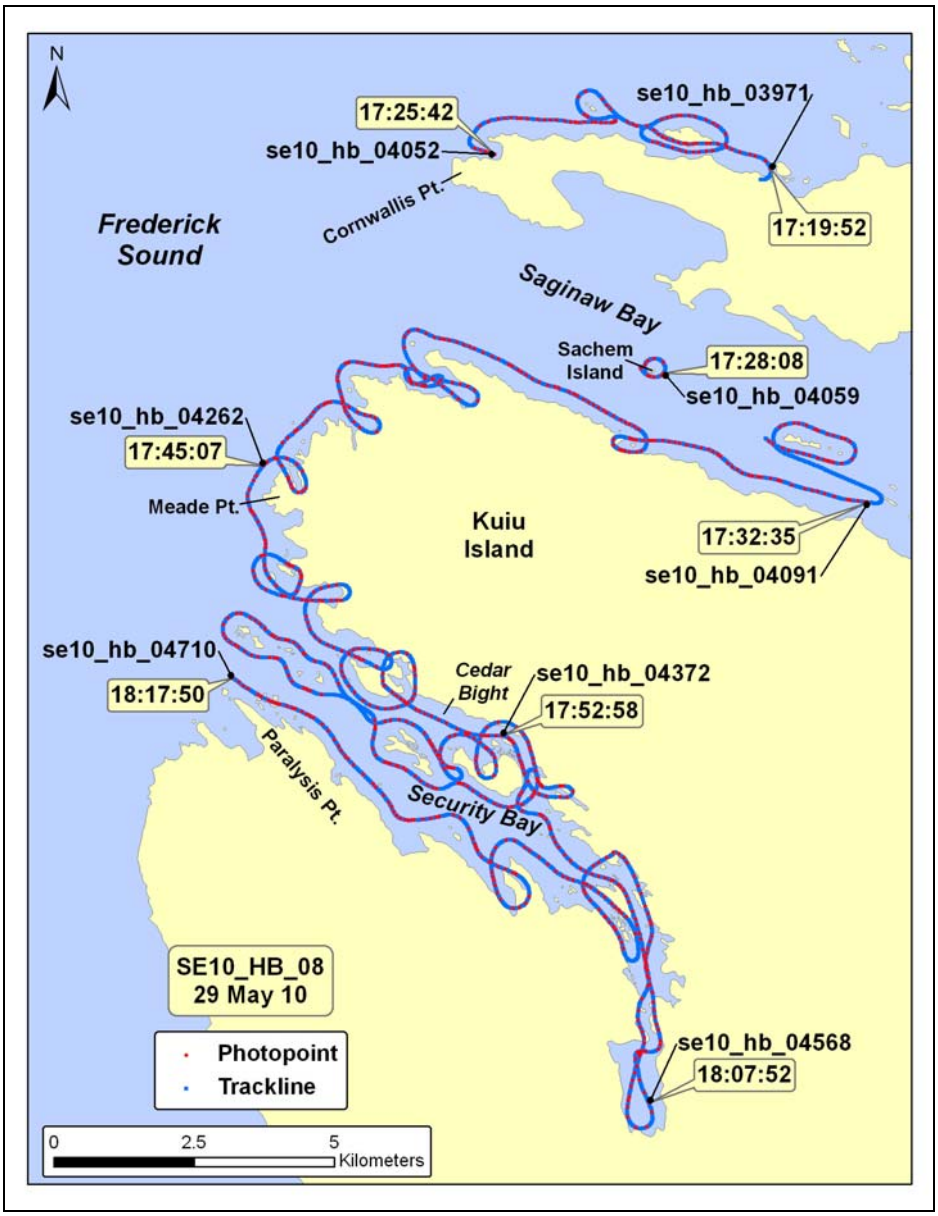

N

2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_07 **Date: 29 May 2010**

General Location: Keku Islands, Saginaw Bay, North Kuiu Island
Time Start (UTC): 15:40:52 **Geo:** Morrow
Fuel Break: None **Bio:** Lindeberg
Time End (UTC): 16:38:32 **Nav:** Lewis
Tape Length: 55 min 37 sec **Pilot:** Snider
Weather: Sunny, scattered low lying fog

Time (UTC)	Location	Photo
15:41:02	Keku Islands, Keku Strait	se10_hb_03314
15:53:23	North Kuiu Island, Keku Strait	se10_hb_03454
16:10:16	North Kuiu Island, Keku Strait	se10_hb_03661
	Fog Break 16:10:31 to 16:12:32	
16:12:33	Cornwallis Pt., North Kuiu Island	se10_hb_03662
16:18:20	Halleck Harbor, Saginaw Bay	se10_hb_03735
16:28:56	Straight Creek, head of Saginaw Bay	se10_hb_03856
16:38:27	Islets at head of Saginaw Bay	se10_hb_03968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17:25:42
se10_hb_03971
se10_hb_04052
Cornwallis Pt.
Frederick Sound
17:19:52
Saginaw Bay
Sachem Island
17:28:08
se10_hb_04059
se10_hb_04262
17:45:07
Meade Pt.
Kuiu Island
17:32:35
se10_hb_04091
se10_hb_04710
18:17:50
Cedar Bight
se10_hb_04372
17:52:58
Paralysis Pt.
Security Bay
SE10_HB_08
29 May 10
Photopoint
Trackline
se10_hb_04568
18:07:52
0
2.5
5
Kilometers

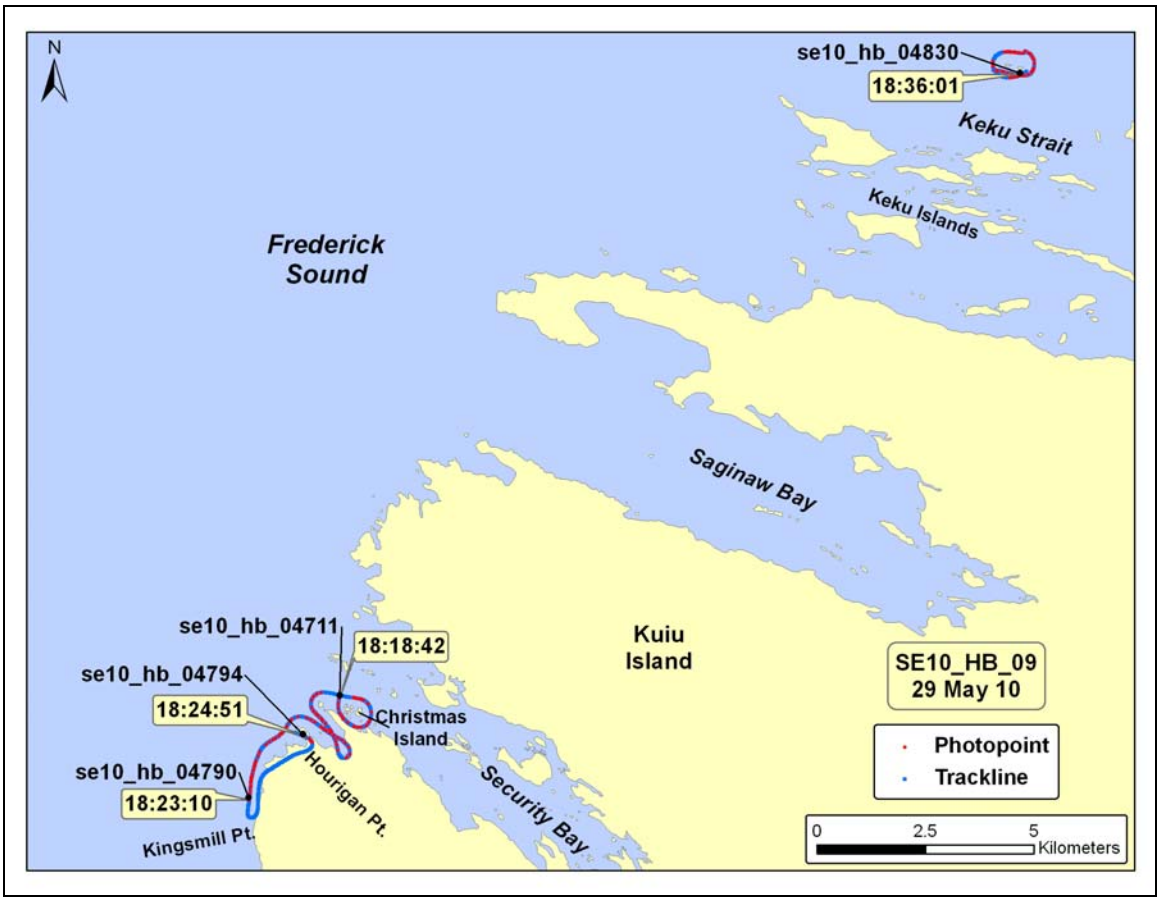
N

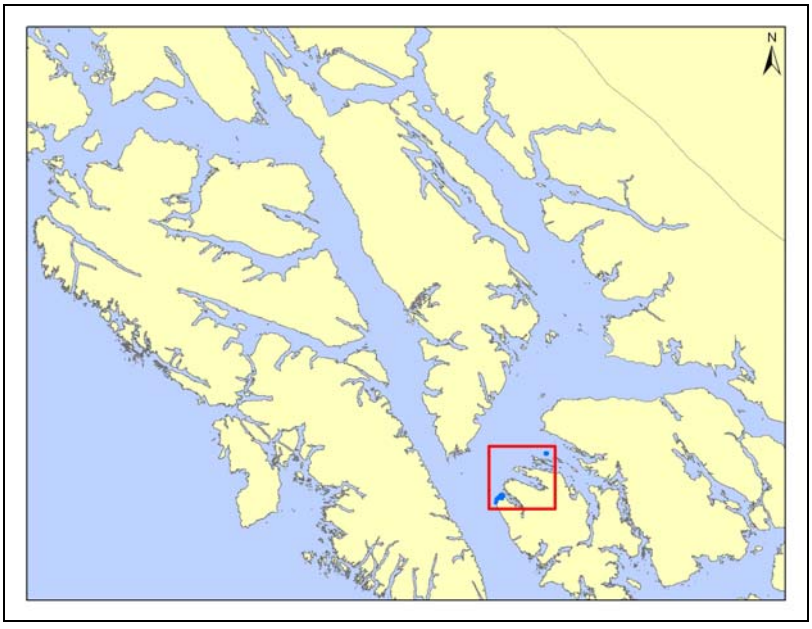
2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

Tape: SE10_HB_08 **Date: 29 May 2010**

General Location: Saginaw Bay, Security Bay, North Kuiu Island
Time Start (UTC): 17:19:42 **Geo:** Morrow
Fuel Break: None **Bio:** Lindeberg
Time End (UTC): 18:17:50 **Nav:** Lewis
Tape Length: 54 min 58 sec **Pilot:** Snider
Weather: Sunny, scattered low lying fog

Time (UTC)	Location	Photo
17:19:52	North Kuiu Island, Keku Strait	se10_hb_03971
17:25:42	Cornwallis Pt., North Kuiu Island	se10_hb_04052
	Transit to Sachem Island 17:25:43 to 17:27:49	
17:28:08	Sachem Island, Saginaw Bay	se10_hb_04059
	Transit to Saginaw Bay Islets 17:28:35 to 17:29:35	
17:32:35	Islets at the head of Saginaw Bay	se10_hb_04091
17:45:07	Meade Pt., Frederick Sound	se10_hb_04262
17:52:58	Cedar Bight, Security Bay	se10_hb_04372
18:07:52	Head of Security Bay	se10_hb_04568
18:17:50	Paralysis Pt., Frederick Sound	se10_hb_04710


N
se10_hb_04830
18:36:01
Keku Strait
Keku Islands
Frederick Sound
Saginaw Bay
Kuiu Island
se10_hb_04711
18:18:42
se10_hb_04794
18:24:51
Christmas Island
se10_hb_04790
18:23:10
Hourigan Pt.
Security Bay
Kingsmill Pt.
SE10_HB_09
29 May 10
Photopoint
Trackline
0
2.5
5
Kilometers


N

2010 Southeast Alaska Aerial Video Imaging Survey
Team Humpback (HB)

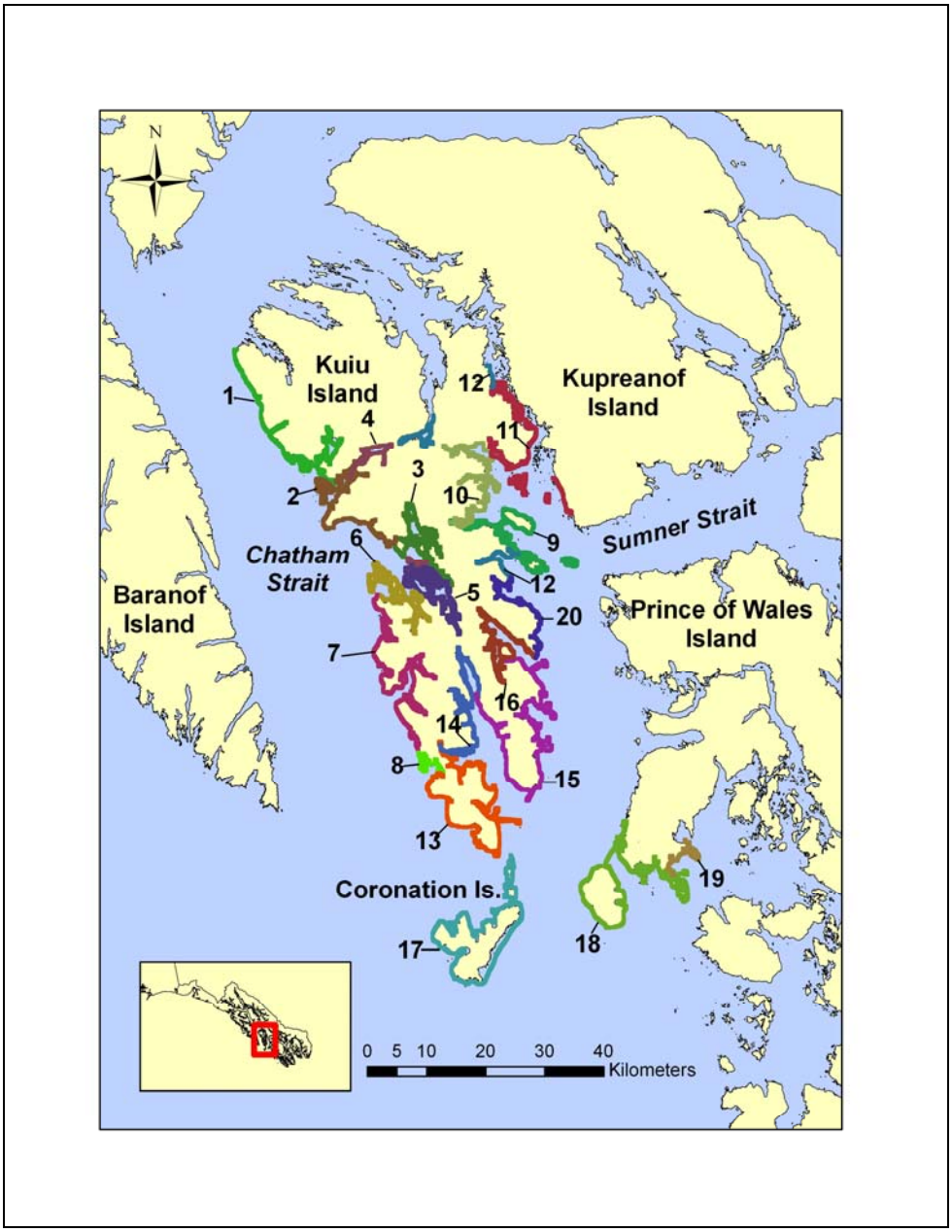
Tape: SE10_HB_09 **Date: 29 May 2010**

General Location: North Kuiu Island, Frederick Sound, Keku Strait
Time Start (UTC): 18:18:40 **Geo:** Morrow
Fuel Break: None **Bio:** Lindeberg
Time End (UTC): 18:36:04 **Nav:** Lewis
Tape Length: 7 min 54 sec **Pilot:** Snider
Weather: Sunny, scattered low lying fog

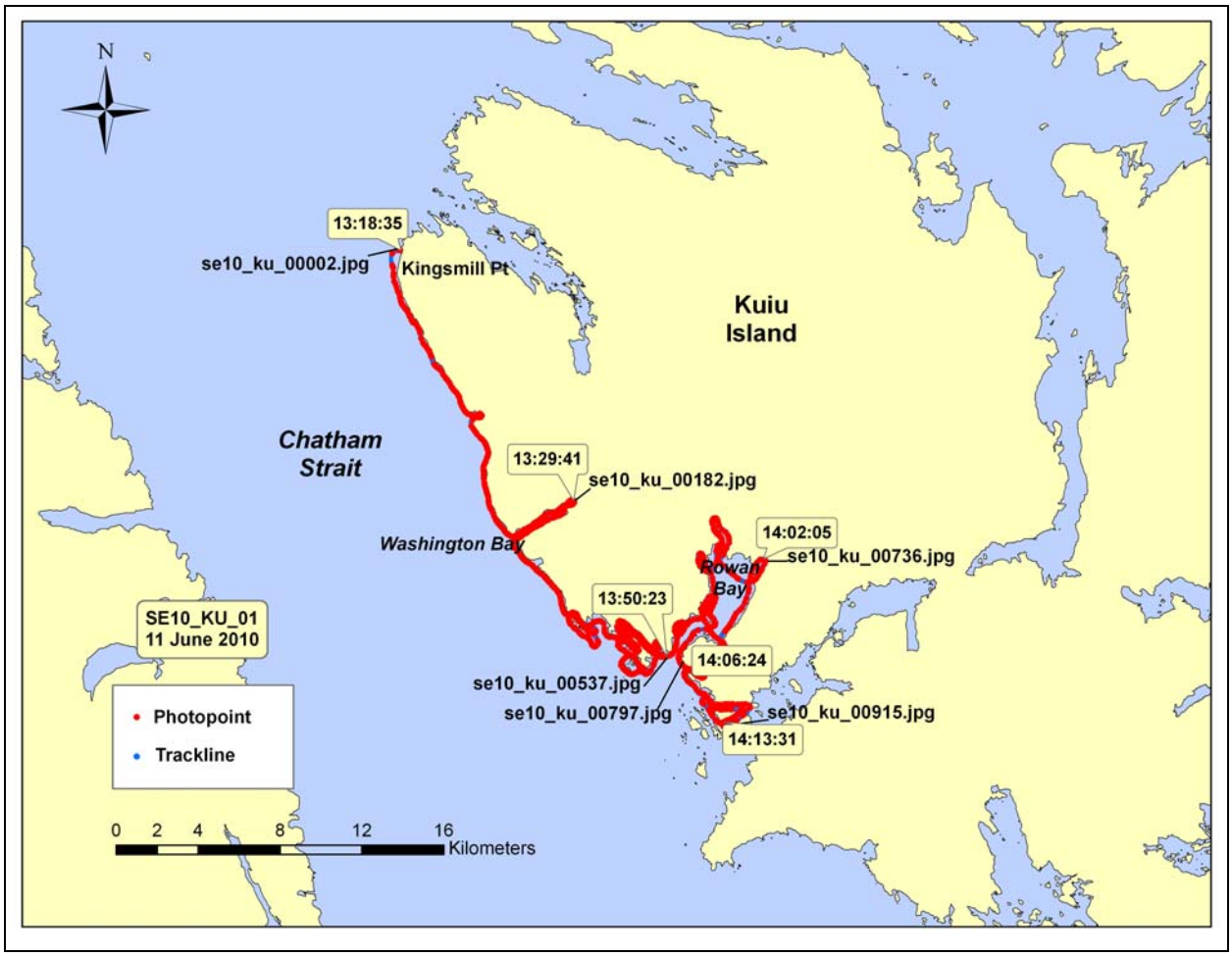
Time (UTC)	Location	Photo
18:18:42	Christmas Island, Security Bay	se10_hb_04711
18:23:10	Kingsmill Pt., Chatham Strait	se10_hb_04790
18:24:51	Hourigan Pt., North Kuiu Island	se10_hb_04794
	Transit to Keku Islands 18:24:59 to 18:34:27	
18:36:01	Keku Islands, Keku Strait	se10_hb_04830

ShoreZone Aerial Video Imaging (AVI) Survey
Southeast Alaska
June 11-16, 2010

Team Kuiu (KU)
Survey Maps and Tape Logs
DVDs: SE10_KU_01 to SE10_KU_20



Flight trackline map showing the location and extent of specific videotapes (DVDs) for the June 11-16, 2010 **Team Kuiu** survey in Southeast Alaska


N
13:18:35
se10_ku_00002.jpg
Kingsmill Pt
Kuiu
Island
Chatham
Strait
13:29:41
se10_ku_00182.jpg
Washington Bay
14:02:05
se10_ku_00736.jpg
Rowan
Bay
13:50:23
SE10_KU_01
11 June 2010
14:06:24
se10_ku_00537.jpg
se10_ku_00797.jpg
se10_ku_00915.jpg
14:13:31
Photopoint
Trackline
0 2 4 8 12 16
Kilometers

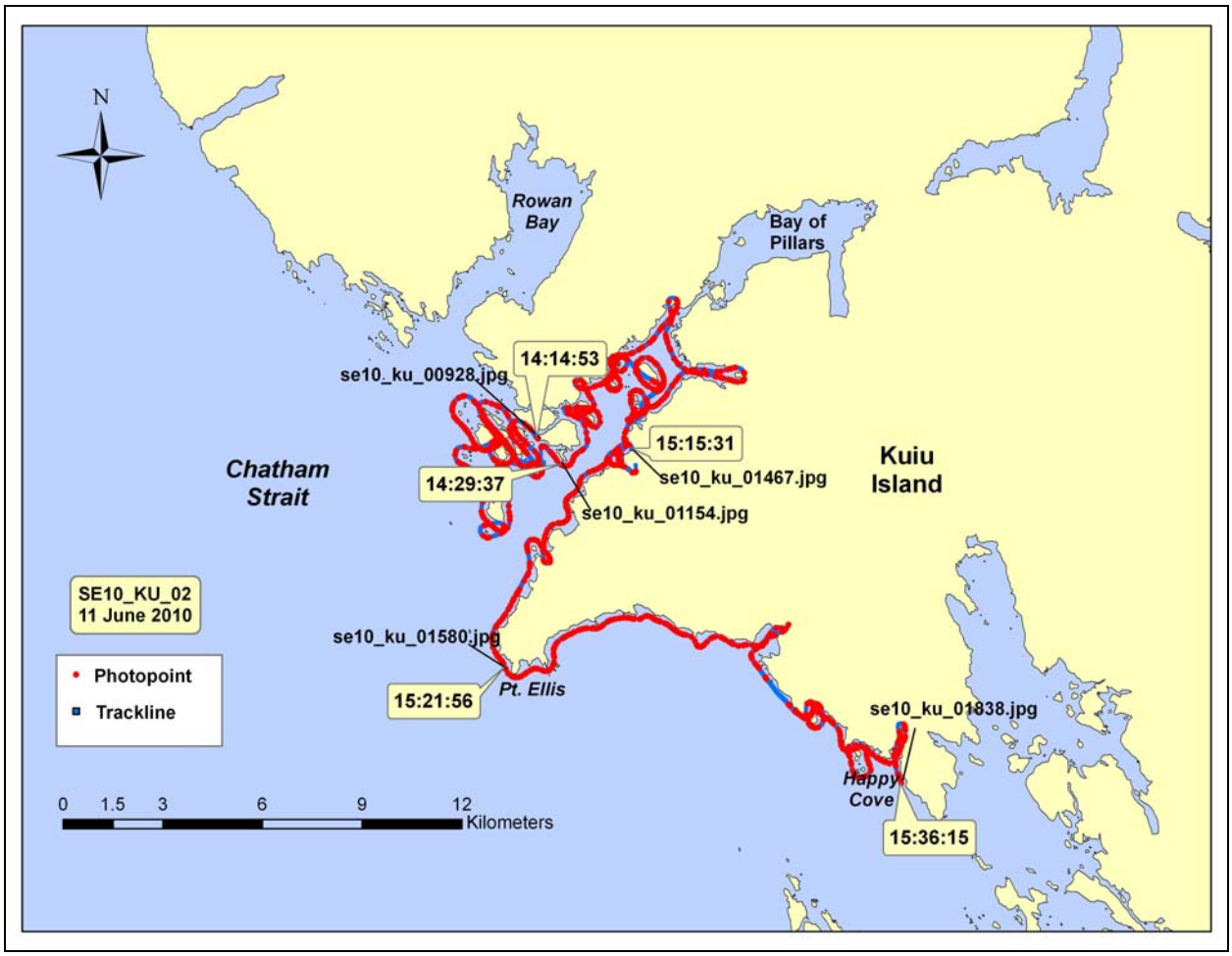
N

2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_01 **Date: 11 June 2010**

General Location: NW Kuiu Island
Time Start (UTC): 13:18:35 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 14:13:31 **Nav:** Daley
Tape Length: 54 min 56 sec **Pilot:** Snider
Weather: Overcast, windy

Time (UTC)	Location	Photo
13:18:35	Kingsmill Pt, NE Kuiu Islands	se10_ku_00002.jpg
13:29:41	Head of Washington Bay	se10_ku_00182.jpg
13:50:23	N Entrance, Rowan Bay	se10_ku_00537.jpg
14:02:05	Head of Rowan Bay	se10_ku_00736.jpg
14:06:24	S Entrance, Rowan Bay	se10_ku_00797.jpg
14:13:31	Islands at entrance to Bay of Pillars	se10_ku_00915.jpg


N
Rowan Bay
Bay of Pillars
14:14:53
se10_ku_00928.jpg
15:15:31
se10_ku_01467.jpg
14:29:37
se10_ku_01154.jpg
Chatham Strait
Kuiu Island
SE10_KU_02
11 June 2010
Photopoint
Trackline
se10_ku_01580.jpg
15:21:56
Pt. Ellis
se10_ku_01838.jpg
Happy Cove
15:36:15
0 1.5 3 6 9 12
Kilometers

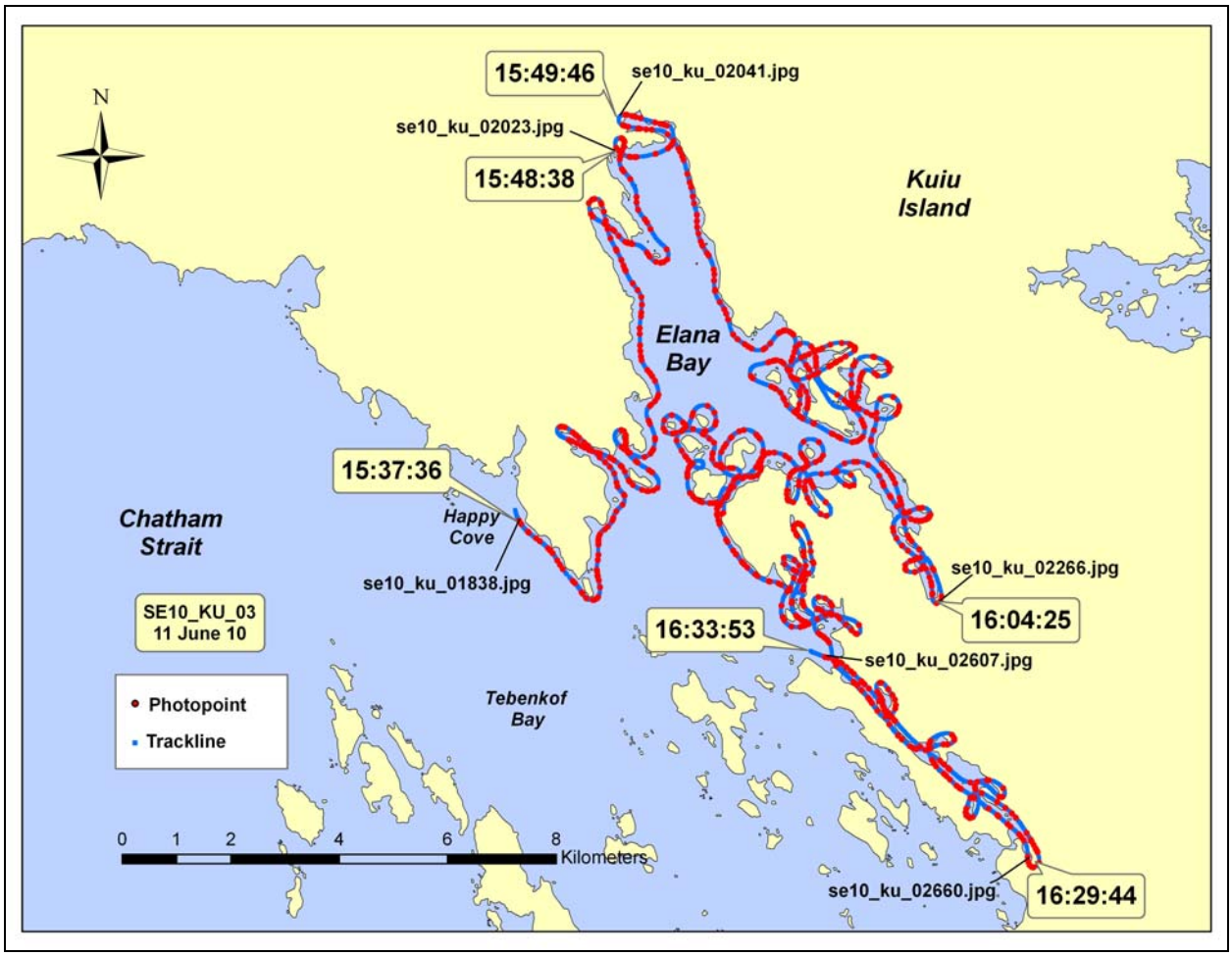
N

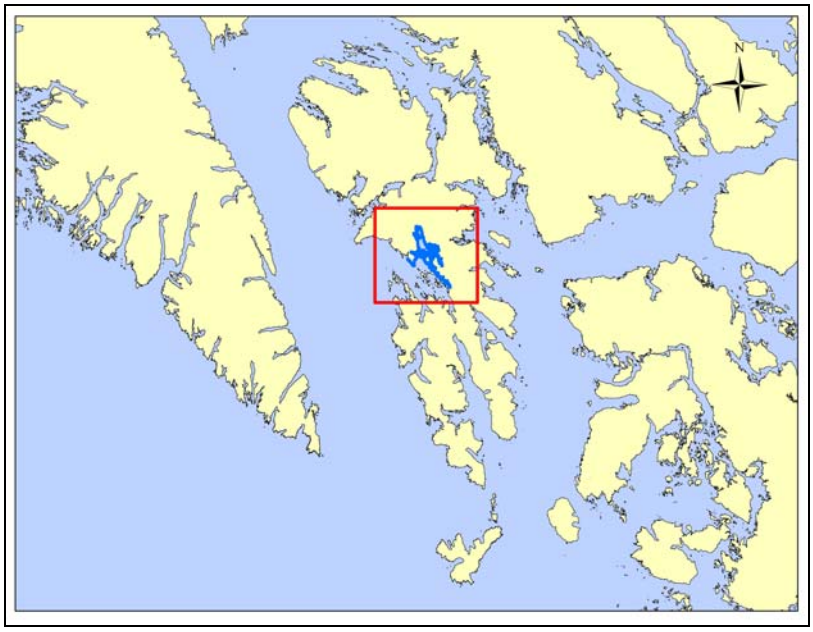
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_02 **Date: 11 June 2010**

General Location: NW Kuiu Island
Time Start (UTC): 14:14:53 **Geo:** Harper/Daley
Fuel Break: 14:46:03 – 15:12:05 **Bio:** Morris
Time End (UTC): 15:36:15 **Nav:** Daley/Harper
Tape Length: 56min 20 sec **Pilot:** Snider
Weather: Overcast, windy

Time (UTC)	Location	Photo
14:14:53	Islands at entrance to Bay of Pillars	se10_ku_00928.jpg
14:29:37	N entrance to Bay of Pillars	se10_ku_01154.jpg
14:46:03	Island in Bay of Pillars	se10_ku_01421.jpg
	Fuel break 14:46:03 to 15:12:05)	
15:10:05	Restart on S shore of Bay of Pillars near cannery	se10_ku_01422.jpg
	Fugawi crash need to rebuild 15:10:05 to 15:15:31	
15:15:31	Old cannery site, S shore, Bay of Pillars	se10_ku_01467.jpg
15:21:56	Pt Ellis	se10_ku_01580.jpg
15:36:15	Happy Cove	se10_ku_01838.jpg


15:49:46
se10_ku_02041.jpg
se10_ku_02023.jpg
15:48:38
Kuiu
Island
Elana
Bay
15:37:36
Happy
Cove
Chatham
Strait
se10_ku_01838.jpg
se10_ku_02266.jpg
16:04:25
SE10_KU_03
11 June 10
16:33:53
se10_ku_02607.jpg
Photopoint
Trackline
Tebenkof
Bay
0 1 2 4 6 8
Kilometers
se10_ku_02660.jpg
16:29:44

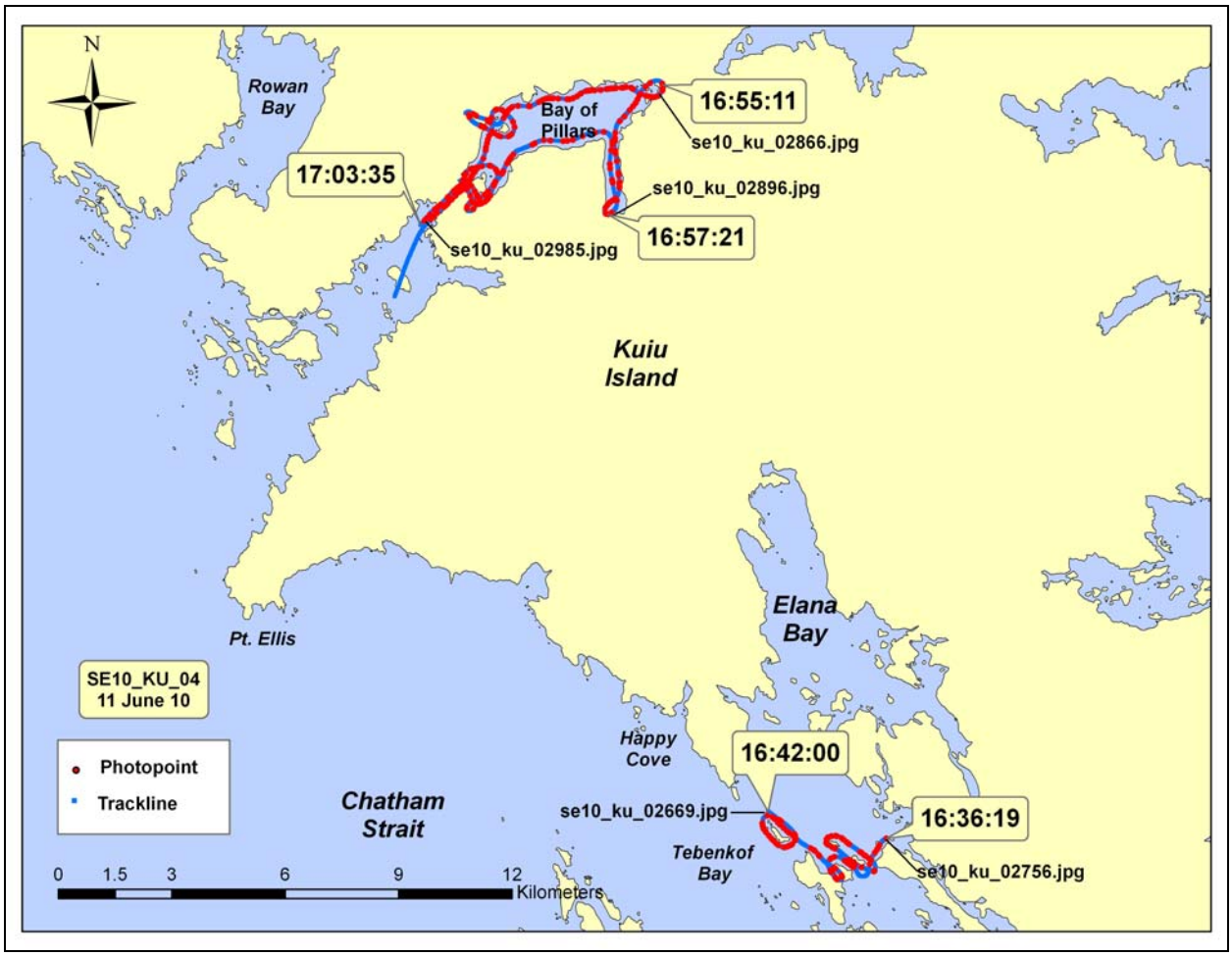


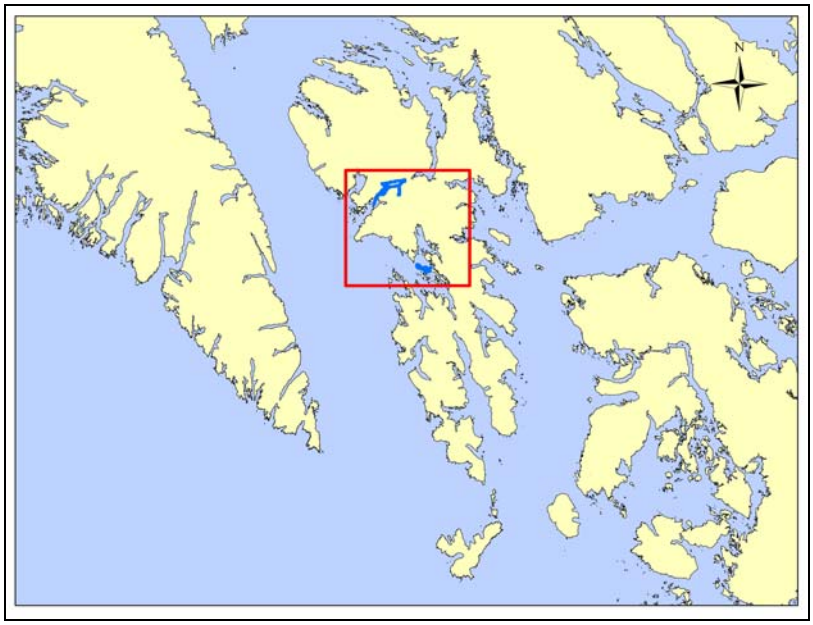
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_03 **Date: 11 June 2010**

General Location: W Kuiu Island
Time Start (UTC): 15:37:36 **Geo:** Daley
Fuel Break: none **Bio:** Morris
Time End (UTC): 16:33:53 **Nav:** Harper
Tape Length: 56min 17 sec **Pilot:** Snider
Weather: Overcast, windy

Time (UTC)	Location	Photo
15:37:36	Happy Cove	se10_ku_01838.jpg
15:48:38	Gap Pt, Tebenkof Bay	se10_ku_02023.jpg
15:49:46	Head of Elena Bay	se10_ku_02041.jpg
16:04:25	S tip of Shelter Cove	se10_ku_02266.jpg
16:29:44	S end of narrow strait near East Island	se10_ku_02607.jpg
16:33:53	N end Strait Is, east of Step Is	se10_ku_02660.jpg


N
Rowan Bay
Bay of Pillars
16:55:11
se10_ku_02866.jpg
17:03:35
se10_ku_02896.jpg
16:57:21
se10_ku_02985.jpg
Kuiu Island
Elana Bay
Pt. Ellis
SE10_KU_04
11 June 10
Photopoint
Trackline
Happy Cove
16:42:00
Chatham Strait
se10_ku_02669.jpg
16:36:19
Tebenkof Bay
se10_ku_02756.jpg
0 1.5 3 6 9 12
Kilometers

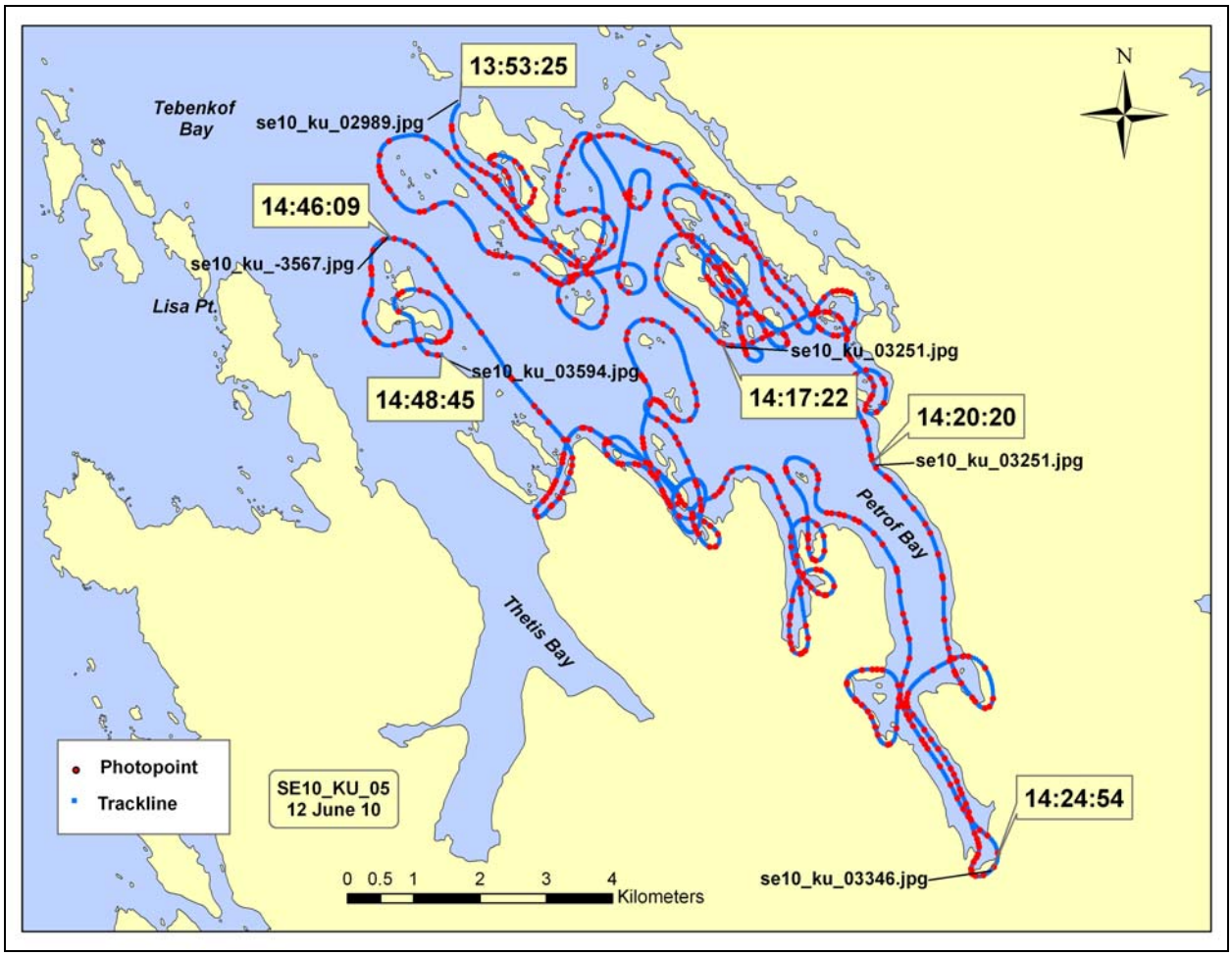

N

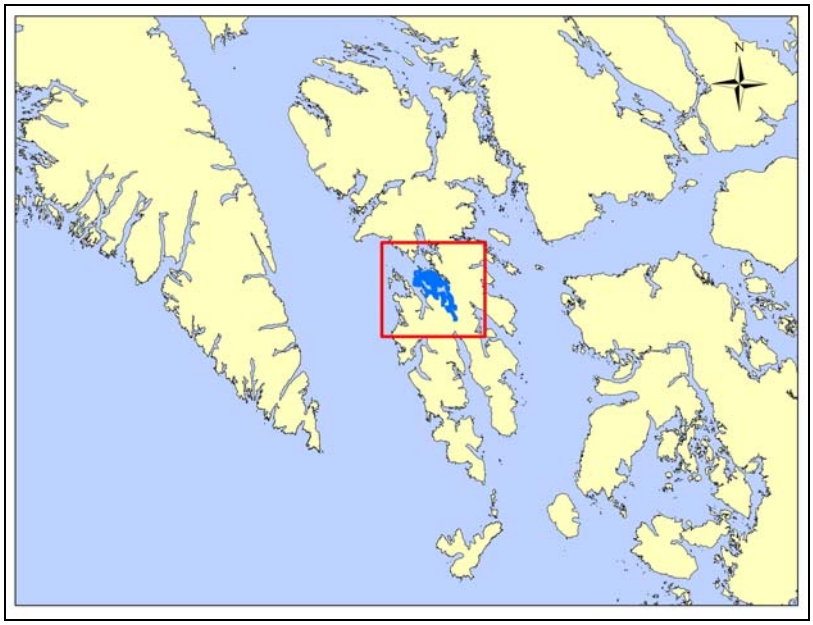
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_04 **Date: 11 June 2010**

General Location: W Kuiu Island, Tebenkof Bay, Bay of Pillars
Time Start (UTC): 16:36:19 **Geo:** Harper
Fuel Break: none **Bio:** Morris
Time End (UTC): 17:03:35 **Nav:** Daley
Tape Length: 19 min 54 sec **Pilot:** Snider
Weather: Overcast, windy

Time (UTC)	Location	Photo
16:36:19	Islands to E of Step Is, Tebenkof Bay	se10_ku_02669.jpg
16:42:00	Islands to N of Step Is, Tebenkof Bay	se10_ku_02756.jpg
	Transit 16:42:00 to 16:49:23	
16:49:23	Entrance channel to Honeymoon Basin	se10_ku_02771.jpg
16:55:11	Head of Honeymoon Basin	se10_ku_02866.jpg
16:57:21	Head of S arm in Honeymoon Basin	se10_ku_02896.jpg
17:03:35	Entrance to Honeymoon Basin	se10_ku_02985.jpg


13:53:25
Tebenkof Bay
se10_ku_02989.jpg
14:46:09
se10_ku_-3567.jpg
Lisa Pt.
se10_ku_03594.jpg
14:48:45
14:17:22
se10_ku_03251.jpg
14:20:20
se10_ku_03251.jpg
Petrof Bay
Thetis Bay
14:24:54
se10_ku_03346.jpg
N
Photopoint
Trackline
SE10_KU_05
12 June 10
0 0.5 1 2 3 4
Kilometers


N

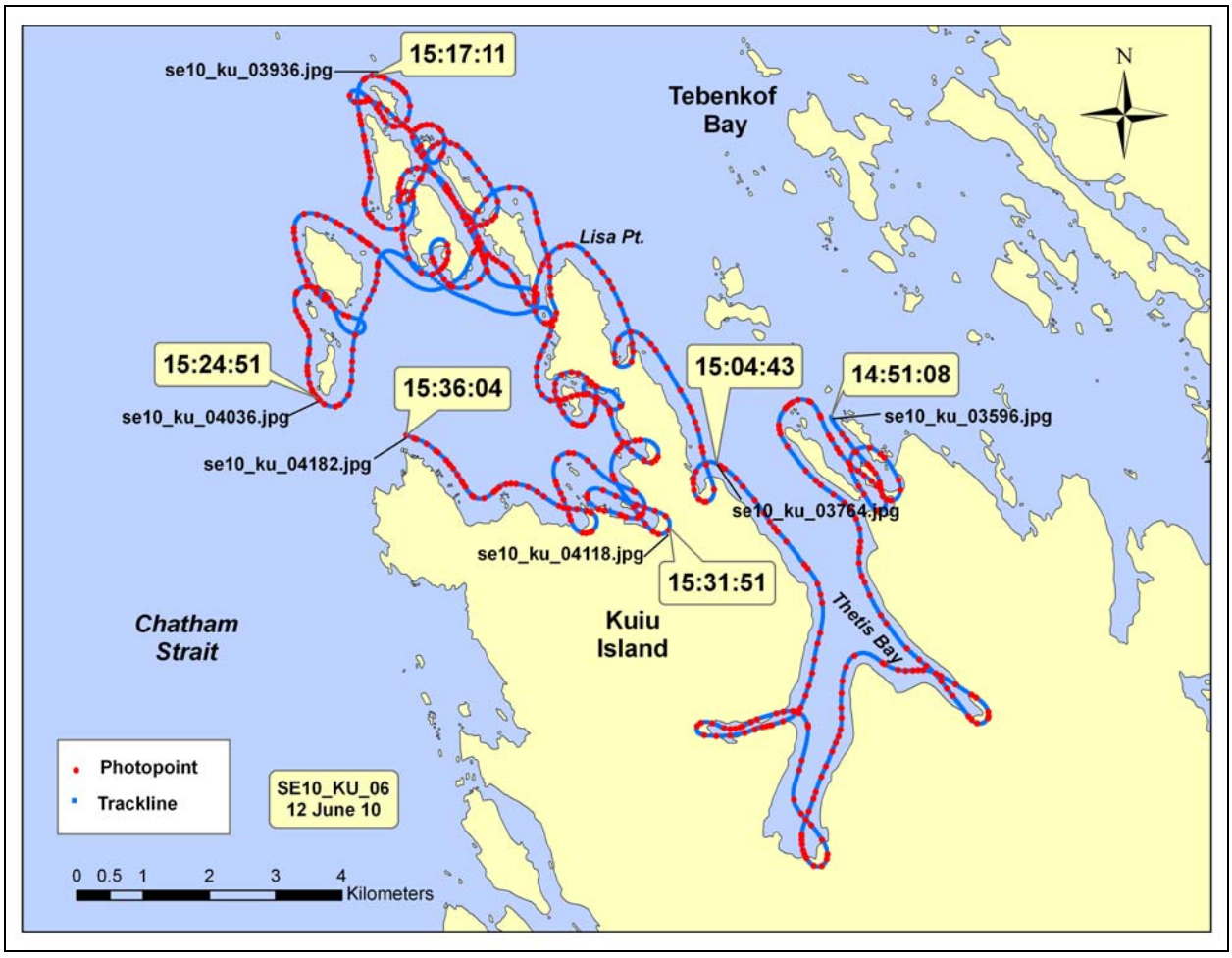
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_05 **Date: 12 June 2010**

General Location: W Kuiu Island
Time Start (UTC): 13:53:26 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 14:48:45 **Nav:** Harper
Tape Length: 55min 19 sec **Pilot:** Snider
Weather: Overcast, rainy, very windy

Time (UTC)	Location	Photo
13:53:25	N tip of Step Is in Tebenkof Bay	se10_ku_02989.jpg
14:17:22	S tip of East Is in Tebenkof Bay	se10_ku_03251.jpg
14:20:20	Mouth of Petrof Bay	se10_ku_03286.jpg
14:24:54	S end of Petrof Bay	se10_ku_03346.jpg
14:46:09	Lisa Pt in Tebenkof Bay	se10_ku_03567.jpg
14:48:45	Orel Anchorage	se10_ku_03594.jpg

Note: There was a problem with the HD camera tape, which actually started at 10 minutes into the tape and there is approximately 1 minute missing from the end of the tape (taped ended at 1 hr 5 min). The DV tape is complete.


15:17:11
se10_ku_03936.jpg
Tebenkof Bay
N
Lisa Pt.
15:24:51
15:36:04
15:04:43
14:51:08
se10_ku_04036.jpg
se10_ku_04182.jpg
se10_ku_03596.jpg
se10_ku_03764.jpg
se10_ku_04118.jpg
15:31:51
Chatham Strait
Kuiu Island
Thetis Bay
Photopoint
Trackline
SE10_KU_06
12 June 10
0 0.5 1 2 3 4
Kilometers

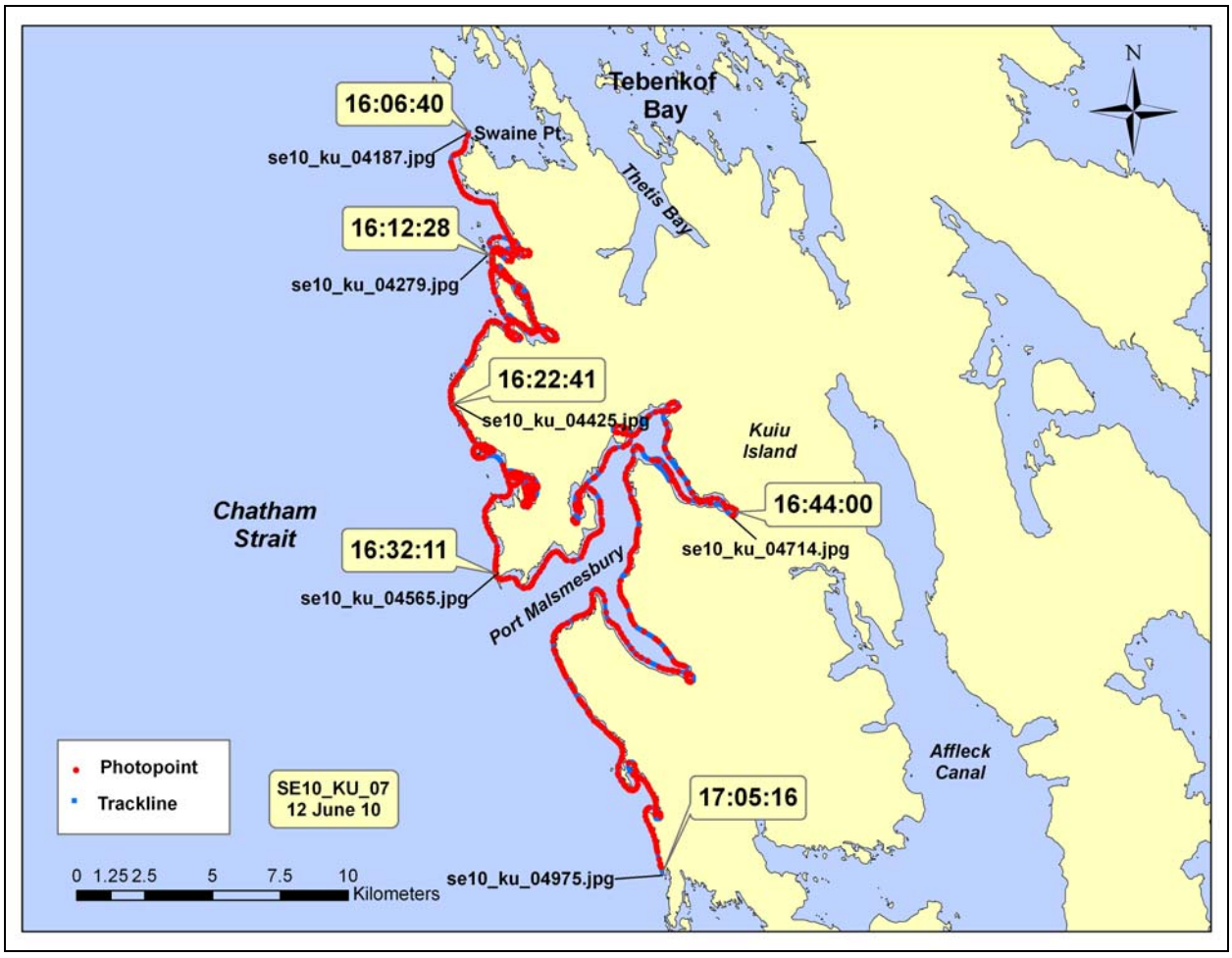
N

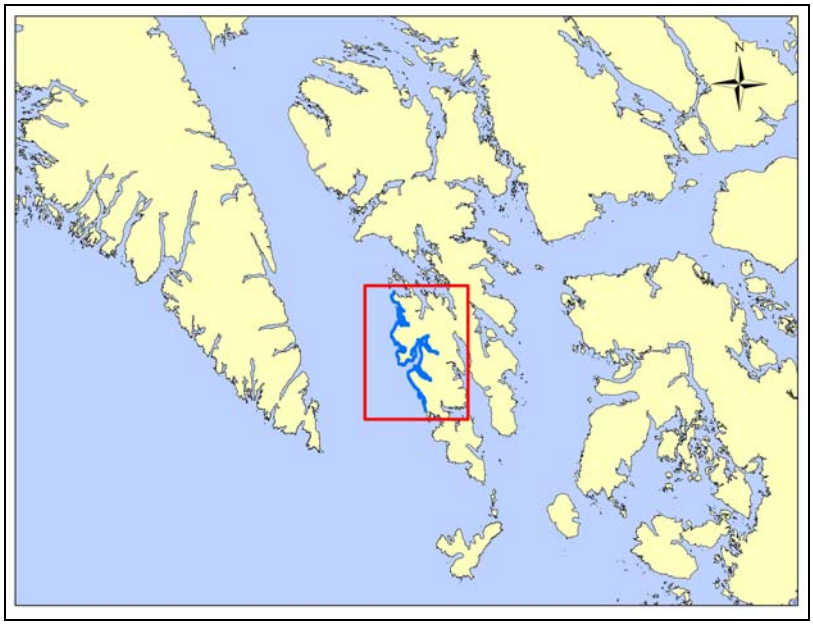
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_06 **Date: 12 June 2010**

General Location: W Kuiu Island
Time Start (UTC): 14:51:08 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 15:36:04 **Nav:** Harper
Tape Length: 42 min 56 sec **Pilot:** Snider
Weather: Overcast, rainy, very windy

Time (UTC)	Location	Photo
14:51:08	Orel Anchorage, Tebenkof Bay	se10_ku_03596.jpg
15:04:43	Oyster Rock, Thetis Bay	se10_ku_03764.jpg
15:07:52	E mouth of Helianthus Passage	se10_ku_03800.jpg
15:17:11	Troller Pt, N end of Troller Islands	se10_ku_03936.jpg
15:24:51	SW end of Windfall Islands	se10_ku_04036.jpg
15:31:51	SE corner of Explorer Basin	se10_ku_04118.jpg
15:36:04	Swaine Pt, Explorer Basin	se10_ku_04182.jpg


Tebenkof Bay
16:06:40
Swaine Pt
se10_ku_04187.jpg
Thelis Bay
16:12:28
se10_ku_04279.jpg
16:22:41
se10_ku_04425.jpg
Kuiu Island
16:44:00
se10_ku_04714.jpg
Chatham Strait
16:32:11
se10_ku_04565.jpg
Port Malsmesbury
Affleck Canal
17:05:16
se10_ku_04975.jpg
Photopoint
Trackline
SE10_KU_07
12 June 10
0 1.25 2.5 5 7.5 10
Kilometers
N

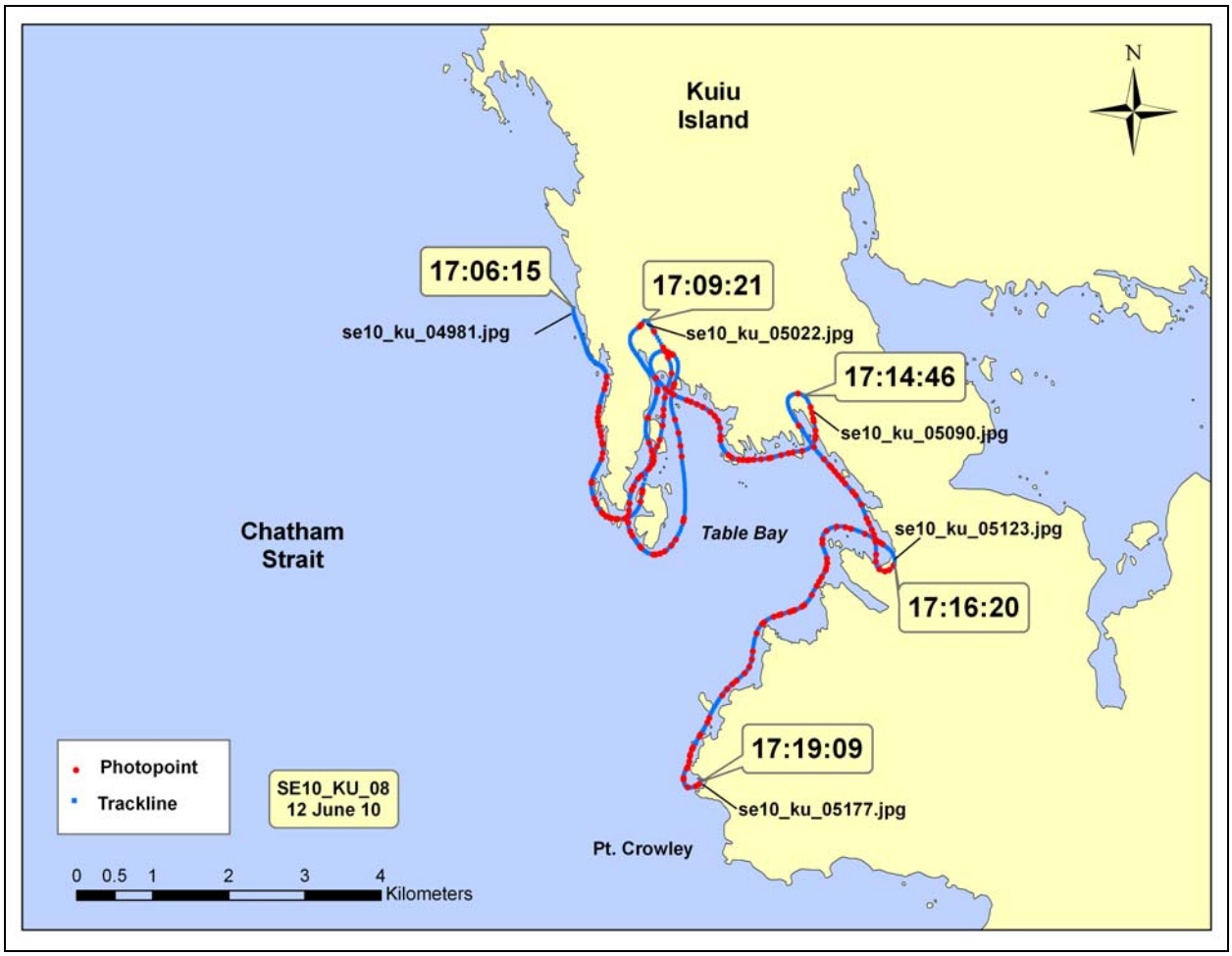

N

2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_07 **Date: 12 June 2010**

General Location: W Kuiu Island
Time Start (UTC): 16:06:40 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 17:05:16 **Nav:** Daley
Tape Length: 58 min 36 sec **Pilot:** Snider
Weather: Overcast, rainy, very windy

Time (UTC)	Location	Photo
16:06:40	Swaine Pt, Explorer Basin	se10_ku_04187.jpg
16:12:28	N entrance to Gedney Harbor	se10_ku_04279.jpg
16:20:50	S entrance to Gedney Harbor	se10_ku_04394.jpg
16:22:41	Pt Cosmos	se10_ku_04425.jpg
16:28:13	Harris Cove	se10_ku_04507.jpg
16:32:11	Cape Harris, Port Malmesbury	se10_ku_04565.jpg
16:44:00	Head of SE arm, Port Malmesbury	se10_ku_04714.jpg
16:53:50	Head of SW arm, Port Malmesbury	se10_ku_04815.jpg
17:05:16	N of entrances to Table Bay	se10_ku_04975.jpg


Kuiu
Island
N
17:06:15
se10_ku_04981.jpg
17:09:21
se10_ku_05022.jpg
17:14:46
se10_ku_05090.jpg
Chatham
Strait
Table Bay
se10_ku_05123.jpg
17:16:20
17:19:09
se10_ku_05177.jpg
Pt. Crowley
Photopoint
Trackline
SE10_KU_08
12 June 10
0 0.5 1 2 3 4
Kilometers

N

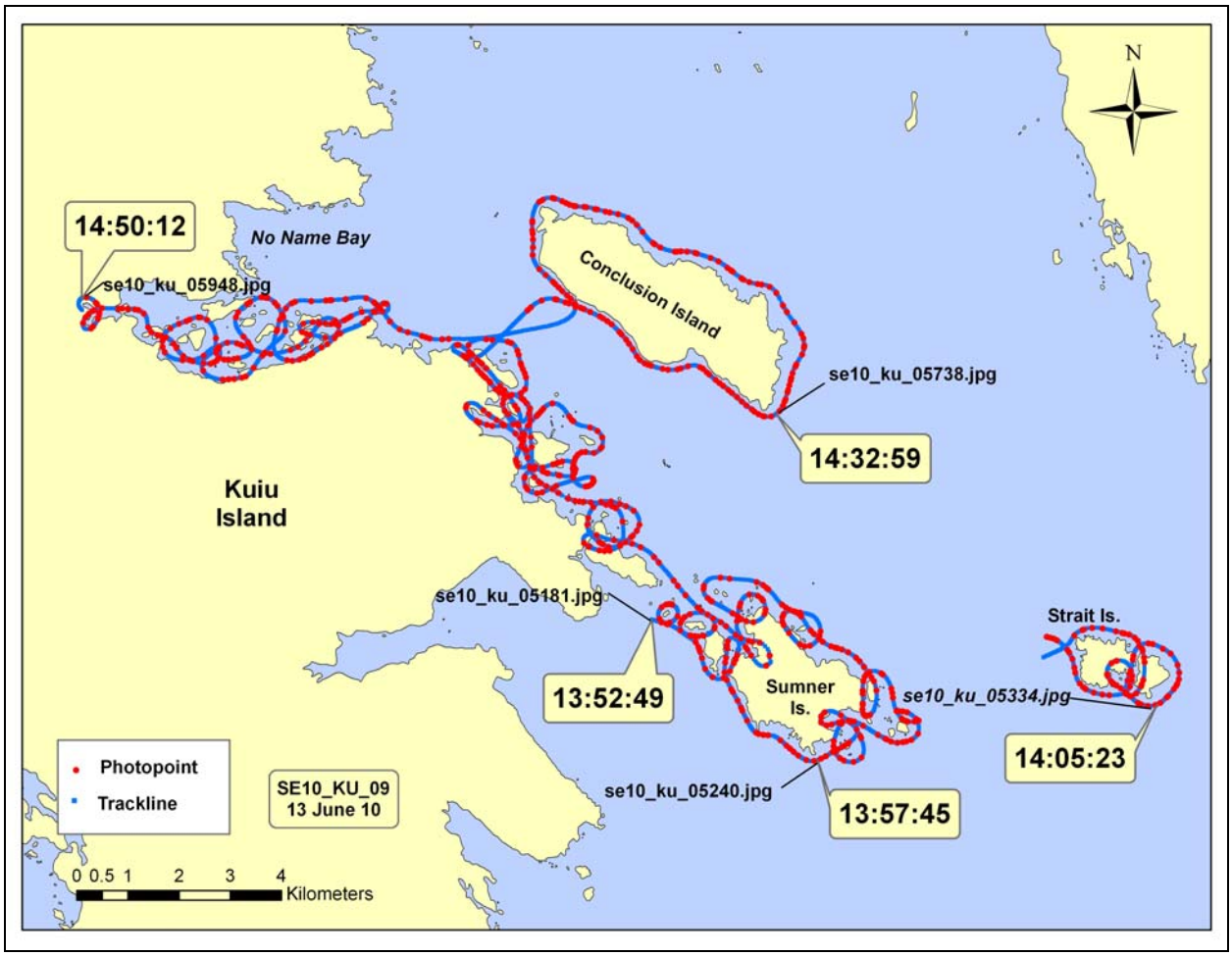
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

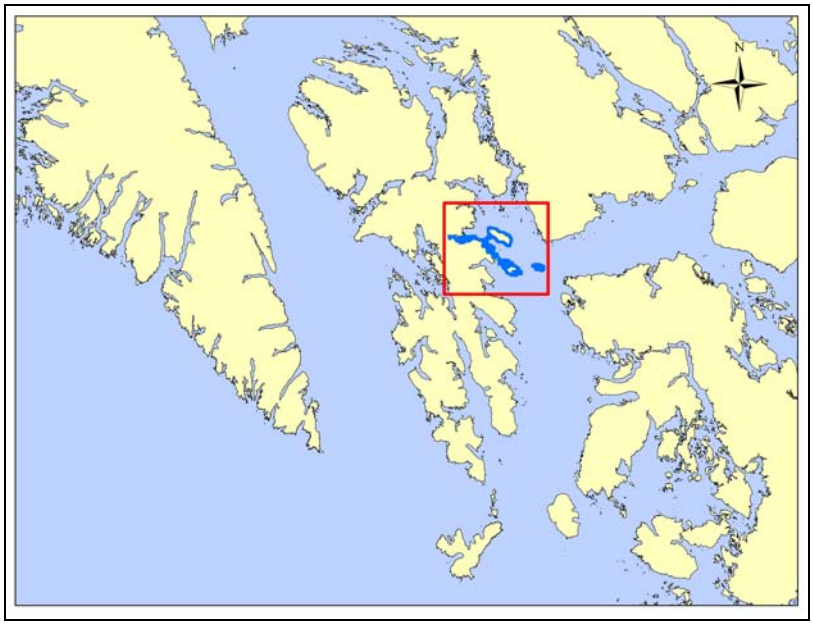
Tape: SE10_KU_08 **Date: 12 June 2010**

General Location: W Kuiu Island
Time Start (UTC): 17:06:15 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 17:19:09 **Nav:** Daley
Tape Length: 12 min 56 sec **Pilot:** Snider
Weather: Overcast, rainy, very, very windy (+30 knots)

Time (UTC)	Location	Photo
17:06:15	N of entrances to Table Bay	se10_ku_04981.jpg
17:09:21	Head of NW arm of Table Bay	se10_ku_05022.jpg
17:14:46	Head of NE arm of Table Bay	se10_ku_05090.jpg
17:16:19	Head of SE are of Table Bay	se10_ku_05123.jpg
17:19:09	Approx 1 km N of Cape Crowley	se10_ku_05177.jpg

Note: Survey terminated due to turbulence


N
14:50:12
No Name Bay
se10_ku_05948.jpg
Conclusion Island
se10_ku_05738.jpg
14:32:59
Kuiu
Island
se10_ku_05181.jpg
13:52:49
Strait Is.
Sumner
Is.
se10_ku_05334.jpg
14:05:23
se10_ku_05240.jpg
13:57:45
Photopoint
Trackline
SE10_KU_09
13 June 10
0 0.5 1 2 3 4
Kilometers

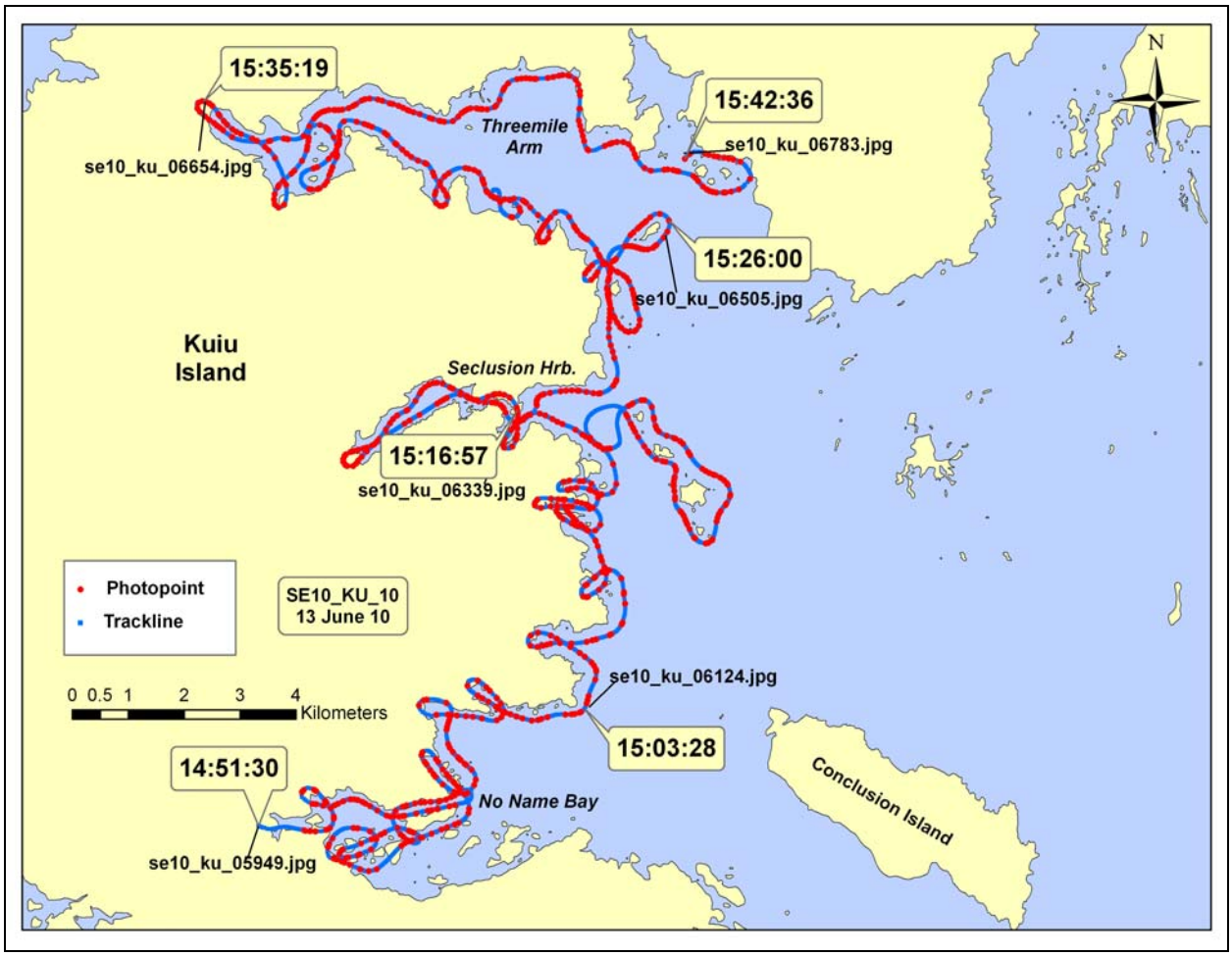

N

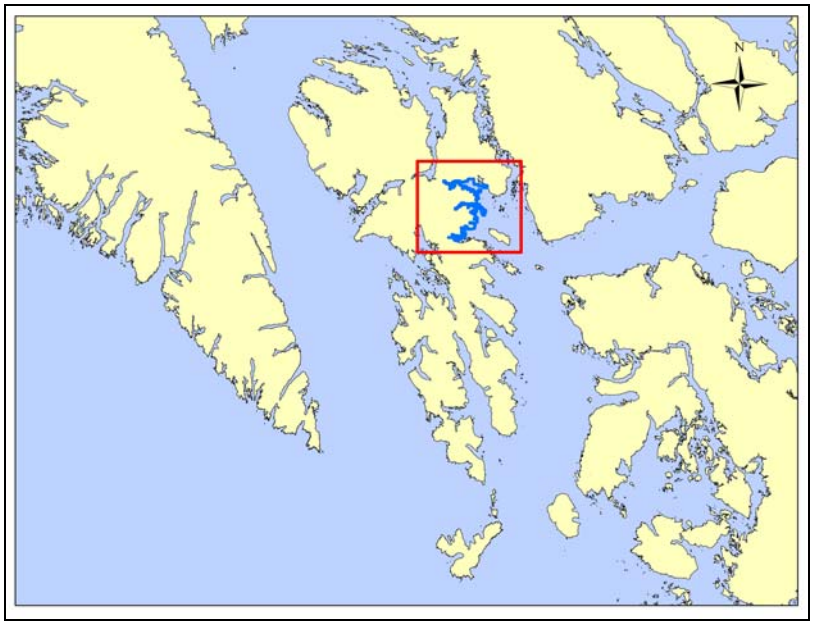
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_09 **Date: 13 June 2010**

General Location: E Kuiu Island
Time Start (UTC): 13:52:49 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 14:50:21 **Nav:** Daley
Tape Length: 58 min 39 sec **Pilot:** Snider
Weather: Overcast, rainy, windy

Time (UTC)	Location	Photo
13:52:49	N entrance to Alvin Bay	se10_ku_05181.jpg
13:57:45	S tip of Summer Is	se10_ku_05240.jpg
	Transit to Strait and Mariposa Is 14:01 to 14:03:12	
14:05:23	S tip of Mariposa Is	se10_ku_05334.jpg
	Transit back to Summer Is 14:07:58 to 14:09:00	
14:32:59	S tip of Conclusion Is	se10_ku_05738.jpg
14:38:40	S entrance of No Name Bay	se10_ku_05802.jpg
14:50:12	Head of No Name Bay	se10_ku_05948.jpg


15:35:19
se10_ku_06654.jpg
Threemile Arm
15:42:36
se10_ku_06783.jpg
15:26:00
se10_ku_06505.jpg
Kuiu Island
Seclusion Hrb.
15:16:57
se10_ku_06339.jpg
Photopoint
Trackline
SE10_KU_10
13 June 10
0 0.5 1 2 3 4
Kilometers
se10_ku_06124.jpg
15:03:28
14:51:30
No Name Bay
se10_ku_05949.jpg
Conclusion Island
N


N

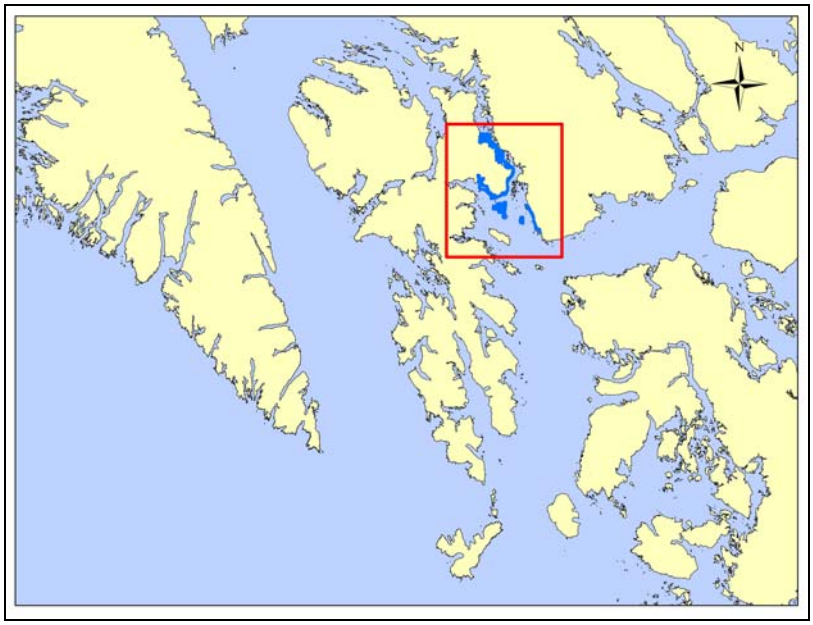
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_10 **Date: 13 June 2010**

General Location: E Kuiu Island
Time Start (UTC): 14:51:30 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 15:42:36 **Nav:** Daley
Tape Length: 51 min 06 sec **Pilot:** Snider
Weather: Overcast, rainy, windy

Time (UTC)	Location	Photo
14:51:30	Head of No Name Bay	se10_ku_05949.jpg
15:03:28	N entrances to No Name Bay	se10_ku_06124.jpg
15:16:57	Entrance to tidal lagoon, Seclusion Harbor	se10_ku_06339.jpg
15:26:00	Island at entrances to Threemile Arm	se10_ku_06505.jpg
15:35:19	Head of Threemile Arm	se10_ku_06654.jpg
15:42:36	E entrance of Threemile Arm	se10_ku_06783.jpg

17:18:14
se10_ku_07717.jpg
Rocky Pass
0 1 2 4 6 8
Kilometers
N
SE10_KU_11
13 June 10
Photopoint
Trackline
Kuiu
Island
Kupreanof
Island
Threemile
Arm
16:55:30
se10_ku_07333.jpg
16:43:34
Seclusion Hrb.
se10_ku_07164.jpg
se10_ku_07011.jpg
16:21:31
se10_ku_06831.jpg
16:33:03
se10_ku_07100.jpg
16:38:42
No Name Bay

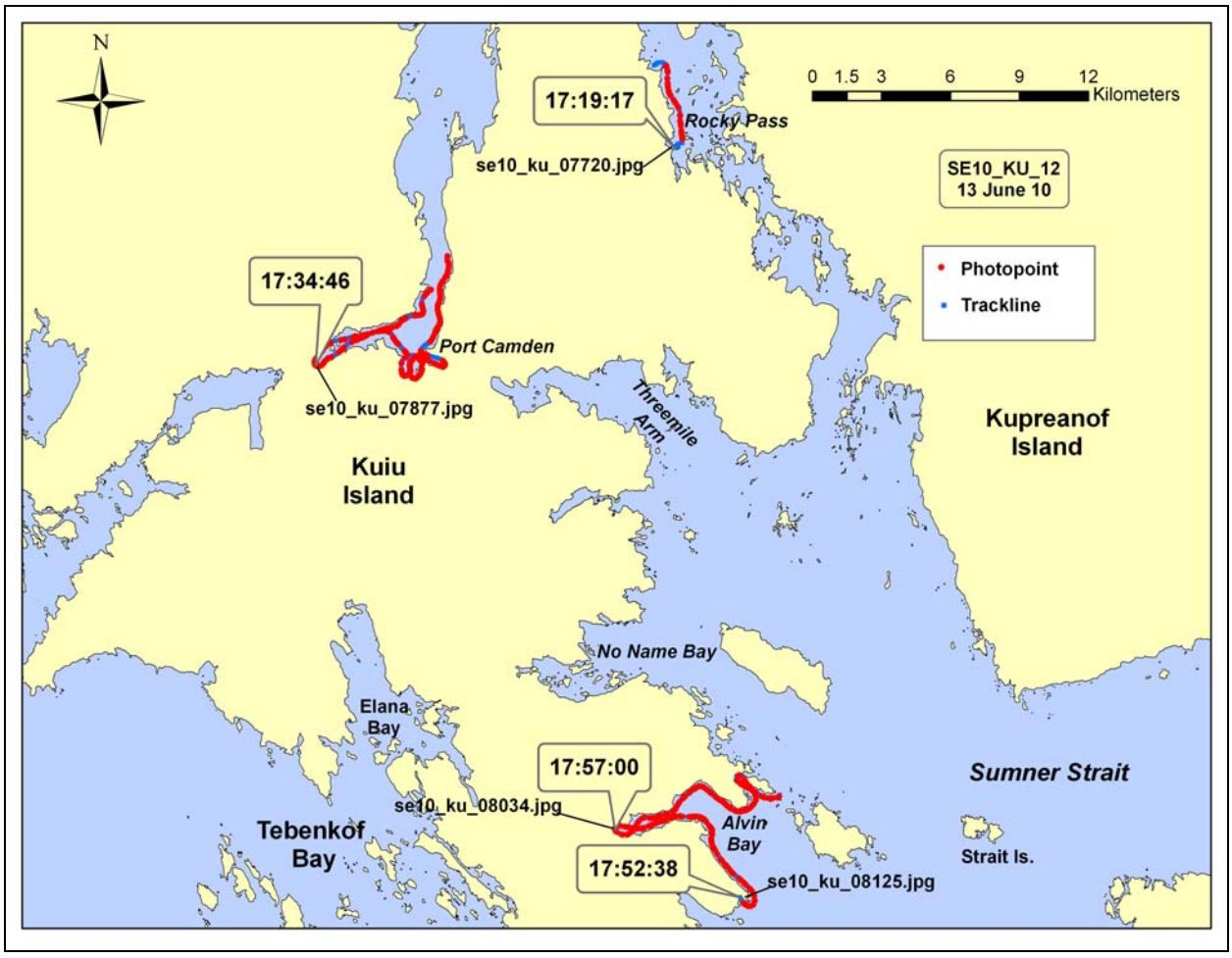

N

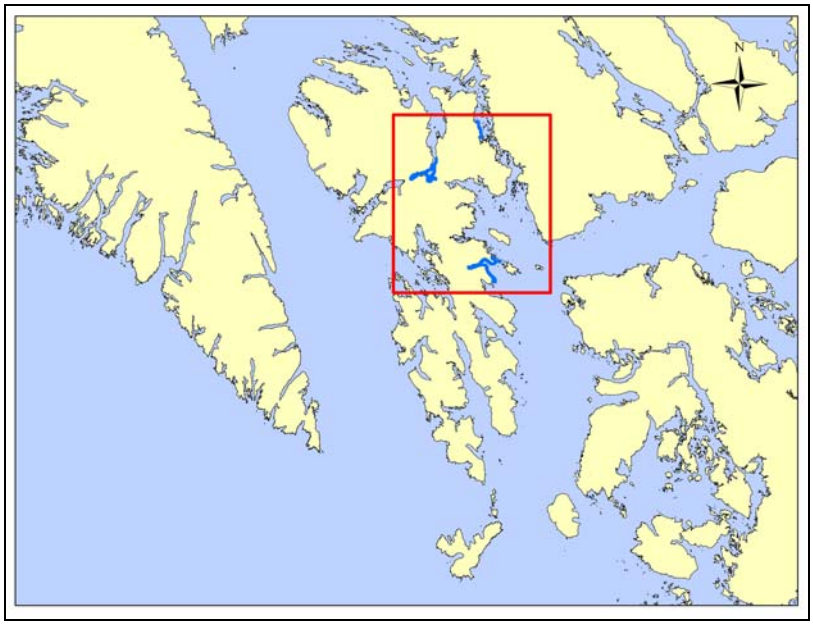
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_11 **Date: 13 June 2010**

General Location: E Kuiu Island, Rocky Pass
Time Start (UTC): 16:21:31 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 17:18:14 **Nav:** Harper
Tape Length: 58 min 16 sec **Pilot:** Snider
Weather: Overcast, rainy, windy

Time (UTC)	Location	Photo
16:21:31	Island group at S entrance to Rock Pass	se10_ku_06831.jpg
	Transit to Kupreanof: 16:30:16 to 16:33:02	
16:33:03	Kupreanof Is near Skip Is	se10_ku_07011.jpg
	Transit from Kupreanof to island: 16:37:32 to 16:38:41	
16:38:42	Island between entrances to Threemile Arm and Rocky Pass	se10_ku_07100.jpg
	Transit from island to entrance of No Name Bay: 16:40:29 to 16:43:33	
16:43:34	E entrance to Threemile Arm	se10_ku_07164.jpg
16:55:30	W entrance to Rocky Pass	se10_ku_07333.jpg
17:10:45	S of narrows at Summit in Rocky Pass	se10_ku_07577.jpg
17:18:14	Rocky Pass, just north of Summit	se10_ku_07717.jpg


N
0 1.5 3 6 9 12
Kilometers
17:19:17
Rocky Pass
se10_ku_07720.jpg
SE10_KU_12
13 June 10
Photopoint
Trackline
17:34:46
Port Camden
se10_ku_07877.jpg
Threemile Arm
Kuiu Island
Kupreanof Island
No Name Bay
Elana Bay
17:57:00
se10_ku_08034.jpg
Sumner Strait
Alvin Bay
Tebenkof Bay
17:52:38
Strait Is.
se10_ku_08125.jpg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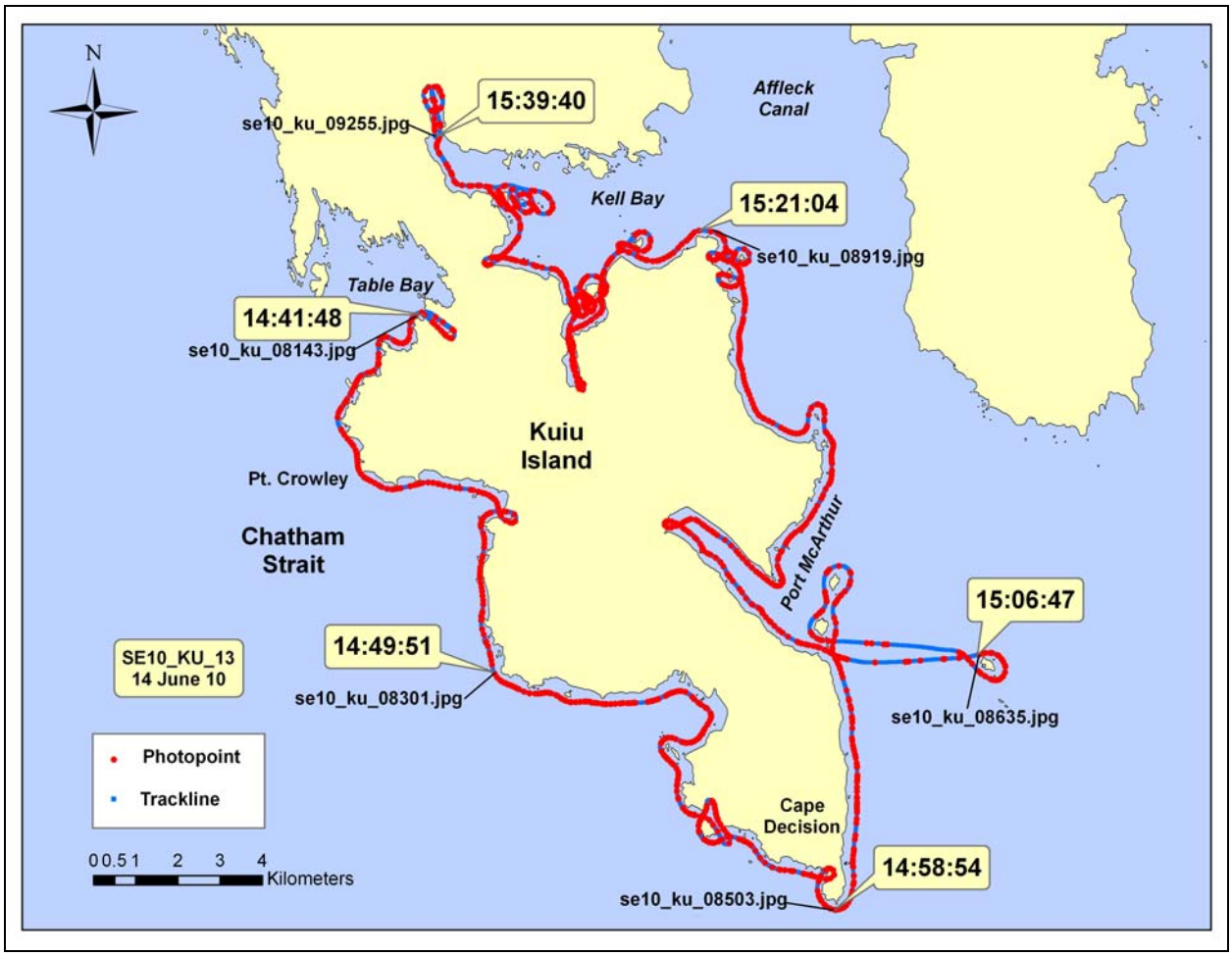
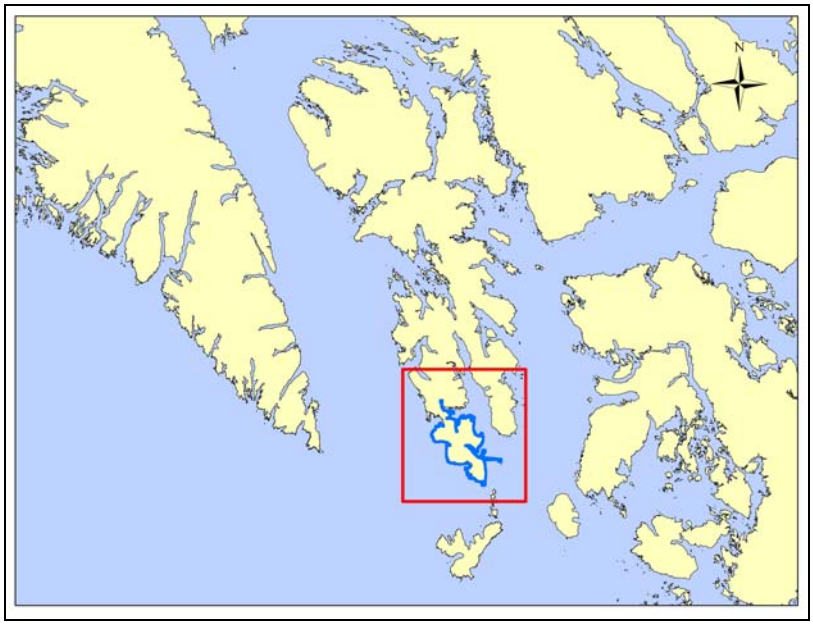
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_12 **Date: 13 June 2010**

General Location: E Kuiu Island
Time Start (UTC): 17:19:17 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 18:02:44 **Nav:** Harper
Tape Length: 24 min 54 sec **Pilot:** Snider
Weather: Overcast, rainy, windy

Time (UTC)	Location	Photo
17:19:17	Mid Rock Pass at the Summit	se10_ku_07720.jpg
	Transit from Rocky Pass to Port Camden 17:21:23 to 17:26:38	
17:34:46	Head of Camden Bay	se10_ku_07877.jpg
	Transit from Port Camden to Alvin Bay 17:38:06 to 17:52:37	
17:52:38	Pt north of Reid Bay	se10_ku_07960.jpg
17:55:04	S entrance to Alvin Bay	se10_ku_07999.jpg
17:57:00	Head of Alvin Bay	se10_ku_08034.jpg
18:02:44	N entrance to Alvin Bay	se10_ku_08125.jpg


N
15:39:40
se10_ku_09255.jpg
Affleck
Canal
Kell Bay
15:21:04
se10_ku_08919.jpg
Table Bay
14:41:48
se10_ku_08143.jpg
Kuiu
Island
Pt. Crowley
Chatham
Strait
Port McArthur
15:06:47
14:49:51
se10_ku_08301.jpg
SE10_KU_13
14 June 10
se10_ku_08635.jpg
Photopoint
Trackline
Cape
Decision
14:58:54
se10_ku_08503.jpg
0 0.5 1 2 3 4
Kilometers


N

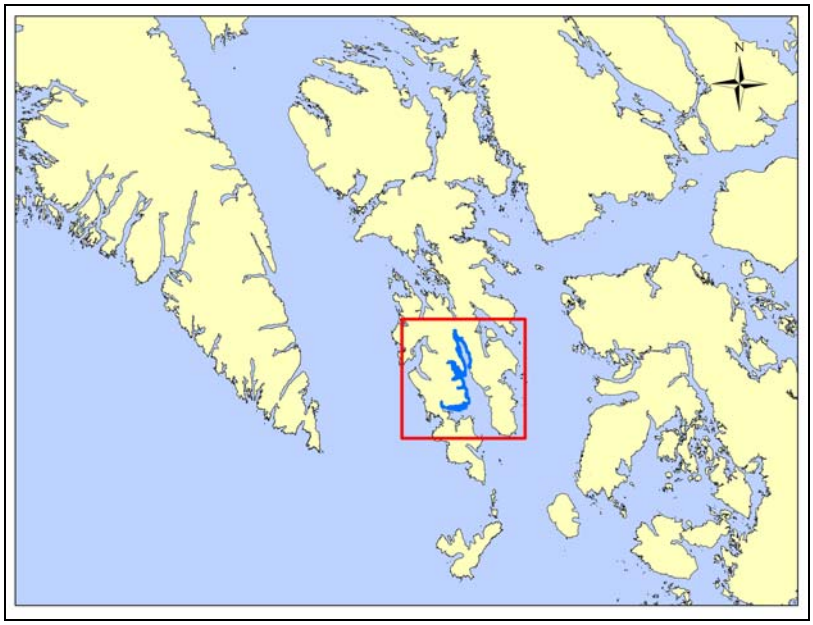
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_13 **Date: 14 June 2010**

General Location: S Kuiu Island
Time Start (UTC): 14:41:28 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 15:39:40 **Nav:** Daley
Tape Length: 59 min 33 sec **Pilot:** Snider
Weather: Sunny, calm

Time (UTC)	Location	Photo
14:41:48	S shore of Table Bay	se10_ku_08143.jpg
14:45:21	Pt Crowley	se10_ku_08211.jpg
14:49:51	Pt Howard	se10_ku_08301.jpg
14:58:54	Cape Decision	se10_ku_08503.jpg
15:06:47	Fairway Is	se10_ku_08635.jpg
15:08:25	S entrance to Port McArthur	se10_ku_08656.jpg
15:21:04	S entrance to Kell Bay	se10_ku_08919.jpg
15:25:31	Head of Kadey Krogen Cove	se10_ku_09000.jpg
15:39:40	Head of NW arm, Kell Bay	se10_ku_09255.jpg

N
16:20:21
se10_ku_09845.jpg
16:04:53
se10_ku_09627.jpg
16:26:28
se10_ku_09929.jpg
Port Malsmesbury
se10_ku_09541.jpg
15:58:30
Affleck
Canal
SE10_KU_14
14 June 10
se10_ku_09256.jpg
15:40:28
Photopoint
Trackline
0 0.5 1 2 3 4
Kilometers
se10_ku_09405.jpg
15:51:04
Kell Bay


N

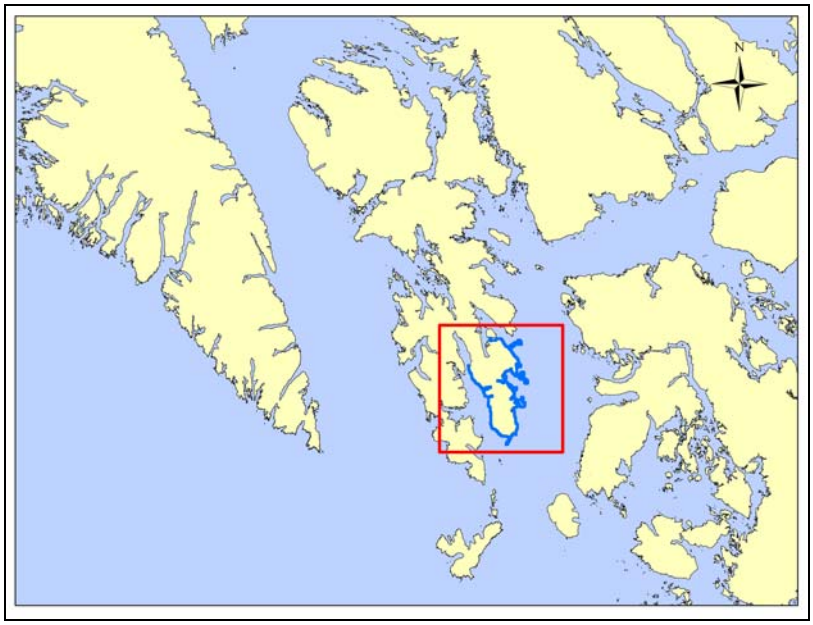
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_14 **Date: 14 June 2010**

General Location: SE Kuiu Island
Time Start (UTC): 15:40:28 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 16:26:28 **Nav:** Daley
Tape Length: 47 min 01 sec **Pilot:** Snider
Weather: Sunny, calm

Time (UTC)	Location	Photo
15:40:28	Head of NW arm, Kell Bay	se10_ku_09256.jpg
15:51:04	N entrance to Kell Bay	se10_ku_09405.jpg
15:58:30	S entrance to Bear Harbor	se10_ku_09541.jpg
16:04:53	Head of Bear Harbor	se10_ku_09627.jpg
16:20:21	Head of Affleck Canal	se10_ku_09845.jpg
16:26:28	East shore of Affleck Canal, opposite of Bear Harbor	se10_ku_09929.jpg

N
Port Beauclerc
17:55:51
se10_ku_10803.jpg
17:50:45
Beauclerc Is.
se10_ku_10738.jpg
16:59:48
Kuiu
Island
Sumner Strait
se10_ku_09931.jpg
17:31:22
Louise
Cove
17:39:53
Amelius Is.
se10_ku_10431.jpg
se10_ku_10587.jpg
Affleck
Canal
SE10_KU_15
14 June 10
Photopoint
Trackline
Kell Bay
Pt. St. Albans
se10_ku_10177.jpg
17:16:11
0 1 2 4 6 8
Kilometers

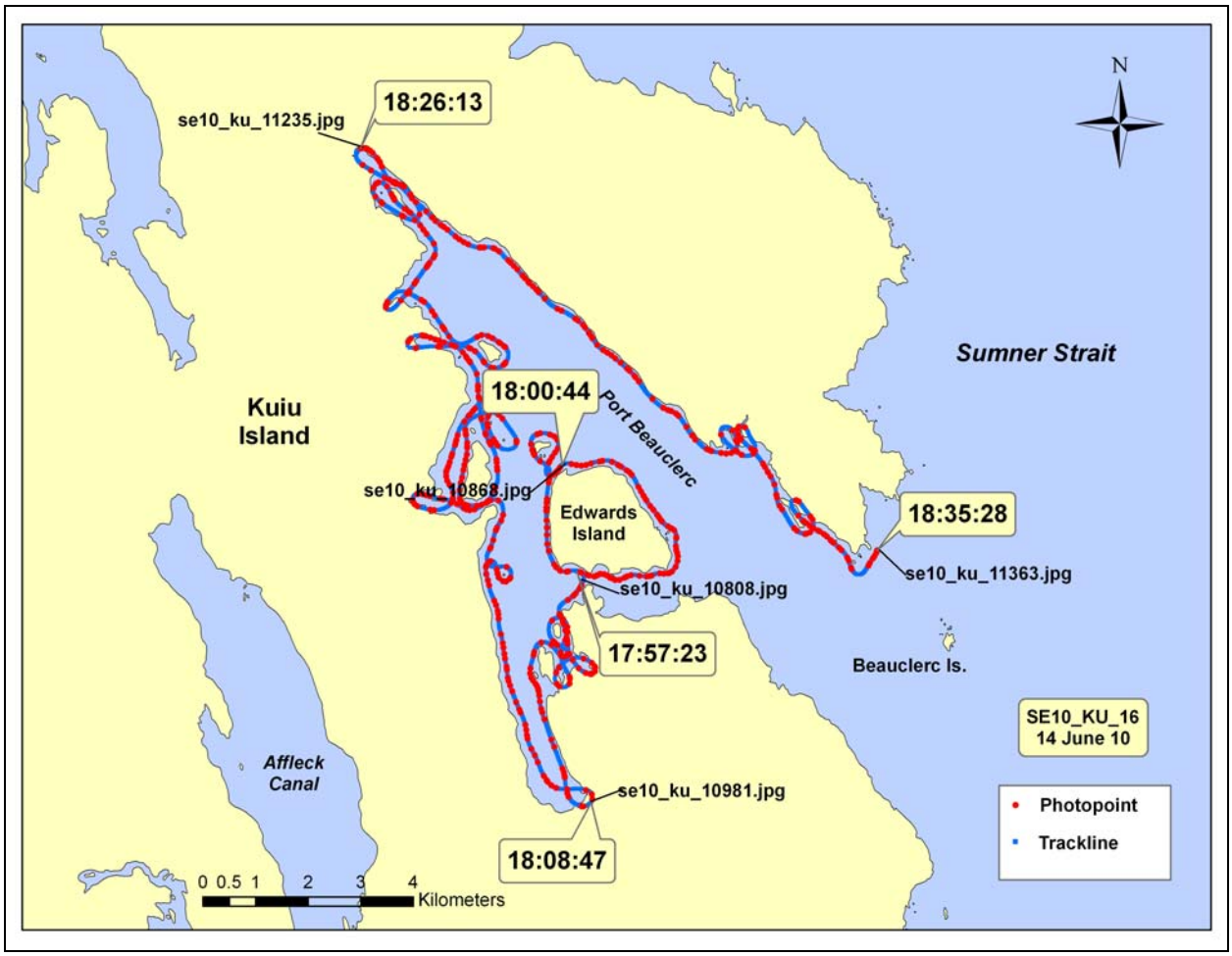

N

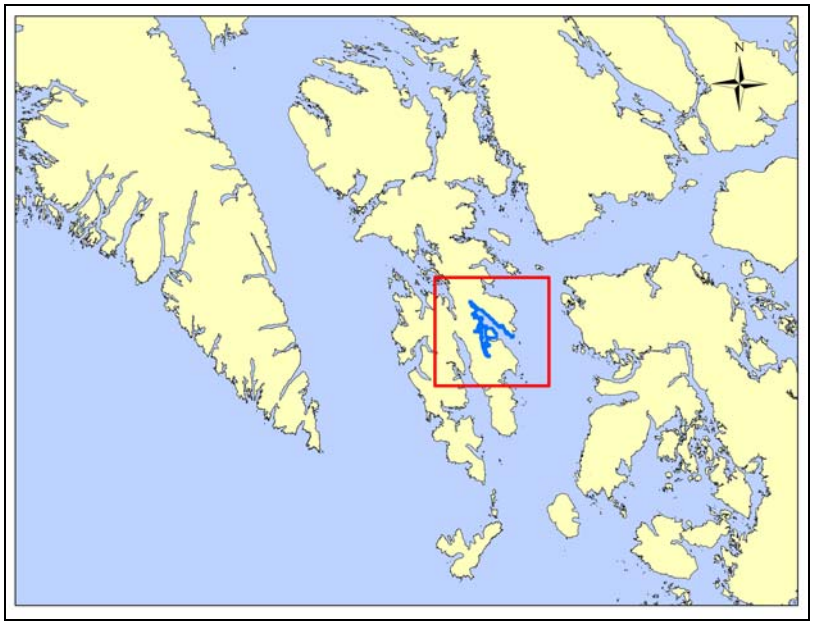
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_15 **Date: 14 June 2010**

General Location: SE Kuiu Island
Time Start (UTC): 16:59:48 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 17:55:51 **Nav:** Harper
Tape Length: 57 min 09 sec **Pilot:** Snider
Weather: Sunny, calm

Time (UTC)	Location	Photo
16:59:48	East shore of Affleck Canal, opposite of Bear Harbor	se10_ku_09931.jpg
17:06:58	Head of cove opposite of Kell Bay	se10_ku_10042.jpg
17:16:11	Pt St Albans	se10_ku_10177.jpg
17:31:22	S entrance to Louise Cove	se10_ku_10431.jpg
17:39:53	Amelius Is	se10_ku_10587.jpg
17:43:02	Pt Amelius	se10_ku_10633.jpg
17:50:45	Beauclerc Is	se10_ku_10738.jpg
17:55:51	Beauclerc Bay, just south of Edwards Is	se10_ku_10803.jpg


N
18:26:13
se10_ku_11235.jpg
Sumner Strait
18:00:44
Port Beauclerc
Kuiu
Island
se10_ku_10868.jpg
Edwards
Island
18:35:28
se10_ku_11363.jpg
se10_ku_10808.jpg
17:57:23
Beauclerc Is.
SE10_KU_16
14 June 10
Affleck
Canal
se10_ku_10981.jpg
Photopoint
Trackline
18:08:47
0 0.5 1 2 3 4
Kilometers


N

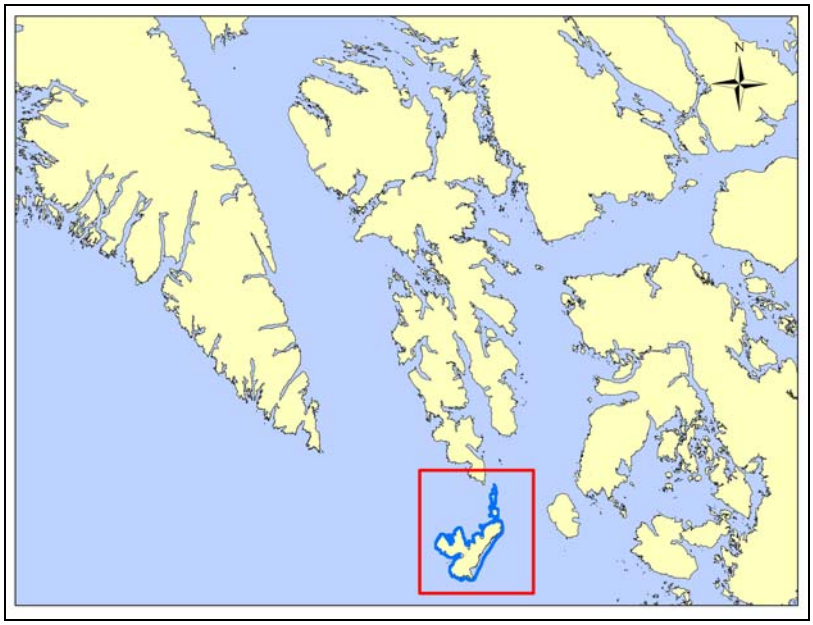
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_16 **Date: 14 June 2010**

General Location: SE Kuiu Island
Time Start (UTC): 17:57:23 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 18:35:28 **Nav:** Harper
Tape Length: 38 min 05 sec **Pilot:** Snider
Weather: Sunny, calm

Time (UTC)	Location	Photo
17:57:23	Beauclerc Bay, just south of Edwards Is	se10_ku_10808.jpg
18:00:44	N tip of Edwards Is	se10_ku_10868.jpg
18:08:47	S arm of Port Beauclerc	se10_ku_10981.jpg
18:26:13	Head of Port Beauclerc	se10_ku_11235.jpg
18:35:28	SE entrance to Beauclerc Bay	se10_ku_11363.jpg

N
Chatham Strait
Sumner Strait
Gulf of Alaska
Cape Decision
16:19:29
se10_ku_12257.jpg
15:33:39
se10_ku_11411.jpg
Spanish Islands
15:57:23
Nation Pt.
se10_ku_11837.jpg
15:48:41
Cora Pt.
16:12:03
se10_ku_12119.jpg
Coronation Island
se10_ku_11657.jpg
SE10_KU_17
15 June 10
Photopoint
Trackline
Helm Pt.
se10_ku_12035.jpg
16:06:27
0 1 2 4 6 8
Kilometers


N

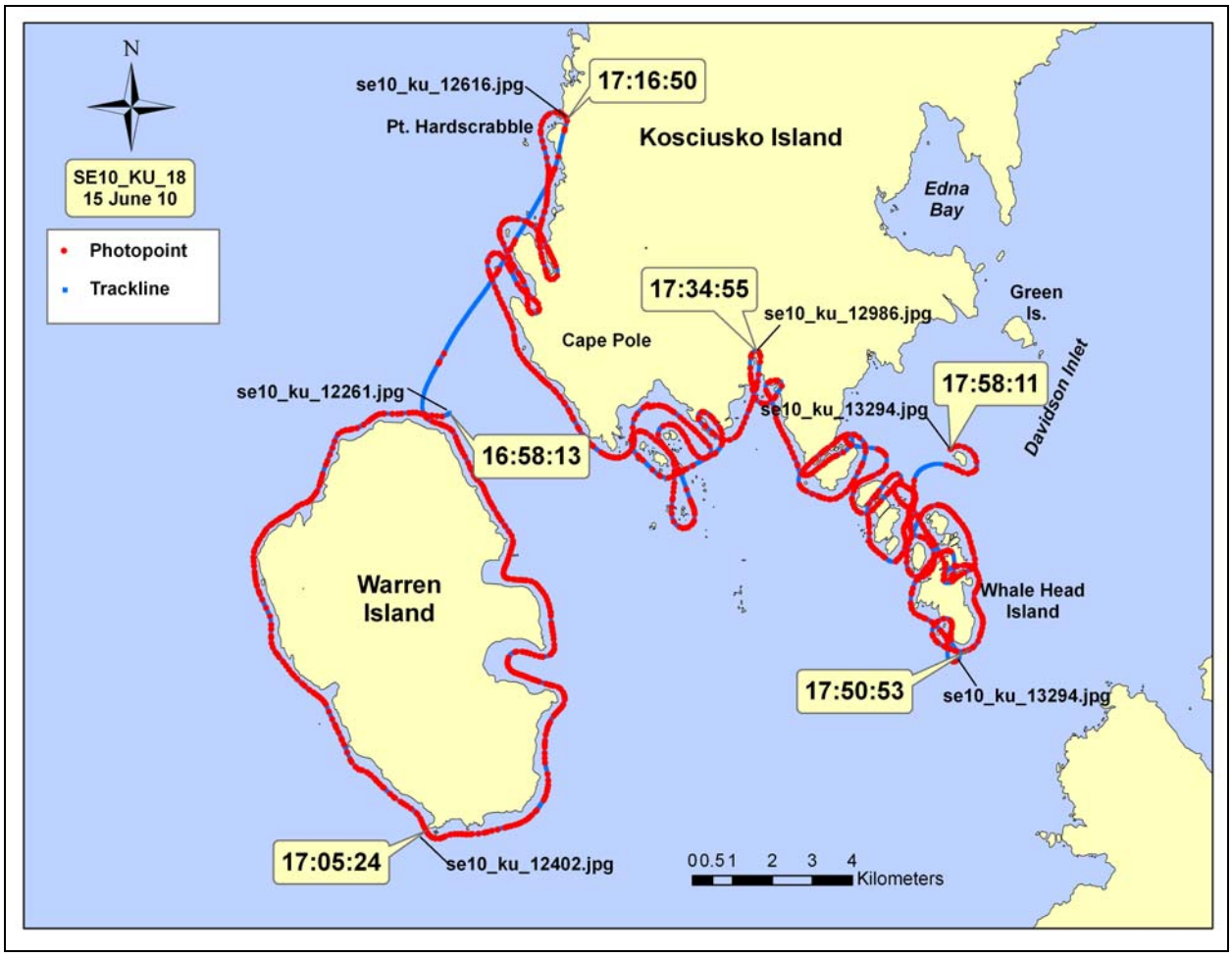
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

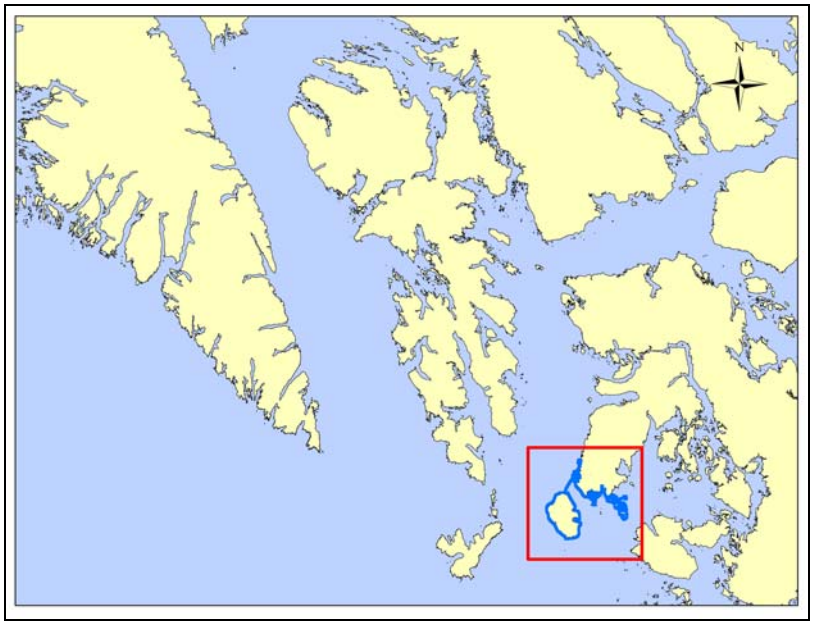
Tape: SE10_KU_17 **Date: 15 June 2010**

General Location: Spanish and Coronation Islands
Time Start (UTC): 15:33:39 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 16:19:29 **Nav:** Daley
Tape Length: 46 min 10 sec **Pilot:** Snider
Weather: Sunny, windy

Time (UTC)	Location	Photo
15:33:39	S side of northern-most Spanish Is	se10_ku_11411.jpg
15:42:32	N tip of Coronation Is	se10_ku_11549.jpg
15:48:41	W arm of Aats Bay, Coronation Is	se10_ku_11657.jpg
15:51:43	Large sea lion colony Alikula Bay	se10_ku_11716.jpg
15:57:23	Nation Pt, Coronation Is	se10_ku_11837.jpg
16:01:38	Head of Windy Bay on a windy day	se10_ku_11922.jpg
16:06:27	Helm Pt, southern-most tip of Coronation Is	se10_ku_12035.jpg
16:12:03	Cora Is, Coronation Is	se10_ku_12119.jpg
16:17:23	Halfway up E side of Spanish Is	se10_ku_12229.jpg
16:19:29	N tip of Spanish Islands	se10_ku_12257.jpg

Note: Extremely turbulent on the south side of Coronation Island so imagery is very high, distant and jumpy


N
SE10_KU_18
15 June 10
Photopoint
Trackline
se10_ku_12616.jpg
17:16:50
Pt. Hardscrabble
Kosciusko Island
Edna
Bay
17:34:55
se10_ku_12986.jpg
Green
Is.
Cape Pole
Davidson Inlet
17:58:11
se10_ku_12261.jpg
se10_ku_13294.jpg
16:58:13
Warren
Island
Whale Head
Island
17:50:53
se10_ku_13294.jpg
17:05:24
se10_ku_12402.jpg
0 0.5 1 2 3 4
Kilometers

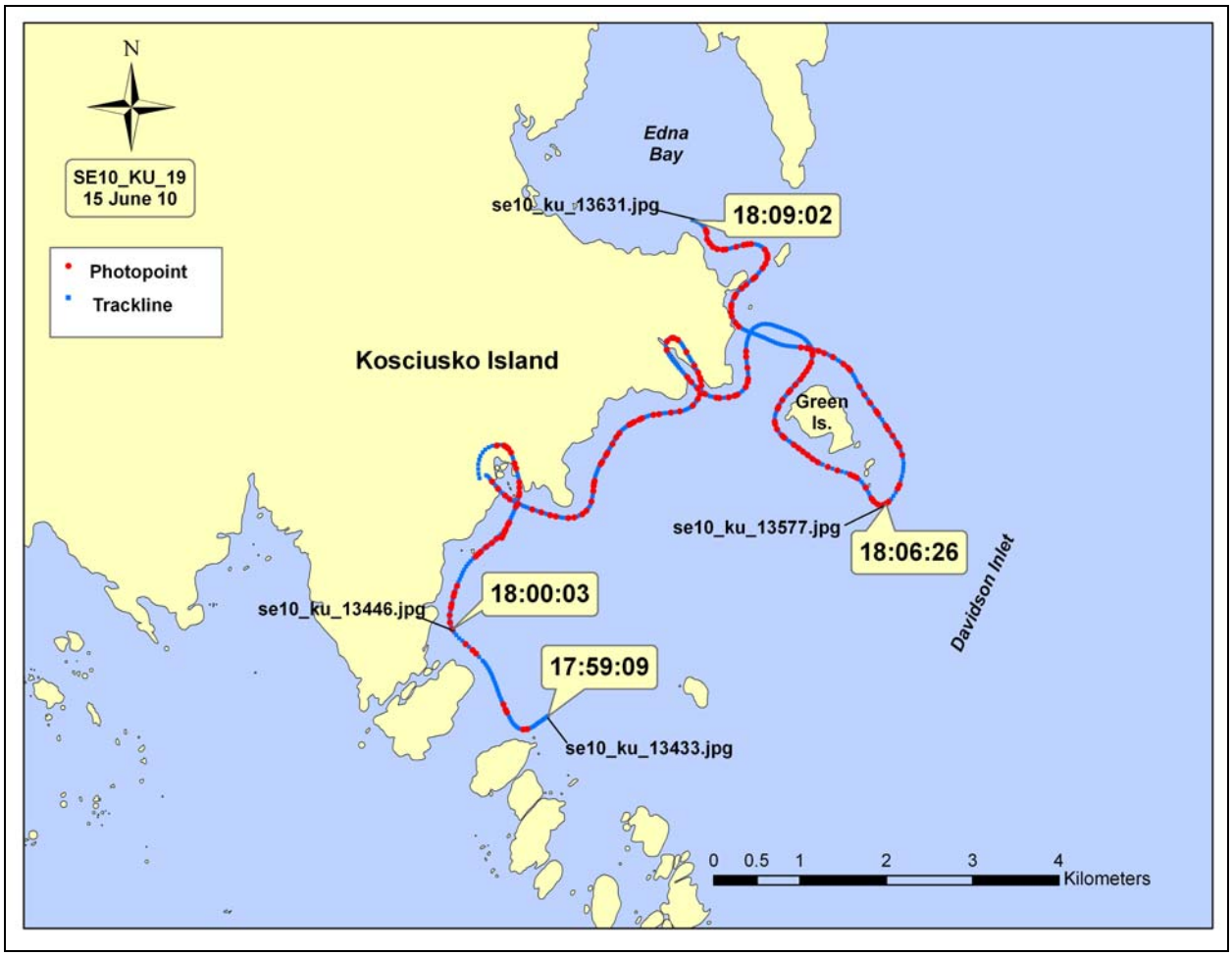

N

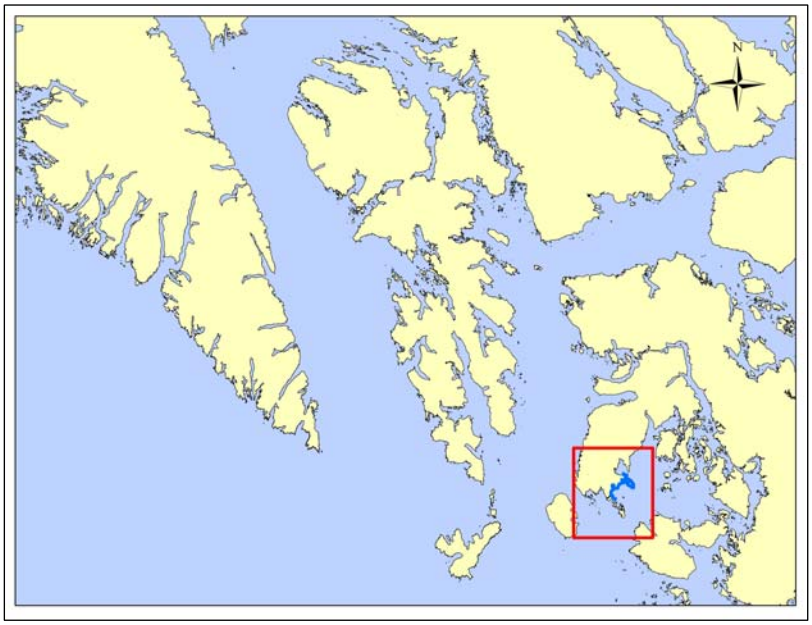
2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_18 **Date: 15 June 2010**

General Location: Warren Is, S Kosciusko Is
Time Start (UTC): 16:58:13 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 17:58:11 **Nav:** Harper
Tape Length: 58 min 47 sec **Pilot:** Snider
Weather: Sunny, windy

Time (UTC)	Location	Photo
16:58:13	N tip of Warren Is	se10_ku_12261.jpg
17:02:54	W tip of Warren Is (California mussels)	se10_ku_12346.jpg
17:05:24	Boot Pt, SW corner of Warren Is	se10_ku_12402.jpg
17:09:01	Center of Warren Cove, Warren Is	se10_ku_12493.jpg
17:13:44	N tip of Warren Is, finish	se10_ku_12596.jpg
	Transit	
17:16:50	Pt Hardscrabble, S Kosciusko Is	se10_ku_12616.jpg
17:19:24	head of Cape Pole community	se10_ku_12668.jpg
17:25:55	W entrance to Halibut Harbor	se10_ku_12811.jpg
17:29:46	Island just E of Quartz Rock	se10_ku_12896.jpg
17:34:55	Head of Survey Cove	se10_ku_12986.jpg
17:44:24	Island at W entrance to Fake Pass	se10_ku_13171.jpg
17:50:53	S tip of Whale Head Is	se10_ku_13294.jpg
17:58:11	Round Is, western Sea Otter Sound	se10_ku_13437.jpg


N
SE10_KU_19
15 June 10
Photopoint
Trackline
Edna
Bay
se10_ku_13631.jpg
18:09:02
Kosciusko Island
Green
Is.
se10_ku_13577.jpg
18:06:26
Davidson Inlet
se10_ku_13446.jpg
18:00:03
17:59:09
se10_ku_13433.jpg
0 0.5 1 2 3 4
Kilometers

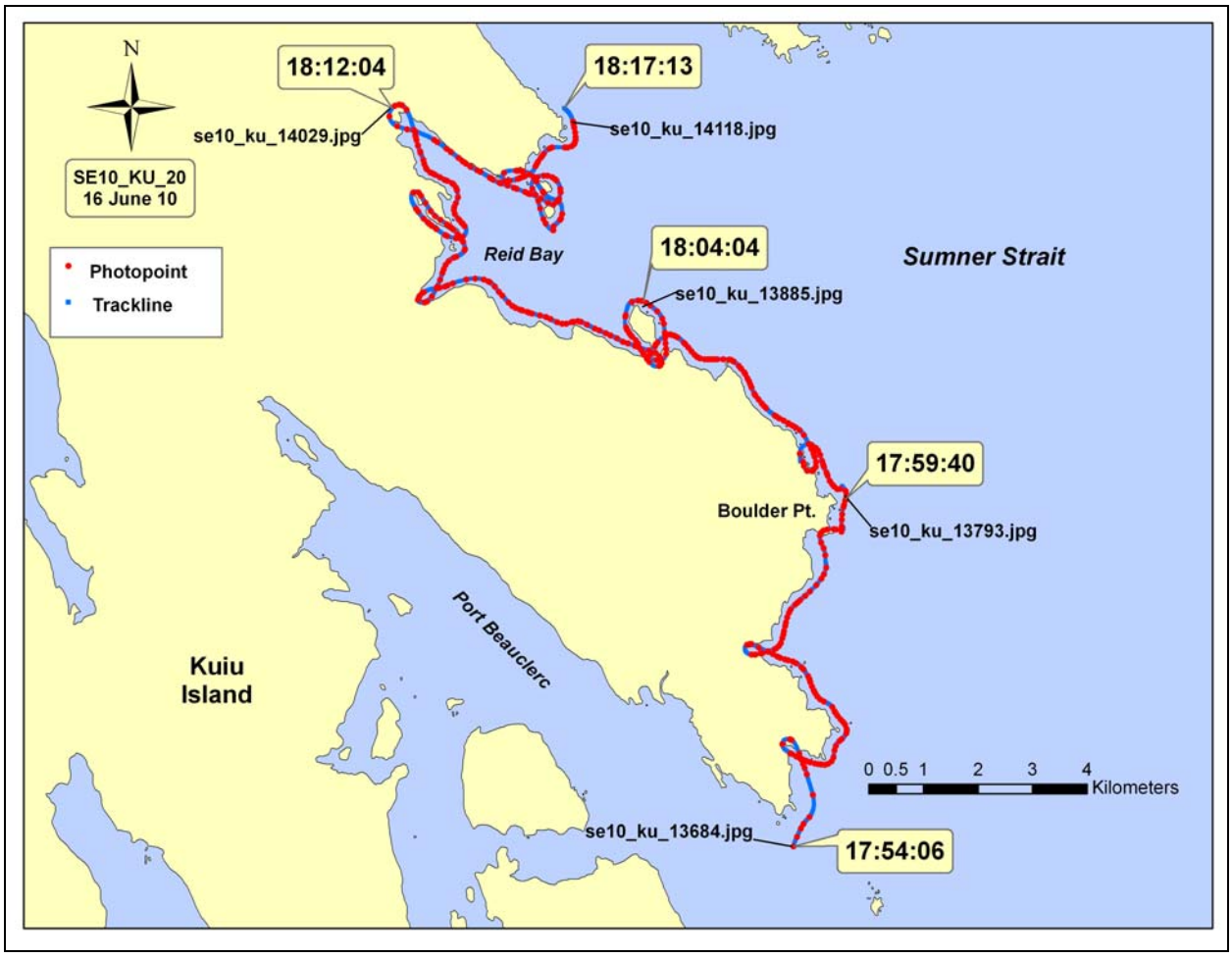

N

2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_19 **Date: 15 June 2010**

General Location: S Kosciusko Island
Time Start (UTC): 17:59:07 **Geo:** Daley
Fuel Break: None **Bio:** Morris
Time End (UTC): 18:09:02 **Nav:** Harper
Tape Length: 10 min 55 sec **Pilot:** Snider
Weather: Sunny, windy

Time (UTC)	Location	Photo
17:59:07	E entrance to Straw Pass, Kosciusko Is	se10_ku_13438.jpg
18:00:03	E entrance to Straw Pass	se10_ku_13446.jpg
18:06:26	S tip of Green Is	se10_ku_13577.jpg
18:09:02	Point near Entrance Is, Edna Bay	se10_ku_13631.jpg


N
SE10_KU_20
16 June 10
Photopoint
Trackline
18:12:04
se10_ku_14029.jpg
18:17:13
se10_ku_14118.jpg
Reid Bay
18:04:04
se10_ku_13885.jpg
Sumner Strait
17:59:40
Boulder Pt.
se10_ku_13793.jpg
Port Beauclerc
Kuiu
Island
0 0.5 1 2 3 4
Kilometers
se10_ku_13684.jpg
17:54:06

N

2010 Southeast Alaska Aerial Video Imaging Survey
Team Kuiu (KU)

Tape: SE10_KU_20 **Date: 16 June 2010**

General Location: E Kuiu Island
Time Start (UTC): 17:54:06 **Geo:** Harper
Fuel Break: None **Bio:** Morris
Time End (UTC): 18:17:13 **Nav:** Daley
Tape Length: 23 min 07 sec **Pilot:** Snider
Weather: Low overcast, calm

Time (UTC)	Location	Photo
17:54:06	E entrance to Beauclerc Bay, Kuiu Is	se10_ku_13684.jpg
17:59:40	Boulder Pt, S of Reid Bay	se10_ku_13793.jpg
18:04:04	Island at W entrance to Reid Bay	se10_ku_13885.jpg
18:12:04	Head of Reid Bay, Kuiu Is	se10_ku_14029.jpg
18:17:13	E entrance to Alvin Bay, Kuiu Is	se10_ku_14118.jpg

Note: Last survey to complete all shoreline imaging in SE Alaska

SE10 AVI Team Humpback Example Photos, Survey Day 1 May 27, 2010

George Islands, Inian Islands, Lemesurier Island and The Sisters in Icy Strait.

Islands surrounded by glacial silty water, bright aquamarine in color. Dominated by Dragon Kelp (ALF) in the nearshore subtidal.

Steep bedrock cliffs, George Islands, Icy Strait se10_hb_00572.jpg	White pollen from trees on the surface of the water, Inian Islands, Icy Strait se10_hb_00823.jpg
Large bed of Dragon Kelp (ALF) streaming in the current, Lemesurier Island, Icy Strait se10_hb_00912.jpg	Wide beach with Dragon Kelp (ALF) and Eelgrass (ZOS) in the subtidal, Lemesurier Island, Icy Strait se10_hb_00967.jpg

SE10 AVI Team Humpback Example Photos, Survey Day 2 May 28, 2010

Frederick Sound from Cape Fanshaw to Icy Cove, including Farragut Bay and Thomas Bay.

Area has extensive estuaries with wide tidal flats. Blue Mussels (BMU) form distinct dark bands on bedrock cliffs and large patches on tidal flats. Glacial silty water.

<table>
<tr><td> </td><td> </td></tr>
<tr><td>Black patches of Blue Mussel (BMU) on edge of tidal Farragut River estuary, Farragut Bay
se10_hb_01466.jpg</td><td>Large estuarine complex, southeast of Agassiz Point, Frederick Sound
se10_hb_01884.jpg</td></tr>
<tr><td> </td><td> </td></tr>
<tr><td>Steep narrow bedrock cliff, northeast of Porter Cove, Thomas Bay
se10_hb_02119.jpg</td><td>Baird Glacier, Thomas Bay
se10_hb_02136.jpg</td></tr>
</table>

SE10 AVI Team Humpback Example Photos, Survey Day 3 May 29, 2010

Northwest Kuiu Island from Gil Harbour to Kingsmill Point, including Hound Island, Keku Islands, Saginaw Bay and Security Bay.

Diversity of wave energies, shoreline habitats and substrate types.

Low wave cut platform with a veneer of fine sediment, Gil Harbour, Kuiu Island se10_hb_02891.jpg	Sand spit formation due to longshore drift, east Keku Islands se10_hb_02995.jpg
Sand beach mixed with rock ramp including backshore sediment deposits, southeast Saginaw Bay, Kuiu Island se10_hb_03806.jpg	Continuous banding of algae along limestone shoreline, west of Saginaw Bay, Kuiu Island se10_hb_04212.jpg

Kingsmill Point, northwest Kuiu Island south to Elena Bay, in Tebenkof Bay, Kuiu Island, including Rowan Bay, Bay of Pillars and the upper lagoon with current dominated channel at the head of Bay of Pillars.

The region is notable for the extensive Dragon Kelp (ALF) on the open coast facing Chatham Strait, the complex of islets and lagoons at the entrances of Rowan Bay and Bay of Pillars, ruins of old cannery sites in Washington Bay and Bay of Pillars, and the broad estuary flats at heads of all of the larger inlets.

<table>
<tr><td> </td><td> </td></tr>
<tr><td>Estuary at the head of Rowan Bay, northwest Kuiu Island
se10_ku_00736.jpg</td><td>Islets and rock ramps with abundant Dragon Kelp (ALF), outside Bay of Pillars, west Kuiu Island
se10_ku_01057.jpg</td></tr>
<tr><td> </td><td> </td></tr>
<tr><td>Ruins of cannery site, Bay of Pillars, west Kuiu Island
se10_ku_01484.jpg</td><td>Estuary salt marsh zonation, Elena Bay, upper Tebenkof Bay, west Kuiu Island
se10_ku_02893.jpg</td></tr>
</table>

SE10 AVI Team Kuiu Example Photos, Survey Day 2 June 12, 2010

South Tebenkof Bay from Petro Bay complex, outer west coast of Kuiu Island, south to Port Malmsbury, Table Bay to just north of Point Crowley, where we are stopped by rough winds and turbulence.

Exciting area of complex reefs and islets on open west coast, with several examples of overlapping three species of canopy kelps (ALF, MAC, NER). Diversity of wave energies, from sheltered inlets to open west coast.

<table>
<tr><td> </td><td> </td></tr>
<tr><td>Islet in Petrof Bay, Tebenkof Bay, mid-west side Kuiu Island
se10_ku_03066.jpg</td><td>High energy platform at Point Harris, southwest Kuiu Island
se10_ku_04569.jpg</td></tr>
<tr><td> </td><td> </td></tr>
<tr><td>Islet and Giant Kelp (MAC), upper Port Malmesbury, southwest Kuiu Island
se10_ku_04739.jpg</td><td>Looking south along Kuiu Island, from north of Table Bay
se10_ku_04955.jpg</td></tr>
</table>

SE10 AVI Team Kuiu Example Photos, Survey Day 3 June 13, 2010

East side of Kuiu Island, from Sumner Island, Strait Island, north through No Name Bay, Threemile Arm, southwest Rocky Pass, and closed gaps at south Port Camden as well as southwest corner of Kupreanof Island.

Mostly shelter inlets and bays, on east-facing shore of Kuiu Island, with highlights including the complex salt lagoon in upper Seclusion Harbor, fish traps and canoe runs in Rocky Pass and Port Camden, and areas of extensive *Ruppia* flats in Rocky Pass.

Sea otters in Dragon Kelp (ALF), east Kuiu Island
se10_ku_05729.jpg

Platforms near entrance to No Name Bay, east Kuiu Island
se10_ku_06274.jpg

Outflow tidal Salt Lagoon at head of Seclusion Harbor
se10_ku_06337.jpg

Flats and islets, Rocky Pass, between Kuiu Island and Kupreanof Islands
se10_ku_07703.jpg

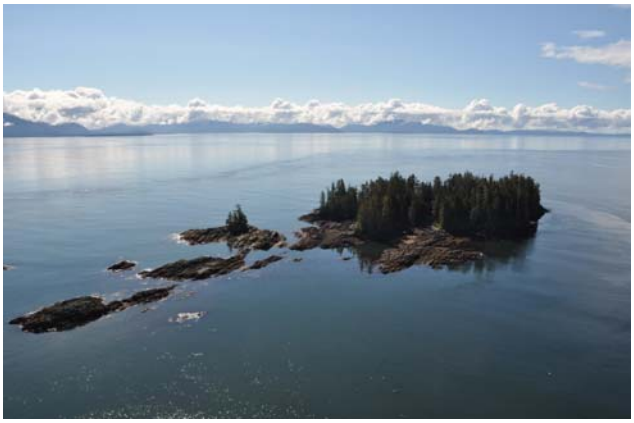
SE10 AVI **Team Kuiu Example Photos, Survey Day 4** **June 14, 2010**

Resume at exposed south entrance to Table Bay, on southwest Kuiu Island, round Cape Decision, north up the east side Kuiu through Kell Bay, Affleck Canal, round Point Albans and complete Port Beauclerc, lower east side of Kuiu Island.

Daily highlights included completing the open high energy exposed west coast at Cape Crowley and rounding Cape Decision to more shelter on east coast. Many locations with all three canopy kelps (ALF, MAC, NER) co-existing.

Cape Decision lighthouse, south tip of Kuiu Island
se10_ku_08509.jpg

Islet with eelgrass (ZOS), Bear Harbor, upper Affleck Bay, south Kuiu Island
se10_ku_09585.jpg



View southeast across Sumner Strait, from Port Beauclerc entrance, Prince of Wales Island on the horizon
se10_ku_10744.jpg

Estuary in upper Beauclerc Bay, southeast Kuiu Island
se10_ku_11057.jpg

SE10 AVI **Team Kuiu Example Photos, Survey Day 5** **June 15, 2010**

From Port McArthur, Kuiu Island, survey at Spanish Islands southward on to Coronation Island, along extremely rough downdraft winds on south coast. Cross to Warren Island and the section of Kosciusko Island from Cape Pole to Edna Bay.

Extremely rugged coast at Coronation Island with Very Exposed vertical limestone cliffs at Helm Point. Areas of California Mussel (MUS) bioband with gooseneck barnacles at Coronation Island, as well as at south Warren Island. Complex and lush platform lagoon complexes with Eelgrass and Surfgrass, lush biota at Halibut Harbor. Survey the southernmost extent of Dragon Kelp (ALF).

<table>
<tr><td> </td><td> </td></tr>
<tr><td>Very Exposed cliffs, southwest Coronation Island
se10_ku_12032.jpg</td><td>Gooseneck barnacle and California Mussel (MUS) band, south Warren Island
se10_ku_12377.jpg</td></tr>
<tr><td> </td><td> </td></tr>
<tr><td>Humpback whale and calf, nearshore along the east side of Warren Island
se10_ku_12464.jpg</td><td>Islets and Macrocystis (MAC) in Halibut Harbor, southwest Kosciusko Island
se10_ku_12904.jpg</td></tr>
</table>

SE10 AVI **Team Kuiu Example Photos, Survey Day 6** **June 16, 2010**

Short section of coast on east side of Kuiu Island, from north entrance Beauclerc Bay to north side of Reid Bay.

Semi-Protected and Protected bays on east side of Kuiu Island. Notable for lush Soft Brown Kelps (SBR).

<table>
<tr><td> </td><td> </td></tr>
<tr><td>Lush lower intertidal on platforms, near Boulder Point, southeast Kuiu Island
se10_ku_13813.jpg</td><td>Thick Soft Brown Kelps (SBR), including clumps of Cymathere, with nearshore Dragon Kelp (ALF), near Boulder Point, southeast Kuiu Island
se10_ku_13818.jpg</td></tr>
<tr><td> </td><td> </td></tr>
<tr><td>Small saltmarsh and mobile beach face, upper Reid Bay, east Kuiu Island
se10_ku_13987.jpg</td><td>Islet at north entrance to Reid Bay, east Kuiu Island
se10_ku_14086.jpg</td></tr>
</table>

References

Harney, J.N., Morris, M., and Harper, J.R. 2008. ShoreZone Coastal Habitat Mapping Protocol for the Gulf of Alaska. Report prepared for The Nature Conservancy, NOAA National Marine Fisheries Service, and the Alaska State Department of Natural Resources (Juneau, AK). 153 p.

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