Preface to 2023 KM_B field observer forms

The following information may be useful for interpreting these forms and includes notes from the survey:

1. Crew for 2023: Sean Eagan (SME, observer), Steve Hoekman (STH; observer), Linnea Pearson (LEP; observer), Allison Tuttle (ART; data recorder, observer in training), Jamie Womble (JNW; observer; data recorder), Thomas Ziomek (TRZ; data recorder). Vessel: R/V Capelin, Vessel Captain: Justin Smith (JGS).
2. Survey dates were July 5-7 and July 12-14, 2023. July 5th included training and practice not included in KM_B. From July 5-7, observers were STH, LEP, ART. From July 12-14 observer was JNW. SME was the second observer on July 14. Surveys were not conducted from July 8-11.
3. Data entry for the 2023 survey was done in SeaLog v2.3. as Park Observer is no longer supported. During the survey, minor software revisions to fix bugs and provide feature enhancements were made. Revision versions used were: 2.3.0_da, 2.3.1_da, 2.3.1_dar. QC procedures performed later were able to confirm that these revisions did not affect the data quality.
4. Overall, 34 (totaling 182 km) of 46 transects (251 km) planned for 2023 were surveyed.
5. Transects 202, 203, 206, and 213-221 were not surveyed.
6. Sampling on transect 205 on 5 July 2023 was aborted due to a cruise ship crossing the transect. These data should be excluded from analysis. The transect was resampled entirely on 7-6-2023.
7. Transect 020 (recorded on the bottom of the form for transect 021) was aborted due to radio issues at 13:30. It was restarted from the beginning of the transect at 13:35. Data entries between 13:24 and 13:30 should be excluded from analysis.
8. Observations of other bird and mammal species observed while on transect by some observers.
9. On several transects, the GPS stopped recording position. Survey efforts were paused until the problem could be fixed. Transect gaps are corrected in KM_D.
10. On Transect 008, the GPS error was not noticed by the data recorder, and as a result, many observations (from time 15:54:42 to 16:11:27) were recorded in one location along the transect. These observations are suitable for estimating abundance, but may be unsuitable for other analyses (e.g., spatial distribution). A data quality grade of 4 was assigned to these observations, along with a data quality comment, indicating loss of GPS.
11. High densities of KIMU occurred in Hugh-Miller and Scidmore Inlet, mouth of the East Arm, and Reid Inlet. High densities for marbled murrelets occurred in the mid bay, mouth of East Arm, and mouth of lower bay.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 001
Vessel CAPELIN Page 1 of ___
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 1246 / 1258 |
In Alaska Daylight Time

Date 05-JUL-23
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
STARTED	SHORT OF TRANSECT DUE TO				KELP				
STOPPED	SHORT OF END OF	TRANSECT	DUE TO	KELP.					

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
○ Corrections to auto data capture,
or ○ Manual record of observations

Transect 002
Vessel Capelin Page __ of __
Obsrvr 1 STH
Only observer of left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 13:13 14:14 |
In Alaska Daylight Time

Date 06 - JUL 2023
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500 m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
Whale		400 m		135°					
5 Tufted Puffins		80 m		90°					
3 Whales @ South Marble									
2-3 Sea lions	300 m			270°					
Murrelet w/ capelin			50 m,	90°					
2 otters		300 m,		235°					
1 otter		150 m,		225°					
1 otter		100 m,		270°					
400+ surf scoters		on	N.	tip of	Leland	Island			
~20 mergansers		on	N.	tip of	Leland	Island			
2 otter (mom + pup)		100 m,		190°					
2 otter (mom + pup)		160 m,		160°					
2 otter (mom + pup)		50 m		260°					
2 Pacific loons		100 m		250°					

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
◯ Corrections to auto data capture,
or ◯ Manual record of observations

Transect 003 Date 6-Jul-2023

Vessel Capelin Page ___ of ___ Recorder TRZ

Obsrvr 1 STH Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 LEP Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 14:39 15:41 | Beaufort 0

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
3 whales		400	m W	of	N. Marble Island				
2 otters		250	m		135°				

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
○ Corrections to auto data capture,
or ⊘ Manual record of observations

Transect 004 | Date 6-Jul-2023
Vessel Capelin | Page __ of __ | Recorder TZ
Obsrvr 1 STH | Weather 0
Only observer, or left observer of 2-person team | (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Obsrvr 2 LED | Visibility (m) 1
Right observer of a 2-person team | (1) > 500m (2) 250-500m (3) < 250m
Start | end 15:59 | 16:55 | Beaufort 0
In Alaska Daylight Time | (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
3 gulls		foraging		200 m,	165°				
16:16	90	190		1	M				
1 tufted puffin				100 m,	135°				
Common loon				100 m,	120°				
Many small fish jumped in unison				70 m	on the centerline				
+1 session 3	whales		200 m		190°	next to shoreline			
Otter			130 m,	90°					
2 common loon			150 m,		100°				
1 whale			400 m		250°				
CORRECTION*		030		1	M				
			*	{change to 2					

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 005 Date 07-JUL-2023

Vessel Caplin Page 1 of 1 Recorder TRZ

Obsrvr 1 STH Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 LEP Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 09:10 | 1007 | Beaufort 0

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record key~~ TIME	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
0854	3 WHALES	NEAR SHORE	AT START OF TRANSECT						
		+ 2	SEA LIONS						
0914	HARLEQUIN DUCKS AND SURF SCOTERS NEAR STURGIS ISLAND								
0948	HARBOR SEAL	at 200° 70m							
0958	100	50	2 HARBOR PORPOISE						
0959	2 JUVENILE	KITTIWAKES, 1 ADULT							
1006	@180		ANCIENT MURRELET						

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
◯ Corrections to auto data capture,
or ◯ Manual record of observations

Transect 006
Vessel CAPELIN Page ___ of ___
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 13:18 14:15 |
In Alaska Daylight Time

Date 7-JUL-2023
Recorder ART
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
HARBOR	SEAL	OFF BOW		20 m	100°				
TWO SEA LIONS	GO	M OFF	OF	BOW	@	U	STURGIS		
n 20	SUSC	FLUSHED	AS	WE APPROACHED		2nd	HALF	OF	
		TRANSECT	(	E. STURGIS)					
ONE	UNHAE		400 M		140°				

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 007 | Date 7-JUL-2023
Vessel CAPELIN | Page 1 of 1 | Recorder ART
Obsrvr 1 STH (Only observer, or left observer of 2-person team) | Weather 0 (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Obsrvr 2 LEP (Right observer of a 2-person team) | Visibility (m) 1 (1) > 500m (2) 250-500m (3) < 250m
Start | end 14:32 15:37 (In Alaska Daylight Time) | Beaufort 0 (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
Two whales		off port side			200m	100°			
					300 m	60°			
Flock of		gulls	feeding		300 m	90°			
* 14:56	-14:57	one	record	did	not save				
20+ Kittiwakes	?	mumelers	feeding		350 m	235°			
QC - Record 24909 1528	?	?		3	M	missed angle/distance due to radio			

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 008 | Date 7-Jul-2023
Vessel Capelin | Page 1 of 1 | Recorder ~~EZ~~ ART
Obsrvr 1 STH | Weather 0
Only observer, or left observer of 2-person team | (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Obsrvr 2 LED | Visibility (m) 1
Right observer of a 2-person team | (1) > 500m (2) 250-500m (3) < 250m
Start | end 1548 | 1657 | Beaufort 0
In Alaska Daylight Time | (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1605	HARBOR PORPOISE		KITTIWAKES, PUFFINS,		SEA OTTERS IN		TRANSECT		
1608	GPS lost. Stopped		transect, restarted with GPS active.						
	AFTER FIRST		THREE RECORDS,		REMAINING COORDINATES		QUESTIONABLE		
1613	RESUMED TRANSECT		WITH GPS		RESTORED			(PROBABLY WRONG)	
	NOTE THERE WAS A LARGE		NUMBER OF		KIMU		OFF TRANSECT		
	TOWARD EAST		ARM.		AROUND		1630.		

QC: All obs between 15:54:42 through 16:11:27 assigned data_quality 4.

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 009
Vessel CAPELIN Page 1 of ___
Obsrvr 1 JNW
Only observer, or left observer of 2-person team
Obsrvr 2 ___
Right observer of a 2-person team
Start | end ___ |
In Alaska Daylight Time

Date 14-JUL-23
Recorder TRZ
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record~~ key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
0947	B-1								
0949	B-0								
1007	B-1								
1010	STOPPED SHORT DUE TO KELP								
	END TRANSECT								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 010
Vessel CAPELIN Page 1 of ___
Obsrvr 1 JNW
Only observer, or left observer of 2-person team
Obsrvr 2 ___
Right observer of a 2-person team
Start | end 1056 | 1122 |
In Alaska Daylight Time

Date 14-JUL-23
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key (TIME)	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1100	B-1								
1104	B-0								
1112	WHALE BEARING 180°								
	BIRDS W/ FISH								
1116	B-1								
1122	END TRANSECT								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 011 Date 14-JUL-23

Vessel CAPELIN Page 1 of 1 Recorder TRZ

Obsrvr 1 JNW Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 _____ Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 1130 | 1154 | Beaufort 1

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record~~ TIME ~~key~~	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1132	MANY [illegible] KIMU TO PORT OF TRANSECT								
1146	FISH JUMPING ON TRANSECT								
1155	270° 130m 2K								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 012
Vessel CAPELIN Page 1 of ___
Obsrvr 1 ~~[illegible]~~ SMG
Only observer, or left observer of 2-person team
Obsrvr 2 ~~SMG~~ JNW
Right observer of a 2-person team
Start | end 1240 1313 |
In Alaska Daylight Time

Date 14-JUL-23
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1252	B-	1							
1304	B-	2							

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 013
Vessel CAPELIN Page 1 of 1
Obsrvr 1 SME
Only observer, or left observer of 2-person team
Obsrvr 2 JNW
Right observer of a 2-person team
Start | end 1430 1442 |
In Alaska Daylight Time

Date 14-JUL-23
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1440	SEALS ON		TRANSECT	1	200m				

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 014, 015, 017
Vessel CAPELIN Page 1 of 1
Obsrvr 1 JNW
Only observer, or left observer of 2-person team
Obsrvr 2
Right observer of a 2-person team
Start | end 1330 | 1343 |
In Alaska Daylight Time

Date 12-JUL-23
Recorder TRZ
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

TRANSECT	~~Record key~~	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
014	1343	NOTHING TO REPORT								
015	1350	START		W-1	V-1	B-1				
	1414	B-2								
		JNW NOTES THE LIGHTING IS POOR								
	1426	END TRANSECT								
017	1434	START		W-1	V-1	B-1				
	1434	3 PORPOISES	0 ~~180 2 360~~				270°	~100m	ON TRANSECT	
	1445	B-2								
	1449	SEVERAL HUNDRED SURF SCOTERS JUST OUTSIDE WEIRD BAY								
	1451	LOONS TO PORT								
	1502	END TRANSECT								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 016, 018 Date 12-Jul-2023

Vessel Capella Page 1 of 1 Recorder TRZ

Obsrvr 1 JNW Weather 1

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end | Beaufort 1

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

	~~Record~~ Time key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
016	1508	START TRANSECT								
	1519	JNW REPORTS SEVERE GLARE								
	1530	HARBOR SEALS HAULED OUT 180° ON POINT. END TRANSECT								
		TO NOT DISTURB THEM. NO BIRDS NOTICED.								
018	1653	START TRANSECT			W-1	V-1	B-0			
	1704	B-2								
	1717	COMPUTER FROZE, RESTARTED. NO RECORDS LOST.								
	1719	END TRANSECT								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 019
Vessel CAPELIN Page 1 of ___
Obsrvr 1 JNW
Only observer, or left observer of 2-person team
Obsrvr 2 ___
Right observer of a 2-person team
Start | end ___ |
In Alaska Daylight Time

Date 13-JUL-23
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) ≥ 500m (2) 250-500m (3) < 250m
Beaufort 2
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record~~ key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
019 1432	ON TRANSECT			V-1	W-0	B-2			
1443						B-3			
1452	TRANSECT COMPLETE								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 021 Date 13-JUL-23

Vessel CAPELIN Page 1 of ___ Recorder TRZ

Obsrvr 1 JNW Weather ___

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 ___ Visibility (m) ___

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 1[illegible] | Beaufort ___

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key / TIME	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
021 1254	ON TRANSECT				V-1	W-0	B-2		
1309							B-0		
	TRZ NOTE:	PRIOR TO TRANSECT, 2 CRUISE SHIPS AND							
		1-100 FT YACHT CROSSED TRANSECT. AT LEAST							
		15 MIN ELAPSED SINCE LAST BOAT CROSSED							
1313	TRANSECT COMPLETE								
020 1324	ON TRANSECT				V-1	W-0	B-1		
1326	WHALE AT REID ENTRANCE								
1330	TRANSECT HALTED DUE TO RADIO ISSUES. RESTARTING AT BEGINNING								
1335	ON TRANSECT								
1337	WHALE FORAGING ON MORNING B 180° ~ 0.1 NM								
1355	B3 BUT CONTINUING REMAINDER OF TRANSECT						B-3		
1400	PORPOISES B 180° ON TRANSECT								
1402	CAPTAIN REPORTS NUMEROUS FISH ON SOUNDER								
1411	HARBOR SEAL @ 150m								
	CAPTAIN REPORTS NUMEROUS FISH ON SOUNDER								
1412	TRANSECT COMPLETE								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 024, 025, 023, 022 Date 13-JUL-23

Vessel CAPELIN Page 1 of 1 Recorder TRZ

Obsrvr 1 JNW Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 _____ Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end _____ | Beaufort 0

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record key~~	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
024	0840	ON TRANSECT		V-1	W-0	B-0			
	0900	TRANSECT COMPLETE							
025	0911	ON TRANSECT		V-1	W-0	B-0			
	0927	LARGE YACHT CROSSING TRANSECT ABOUT 0.3 NM							
		AHEAD OF OUR CURRENT POSITION							
		NOT SEEING ANY BIRDS BEING FLUSHED							
	0940	TRANSECT COMPLETE							
023	1026	ON TRANSECT		V-1	W-0	B-1			
	1032					B-2			
	1043					B-1			
	1044					B-0			
	1051	TRANSECT COMPLETE.							
022	1057	ON TRANSECT		V-1	W-0	B-0			
	1103	SAILBOAT CROSSED TRANSECT AT 0.2 NM							
	1112					B-2			
	1120					B-1			
	1124	TRANSECT COMPLETE							

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 201
Vessel CAPELIN Page 1 of 1
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 0742 | 0840
In Alaska Daylight Time

Date 06-JUL-23
Recorder ART
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0, 6 see note
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record~~ Time key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
HARBOR PORPOISE ALONG TRANSECT (SITKA KOAST)						0807	180m		
NOTE FROM JUSTIN (CAPTAIN), DUE TO STRONG CURRENT, SOME DRIFT									
SEVERAL SEA LIONS FORAGING AT START OF TRANSECT. ONE HAD A LARGE FISH									
0813	SEA LIONS BEARING			045	~150m				
0821	CAPTAIN REPORTS STRONGER EBB CURRENT								
	BEAFORT 1 - see data for time								
0839	1M - JUVENILE								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 204
Vessel CAPELIN Page 1 of 1
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 0928 | 0955 |
In Alaska Daylight Time

Date 06-JUL-23
Recorder TRZ
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd	Obs
0942		50m	F		Harbor porpoise					ART
0945	270°	150-250m			Sea otters					ART
0950	110°	200m			Sea otter					ART
0954	180°	150m			Sea otter					ART
0955	180°	150m			Sea otter					ART
0955	90°	100m			Harbor seal					ART
End	Survey									

*ART = Allison R. Turke - Observer in training quantifying birds + mammals along murrelet survey; while learning murrelet ID.

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 205
Vessel CAPELIN Page 1 of ___
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 1347 / 1356 |
In Alaska Daylight Time

Date 05-JUL-23
Recorder ART
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) /
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
TRANSECT ABORTED DUE TO CRUISE SHIP CROSSING.									

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
○ Corrections to auto data capture,
or ○ Manual record of observations

Transect 205 | Date 06 JUL -23
Vessel Capelin | Page 1 of ___ | Recorder TRZ
Obsrvr 1 STH | Weather 1
Only observer, or left observer of 2-person team | (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Obsrvr 2 LEP | Visibility (m) 1
Right observer of a 2-person team | (1) >500m (2) 250-500m (3) < 250m
Start | end 1003 | 1039 | Beaufort 0
In Alaska Daylight Time | (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record key~~ TIME	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd	Obs
	Boat	crossing		transect		21				
1010	225	220m			SEOT					ART MRE
1018	90	350m			HAPO					
1026				1	MAMU	JUVENILE		IN group of 7		
	END		SURVEY							

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(⊘) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 207 Date 05-JUL-23

Vessel CAPELIN Page 1 of 1 Recorder ART

Obsrvr 1 STH Weather 0

Only observer, or left observer of 2-person team

(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 LEP Visibility (m) 1

Right observer of a 2-person team

(1) > 500m (2) 250-500m (3) < 250m

Start | end 1412 | 1428 | Beaufort 1

In Alaska Daylight Time

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
2 WHALES S. of JOHNSON COVE				~400m @ bearing 190					

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
⊗ Corrections to auto data capture,
or ○ Manual record of observations

Transect 208
Vessel Capelin Page ___ of ___
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 1444 / 1542 |
In Alaska Daylight Time

Date 05-JUL-23
Recorder TZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
3 Whales		SE of	S.	Marble	Island	-	Diving	& foraging	
Caspian	tern	caught	a fish	200	m	off	bow		

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 209
Vessel Capelin Page __ of __
Obsrvr 1 STH
Only observer, or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 1114 | 1129 |
In Alaska Daylight Time

Date 06 Jul 23
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
TIME									OBS
1118	180°	300m			HASE				HRT
1128	90°	150m			PIGU	Holding fish			
					PIGU	nesting on cliff face on Francis			
1128					TUPU	(8 in water)			
	(58.62744 - 136.18674 on Francis Island					location of nesting PIGU			
	End Survey								

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
Ø Corrections to auto data capture,
or ○ Manual record of observations

Transect 210
Vessel Capelin Page 1 of 1
Obsrvr 1 STH
Only observer or left observer of 2-person team
Obsrvr 2 LEP
Right observer of a 2-person team
Start | end 1138 | 1212 |
In Alaska Daylight Time

Date 6 July 2023
Recorder TRZ
Weather 0
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

~~Record key~~ TIME	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1143				1	SEOT				
1157	210	150		4	SEOT				
1153	Fish	jumping		8					
	Computer	briefly			stopped				
	END	survey							

OBS ART ART

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
◯ Corrections to auto data capture,
or ◯ Manual record of observations

Transect 211 Date 7-Jul-2023

Vessel CAPELIN Page __ of __ Recorder ART

Obsrvr 1 STH Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 LEP Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 10:11 11:16 | Beaufort 0

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	**Angle** 0-359°	**Distance** (m)	**Behavior** W/F	**# in Group**	**Species** K/M/U	**GPS Waypnt**	**ADT** 24:mm	**Latitude** dd.ddddd	**Longitude** -ddd.ddddd
Cruise	ship	passed	behind	the	Capelin	@ 10	:42		
Harbor	seals	hauled	out	on	Gribbe	Rock			

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
◯ Corrections to auto data capture,
or ◯ Manual record of observations

Transect 212 Date 7-Jul-2023

Vessel Capelin Page ___ of ___ Recorder ADT

Obsrvr 1 STH Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 LEP Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 11:42 12:29 | Beaufort 0

In Alaska Daylight Time (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key	**Angle** 0-359°	**Distance** (m)	**Behavior** W/F	**# in Group**	**Species** K/M/U	**GPS Waypnt**	**ADT** 24:mm	**Latitude** dd.ddddd	**Longitude** -ddd.ddddd
HARBOR	SEALS	HAULED	OUT	ON	LONE	ISLAND			

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.