

APPENDIX 1

Transect distances (km)

Zone	Open/coastal	2020				2021			2022	
		Survey 1	Survey 2	Survey 3	Survey 4	Survey 1	Survey 2	Survey 3	Survey 1	Survey 2
		16-19 Aug	31 Aug - 3 Sep	14-17 Sep	29 Sep -1 Oct	13-14 Sep	28-30 Sep	12-15 Oct	14-16 Sep	26-28 Sep
Outer Strait	Open water	51.3	51.3	51.3	51.3	63.5 ^a	63.5 ^a	47.4	63.5 ^a	63.5 ^a
Inner Strait	Open water	50.2	50.3	45	45	51	57.5	43	51	57.5
Cormorant Ch.	Open water	37.8	33.5	39.9	32.4	35	71.9	35	35	71.9
Cormorant Ch.	Shoreline	21.3	20.6	20.6	22.1	31.7	31.3	31.7	31.7	31.3
Johnstone Str.	Open water	44.7	34.6	52.8	45.4	54.2	54.2	54.2	54.2	54.2
Johnstone Str.	Shoreline	11.6	19.8	20.8	19.2	14.8	14.8	14.8	14.8	14.8
N shore, Malcolm I.	Shoreline	15.1	17.3	24.2	17.8	16.6	16.6	16.6	32.9 ^b	17.8
Totals										
All transects		232	227.4	254.6	233.2	266.8	309.8	242.7	283.1	311
Open water		184	169.7	189	174.1	203.7	247.1	179.6	203.7	247.1
Shoreline		48	57.7	65.6	59.1	63.1	62.7	63.1	79.4	63.9

^a A diagonal transect was added to the N-S transects to improve the sample size for the densest aggregation area

^b On this survey we covered the whole north coast of Malcolm Island

APPENDIX 2
Correction factors used to correct for detectability*

Species	P_a	
	Mean	95% CI
Surf Scoter (SUSC)	0.564	0.345-0.921
American Wigeon (AMWI)	0.564	0.345-0.921
Red-necked Phalarope (RNPH)	0.529	0.519-0.540
Common Murre (COMU)	0.537	0.478-0.604*
Pigeon Guillemot (PIGU)	0.602	0.541-0.671*
Ancient Murrelet (ANMU)	0.537	0.478-0.604
Rhinoceros Auklet (RHAU)	0.516	0.401-0.665*
Marbled Murrelet (MAMU)	0.529	0.519-0.540*
California Gull (CAGU)	0.564	0.345-0.921*
Glaucous-winged Gull (GWGU)	0.564	0.345-0.921*
Iceland (Thayer's) Gull (THGU)	0.564	0.345-0.921
Mew Gull (MEGU)	0.564	0.345-0.921
Black-legged Kittiwake (BLKI)	0.564	0.345-0.921
Common Loon (COLO)	0.537	0.478-0.604
Pacific Loon (PALO)	0.537	0.478-0.604
Red-necked Grebe (RNGR)	0.537	0.478-0.604
Fork-tailed Storm Petrel (FTSP)	0.529	0.519-0.540

* Original estimates from Ronconi & Burger (2009, Table 3). Others are assigned; see Methods