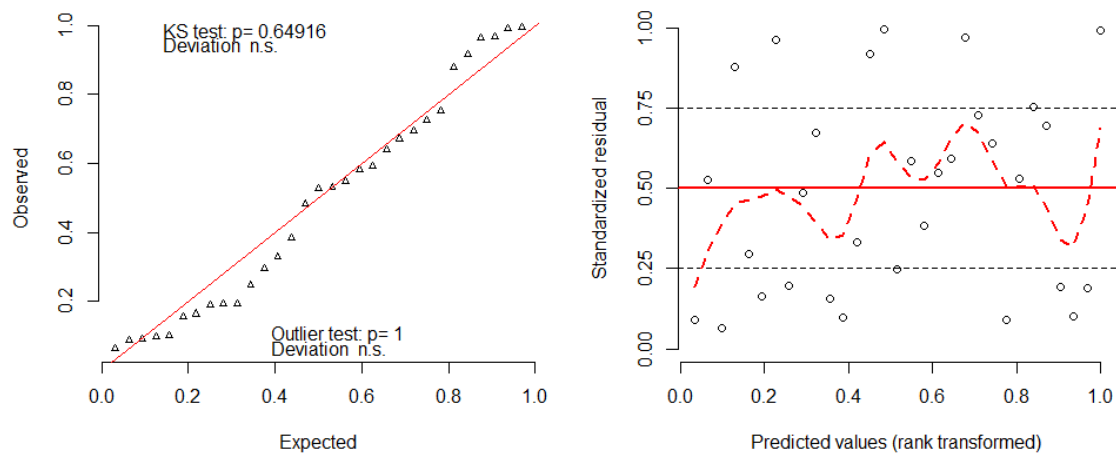


# Wanted dead or alive: characterizing likelihood of juvenile Steller sea lion predation from diving and space use patterns

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**Fig. S1.** Validation of the residuals for the best generalized linear mixed-effect model including vertical-dive predictor values (Table 2b). A QQ-uniform plot (left) indicates no significant deviation detected from overall uniformity of the residuals, and a plot of the residuals against predicted values (right) suggests uniformity in the vertical direction, with no outliers identified.

**Table S1.** Seasonal values (SS – spring/summer; FW – fall/winter) of home range area, average trip distance, average dive depth, and average percentage time wet for each individual.

<b>ID</b>	<b>Release Date (mm/dd/yy)</b>	<b>Tracking Season</b>	<b>Vital Status</b>	<b>Home Range Area (km<sup>2</sup>)</b>	<b>Trip Distance (km)</b>	<b>Dive Depth (m)</b>	<b>%Time Wet</b>
LHX2_07	5/14/14	SS	Dead	367.65	32.29		
LHX2_08	5/14/14	SS	Dead	159.25	11.80		
LHX2_11	8/28/14	FW	Dead	329.70	11.24		
TJ27	4/16/06	SS	Dead	1276.98	20.55	20.88	
TJ32	10/10/07	FW	Dead	186.22	6.50	21.66	77.84
TJ33	10/10/07	FW	Dead	411.59	7.12	28.56	72.51
TJ35	10/9/07	FW	Dead				
TJ43	11/12/08	FW	Dead	866.04	45.15	32.12	73.26
TJ43	11/12/08	SS	Dead				
TJ44	11/11/08	FW	Dead	276.50	9.31	11.98	42.68
TJ46	11/11/08	FW	Dead	332.81	34.97	34.40	75.13
TJ47	11/11/08	FW	Dead	920.40	24.65	36.13	60.98
TJ51	7/21/09	SS	Dead				
TJ52	7/29/09	SS	Dead	44.97	4.50	17.00	42.99
TJ52	7/29/09	FW	Dead				
TJ54	7/21/09	SS	Dead	112.89	3.09	34.88	33.24
TJ57	11/24/10	FW	Dead	1911.43	50.04	24.48	68.18
TJ57	11/24/10	SS	Dead				
TJ58	11/23/10	FW	Dead	1750.71	25.09	61.73	61.99
TJ59	11/23/10	FW	Dead	9163.48	74.08	37.81	67.55
TJ59	11/23/10	SS	Dead				
TJ62	6/29/11	SS	Dead	223.45	24.97	14.03	58.45
TJ63	6/22/11	SS	Dead				
TJ64	6/22/11	SS	Dead				
LHX2_03	5/14/14	SS	Alive	430.46	10.18	12.87	55.06
LHX2_04	5/14/14	SS	Alive	323.17	13.28	11.47	63.42
LHX2_05	5/14/14	SS	Alive	133.92	9.25		
LHX2_09	8/28/14	FW	Alive	108.27	7.54		
LHX2_10	8/28/14	FW	Alive	421.03	13.00	39.33	65.98
LHX2_12	8/28/14	FW	Alive	117.75	3.97		
TJ22	11/22/05	SS	Alive	92.95	50.53	33.57	
TJ22	11/22/05	FW	Alive	1980.78	54.67	37.76	
TJ23	11/22/05	FW	Alive	2393.99	28.09	41.08	
TJ24	4/17/06	SS	Alive	817.43	25.89	23.69	

TJ25	4/17/06	SS	Alive	1550.95	30.98	17.10	
TJ26	4/17/06	SS	Alive	1376.90	25.63	16.63	
TJ34	10/9/07	FW	Alive	106.73	7.72	32.26	82.57
TJ34	10/9/07	SS	Alive	241.61	11.08	22.63	92.37
TJ36	10/9/07	FW	Alive	400.02	5.80	32.31	59.87
TJ38	4/29/08	SS	Alive	140.89	5.71	14.18	68.98
TJ39	4/29/08	SS	Alive	1228.23	22.65	15.89	68.24
TJ40	4/29/08	SS	Alive	168.01	7.64	12.03	48.66
TJ41	4/29/08	SS	Alive	1155.64	15.04	17.38	60.00
TJ45	11/12/08	FW	Alive	2173.90	57.80	37.84	73.38
TJ48	11/11/08	SS	Alive	203.97	4.53	27.09	63.72
TJ48	11/11/08	FW	Alive	109.08	4.58	48.44	54.86
TJ50	7/29/09	SS	Alive			12.92	50.27
TJ53	9/10/09	FW	Alive				
TJ55	7/29/09	FW	Alive	48.48	4.25	52.91	47.28
TJ55	7/29/09	SS	Alive	123.45	5.50	17.84	47.28
TJ56	11/24/10	FW	Alive	2365.89	57.20	22.82	75.83
TJ60	12/20/10	FW	Alive	177.43	21.67	17.47	74.85
TJ61	6/29/11	SS	Alive			15.66	58.15

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**Table S2.** Outcomes of Mann-Whitney U test (W-Statistic, p-value, and Median Differences) for 50 randomization trials comparing differences in average dive depth for animals whose end of track was a predation event (n=3) versus animals whose SDR stopped transmitting due to other reasons (end of record, EOR, n=13). Highlighted rows indicate trials where there was a significant difference.

<b>Trial</b>	<b>p-value</b>	<b>W</b>	<b>Median Difference EOR</b>	<b>Median Difference Mortality</b>
1	0.296	28	4.359	-13.313
2	0.439	13	4.571	10.421
3	0.439	26	6.412	-1.024
4	1.000	20	2.063	8.271
5	0.704	16	5.584	17.347
6	0.146	31	4.552	-10.470
7	0.439	26	2.350	-8.746
8	<i>0.007</i>	38	<i>1.193</i>	<i>-15.648</i>
9	0.239	29	3.818	-17.832
10	0.111	32	4.446	-17.816
11	0.800	22	2.921	-1.198
12	<i>0.025</i>	36	<i>11.425</i>	<i>-9.718</i>
13	<i>0.014</i>	37	<i>13.246</i>	<i>-3.172</i>
14	0.296	28	2.757	-16.456
15	<i>0.004</i>	39	<i>8.685</i>	<i>-17.191</i>
16	0.296	28	5.043	-5.595
17	0.364	27	1.695	-9.274
18	0.611	24	6.417	-8.402
19	0.364	27	5.687	-12.508
20	0.239	29	8.606	-21.220
21	0.296	28	5.970	-1.289
22	0.239	29	4.434	-16.313
23	<i>0.014</i>	37	<i>3.572</i>	<i>-16.753</i>

24	0.364	27	4.637	-10.558
25	0.364	27	14.639	-7.923
26	0.025	36	4.882	-13.798
27	0.239	29	1.295	-17.351
28	0.004	39	1.309	-34.364
29	1.000	20	0.501	0.753
30	0.004	39	7.771	-32.044
31	0.364	27	10.829	-9.932
32	0.189	30	9.836	-0.176
33	0.439	26	7.276	-10.909
34	0.704	16	2.514	3.819
35	0.039	35	4.106	-16.812
36	0.039	35	3.686	-15.360
37	0.025	36	6.301	-28.057
38	0.800	17	7.712	13.550
39	1.000	19	8.805	1.061
40	0.800	17	2.799	17.649
41	0.239	29	3.485	-27.832
42	0.296	28	-0.714	-11.227
43	0.439	26	7.265	-19.020
44	0.364	27	7.635	-5.932
45	0.800	22	8.301	-10.333
46	0.800	22	3.984	2.952
47	0.007	38	-1.062	-21.754
48	0.296	28	10.247	-1.862
49	0.296	28	3.908	-21.869
50	0.057	34	4.127	-27.511

**Table S3.** Outcomes of Mann-Whitney U test (W-Statistic, p-value, and Median Differences) for 50 randomization trials comparing differences in percent time wet for animals whose end of track was a mortality event (n=3), versus animals whose SDR stopped transmitting due to other reasons (end of record, EOR, n=8). Highlighted rows indicate trials where there was a significant difference.

<b>Trial</b>	<b>p-value</b>	<b>W</b>	<b>Median Difference EOR</b>	<b>Median Difference Mortality</b>
1	0.497	8	2.211	24.283
2	0.630	9	2.268	22.621
3	0.279	6	12.435	17.530
4	0.376	7	3.557	16.667
5	0.630	9	11.864	23.311
6	0.085	21	16.180	-14.163
7	0.497	8	1.354	17.153
8	0.630	15	13.821	-11.650
9	0.776	14	13.292	-2.780
10	0.497	8	11.304	24.294
11	0.497	8	10.276	35.192
12	0.776	14	13.658	6.583
13	0.497	8	5.438	9.488
14	0.921	13	24.948	14.288
15	0.497	16	11.813	-2.954
16	0.630	9	8.040	21.503
17	0.630	9	6.403	28.123
18	0.630	9	13.080	19.632
19	0.279	6	6.990	15.425
20	1.000	12	24.449	6.775
21	0.630	15	19.724	3.050
22	0.194	5	14.153	49.708
23	0.776	14	12.386	18.597
24	0.279	18	18.028	-4.233
25	0.497	8	-7.152	24.883
26	0.776	14	7.891	3.043

27	0.776	10	10.888	17.892
28	0.776	14	2.861	0.088
29	0.048	2	4.443	36.593
30	0.921	11	12.914	16.550
31	0.921	11	2.190	5.917
32	0.497	8	31.906	36.383
33	0.630	9	2.518	28.896
34	0.279	6	10.017	25.308
35	0.497	16	9.421	-10.513
36	0.133	4	10.705	27.332
37	0.279	18	23.483	-2.408
38	0.085	21	17.938	-5.827
39	0.497	16	3.813	-16.263
40	1.000	12	1.271	0.633
41	1.000	12	14.390	23.083
42	0.376	7	14.588	20.333
43	0.921	11	18.590	20.208
44	0.921	11	-0.987	-2.558
45	0.194	5	-6.315	21.568
46	0.776	10	7.601	13.325
47	0.497	8	9.891	36.708
48	0.497	8	15.925	18.683
49	0.630	9	-3.491	24.329
50	0.085	3	-7.391	28.400