

## Supplementary material

Rob S.A. van Bemmelen, Hans Schekkerman & Ruben C. Fijn (2025) Tracking of Black-legged Kittiwakes from an offshore platform in the Dutch North Sea during summer.

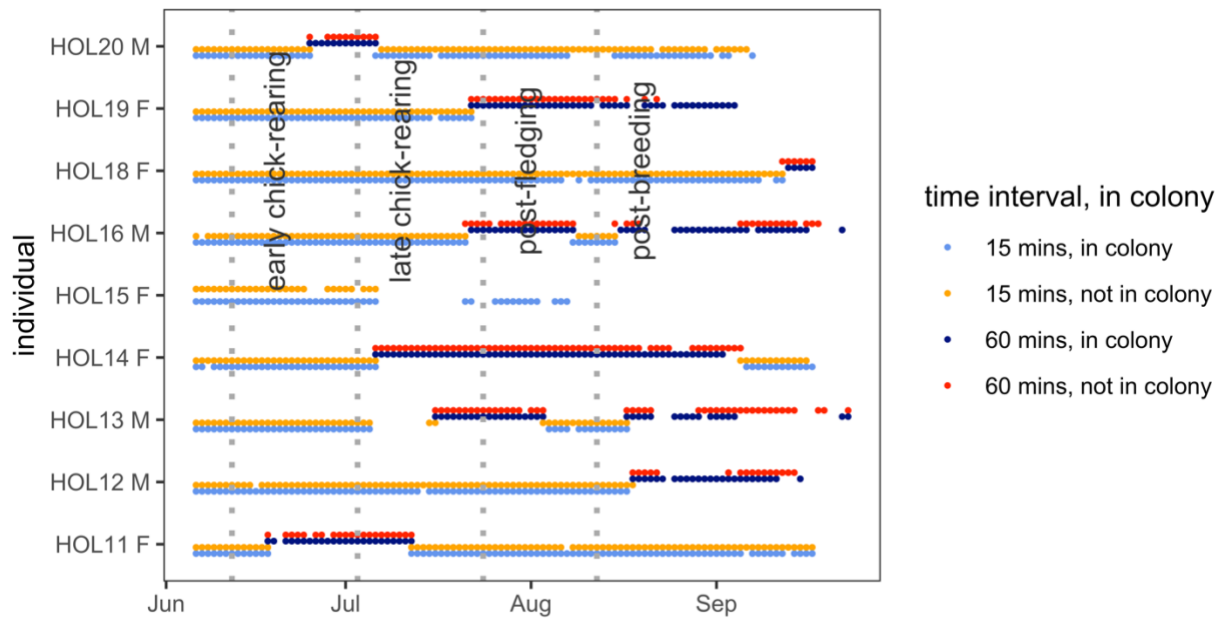
Seabird 37.

**Table A1.** Overview of tagged individuals. The number of positions refers to positions, taken at 15- or 60-minute intervals, further than 1 km from the platform center. Kittiwake ID HOL17 presumably lost its logger directly after tagging and is not included here.

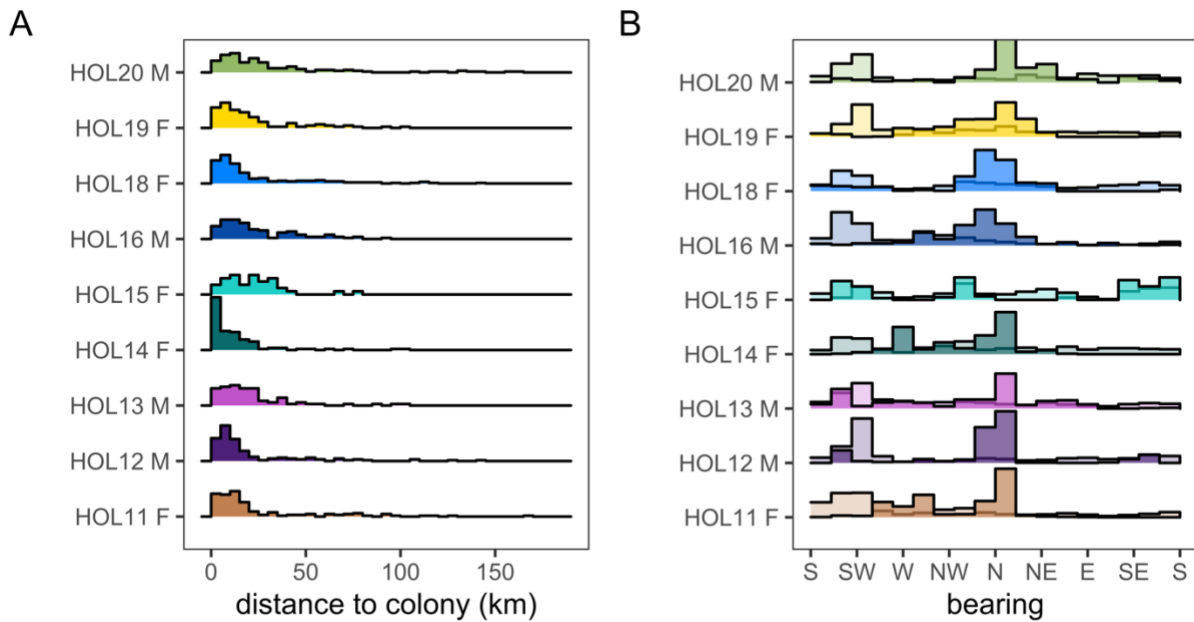
<b>logger ID</b>	<b>sex</b>	<b>n positions</b>	<b>n days</b>	<b>n trips</b>	<b>last date</b>
HOL11	F	1,967	104	318	17 Sep 2023
HOL12	M	1,266	102	337	15 Sep 2023
HOL13	M	1,180	94	495	23 Sep 2023
HOL14	F	1,222	105	667	17 Sep 2023
HOL15	F	438	45	71	07 Aug 2023
HOL16	M	1,140	103	409	22 Sep 2023
HOL18	F	2,494	105	356	17 Sep 2023
HOL19	F	1,123	89	455	04 Sep 2023
HOL20	M	2,196	95	299	07 Sep 2023

**Table A2.** Summary statistics of maximum trip distance per estimated period for nine kittiwakes GPS-tracked from the L7-B platform. The lower and upper boundaries of the 95% credible intervals are 0.025% and 0.975% quantiles of the posterior.

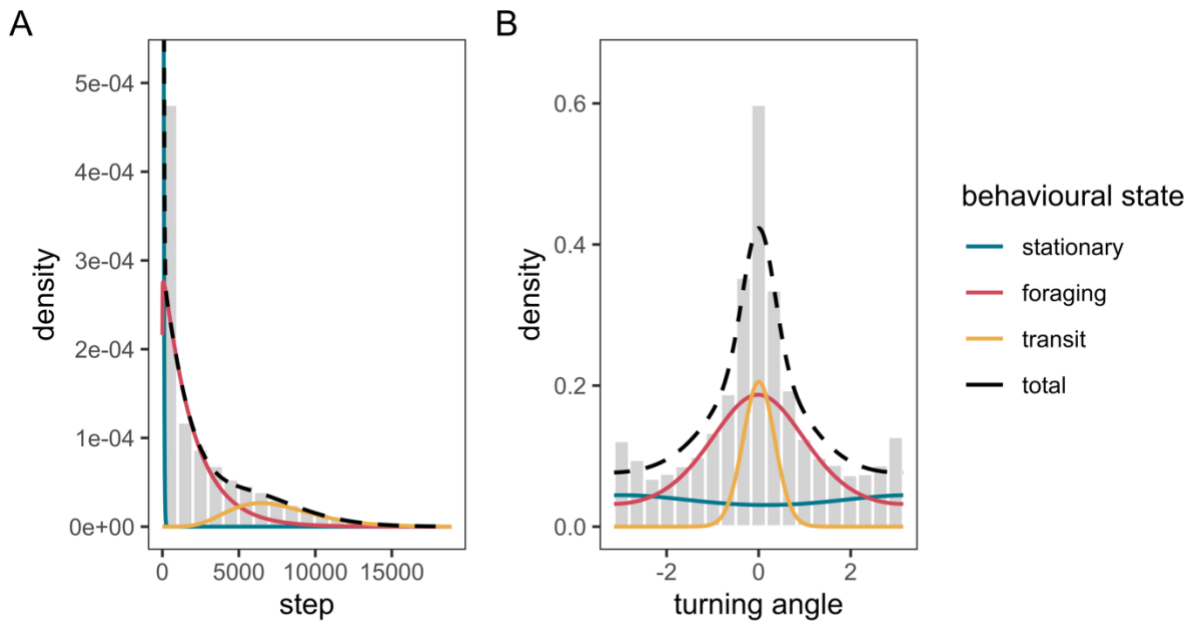
stage	maximum trip distance (km)			n trips	n individuals	95% CrI	
	mean	sd	max			lower	upper
6-11 Jun (incubation)	34.6	21.2	102.8	85	9	28.9	49.1
12 Jun-2 Jul (early chick-rearing)	13.9	10.3	70.3	338	9	12.3	19.0
3-23 Jul (late chick-rearing)	30.2	27.1	119.2	271	8	25.1	39.3
24 Jul-12 Aug (post-fledging)	40.7	40.4	166.3	144	6	31.6	52.2
13 Aug-17 Sep (post-breeding)	12.0	17.9	162.4	254	7	9.0	14.2



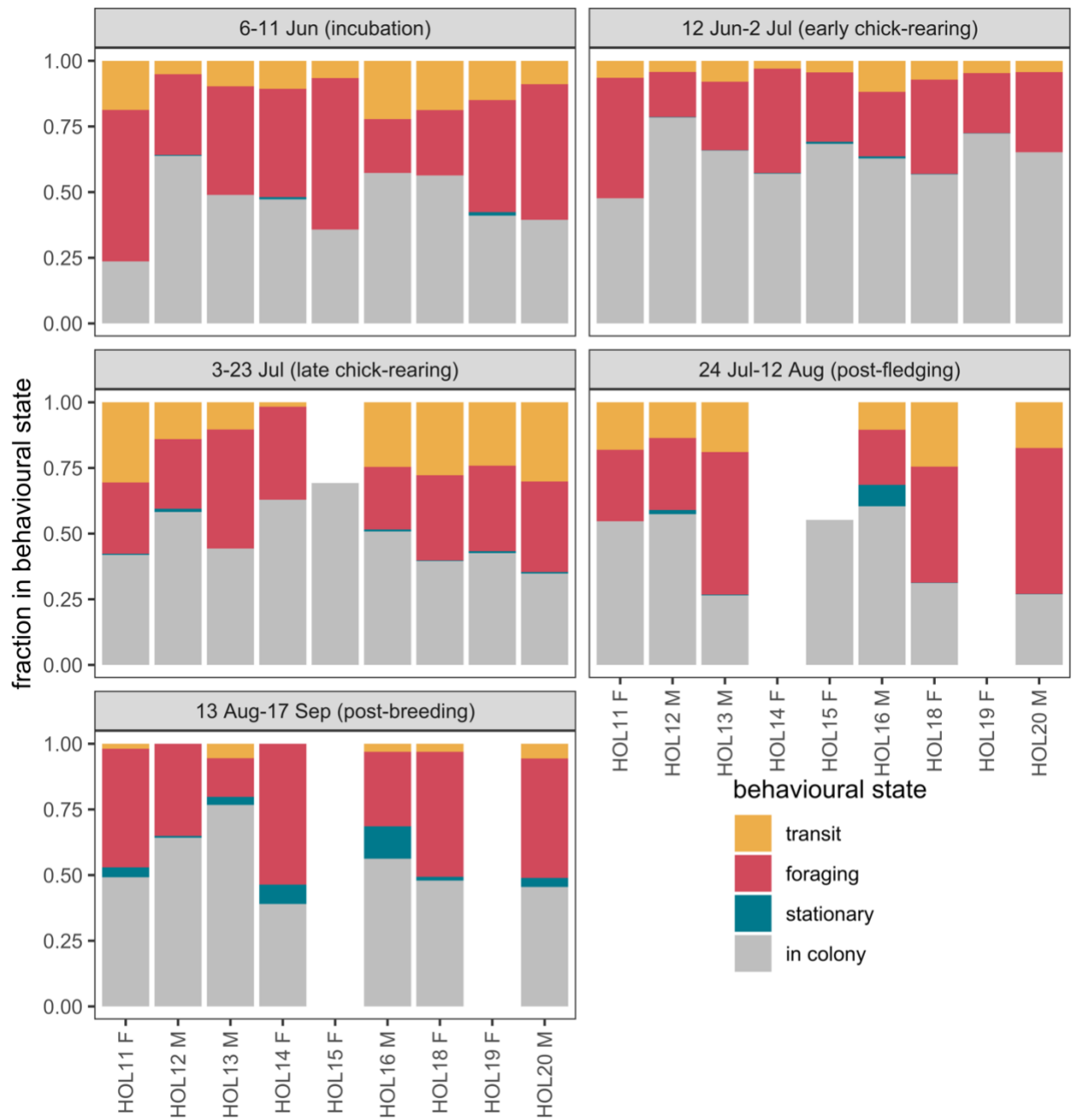
**Figure A1.** Deployment periods for each of the nine GPS-tagged Black-legged Kittiwakes. A tenth bird, kittiwake ID HOL17 presumably lost its logger directly after tagging and is not included here. Blue dots indicated periods when positions were taken at 15-minute intervals; red dots are periods with positions at hourly intervals. The grey vertical lines represent the start, from left to right, of the early chick-rearing, late chick-rearing, post-fledging and post-breeding periods.



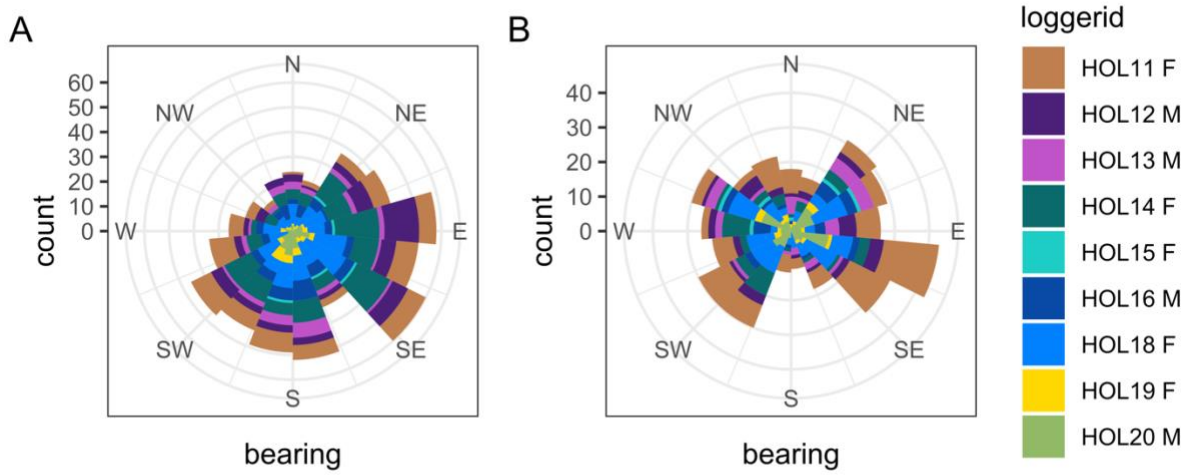
**Figure A2.** Trip characteristics of nine GPS-tagged Black-legged Kittiwakes breeding at platform L7-B. A) The distribution of maximum distance from the colony per trip, with most trips staying within 25 km from the colony. B) Trips with a maximum distance further than c. 25 km from the colony (dark shades) were generally to the north of the breeding platform, whereas shorter trips were predominantly to the southwest of the breeding platform.



**Figure A3.** Distribution of A) step lengths and B) turning angles of the three behavioural states as estimated from the HMM.



**Figure A4.** Fraction of positions viterbi-classified in each of the three behavioural states, based on the HMM, for nine GPS-tracked Black-legged Kittiwakes.



**Figure A5.** Direction of positions relative to A) the L7-B platform and B) other platforms, of positions between 125 and 500m from platforms.