

Supplementary material

Appendix 1

Table A1. Wind directions and strengths during autumn migration, for common sandpipers marked as breeding birds in Scotland. The year of the migration is shown. All wind speeds are in metres per second.

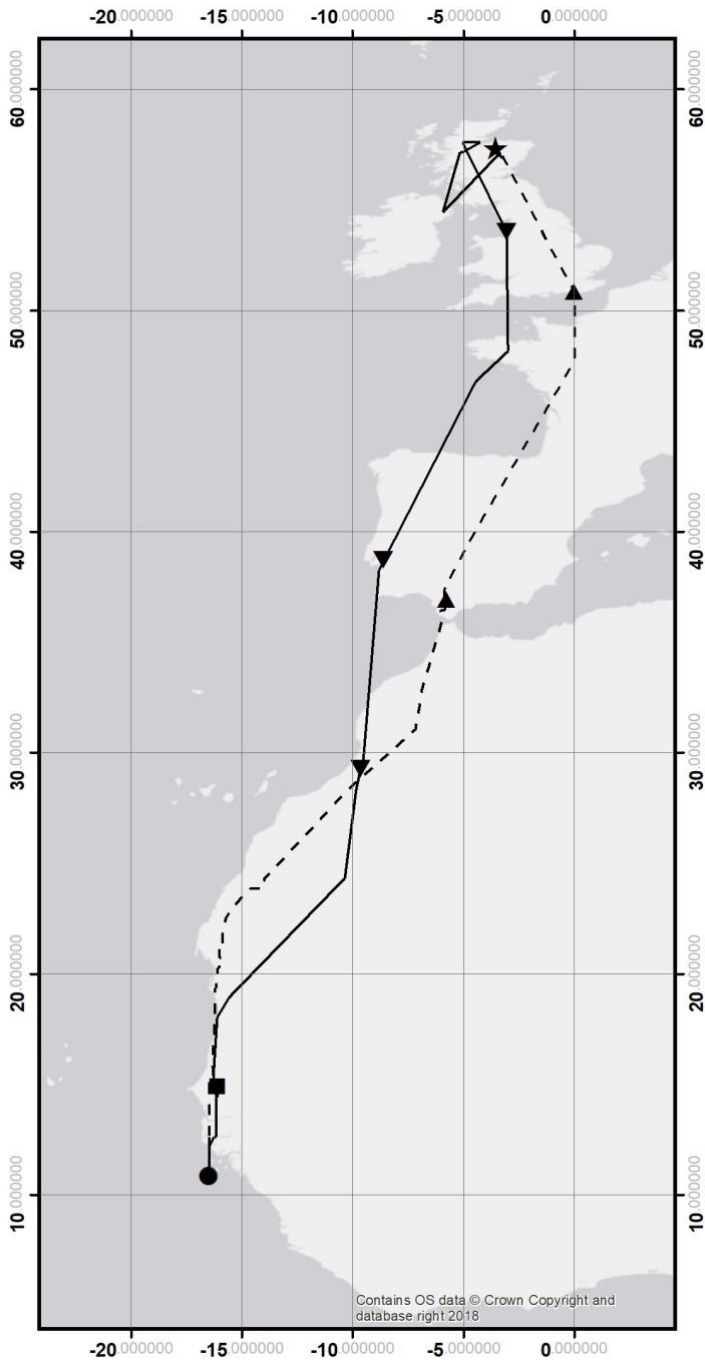
Bird code and year	Wind direction and strength (at assumed flight level)			
	Britain	France	W. Iberia/Morocco	Mauritania/Western Sahara
1. (2011)	Light NW becoming NE	N 5	NNW 5-10	Light N-NE
2. (2013)	NW 10 becoming NE 5	NE 15-20	Variable 1-5	NW 5
3. (2013)	Light SW becoming SE	NE 5-10	NW-N 5	Light N-NE
4. (2013)	Light W becoming NE	NE 5-10	Light NE	W 5 becoming NE 5-10
5. (2013)	Light variable	NE 5	Variable mainly NE Light	NE 5-15
6. (2013)	Light N	Light NE	Light variable	N 5
7. (2013)	WNW 5	Variable, light	NE 5-10	NE 5
8. (2014)	Light variable becoming SW 5	NW 5 becoming 10	NW 1-5	N-NE 10 becoming W 5
9. (2015)	W becoming NE 5	N-NE 5-10	NNE 5-10	NE 5
10. (2015)	SW-W 5	W 5	W becoming N 5 then variable light	S-SE 5 becoming variable light

Table A2. Wind directions and strengths during spring migration to Scotland, for common sandpipers marked as breeding birds in Scotland. The year of the migration is shown. Wind speeds are in metres per second.

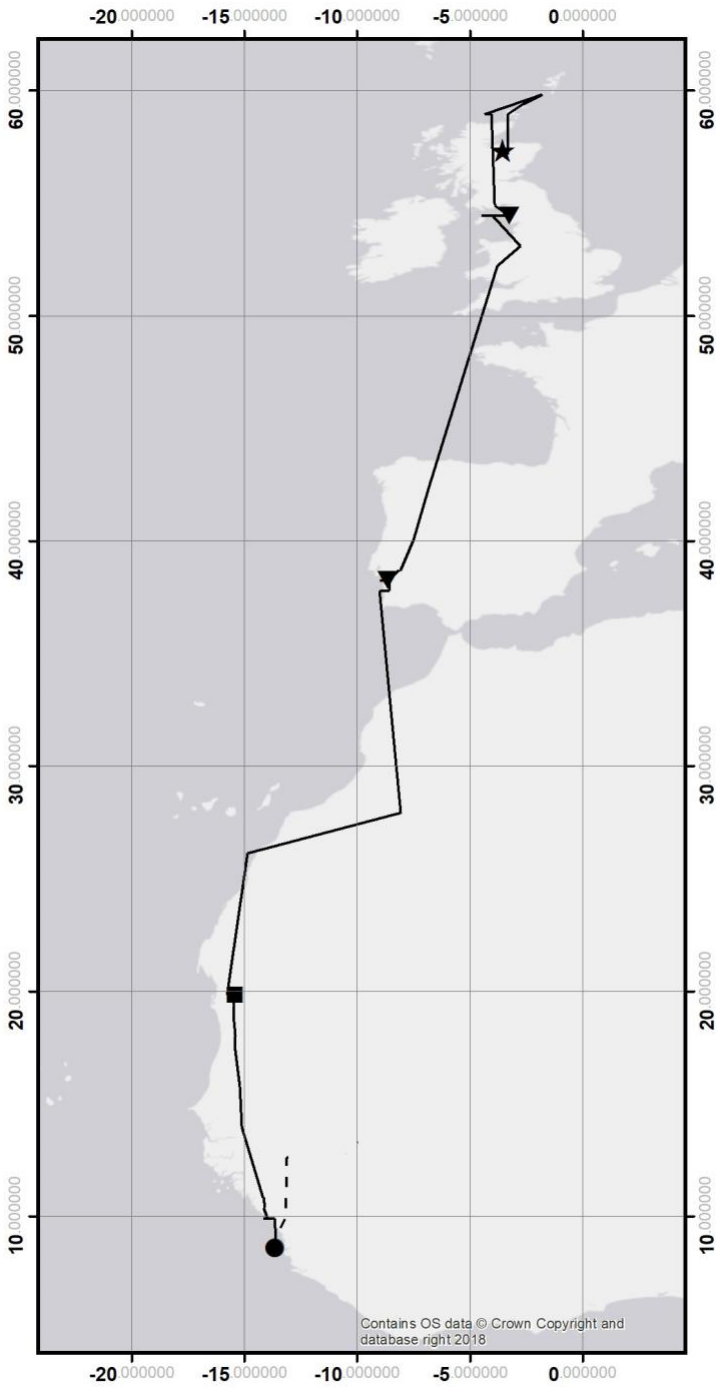
Bird code and year	Wind direction and strength (at assumed flight level)				
	Mauritania/Western Sahara	Morocco/Algeria	Iberia	France	Britain
1. (2012)	NE 5 becoming SW-W 5-15 above 1000 m	NW 10-15	NW 15 becoming 10	W 5-10	Variable 5
3. (2014)	N 5 becoming light SW-W above 1000 m	Variable 5	W 5	SW 5 becoming W-NW 5	E- SE 5
4. (2014)	N 5-10 becoming variable light above 1500 m (SW 15 @ 3km)	NE 5	Variable 1-5	SW 5-10	SW 5-10
5. (2014)	N 10 becoming SE 5	Light variable	Light variable	Variable becoming S 5	SE 5-10
6. (2014)	N 10-15 becoming SW 5-15 above 2000 m	SW 10 briefly N-NW 10-20	SW 5 becoming N 1-5	SW-W 5-10	Light SW
8. (2015)	NE 5-10 becoming SW 5	NW 5 becoming SE 5	E-NE 5 locally E 20-25	(Biscay) E 5 temporarily 15	SW 10 becoming E 5
9. (2016)	N 5	SW 5	SW 10	Changeable	SW 10
10. (2016)	NE 10 becoming W-SW 5-15 above 1000 m	Variable 1-5	-	NW 5-10	NW 5 becoming SW 10

Figure A1. Migration routes on common sandpipers 1 to 10, based on unsmoothed median values. Solid lines show southward movements and dashed lines show northward movements. Stars show marking places, downward pointing triangles are staging sites on the southward movements, upward pointing triangles are staging sites on the northward movements, squares are sites used prior to the autumn equinox and circles are non-breeding sites (October to February). Short erratic movements are deemed to be random error.

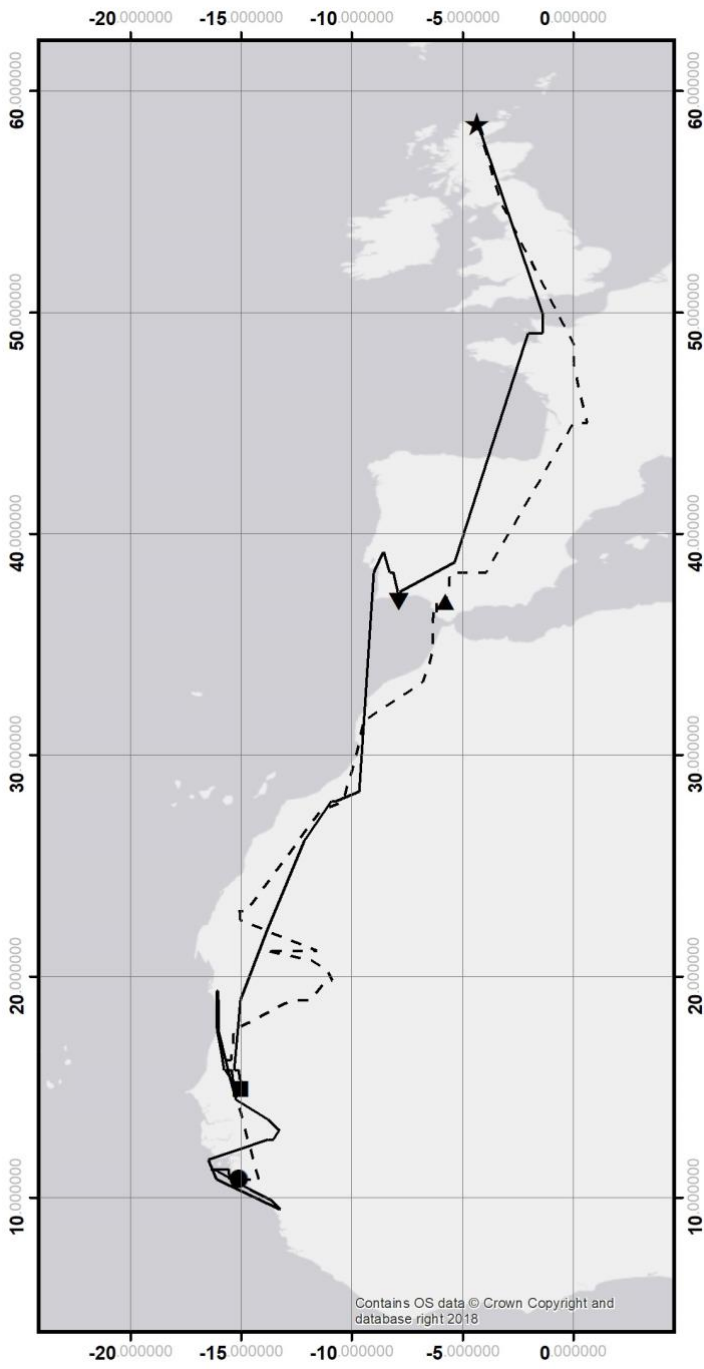
Bird 1



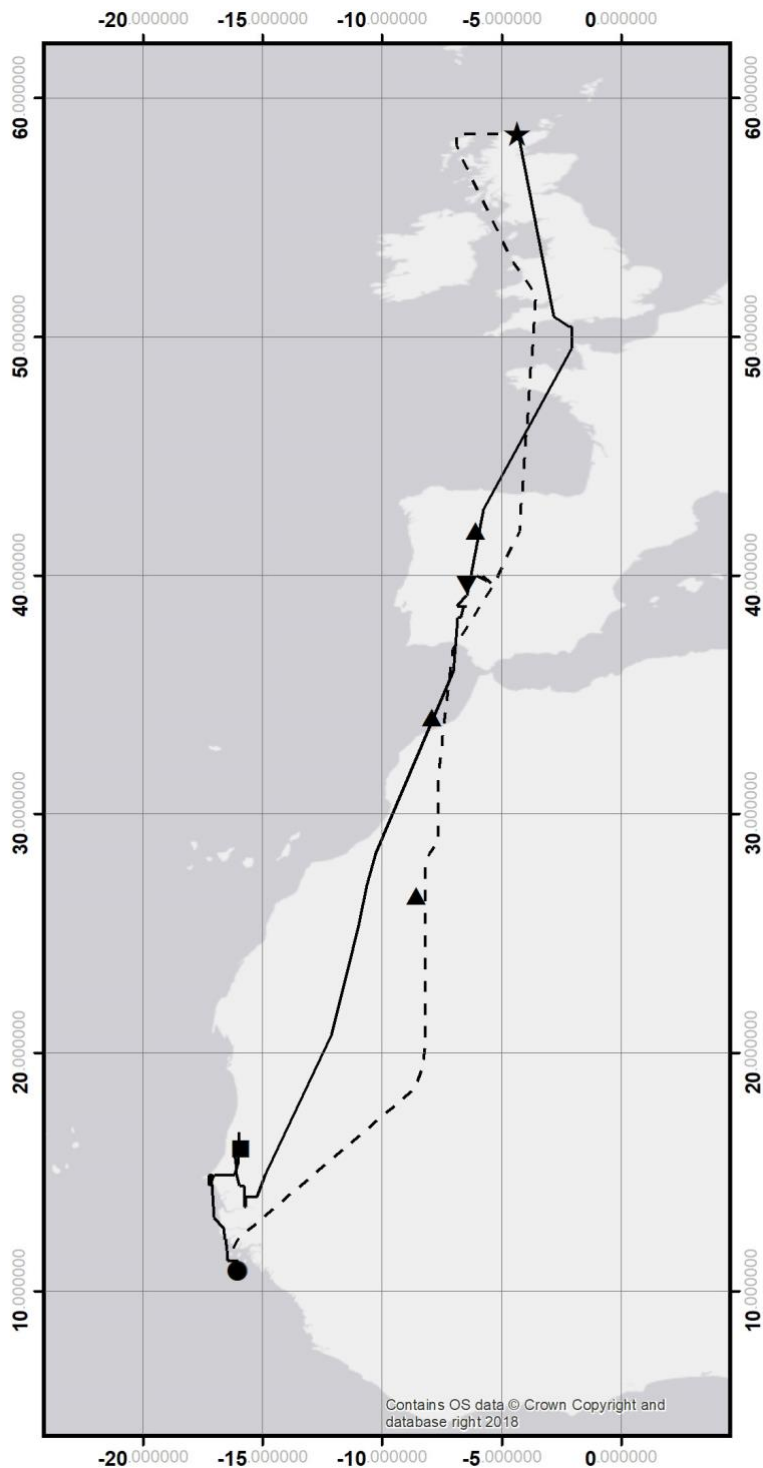
Bird 2



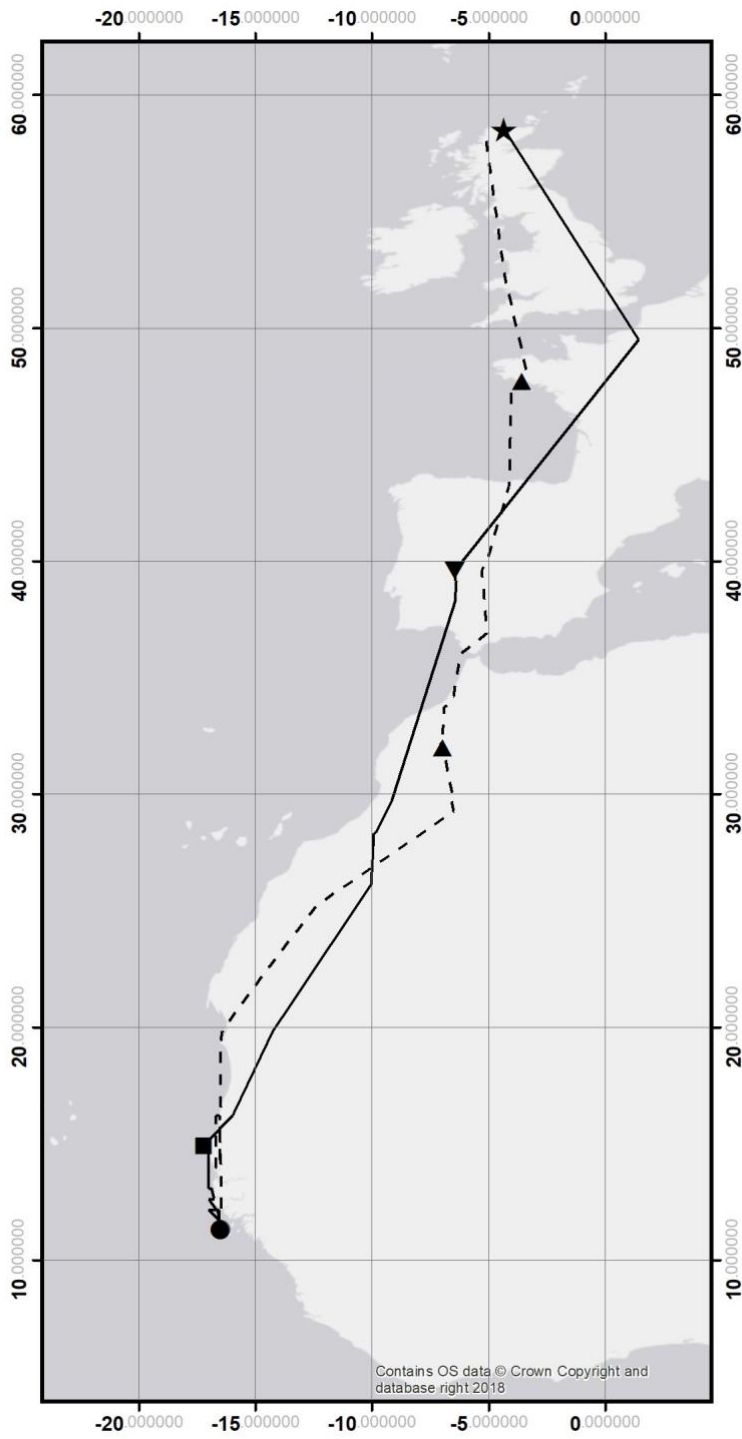
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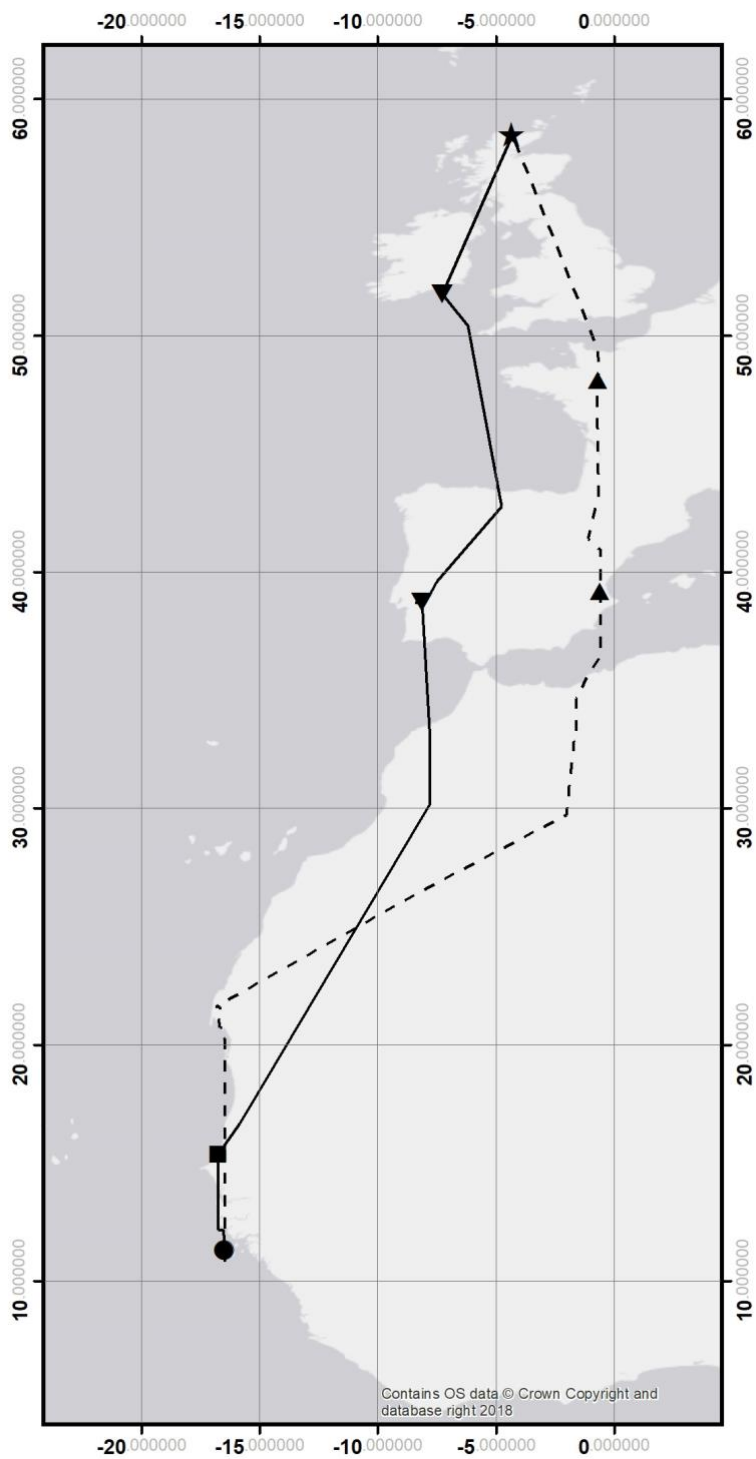
Bird 4



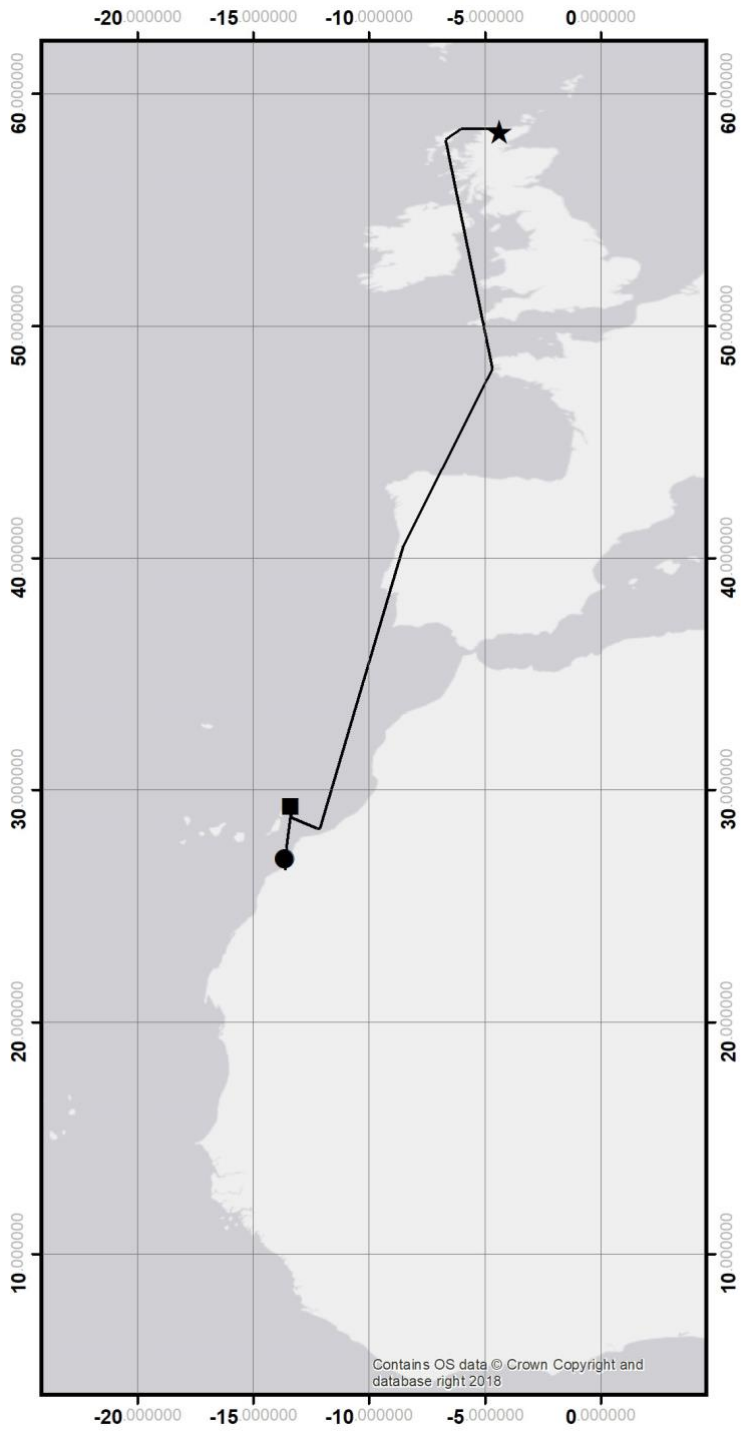
Bird 5



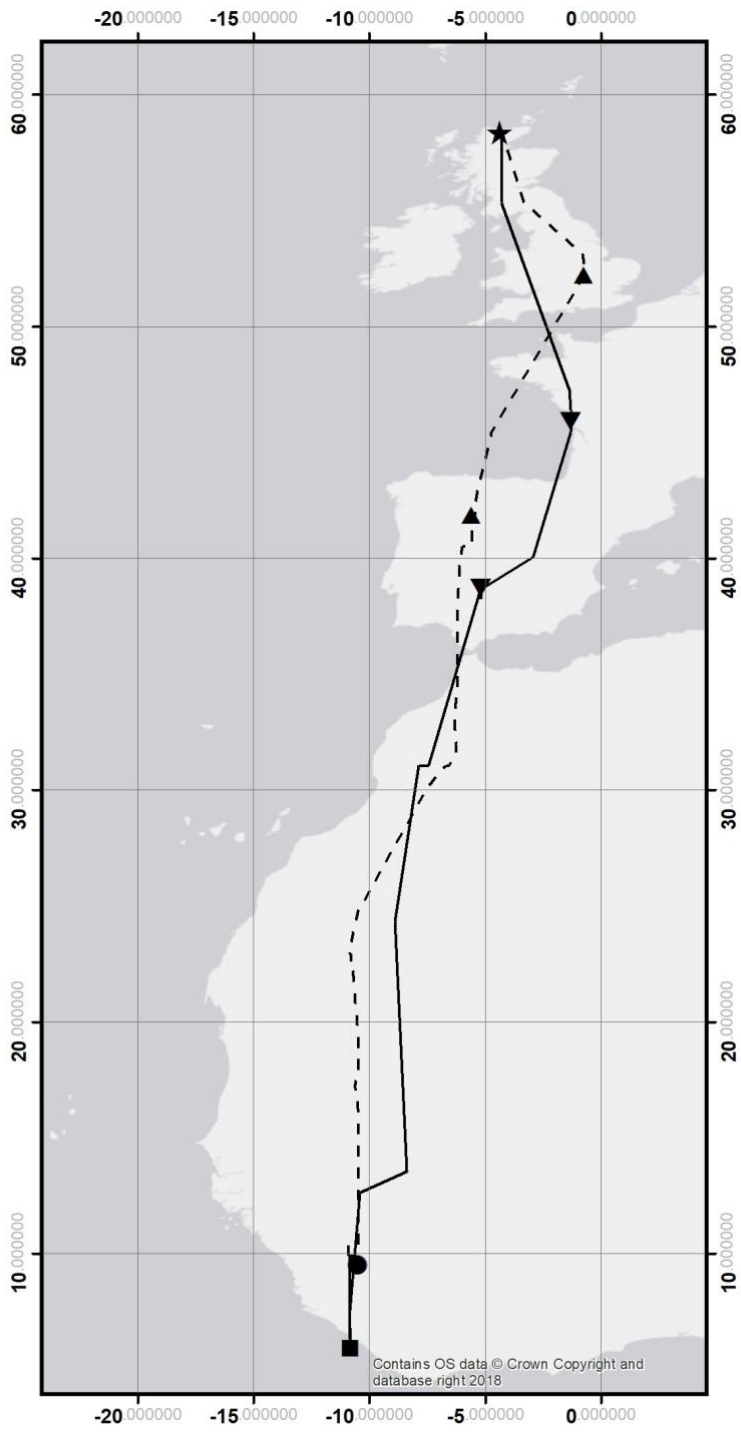
Bird 6



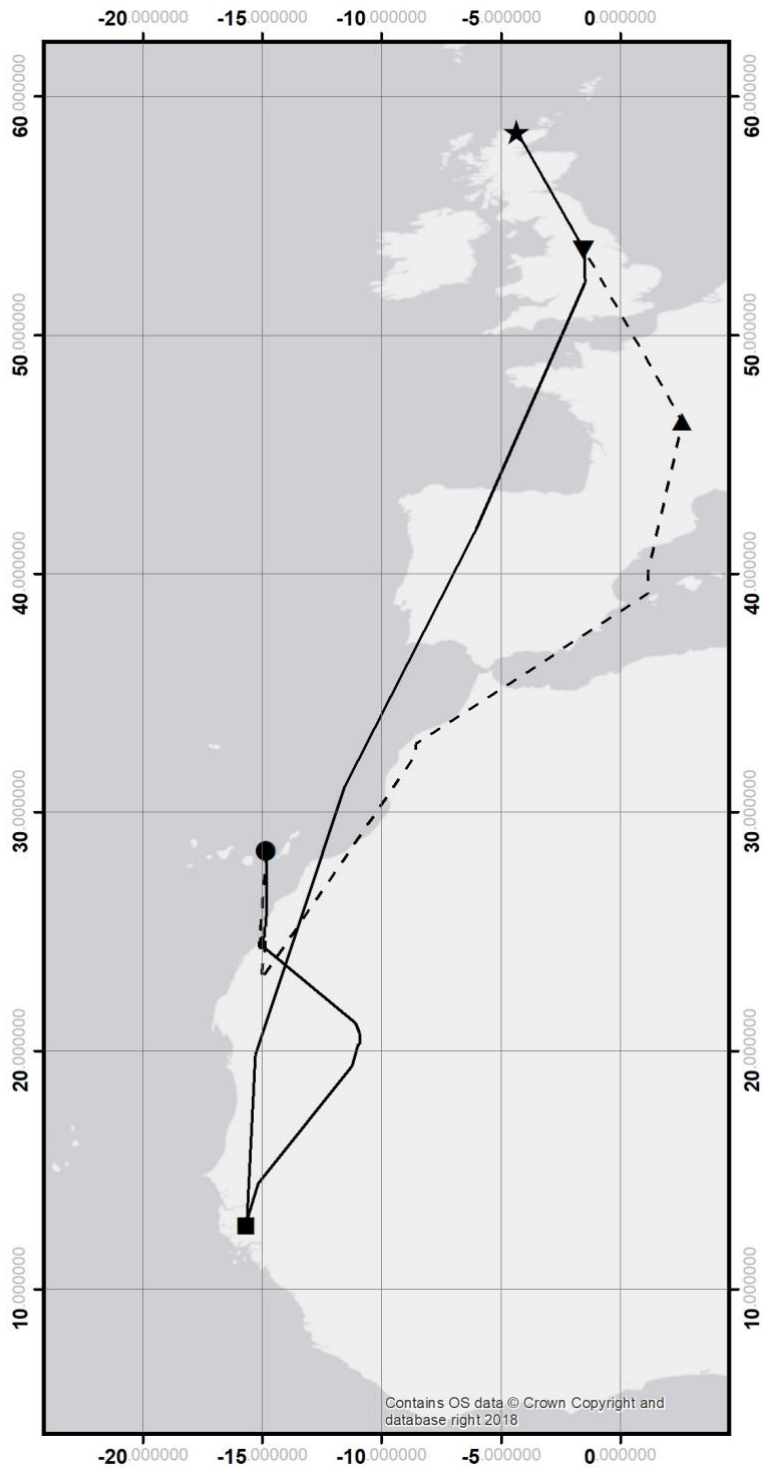
Bird 7



Bird 8



Bird 9



Bird 10

