

Supporting Information 2

Random Encounter Model and Distance Sampling density estimates

Table S1 Population density estimates derived from the *Random Encounter Model* using camera trapping data for native and invading hares in Mid-Ulster, Northern Ireland during 2013. * highlights three squares of European hare allopatry in the invader's core range within which the native species was entirely absent.

Zone	Square ID	Number of detections	Absolute density		% European hares	Hares.km ²			
			Hares.km ²			European		Irish	
Native species allopatry	1	10	2.0	(1.4 - 3.0)	0	0.0	(0.0 - 0.0)	2.0	(1.4 - 3.0)
	2	21	2.6	(2.1 - 3.5)	0	0.0	(0.0 - 0.0)	2.6	(2.1 - 3.5)
	3	23	2.5	(2.0 - 3.2)	0	0.0	(0.0 - 0.0)	2.5	(2.0 - 3.2)
	4	46	4.8	(4.1 - 5.7)	0	0.0	(0.0 - 0.0)	4.8	(4.1 - 5.7)
	\bar{x}	25	3.0	(2.4 - 3.9)	0	0.0	(0.0 - 0.0)	3.0	(2.4 - 3.9)
Invader's peripheral range	5	42	6.8	(5.9 - 8.0)	0	0.0	(0.0 - 0.0)	6.8	(5.9 - 8.0)
	6	17	2.3	(1.7 - 3.1)	18	0.4	(0.3 - 0.5)	1.9	(1.4 - 2.6)
	7	12	1.9	(1.3 - 2.6)	58	1.1	(0.8 - 1.5)	0.8	(0.6 - 1.1)
	8	46	7.0	(6.0 - 8.2)	28	2.0	(1.7 - 2.3)	5.0	(4.3 - 5.9)
	9	62	5.7	(5.0 - 6.7)	85	4.9	(4.3 - 5.7)	0.8	(0.7 - 1.0)
\bar{x}	36	4.8	(4.0 - 5.7)	38	1.7	(1.4 - 2.0)	3.1	(2.6 - 3.7)	
Invader's core range	10	69	11.6	(10.2 - 13.3)	68	7.7	(6.9 - 9.1)	3.9	(3.3 - 4.2)
	*11	51	4.9	(4.5 - 5.5)	100	4.9	(4.5 - 5.5)	0.0	(0.0 - 0.0)
	*12	34	3.7	(3.1 - 4.8)	100	3.7	(3.1 - 4.8)	0.0	(0.0 - 0.0)
	*13	23	2.6	(2.1 - 3.2)	100	2.6	(2.1 - 3.2)	0.0	(0.0 - 0.0)
	\bar{x}	44	5.7	(5.0 - 6.7)	92	4.7	(4.2 - 5.7)	1.0	(0.8 - 1.1)

Table S2 Population density estimates derived from *Distance sampling* using night-driven spotlight surveys for native and invading hares in Mid-Ulster, Northern Ireland during 2013.

Zone	Number of detections	Absolute density		% European hares	Hares/km ²			
		Hares/km ²			European		Irish	
Native species allopatry	121	1.7	(1.5 - 1.8)	0	0.0	(0.0 - 0.0)	1.7	(1.5 - 1.8)
Invader's peripheral range	83	2.1	(1.6 - 2.5)	43	0.9	(0.7 - 1.1)	1.2	(0.9 - 1.3)
Invader's core range	63	9.4	(8.4 - 10.4)	87	8.2	(7.5 - 8.8)	0.8	(0.7 - 0.9)