# Results

All 20 simulated populations survived until reached December 2040.

## Home range sizes

The mean total home range of mature deer across simulations which were alive at the end, representing a mix of ages at a snapshot point in time, varied from 1972 ha to 2211 ha (mean 2053 ha), whilst standard deviations varied from 372.0 to 486.3 (Table x). Here, home range size was the number of unique 1 ha patches visited by a deer individual.

This is compared to an estimated home range size from GPS data of xyz.

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| **Table x** Mean and standard deviations (Sd) for lifetime home range sizes of deer alive on the final step of the model (10:00 16th December 2040) across the 20 simulations. Here, home range is the total number of unique 1 ha patches visited by each deer to date (not including patches visited when deer were immature and simply following their mother). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Simulation ID | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | |
| Mean home range (ha) | 2030 | 2098 | | 2114 | | 2128 | | 1979 | | 2025 | | 2211 | | 2047 | | 2018 | | 2025 | | 2041 | | 2015 | | 2060 | | 2074 | | 2019 | | 2031 | | 2068 | | 2054 | | 1972 | | 2062 | |
| Sd home range | 392.0 | 418.8 | | 431.1 | | 422.6 | | 377.4 | | 463.9 | | 486.3 | | 388.7 | | 396.2 | | 407.1 | | 386.7 | | 416.7 | | 406.2 | | 441.9 | | 418.6 | | 403.2 | | 386.9 | | 417.0 | | 372.0 | | 407.5 | |

## Deer:fawn ratio across time points

Compared to an expected value of 0.325, the immature:mature deer ratio decreased over time, ranging from 0.275 – 0.228 (Table x).

## Population dynamics and spatial expansion

From 2020 - 2040, the annual growth and spatial expansion rates were 1.29 and 2,667 ha, respectively. By 2040 the model estimated a mean population size of 2250 deer, 418 of which were immature offspring, which had explored 62700 ha of Corsica on average (Table x). By visualising the spatial expansion of the deer, we can see that the three reintroduced populations are unlikely to become one larger population by 2040 (Figure x; Figure x).

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| **Table x** Mean deer population, split by mature and immature deer, and the mean number of visited patches at each time point across the 20 simulations. Brackets contain standard deviations. | | | | | |
| Year | Mean deer population | Mean mature deer population | Mean immature deer population | Immature:mature mean deer ratio | Mean number of visited patches |
| 2020 | 83.8 (8.94) | 65.8 (7.17) | 18.0 (3.59) | 0.275 | 9370 (810) |
| 2025 | 213 (27.4) | 171 (21.8) | 42.0 (6.89) | 0.245 | 18500 (1820) |
| 2030 | 472 (73.0) | 381 (59.7) | 91.6 (14.9) | 0.240 | 29400 (1690) |
| 2035 | 1030 (178) | 837 (144) | 197 (35.8) | 0.235 | 43900 (4790) |
| 2040 | 2250 (384) | 1830 (315) | 418 (73.2) | 0.228 | 62700 (6920) |

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| A graph of numbers and numbers  AI-generated content may be incorrect. |
| **Figure x** Population growth rate (A: split by mature and immature deer) and range expansion (B) across the five time points. |

## Spatial expansion

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| **Figure x** Spatial expansion of deer on Corsica, measured via the mean cumulative visit frequency of deer to each patch across the 20 simulations. Standard deviations are presented on the second row. Non-zero mean cumulative visit frequencies and standard deviations are coloured by quartiles of the final 2040 map, to allow comparison across years. |

### Change between years

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| **Figure x** The change in patch visit freqency between the five timepoints (i.e., 2025-2035 is the change in visit frequency from 2025 to 2030). Non-zero changes between yearrs are coloured by quartiles of the final 2040 map, to allow comparison across years. |