Oikos

O17003
Van Moorter, B., Visscher, D., Benhamou, S., Börger, L., Boyce, M. S. and Gaillard, J.-M. 2009. Memory keeps you at home: a mechanistic model for home range emergence. – Oikos 118: 641–652.

Appendix 1.

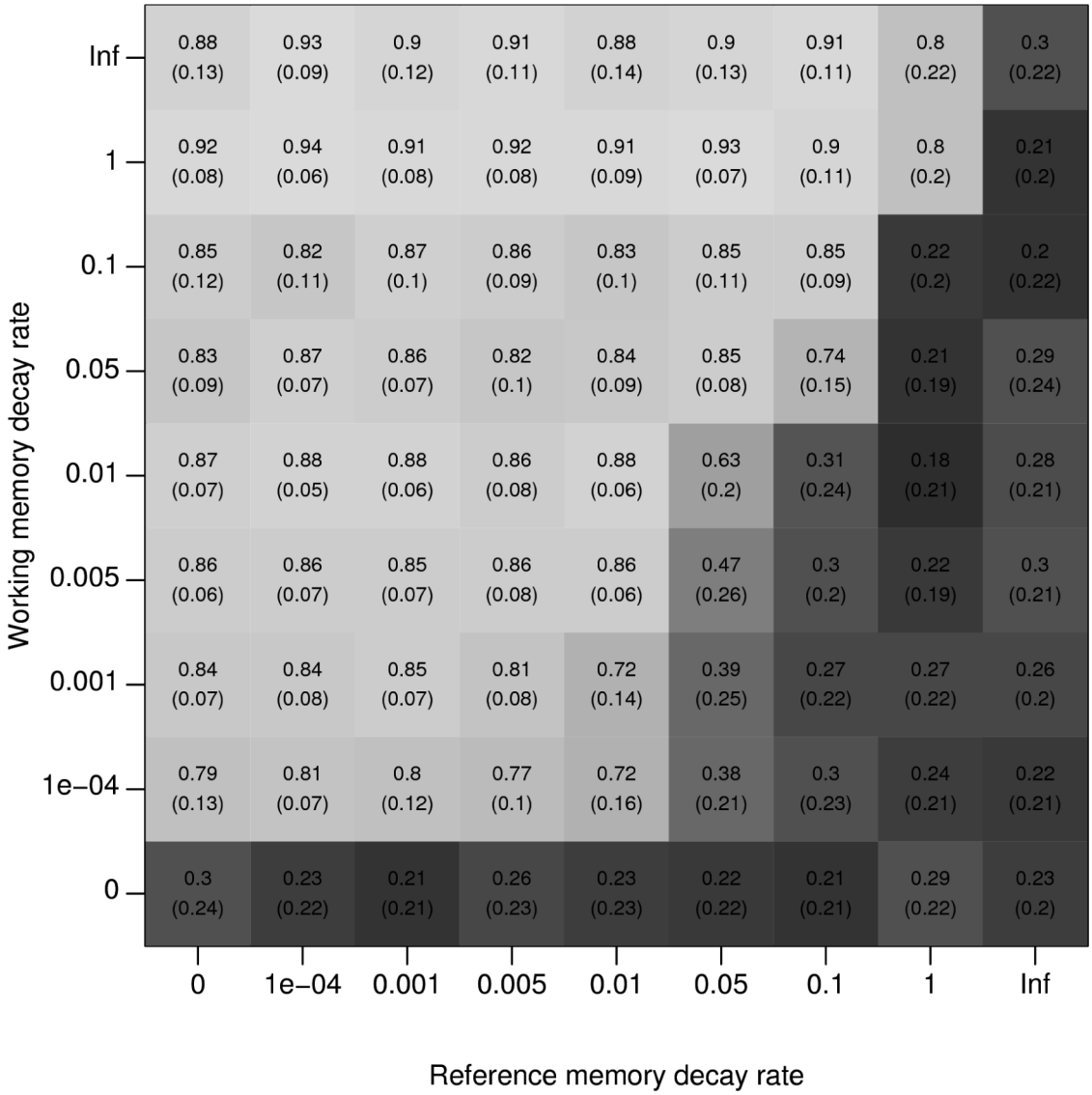

Figure S1. Proportion overlap between the areas covered in the first and second half of the simulations, as a function of the reference and working memory decay rates. Within a wide range of values of memory decay the overlap is large (>80%), the transition between high overlap and low overlap is quite abrupt and is often close to the diagonal where the working memory decay becomes smaller than the reference memory decay.

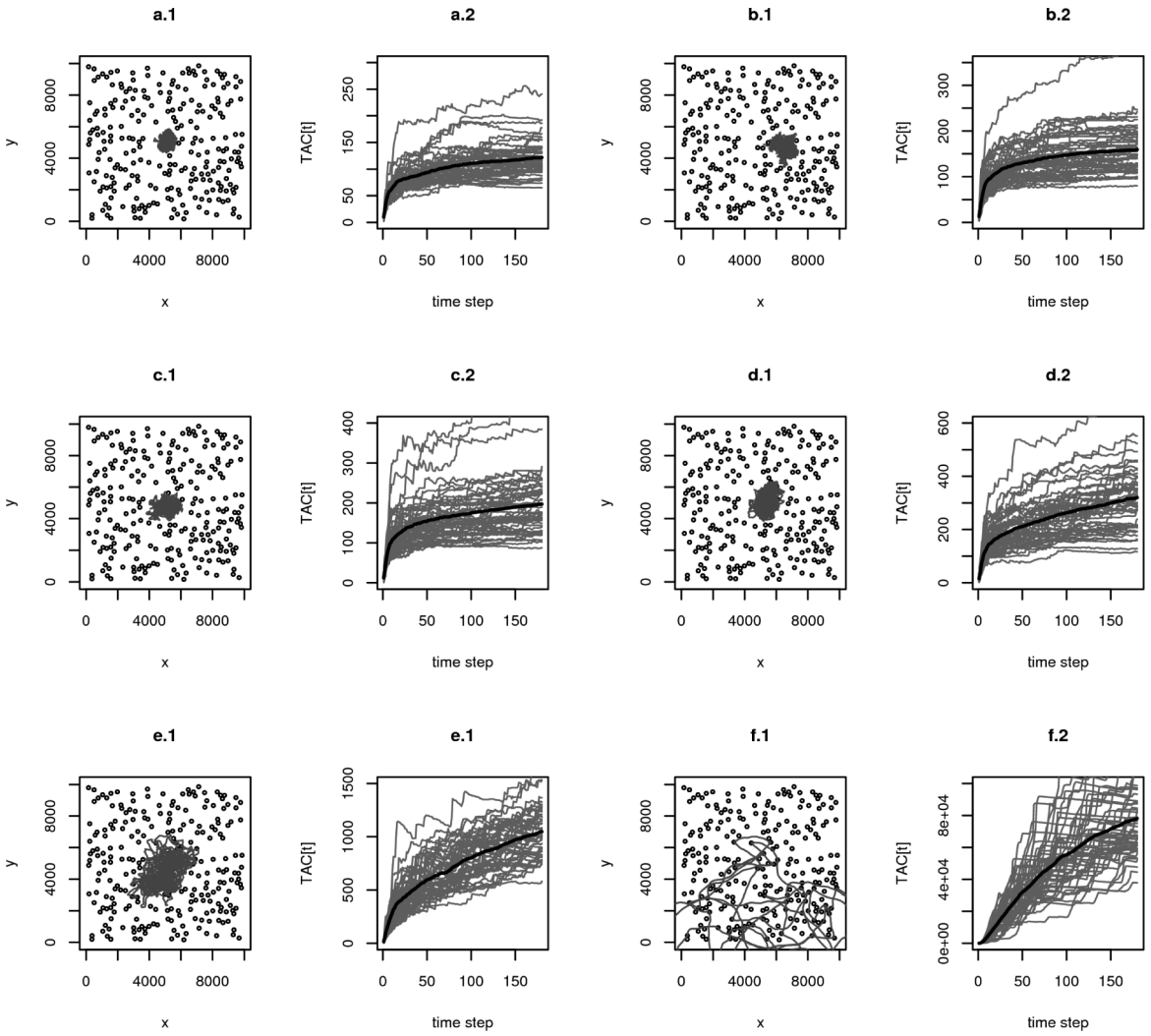

Figure S2. Influence of the directional persistence on the random walk models: a random walk model without correlation (r = 0; Fig. 4a), models with the default correlation value (r = 0.2; Fig. 4b), and models with increasingly larger correlation values (r = 0.4 in Fig. 4c; r = 0.6 in Fig. 4d, r = 0.8 in Fig. 4e; r = 0.99 in Fig. 4f). As in Fig. 2, panel 1 shows one individuals' trajectory as an example, whereas panel 2 shows the home range size as a function of time – for all individuals (in grey) and for the mean individual (in black). Only the curves from simulations with r = 0.2 and 0.4 where fitted best by a saturation function; all other simulations were better fitted by a power function, where the exponent increased with increasing correlation values.