

Correction

ECOLOGY, APPLIED MATHEMATICS

Correction for “Stigmergy, collective actions, and animal social spacing,” by Luca Giuggioli, Jonathan R. Potts, Daniel I. Rubenstein, and Simon A. Levin, which appeared in issue 42, October 15, 2013, of *Proc Natl Acad Sci USA* (110:16904–16909; first published September 30, 2013; 10.1073/pnas.1307071110).

The authors note that Fig. 3 appeared incorrectly. The corrected figure and its legend appear below. The authors thank Dr. Jannis Uhlendorf for calling their attention to this error.

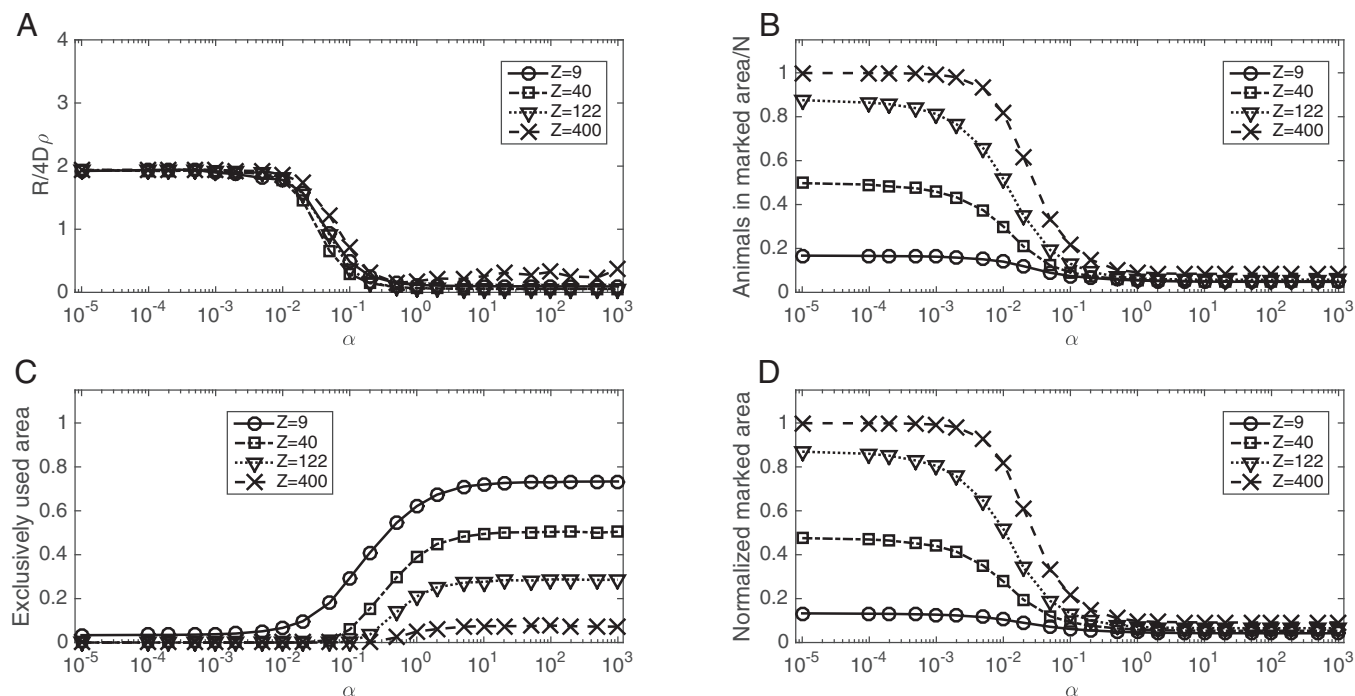


Fig. 3. Encounter rate and other demographic characteristics as a function of the degree of stigmergy. (A) Average encounter rate, (B) fraction of the average number of individuals inside a marked area, (C) fraction of the terrain used by exactly one animal, and (D) average size of a single marked area. The normalization in A is with respect to the population density and diffusion constant—more precisely, to the average diffusive rate $4D\rho$, that is, the rate for an animal to cover an area equal to the inverse of the population density ρ^{-1} . In B, we normalize the measured quantity by dividing by N , the total number of individuals in each simulation. The normalization in C and D is with respect to the size of the box (with periodic boundary conditions) that has been used in the stochastic simulations. When α is small, retreat events upon the encounter of foreign marks are reduced to a minimum, with individuals moving nearly unbounded and having no exclusive use of space, except for very low Z (C). With few constraints on their movement, an increase in Z corresponds to an increase in the diffusive area that individuals would cover, resulting in larger home ranges (D). For larger α , on the other hand, we obtain a reduction in the size of the exclusive area with increased neighbor competition, that is, with larger Z (C), without an appreciable change in home range size (D).

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