

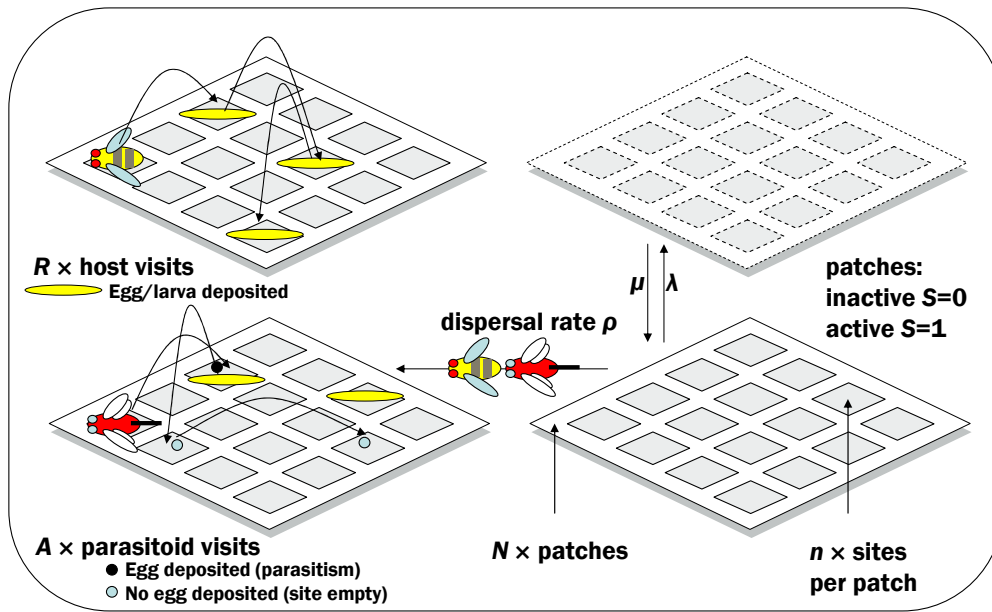
Coevolution of dispersal in a  
parasitoid-host system

Electronic Supplementary Material

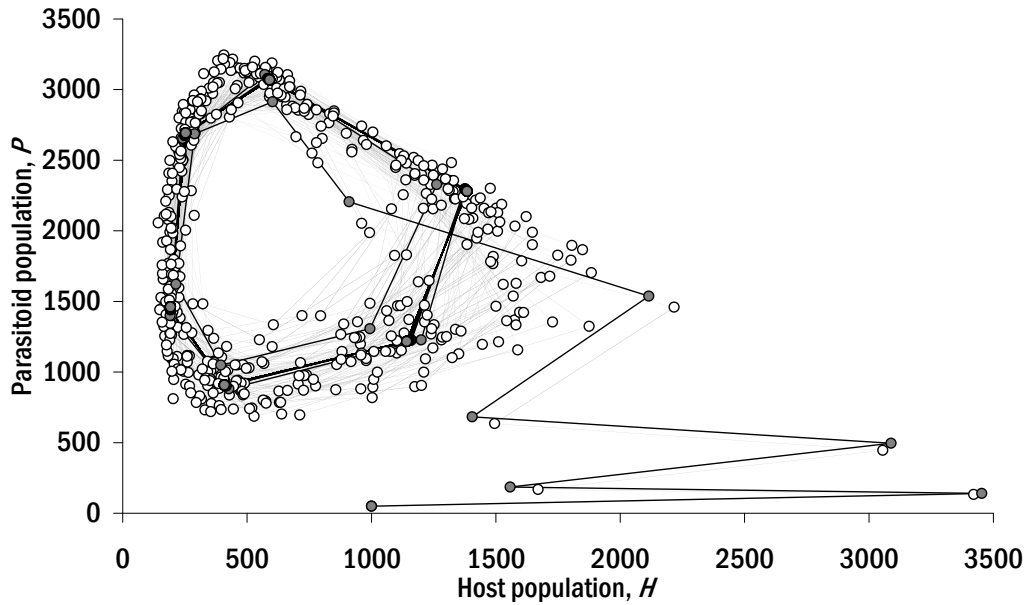
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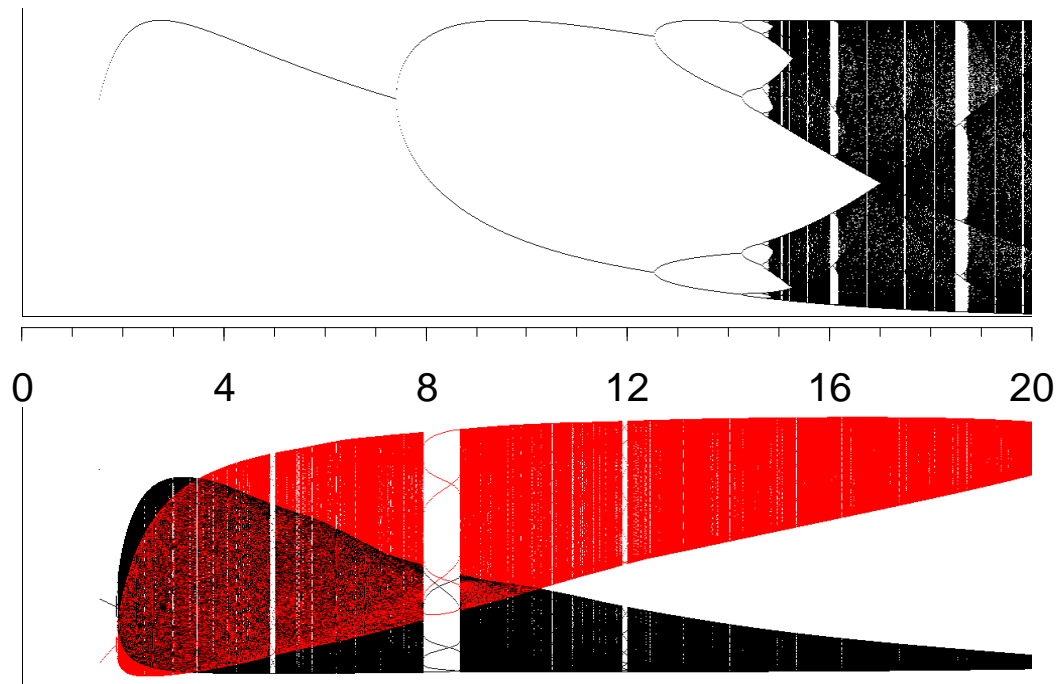




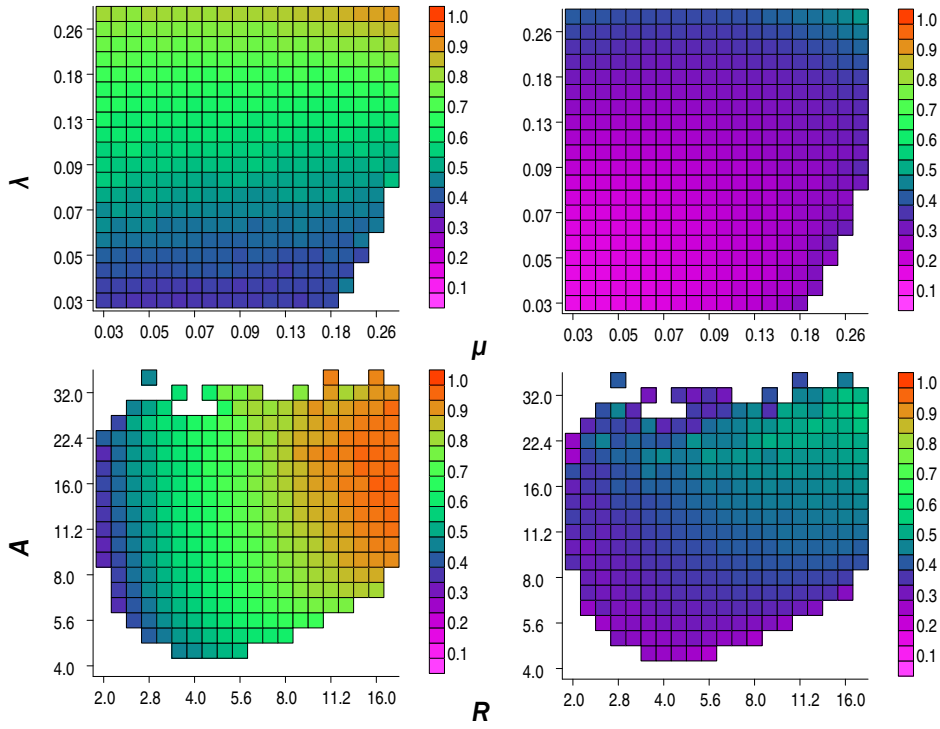
**Figure S1.** Schematic showing model concept and parameters.



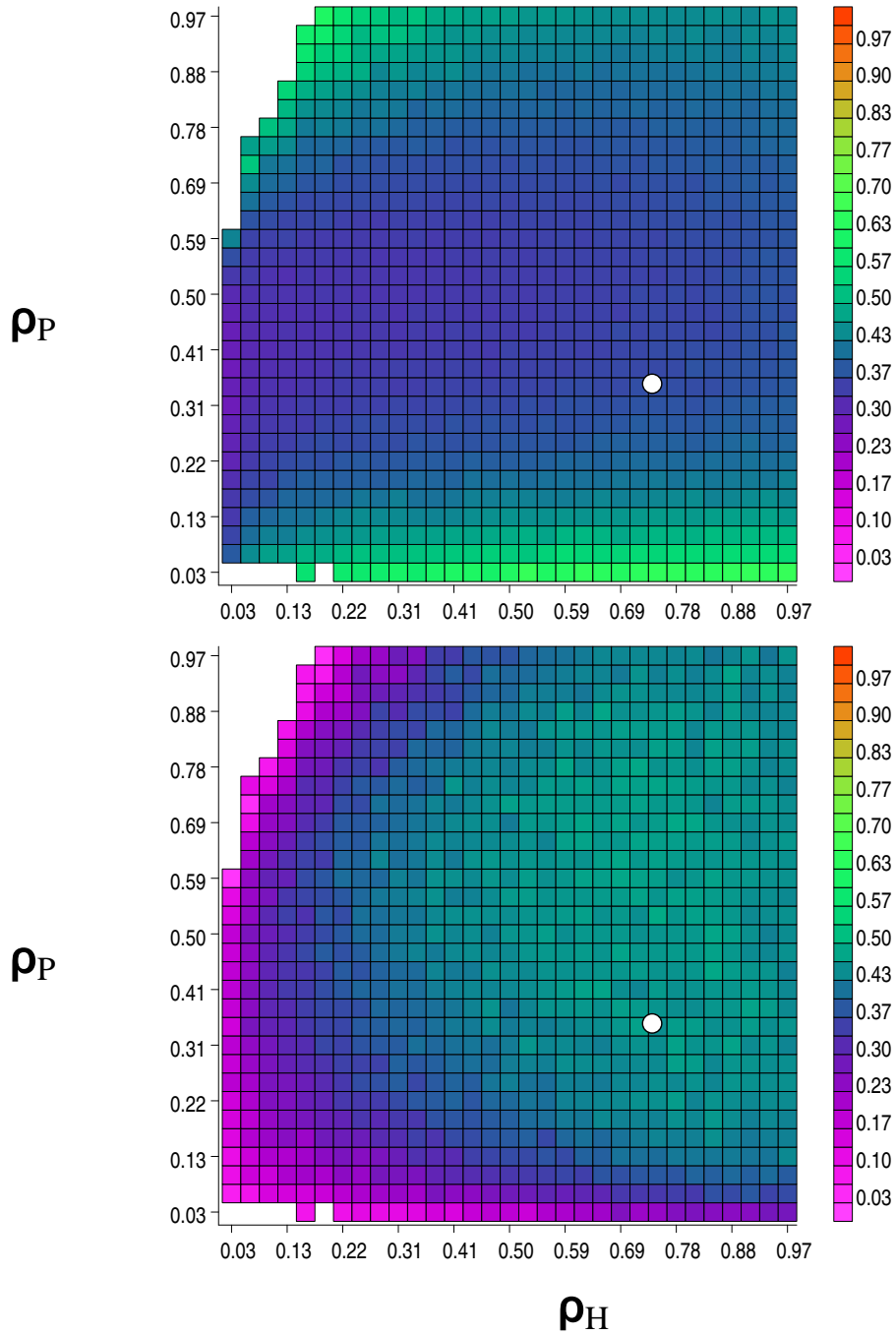
**Figure S2.** Trajectory of host and parasitoid populations for a single-patch model ( $N = 1, S = 1$ ) through time, with  $R = 8, A = 8, n = 10000$  and initial populations  $H_0 = 1000$  and  $P_0 = 50$ . White symbols: stochastic model converging to a noisy limit cycle; black symbols: deterministic model (Eq(s). 2 in main text) with the same parameters, shown converging to a limit cycle with similar mean dynamics.



**Figure S3.** Bifurcation diagram showing cycles and chaos for the single-patch deterministic model,  $n = 10000$ , versus  $R$  ( $x$ -axis). Host population indicated in black, parasitoid population in red. Upper panel:  $A = 0$ ; lower panel:  $A = 8$ . Note for  $A = 8$  the stable six-point limit cycle can be seen as shown in Fig. S2.



**Figure S4.** Equilibrium  $\bar{\rho}_H$  (left) and  $\bar{\rho}_P$  (right) versus varied patch dynamic parameters (top) and host and parasitoid parameters (bottom). Top:  $\mu$  ( $x$ -axis) versus  $\lambda$  ( $y$ -axis); bottom:  $R_0$  ( $x$ -axis) versus  $A$  ( $y$ -axis). Means of c. 15 simulations are plotted.



**Figure S5.** Host (top) and parasitoid (bottom) population size (10000s) versus fixed  $\rho_P$  and  $\rho_H$ .  $R = 8$ ,  $A = 8$ ,  $n = 500$ ,  $N = 100$ ,  $\lambda = \mu = 0.25$ . The point to which the populations evolve when allowed to do so is marked in white. Medians of 3 simulations are plotted.