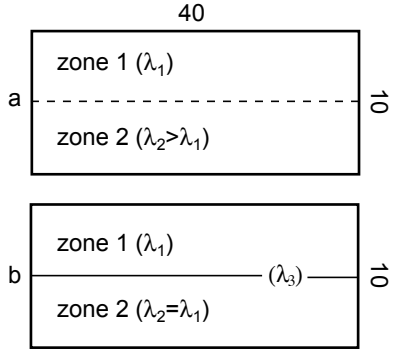

Fig. 1 The simulated trajectories are inscribed in a rectangular area (40 × 10 arbitrary units) divided into two adjacent zones, each with its own mean move length $1/\lambda$ and a symmetric distribution of turning angles around zero. (**a**) In the first condition, the mean distance travelled before changing direction is lower in zone 2 than in zone 1 ($1/\lambda_1 > 1/\lambda_2$) (**b**) In the second condition, this distance is the same in the two zones but the organisms have a tendency to follow the boundary between the two zones (straight line) and to leave it after travelling on average a distance $1/\lambda_3$