APPENDIX

The role of habitat configuration in shaping animal population processes: a framework to generate quantitative predictions

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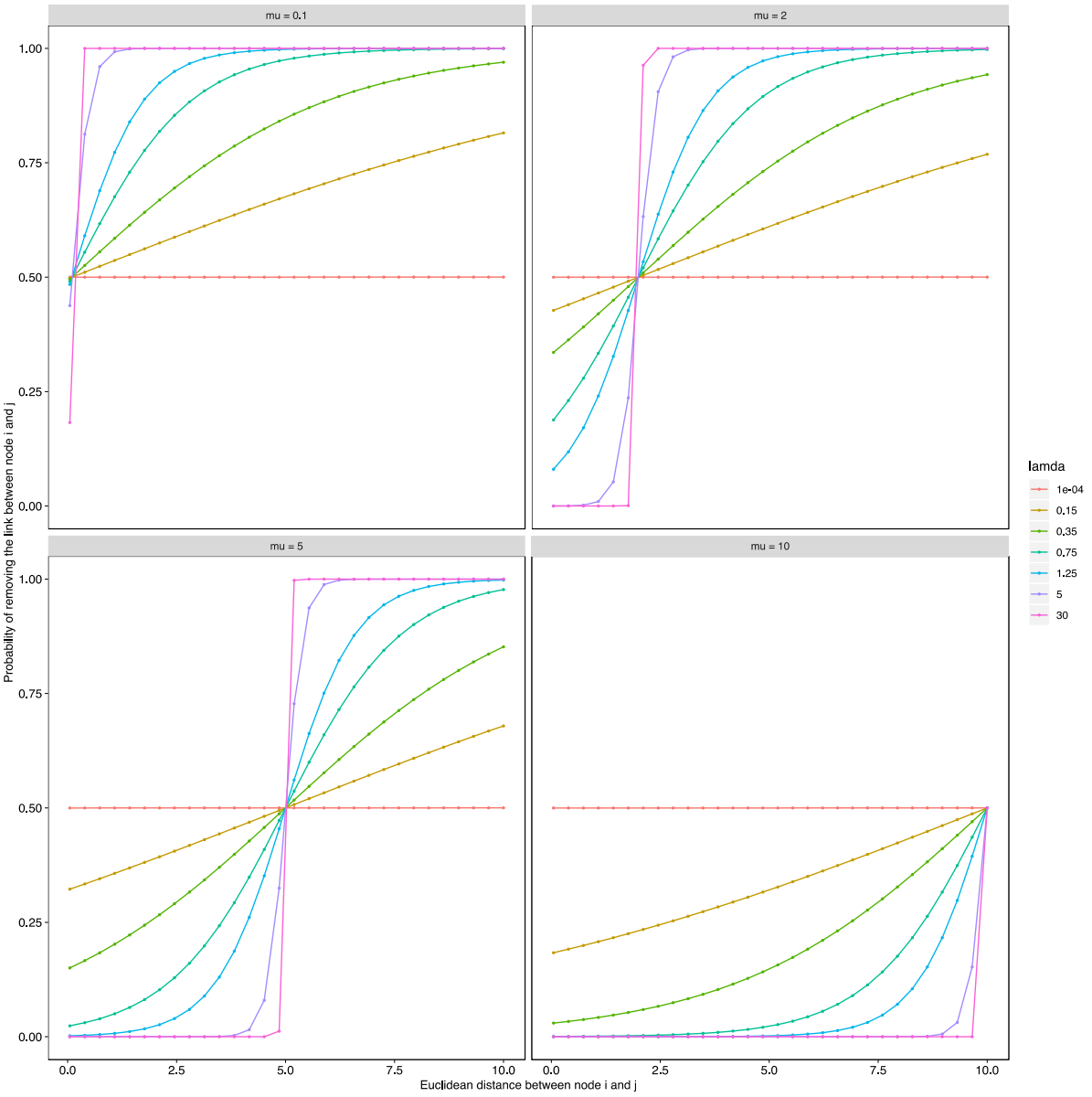

Fig. A1 The effects of the parameter λ (lamda) and μ (mu) on the link filtering out probability function $P(D_{ij}) = [1 + \exp(-\lambda(D_{ij} - \mu))]^{-1}$ in the AHN model. As λ increases, the Euclidian distance between habitat components has an increasing effect on the probability of removing links from the initial complete network, while as μ increases, the probability decreases.

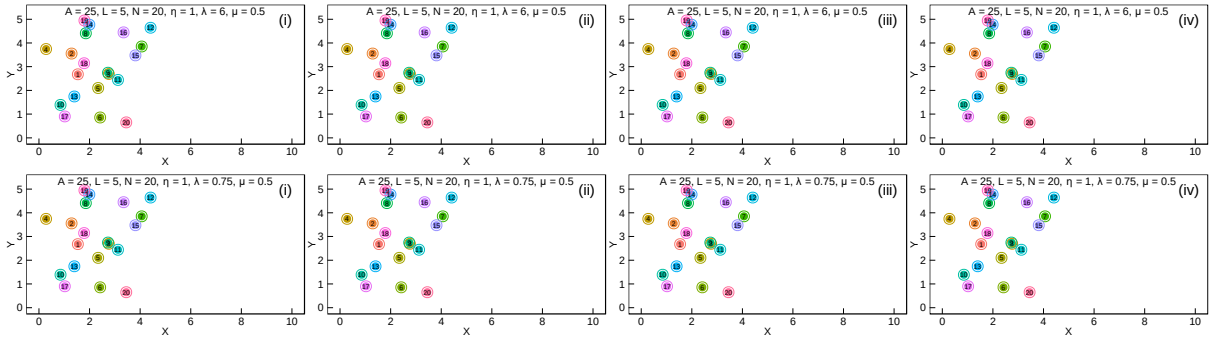

Fig. A2 The effects of the parameter λ in the model on the structures of the resulting animal habitat networks. As λ decreases, the density of the habitat network tends to increase.

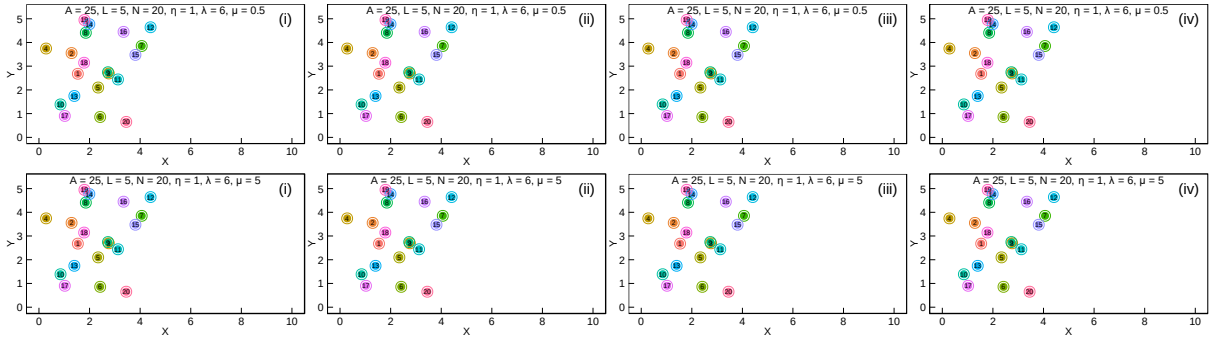

Fig. A3 The effects of the parameter μ in the model on the structures of the resulting animal habitat networks. As μ increases, the habitat network tends to be more densely connected (less links will be removed from the initial complete network).

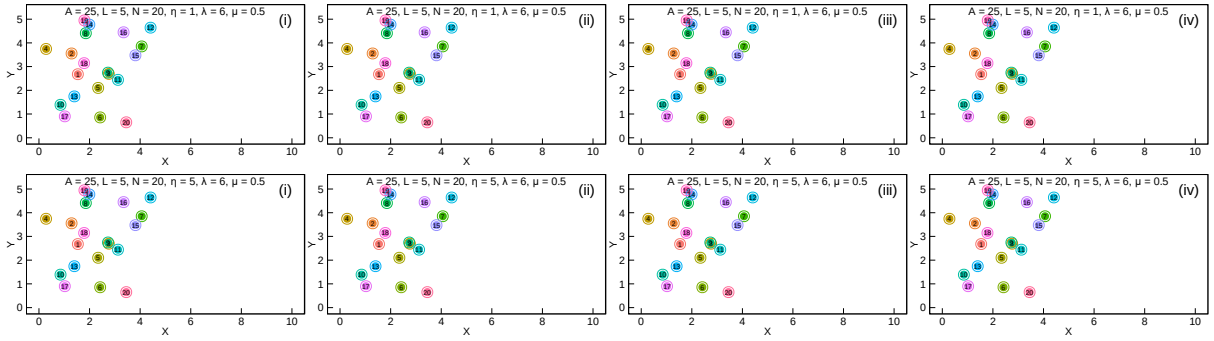

Fig. A4 The effects of the parameter η in the model on the structures of the resulting animal habitat networks. An increasing η has an increasing effect on the weights of rewiring links.

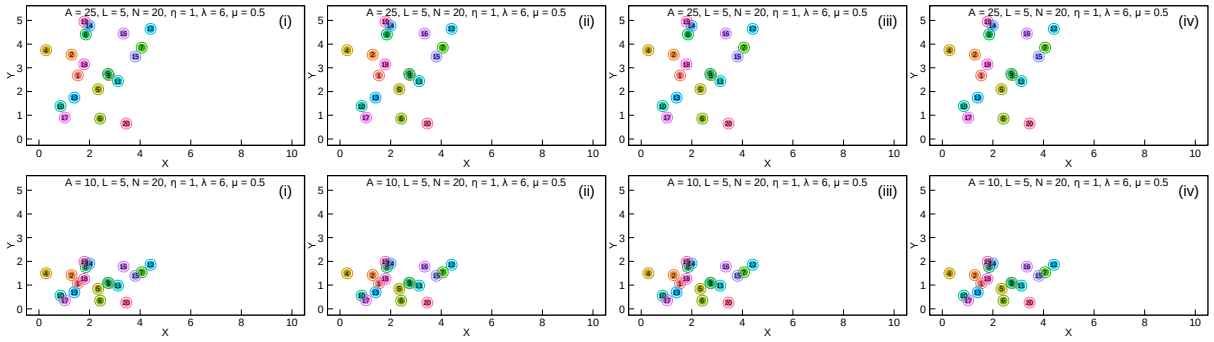

Fig. A5 The effects of the parameter A in the model on the structures of the resulting animal habitat networks. As A decreases, the spatial extent at which the habitat network is defined decreases and the network tend to be more densely connected (due to a decrease in the Euclidean distances between habitat components).

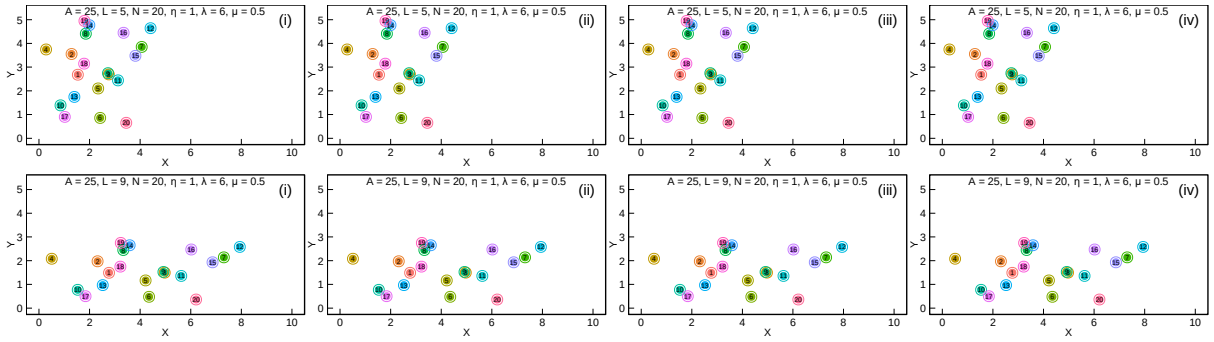

Fig. A6 The effects of the parameter L in the model on the structures of the resulting animal habitat networks. As L increases, the linearity of the habitat network increases.

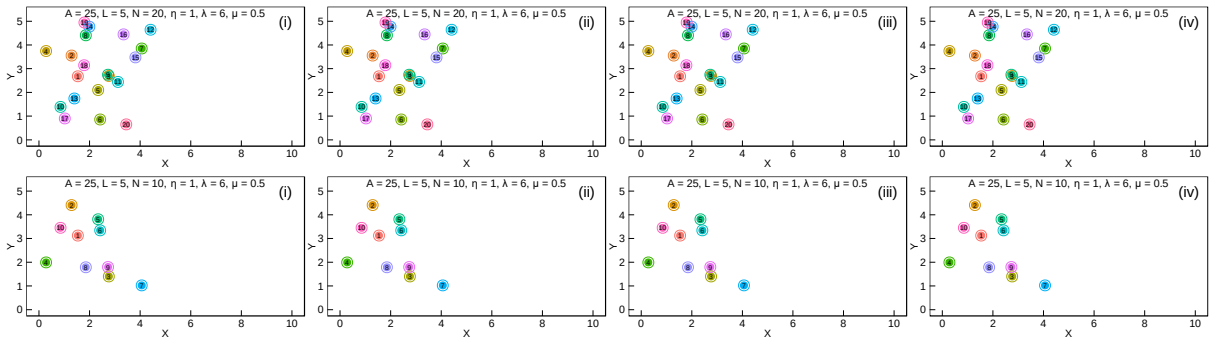

Fig. A7 The effects of the parameter N in the model on the structures of the resulting animal habitat networks. As N decreases, the size and configurational complexity of the network decrease, while the spatial resolution at which the habitat network is defined increases.