
Contents

1 Ecology as a Modern Science	
<i>Kazunori Sato, Yoh Iwasa, Yasuhiro Takeuchi</i>	1
2 Physiologically Structured Population Models: Towards a General Mathematical Theory	
<i>Odo Diekmann, Mats Gyllenberg, Johan Metz</i>	5
3 A Survey of Indirect Reciprocity	
<i>Hannelore Brandt, Hisashi Ohtsuki, Yoh Iwasa, Karl Sigmund</i>	21
4 The Effects of Migration on Persistence and Extinction	
<i>Jingan Cui, Yasuhiro Takeuchi</i>	51
5 Sexual Reproduction Process on One-Dimensional Stochastic Lattice Model	
<i>Kazunori Sato</i>	81
6 A Mathematical Model of Gene Transfer in a Biofilm	
<i>Mudassar Imran, Hal L. Smith</i>	93
7 Nonlinearity and Stochasticity in Population Dynamics	
<i>J. M. Cushing</i>	125
8 The Adaptive Dynamics of Community Structure	
<i>Ulf Dieckmann, Åke Brännström, Reinier HilleRisLambers, Hiroshi C. Ito</i>	145
Index	179