ANIMAL POPULATION DYNAMICS



Contents

pref	ace	Page (
1	Counting methods	Book Hally
1.1	Total counts	
1.2	Use of marked animals	
1.3	Sampling by quadrats	Ç
1.4	Indices of abundance	10
	Evolution and population dynamics	
2	What determines population size?	12
2.1	Natural selection	12
2.2	The evolution of population characteristics	12
2.3 2.4	The population as a unit for natural selection	13 14
2.4		
3	The numerical analysis of population change	16
3.1	Correlations	16
3.2	Demography	17
3.3	Population regulation	27
4	The natural limitation of animal numbers	35
4.1	I imiting resources	35
4.2	Limitation and regulation	38
4.3	Steady populations	39
4.4	Fluctuating populations	41
4.5	Social organizations and population density	46
5	The natural history of numbers	49
5.1	Exponential growth	50
5.2	Logistic growth	52
5.3	Organisms in chemostats	56
5.4	Models of predation	60
5.5	Further models	62
6	Decision-making	64
6.1	Levels of exploitation	64
6.2	Controlling pests	68
_		73
7 7.1	Time, space and chance	73
7.1	Distribution and population regulation	74
7.3	Habitat structure and population regulation The future	75
References		76
Index		79