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Nota di contenuto	POPULATION ECOLOGY: A Unified Study of Animals and Plants, THIRD EDITION; Contents; Preface; Part 1: SINGLE-SPECIES POPULATIONS; Chapter 1: Describing populations; 1.1 Introduction; 1.2 Population processes; 1.3 The diagrammatic life table; 1.3.1 General form; 1.3.2 The common field grasshopper, an annual species; 1.3.3 Ragwort, a biennial; 1.3.4 More complex life cycles; 1.3.5 Age and stage: the problems of describing some plant and animal populations; 1.4 Conventional life tables; 1.4.1 The cohort life table; 1.4.2 The static life table; 1.4.3 Resume; 1.5 Some generalizations 1.6 The modular growth of organisms 1.7 Buried seed banks; Chapter 2: Intraspecific competition; 2.1 The nature of intraspecific competition; 2.2 Three characteristics of intraspecific competition; 2.3 Density-dependence: a fourth characteristic; 2.4 Scramble and contest; 2.5 Actual effects of intraspecific competition; 2.5.1 Palmblad's data; 2.5.2 Competition in plants: a deeper look; 2.5.3 Individual variability; 2.5.4

Self-thinning in plants; 2.5.5 Competition in *Patella cochlear*; 2.5.6 Competition in the fruit fly; 2.6 Negative competition; Chapter 3: Models of single-species populations

3.1 Introduction 3.2 Populations breeding at discrete intervals; 3.2.1 The basic equations; 3.2.2 Incorporation of a range of competition; 3.2.3 Models for annual plants; 3.3 Continuous breeding; 3.4 The utility of the equations; 3.4.1 Causes of population fluctuations; 3.4.2 The equations as descriptions; 3.4.3 'Cobwebbing'-a more general approach; 3.5 Incorporation of age-specific fecundity and mortality; 3.5.1 The matrix model; 3.5.2 Using the model; 3.5.3 A working example: *Poa annua*; Part 2: INTERSPECIFIC INTERACTIONS; Chapter 4: Interspecific competition

4.1 The nature of interspecific interactions 4.2 Interspecific competition; 4.3 A field example: granivorous ants; 4.4 Competition between plant species: experimental approaches; 4.4.1 Manipulating density; 4.4.2 Manipulating resources; 4.5 The ecological niche; 4.6 The Competitive Exclusion Principle; 4.7 Competitive exclusion in the field; 4.8 Competitive release; 4.9 Coexistence: resource partitioning; 4.10 Character displacement; 4.11 Competition: its avoidance or its non-existence?; 4.12 Competition and coexistence in plants; 4.13 A logistic model of two-species competition

4.13.1 The model's utility 4.13.2 A test of the model: fruit fly competition; 4.14 Analysis of competition in plants; 4.15 Niche overlap; 4.16 Competition and heterogeneity; Chapter 5: Predation; 5.1 Introduction; 5.2 Patterns of abundance; 5.3 Coevolution, and specialization amongst predators; 5.3.1 One explanation for the degrees of specialization; 5.3.2 Food preference and predator switching; 5.4 Time and timing; 5.5 Effects on prey fitness; 5.5.1 The effects of herbivores on plant fitness; 5.6 The effects of predation-rate on predator fitness; 5.6.1 Thresholds; 5.6.2 Food quality

5.7 The functional response of predators to prey availability

Sommario/riassunto

Worldwide, *Population Ecology* is the leading textbook on this titled subject. Written primarily for students, it describes the present state of population ecology in terms that can be readily understood by undergraduates with little or no background in the subject. Carefully chosen experimental examples illustrate each topic, and studies of plants and animals are combined to show how fundamental principles can be derived that apply to both species. Use of complex mathematics is avoided throughout the book, and what math is necessary is dealt with by examination of real experimental data