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Autore	Spicer John I
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3.2.2 Unconstrained variation3.3 Experimentally altering between-individual variation; 3.4 Changes in between-individual variation in the field; 3.4.1 Differential mortality and extreme events; 3.4.2 Population persistence; 3.4.3 Normal environmental variation, differential mortality and physiological adjustment; 3.5 Sources of between-individual variation; 3.5.1 Experimental variation and developmental noise; 3.5.2 Individual circumstances; 3.5.3 Genetic differentiation; 3.6 The link to fitness?; 3.7 Concluding discussion and summary; Chapter 4: Population Differences; 4.1 Introduction
4.2 The roots of population differences4.2.1 Things are not always as they appear; 4.2.2 Acclimatization and reversible non-genetic differences; 4.2.3 Irreversible non-genetic differences; 4.2.4 Genetic differentiation; 4.2.5 Demographic differences; 4.3 Types of population similarity; 4.3.1 Similarity in environmental conditions and absence of capacity for local acclimatization; 4.3.2 Gene flow; 4.4 Spatial patterns in between-population variation; 4.4.1 Latitude; 4.4.2 Altitude; 4.4.3 Depth; 4.5 Geographic ranges; 4.5.1 Climate and occurrence
4.5.2 Why don't species have larger geographical ranges?4.5.3 Do species escape climatic constraints on their ranges?; 4.6 The link to fitness; 4.7 Concluding discussion and summary; Chapter 5: Species Contrasts; 5.1 Introduction; 5.2 Sources of between-species variation; 5.2.1 Measurement and summary statistics; 5.2.2 Phylogenetic relatedness; 5.2.3 Species circumstances; 5.2.4 Genetic differentiation; 5.2.5 Summary; 5.3 Allometry; 5.4 Spatial patterns in between-species variation; 5.4.1 Latitude; 5.4.2 Altitude; 5.4.3 Depth; 5.5 Rare and common species
5.6 Changing species' distributions and physiology

Sommario/riassunto

Ecologists have always believed, at least to a certain extent, that physiological mechanisms serve to underpin ecological patterns. However, their importance has traditionally been at best underestimated and at worst ignored, with physiological variation being dismissed as either an irrelevance or as random noise/error. Spicer and Gaston make a convincing argument that the precise physiology does matter! In contrast to previous works which have attempted to integrate ecology and physiology, Physiological Diversity adopts a completely different and more controversial approach in tackling