

<<生态学及群体生物发展中的VOLTER>>

图书基本信息

书名：<<生态学及群体生物发展中的VOLTERRA-HAMILTON模型VOLTERRA-HAMILTON MODELS IN>>

13位ISBN编号：9789810224509

10位ISBN编号：9810224508

出版时间：1996-12

出版时间：Penguin

作者：Antonelli, Peter L.; Antonelli;

页数：201

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

内容概要

This book begins with the modeling of evolutionary constraints on morphological diversity in ecology and then extends to development and evolution. The authors have used tractable, traditional models and mathematics, and carefully linked traditional ecological equations with production and consumption. This book contains new, more powerful models and has applied them, for example, in chemical ecology of coral reef. The production space serves as an appropriate background space from which the environmentally induced curvature in the allometric relations of superorganisms such as siphonophores, polymorphic bryozoans and ants can be measured. Projective differential geometry is used to formula dynamical models of evolution by heterochrony and by symbiosis and a theory of stable and weakly chaotic production, important in ecology and in modeling the evolution of individuality is developed.

书籍目录

Prologue Chapter .Simple Growth of Populations and Individuals 1.1.Population Growth 1.2.Multiple—Species Communities 1.3.Individual Growth 1.4.Multidimensional Growth in Individuals 1.5.A Plant Considered as a Population 1.6.A Simple Model of Tannin Production in a Plant 1.7.volterra ' S Production Variable Chapter Summary Chapter .Competitive Interactions Between Two Species 2.1.Gause—Witt Competition 2.2.Hutchinson ' S Competition with Social Effects Chapter Summary Chapter .Medawar ' S Growth Energy and Optimal Production 3.1.Gompertz Growth and Medawar ' S Energy of Growth 3.2.The Calculus of Variations and Optimal Production 3.3.Laird ' S Law.The Principle of Maupertuis and Medawar ' S Energy Chapter Summary Chapter .Predation and Herbivory on Optimally Producing Terrestrial and Marine Ecosystems 4.1.The Crown—of-Thorns Starfish Predation on G.B.R 4.2.Optimal Defense Theory of Rhoades 4.3.Chemical Interactions Between Soft and Hard Corals—The Biology 4.4.Introduction to the Model Description of a Viable Community 4.5.Predictions on the Model Chapter Summary Chapter .The Differential Geometry of Production Stability 5.1.Quadratic Maupertuis Energy 5.2.Non—Quadratic Maupertuis Energy Chapter Summary Chapter .A Dynamical Theory of Heterochrony : Time.Sequencing Changes in Ecology , Evolution and Development 6.1.Krivan ' S Growth Rate Transformation Defined by Ecological Constraints 6.2.Constraints on Production and the Projective Geometry of Sprays.The Adaptation Theorem 6.3.Division of Labour in Colonial Animals Wilson ' S Ergonomics and Allometric Space 6.4.Social Interactions , Curvature and Complexity Kwang Jeon ' S Experiment 6.5.Heterochrony and Environment in the Evolution of a Colonial Individual 6.6.Allometric Space and Wagner Geometry 6.7.Allometric Growth and Heterochrony in Paleontology 6.8.Remarks on the Dissociation of Growth , Maturation and Development in Ontogeny 6.9.Progenesis and Myxomatosis , The Wild Rabbit Disease Chapter Summary Appendix A : On the Fundamental Lemma of Variational Calculus Appendix B : Fuzzy Differential Inclusions as Substitutes for Stochastic Differential Equations in Population Biology 1.Introduction 2.Fuzzy Differential Inclusions 3.An Example of Non—Riemannian Type 4.Targeting Growth in the Presence of Noise 5.Final Remarks References Appendix C : Normal Coordinates and Log。 Biomass References Some Frequently Used Formulas Index

版权说明

本站所提供下载的PDF图书仅提供预览和简介, 请支持正版图书。

更多资源请访问:<http://www.tushu007.com>