Mathematical Biology (Biomathematics)

James D. Murray
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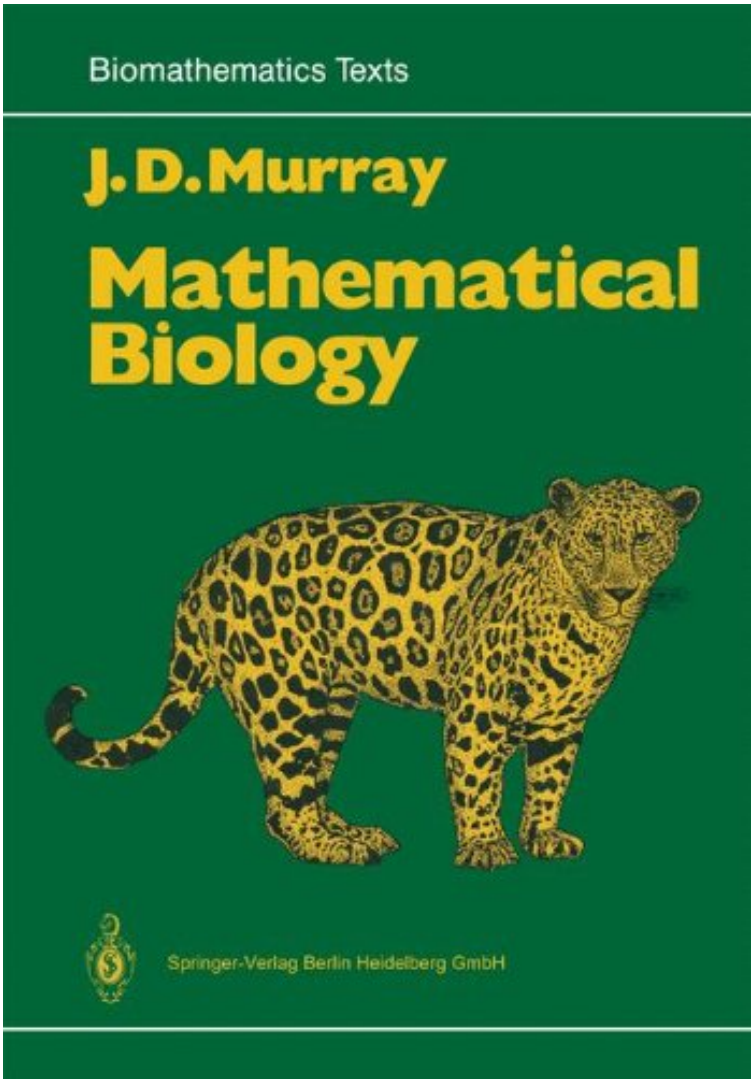

#141233 in Books 1989-08-10Ingredients: Example IngredientsOriginal language:EnglishPDF # 1 .0 x .0 x .0l, .0 #File Name: 3540194606767 pages | File size: 32.Mb

James D. Murray : Mathematical Biology (Biomathematics) before purchasing it in order to gage whether or not it would be worth my time, and all praised Mathematical Biology (Biomathematics):

0 of 0 people found the following review helpful. A classicBy ubpdqnThis book is a classic. I basically skimmed through this (partly a reflection of a current dificulty with focus and concentration). This book covers a large number of areas: simple population models, sex determination in crocodiles, mathematical models of marriage, biological oscillators, diffusion and chemotaxis, wave phenomena in biological systems and finally a brief discussion of fractals in biology (uses and misuses).There is a systematic exploration of these various models and the important insights from linearization, perturbation methods for stability analysis was repeatedly illustrated. The graphics with

comparisons to experimental data were well chosen and demonstrated.The book highlighted to me deeo deficits in my knowledge and forms motivation for reducing my ignorance. I am looking forward to the Second Volume which explores spatial patterns and excitable media.0 of 0 people found the following review helpful. Actually indispensableBy MR PIERRE JEANSo useful for theoretician biologists ! No need to say more !10 of 11 people found the following review helpful. An excellent reference in the field of the Mathematical BiologyBy shilian xuThis book is an excellent reference in the field. In fact, this book introduces almost sub-disciplinaries in the Mathematical Biology. Nevertheless, this book is not an introduction for beginners. Moveover, the mathematical analysis, the ordinary differential equation, the nonlinear nondynamics and chaos should be mastered before reading this excellent textbook.

Mathematical biology - the use of mathematical ideas and models in the biosciences - is a fast growing, very exciting and increasingly important inderdisciplinary field. This textbook is an account of some of the major techniques and models used and of some genuine practical applications drawn from current areas of research interest in, for example, population ecology, developmental biology, physiology, epidemiology and evolution. It provides the reader with a thorough background, sufficient to start genuine interdisciplinary collaborative reserach with biomedical scientists.

s of the original edition: "Murray has produced a magnificent compilation of mathematical models and their applications in biology." Nature "Murray's Mathematical Biology belongs on the shelf of any person with a serious interest in mathematical biology." Bulletin of Mathematical Biology SIAM, 2004: "Murray's Mathematical Biology is a classic that belongs on the shelf of any serious student or researcher in the field. Together the two volumes contain well over 1000 references, a rich source of material, together with an excellent index to help readers quickly find key words. ... I recommend the new and expanded third edition to any serious young student interested in mathematical biology who already has a solid basis in applied mathematics." From the reviews of the third edition: "Mathematical Biology would be eminently suitable as a text for a final year undergraduate or postgraduate course in mathematical biology . It is also a good source of examples for courses in mathematical methods . Mathematical Biology provides a good way in to the field and a useful reference for those of us already there. It may attract more mathematicians to work in biology by showing them that there is real work to be done." (Peter Saunders, The Mathematical Gazette, Vol. 90 (519), 2006)