

Paperback Re-issue

This is the first major synthesis of the theory and empirical knowledge about the ecology and epidemiology of infectious diseases in natural, unmanaged, animal and plant populations. The emphasis is on parasites and pathogens in animal populations ranging from insects through to mammals, although significant sections also deal with plant pathogens. A full range of infectious disease agents is considered from microparasites (viruses, bacteria, protozoa and prions), through to macroparasites (helminths and arthropods).

Throughout the book a dialogue is developed between the patterns observed in empirical studies of disease in natural populations and the mathematical models used to dissect and examine the observed epidemiological patterns. The book arose from a symposium at the Newton Institute at Cambridge University. It is divided into a number of reviews by experts in various fields and four group reports: two of these synthesize important issues relating to the dynamics of microparasites and macroparasites, while the others discuss spatial patterns in disease dynamics and the evolutionary biology of parasites, pathogens and their hosts. Throughout the book considerable emphasis is placed on interdisciplinary collaborations between field workers and theoreticians.

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Isaac Newton Institute for Mathematical Sciences

The Isaac Newton Institute for Mathematical Sciences of the University of Cambridge exists to stimulate research in all branches of the mathematical sciences, including pure mathematics, statistics, applied mathematics, theoretical physics, theoretical computer science, mathematical biology and economics. The four six-month long research programmes it runs each year bring together leading mathematical scientists from all over the world to exchange ideas through seminars, teaching and informal interaction.

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