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Parasitology: A Conceptual Approach. *By Eric S. Loker and Bruce Hofkin. New York: Garland Science; 2015. US $120.00 (Paperback). 550 pp. ISBN: 978-0815344735.*

Adopting a broad perspective, Loker and Hofkin's *Parasitology: A Conceptual Approach* offers an excellent introduction to a subject often ignored or cursorily covered in undergraduate biology and medical school curricula. The book is written for upper-level undergraduates as well as graduate, medical, veterinary, and public health students. It assumes minimal background in molecular biology and microbiology, instead introducing relevant concepts as needed.

The first chapter attempts to delimit the field of "parasitology" and classify which organisms are considered "parasites." Unlike most textbooks, *Parasitology* does not take a prescriptivist tone in setting definitions and even winkingly suggests that parasites are simply the organisms that parasitologists study. In addition, instead of organizing the book by taxon like a phylogenetic catalog (the more common approach taken by Bogitsh's *Human Parasitology* or Roberts' *Foundations of Parasitology*), Loker and Hofkin arrange the book by subject. This is a conscious choice, as per the preface; both of the authors taught courses in parasitology and concluded that the taxonomic approach misses several big-picture concepts and universal principles.

The later chapters of the book continue to emphasize the fluid and dynamic nature of the field and introduce its topics conceptually, using specific examples to illustrate larger themes. For instance, one section incorporates maps of *Anopheles* malaria transmission to illustrate the impact of weather on parasite spread. Loker and Hofkin focus on the ecological, evolutionary, immunological, and public health aspects of parasitology, liberally introducing concepts like the basic reproductive rate and the Red Queen hypothesis to readers with backgrounds in disparate fields. Thus, the authors ensure that every reader, regardless of background, arrives at a unified and multidisciplinary understanding of parasites.

The book also provides an excellent molecular overview of the interaction between the immune system of the host and the shifting adaptations of the parasite. This complex interplay between host and parasite is key to future advances in targeted therapy and personalized medicine within the larger field of infectious disease. Concepts covered include the ability of trypanosomes to change their surface glycoproteins in order to evade the adaptive immune response, the role of Th2 responses in helminth infections, and the unique antibody capping abilities of *Entamoeba dispar*.

The book ends with a "Rogues' Gallery" of infectious parasites relevant to both veterinary and human medicine and carefully catalog their transmission routes, hosts, treatments, and pathology. While the authors deliberately eschew a compendium format for the majority of the book, they do provide an excellent reference in their last section, complete with illustrations of life cycles and histology. While a more advanced reader may need a heftier work as a reference, this section will serve most students well, either in the classroom or as a review for the boards and qualifying exams.

Overall, *Parasitology: A Conceptual Approach* offers a comprehensive introduction to a multifaceted and often ignored field of biology and provides a useful jumping-off point for deeper study. Its broad theme-based structure effectively explicates several subdivisions of parasitology, and its case studies are judiciously chosen and highlight important concepts with salient examples. For those searching for a reference, the last chapter suffices. In sum, Loker and Hofkin's textbook is an excellent read for both undergraduate and graduate students.

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Evolutionary Medicine. *By Stephen C. Stearns and Ruslan Medzhitov. Sunderland, MA: Sinauer Associates, Inc.; 2015. US $68.95 (Paperback). 306 pp. ISBN: 978-1605352602.*

Evolutionary Medicine looks at basic evolutionary principles to gain important insight into biological phenomena. In their preface, Stearns and Medzhitov state that they will use evolutionary thinking as "a framework that integrates medical knowledge." Thus, they weave together a picture of an organism using varied, and often fun, examples from biology with evolutionary insight.

The book addresses how natural variation within a population explains differences in host susceptibility to disease and drug metabolism, as well as being the key mechanism for pathogen evolution and antibiotic resistance. In addition, the authors suggest that the same bell curve of phenotypes could explain the incidence of mental disorders found in the human population. The book explores how evolution has played a critical role in shaping innate and adaptive immunity, while emphasizing the importance of this knowledge to our understanding of immune defense. Reproductive biology is riddled with competition — between mother and father, parent and child, and siblings — consequently, evolutionary biology provides intriguing insights into genetic imprinting, birth in bipedal species, placentas, and menstruation. The book also explores cancer as an evolving entity within the patient's body, as well as the evolutionary trade-offs that

predispose certain species to cancer and metastases. Both concepts are key to the creation of new cancer treatments. Lastly, the book delves into how a mismatch of the modern environment from our evolutionarily ancestral environment explains many diseases of the industrial world such as diabetes, allergies, autoimmunity, and obesity.

Evolutionary Medicine is intended for undergraduate, graduate, or medical school courses. It draws from fields as diverse as anthropology to molecular biology in order to illustrate the vast landscape of an organism in all its complexity. In contrast to the reductionist approach often taken to answer complex biological questions, much of the strength of the book derives from the authors' ability to step back and describe themes that are broadly generalizable. This alternative perspective allows for an innovative understanding of basic biological processes with profound translational potential. The striking simplicity of the author's overall thesis allows the book to address, in a novel light, questions as fundamental as "What is a patient?" as well as "What is a disease?"

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***Technological Medicine: The Changing World of Doctors and Patients**. By Stanley Joel Reiser. New York: Cambridge University Press; 2014. US $25.91 (Paperback). 229 pp. ISBN: 978-1107661233.*

Technological Medicine by Stanley Reiser is a very informative, reader-friendly, and engaging historical overview of the evolution of modern health care policies, advanced medical technologies, and how certain historical events and figures played into the development of those innovations and policies.

The book consists of nine well-intertwined chapters. The text is peppered with anecdotal excerpts from various historical documents and provides illustrations depicting medical technologies as they were imagined throughout history. The author artfully bridges the technical peculiarities of medical technologies with specific historical events that helped spur their invention. Each chapter follows the same engaging recipe: first, it provides a detailed historical overview about what events preceded, sometimes accidental, sometimes painstakingly challenging; followed by an exploration of how lives of patients, practitioners' experience, and health care as a whole were influenced by the successes and pitfalls of their use; and finally, how the response to these technologies re-created the relationship between patients and doctors, increased awareness of health care policy flaws, and helped introduce ways to improve practice in health care.

In the first third of the book, Reiser spends a great deal of time covering the evolution of technologies, from the stethoscope and the X-ray to an artificial kidney and respirators, exploring both unprecedented benefits for the patients as well as a plethora of unexpected medical, ethical, and legal plights for doctors and health care policy makers.

The second part is devoted to less technical aspects of health care evolution and focuses on improving policies and general practices in health care such as a grueling century-long pursuit to create a centralized library of electronic health records; the necessity and effectiveness of random clinical trials; and the development of policies to maximize the effective distribution of therapies through publicly funded programs.

The readers may find that the final part of the book about the technological transformation of childbirth stands out. The final two chapters seem to be a little detached from the narrative but provide an important insight into the transition of birth from a social to a technologically driven medical event.

The student or medical professional who has made it his or her mission to have a deeper understanding of modern health care policies and expand his or her historical knowledge about the evolution of modern medicine will find this book very explanatory and exhilarating to read. It is also a highly educational resource for health professionals and general public interested in how the modern health care system and technologies of medicine evolved over the centuries through invention, ingenuity, and passionate dedication of doctors, engineers, and scientists.

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***Medical Genetics for the MRCOG and Beyond.** Second Edition. By Edward S. Tobias and J. Michael Connor. New York: Cambridge University Press; 2014. US $59.99 (Paperback). 143 pp. ISBN: 978-1107661301.*

The second edition of *Medical Genetics for the MRCOG and Beyond* is a compact text with thorough coverage of essential information for prenatal screening and diagnosis of genetic disorders.

This book begins with a list of abbreviations and a glossary for easy reference as the reader delves into the main text, which is broken up into three overarching sections. The first includes an introduction to genetics and the general principles of inheritance patterns. New to the second edition of this text is updated information on DNA sequencing technologies and other analytical methods crucial for screening and diagnosis of genetic disorders. The second section provides an overview of common disorders that one could encounter in an obstetrics-gynecology practice. This unit includes clear schematics as well as photographs of patients to demonstrate the classic symptoms associated with disease; this pictorial information is accompanied by a complete description of each syndrome or disease, the known mutations and inheritance patterns associated with each disorder, and the recommended screening or testing to be performed. Additionally, this