tion on families, as well as the species in those families. *Handbook of the Birds of the World Alive* provides up-to-date lists of references for each bird species. It also allows readers to add lists of their own personal bird sightings; to search by name, taxonomy, or geographic region; and to search for specific terms throughout the entire resource in seconds, something that would take months in the 13,367 pages of the text version. There is a section called Latest Ornithological News that lists recent developments. Content on *Handbook of the Birds of the World Alive* also links with the information on the Internet Bird Collection (IBC) website (http://ibc.lynxeds.com/), a free online resource of bird photographs, videos, and sound recordings maintained by Lynx Edicions.

For anyone interested in birds, or vertebrate animals in general, *Handbook of the Birds of the World Alive* will be immensely enjoyed, and will quickly become an invaluable and often-used resource.

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WELCOME TO SUBIRDIA: SHARING OUR NEIGHBORHOODS WITH WRENS, ROBINS, WOODPECKERS, AND OTHER WILDLIFE.

By John M. Marzluff; illustrated by Jack DeLap. New Haven (Connecticut): Yale University Press. $30.00. xvi + 303 p.; ill.; index. ISBN: 978-0-300-19707-5. 2014.

HUMAN BIOLOGY AND HEALTH

CHILDHOOD OBESITY IN AMERICA: BIOGRAPHY OF AN EPIDEMIC.

By Laura Dawes. Cambridge (Massachusetts): Harvard University Press. $45.00. ix + 305 p.; ill.; index. ISBN: 978-0-674-28144-8. 2014.

As a freelance medical journalist, Laura Dawes tells the interesting history of childhood plumpness, which went from being admired as a sign of health in the 19th century to being a harbinger of adult obesity. This is as much a social and political history of obesity as it is the history of the biomedical understanding. There are support groups, such as the National Association to Advance Fat Acceptance (NAAFA) and Health at Every Size (HAES), which seek to build self-esteem and empowerment. Although sumo wrestlers can maintain good glucose-insulin regulation despite obesity, the physical activity required is not sustainable and diabetes sets in sooner than later. Given evidence that maternal obesity increases the risk for offspring, there is no quick fix. The title phrase "*obesity in America*" may be a marketing strategy, but does not fairly present the global nature of the obesity epidemic as elaborated in the volume.

Childhood obesity seems as intractable as for adults, with about 30% of U.S. children afflicted. The history of childhood growth curves is nicely reviewed, beginning in mid-1800s with the growth curves of Adolphe Quetelet in Belgium, who introduced the concept of optimum body size with reference to the body mass index. Several decades later in Boston, Henry Bowditch further analyzed sex and ethnic differences in children's growth, with assumptions that were in resonance with prevailing beliefs about racial superiority. Plumpness remained an ideal for a healthy child until the 1920s, when some pediatricians were becoming concerned about overweight patients. Subsequent interventions included psychoanalysis and pituitary extracts, equally futile. Readers seeking depth in the mechanisms leading to childhood obesity will enjoy Susan Prescott's latest book, *Origins: Early-Life Solutions to the Modern Health Crisis* (2015. Crawley (Australia): UWA Publishing). I also note the excellent work of Kevin D. Hall at the National Institutes of Health, which has defined sex differences in growth trajectories to optimize the food intake needed to "outgrow" childhood obesity.

The book concludes on the politics of food production and food advertising in our "obesogenic environment" (p. 207). An enormous effort in public health is needed with a strategy over several future generations.

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NAVIGATING METABOLISM.

By Navdeep S. Chandel; illustrated by Pete Jeffs. Cold Spring Harbor (New York): Cold Spring Harbor Laboratory Press. $79.00 (hardcover); $49.00 (paper). xv + 248 p.; ill.; index. ISBN: 978-1-62182-040-6 (hc); 978-1-62182-129-8 (pb). 2015.

Metabolism, according to Chandel, is a subject that is currently undergoing a renaissance, having nearly gone out of fashion in recent memory. For many students (as well as many seasoned investigators), the encounter with the complexities of metabolism, including multiple intermediates, enzymes, details of regulation, and interactions between pathways, can be quite daunting. Although many biochemistry textbooks cover this topic in varying levels of detail, their comprehensive coverage of the material does have a tendency to become descriptive without a narrative to tie together relationships among the various players.

This volume covers the impact of the metabolic pathways in 232 succinct pages, which include abundant illustrations. Organized into 12 chapters, it begins with a brief synopsis of the seminal

discoveries in the 20th century and a modern perspective of how metabolism is relevant to disorders such as obesity, neurodegenerative diseases, diabetes, and cancer. With a short chapter that covers the basics including thermodynamics, catalysis, and enzyme kinetics, the middle chapters are devoted to the standard topics in metabolism—glycolysis, tricarboxylic acid cycle, respiration, and the synthesis and catabolism of carbohydrates, lipids, amino acids, and nucleotides. The author's overall examination of metabolism leads to a chapter devoted to the impact of metabolism to cell signaling and regulation as well as the role of signaling in regulating metabolism. This exploration culminates with a penultimate chapter that describes how these processes come into play in proliferating cells. The final chapter is devoted to statements by 12 principal investigators, including Chandel, who discuss the impact of metabolism on their respective fields of study. Also included is an appendix by Ralph J. DeBarardinis on metabolomics, describing modern approaches to examining metabolic profiles and how they influence approaches to human diseases.

Describing such intricate processes with this level of brevity does have its perils. As no single subject can be covered in considerable depth, there may be readers who find the discussion of specific topics incomplete or even imprecise. However, as the author states, this volume is not intended to replace biochemistry textbooks but instead to complement them in establishing links with biology. The benefits of this publication are that the complexities of metabolism are described from a unifying perspective in a readily readable form, avoiding the pitfall of making too many links with complexities in biology. Chandel appropriately focuses on connections of metabolism with signaling and discusses their relevance largely from the perspective of cancer biology. Although he does not delve as much into topics such as diabetes and obesity, the short contributions by other investigators give readers a flavor of thinking in other fields and what is in store in future research. The value of this book is in providing a narrative that provides one view of how the diverse elements in metabolism and signal transduction relate to each other, a general way of thinking that undoubtedly will be applicable in addressing various problems pertaining to human health.

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The Immune System. *Fourth Edition.*

By Peter Parham. New York: Garland Science (Taylor & Francis Group). $130.00 (paper). xxii + 532 p.; ill.; A:1-A:12; G:1-G:30; F:1-F:2; I:1-I:26 (index). ISBN: 978-0-8153-4466-7. [This is adapted from *Janeway's Immunobiology*, also published by Garland Science.] 2015.

Medical Biotechnology.

By Bernard R. Glick, Terry L. Delovitch, and Cheryl L. Patten. Washington (DC): ASM Press. $120.00. xix + 737 p.; ill.; index. ISBN: 978-1-55581-705-3 (hc); 978-1-55581-889-0 (eb). 2014.

Computational Biomedicine: Modelling the Human Body.

Edited by Peter V. Coveney, Vanessa Díaz-Zuccarini, Peter Hunter, and Marco Viceconti. Oxford and New York: Oxford University Press. $69.95 (paper). xiii + 278 p.; ill.; index. ISBN: 978-0-19-965818-3. 2014.

Functional Magnetic Resonance Imaging. *Third Edition.*

By Scott A. Huettel, Allen W. Song, and Gregory McCarthy. Sunderland (Massachusetts): Sinauer Associates. $102.95. xvii + 573 p. + G-1-G-16; I-1-I-16; ill.; index. ISBN: 978-0-87893-627-4. 2014.

The Emergence of Tropical Medicine in France.

By Michael A. Osborne. Chicago (Illinois): University of Chicago Press. $50.00. ix + 312 p.; ill.; index. ISBN: 978-0-226-11452-1 (hc); 978-0-226-11466-8 (eb). 2014.