DE HUMANI CORPORIS FABRICA (THE STRUCTURE OF THE HUMAN BODY)

Volume 1: Book I: The Bones and Cartilage by Andreas Vesalius (William Frank Richardson and John Burd Carman, trans) 416 pp, \$275 Novato, CA, Norman Publishing, 2009 ISBN-13: 978-0-9304-0573-0

Volume 2: Book II: The Ligaments and Muscles

by Andreas Vesalius (William Frank Richardson and John Burd Carman, trans) 492 pp, \$275 Novato, CA, Norman Publishing, 2009 ISBN-13: 978-0-9304-0575-7

Volume 3: Book III: The Veins and Arteries and Book IV: The Nerves

by Andreas Vesalius (William Frank Richardson and John Burd Carman, trans) 286 pp, \$275 Novato, CA, Norman Publishing, 2009 ISBN-13: 978-0-9304-0583-8

Volume 4: Book V: The Organs of Nutrition and Generation

by Andreas Vesalius (William Frank Richardson and John Burd Carman, trans) 241 pp, \$275 Novato, CA, Norman Publishing, 2009 ISBN-13: 978-0-9304-4058-8

Volume 5: Book VI: The Heart and Associated Organs and Book VII: The Brain by Andreas Vesalius (William Frank Richardson and John Burd Carman, trans) 413 pp, \$275 Novato, CA, Norman Publishing, 2009 ISBN-13: 978-0-9304-0590-8

WITH THE COMPLETION OF THIS MONUMENTAL 5-VOLUME ENglish translation of Andreas Vesalius' *De Humani Corporis Fabrica* (1543), Jeremy Norman of Norman Publishing has redressed several hundred years of neglect accorded to Vesalius, the 16th-century "reformer of anatomy." Although Vesalius' achievements are widely (but superficially) known, it has not been possible—until now—to read his text in a comprehensive and accurate modern translation, nor to admire the complete set of beautiful woodcut images placed alongside relevant text. This relative obscurity, attributable largely to the declining interest in Greek and Latin, is now ended—one of the most important and influential works in the history of Western science is readily available to all, in its entirety.

The complete translation (published between 1998 and 2009) comprises the original 7 books, arranged in 5 modern volumes. Books I and II make up fully half of the entire *Fabrica*, reflecting both the availability and the importance of the most durable and easily obtained parts of the human body. Immediately, Vesalius makes known that he is working toward a new and higher standard of

excellence in anatomical description. Book III presents a 16th-century overview of the vascular system in which the veins are given much more attention than the arteries, reflecting pre-Harveian misconceptions. In the illustrations, the veins dominate and actually obscure the arteries. The account of the nerves in Book IV is a fascinating mixture of insight and error, because here "nerves" refers to ligaments and tendons as well as true nerves. Book V ends with a detailed account of how to dissect the abdominopelvic organs, a reminder that Vesalius sought first-hand knowledge. Because dissection instructions are also found at the end of books VI and VII, it seems likely that he envisioned a complete dissection manual for student use. The account on the heart is of interest for its obvious historical importance, while the images of the brain and meninges are perhaps as well known and widely admired as any in the Fabrica. Even the squeamish reader cannot look away from the series of beautifully drawn images that reveal the brain via sequential removal of the skull cap and then the dura mater, followed by the serial exposure of several horizontal brain sections that further reveal the ventricular system, cranial nerves, pituitary gland, and the exposed cranial cavity. Here Vesalius is shown at his best and most accomplished, in the full flower of his descriptive powers.

In a work of this scope and complexity, there is a special need for indexes and other types of reference guides, and here they are superbly executed. Each volume (except the last) includes 3 introductory prefaces—historical, translator's, and anatomist's—that provide a treasure trove of informative comments and insights on the text and images that follow.

The numerous marginal reference notes and exhaustive indexes (to text passages, persons and places, words from other languages, translator's notes, and individual volumes) assist the reader in locating any text or image. Two special indexes (to muscles [volume 2] and to vessels and nerves [volume 3]) are specifically meant to assist location of commonly used words and terms. The end of the final volume presents another lengthy set of cumulative indexes (75 pages), as well as Vesalius' own index (71 pages). The final cumulative index comprises more than 4500 entries. Altogether, these constitute a remarkably comprehensive and valuable resource, one for which serious researchers should be forever grateful.

But the dry recitation of facts detracts from the real gem of the story—that of a working anatomist and surgeon reshaping his views and his world as he goes about his business of dissecting, teaching students, and uncovering and rectifying errors of fact, all the while coming to realize that he must challenge received wisdom. The "obsequious submission to authority" (R.F. Jones) that

Book and Media Reviews Section Editor: John L. Zeller, MD, PhD, Contributing Editor.

BOOK AND MEDIA REVIEWS



Left, Table X of Muscles. Right, Folding plate of veins and arteries. Images reproduced from *De Humani Corporis Fabrica*, Volumes 2 and 3, respectively, by Andreas Vesalius (William Frank Richardson and John Burd Carman, trans) by permission of Norman Publishing, Novato, California.

characterized the early Renaissance would soon give way to forces that would culminate in the 17th-century "age of experiment," and Vesalius would have played no small part in this drama.

In 1948, William Ivins, Curator of Prints at the Metropolitan Museum of Art, would write that "The *Fabrica* is an outstanding example . . . of a text that has proved its lack of value by never being read . . . ," even though the illustrations are "after four hundred years . . . still of interest and value to every person interested in the artistic rendering of natural shapes." This extended neglect of the written text must now surely end and allow full appreciation of both text and illustration as conceived by Vesalius.

Thanks to the long-term collaboration between 2 scholars from the University of Auckland—John Carman (anatomist) and William Richardson (classicist)—the result is a work that can be read in several ways: as a straightforward historical masterpiece of Renaissance thought, an introduction to the study of human anatomy (as understood in the 16th century), a series of introductory lessons in art history, and a modern-day tale of morality and mortality to be reflected on by thoughtful students at the dissection table.

The individual volumes, made to the highest standards and printed on acid-free, high-quality 80-pound eggshell paper, are strongly and beautifully bound. The margins are generous, as befits a book that invites annotation and serious study. Gerald Cortright, PhD Office of Medical Education Division of Anatomical Sciences University of Michigan School of Medicine Ann Arbor gcor@umich.edu

Financial Disclosures: None reported.

ANDREAS VESALIUS: THE MAKING, THE MADMAN, AND THE MYTH

By Stephen N. Joffe 222 pp, \$28.99 Bloomington, IN, Persona Publishing, 2009 ISBN-13: 978-1-6048-1560-3

PRIOR TO 1543, MUCH OF THE UNDERSTANDING OF THE ANATOMY of the human body was based on work by the ancient Roman scientist and philosopher Galen of Pergamum. Galen's *Institutiones Anatomicae*, the first major treatise on anatomical form, was the gold standard for medical and anatomical education. However, Galen's work on human anatomy was primarily rooted in dissections of nonhuman primates—dissection of human remains was illegal—with human anatomy extrapolated from the anatomy of close relatives.

However, during the late 1530s, Andreas Vesalius, a young anatomist at the University of Padua, was preparing to revo-