

An Activist in Paleontology

An Agenda for Antiquity. Henry Fairfield Osborn and Vertebrate Paleontology at the American Museum of Natural History, 1890–1935. RONALD RAINGER. University of Alabama Press, Tuscaloosa, 1991. xiv, 316 pp., illus. \$37.95. History of American Science and Technology Series.

On completing his studies at Princeton in the late 1870s, Henry Fairfield Osborn, smitten by the romance of science, did not follow his father into the family (railroad) business as had been expected; and although his father was strongly opposed to this decision he was reluctantly persuaded to let his son spend a year studying in England. Here the young Osborn received a “sound training” in embryology and comparative anatomy under Francis M. Balfour at Cambridge and Thomas Henry Huxley at the Royal College of Science, London, and he remained resolute even though these studies were cut short by his father’s continuing efforts to interfere with his career plans. By the mid 1880s Osborn was firmly ensconced at Princeton, where he began developing new biology courses along the lines of those created by W. Keith Brooks and H. Newell Martin at Johns Hopkins.

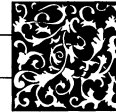
Initially Osborn had clearly identified himself with the “new biology” and its concerns for tracing the development of the germ layers as a means for determining homology and phylogeny. Recognizing his limitations for doing this kind of research, however, he turned his attention away from embryology to vertebrate paleontology—then dominated by two warring titans, Othniel C. Marsh and Edward Drinker Cope. As elsewhere, this area of scientific study was still considered a marginal field at Princeton, and the college had only a modest program, which was under the control of Osborn’s former classmate William B. Scott. Amicably, however, Osborn and Scott joined forces and during the next five years collaborated on several major research projects on fossil mammals. At the same time they both became disciples of Cope, whom they endeavored to assist in his continuing feud with Marsh. By 1890 Osborn had created both a reputation and a niche for himself, but, contrary to his expectations, the program at Princeton remained subordinate to those of Yale, Harvard, and Johns Hopkins. Ambitious and impatient, Osborn made the important decision to quit Princeton and move to Columbia University, where he saw better prospects of promoting his work on a grander scale. During the next four decades Osborn did precisely this. Besides emerging as a dominant figure in American verte-

brate paleontology, Osborn also transformed the American Museum of Natural History (AMNH) into a major research center for the discipline in the United States.

In *An Agenda for Antiquity* Ronald Rainger is primarily concerned with documenting and analyzing how Osborn achieved his ambitions in New York City. Thus, Rainger’s study does not cover in detail Osborn’s entire career, nor does it examine in depth all aspects of his later activities at the AMNH. Among the matters left underdeveloped is Osborn’s connection with the Immigration Restriction League and the Galton Society. But while Rainger’s book does not pretend to be a definitive biography of Osborn, it covers most of the essential details, examining them in their historical context and methodically documenting them, primarily from archival sources, in 65 pages of notes.

According to Rainger, Osborn’s rapid rise to prominence was in large part due to

his familial and social ties with some of New York City’s wealthiest and politically most powerful families (including the Sturges, Dodges, Morgans, and Roosevelts). But, as Rainger notes, while these resources provided him with both financial and political clout, it is important not to lose sight of his entrepreneurial and administrative talents. Furthermore, as Rainger documents, the progress of Osborn’s plans in New York was also greatly enhanced by an ability to capture in his scientific agenda the priorities and concerns of his future benefactors. And the fact that the likes of J. Pierpont Morgan and Morris K. Jesup were more actively interested in funding public institutions such as the New York Zoological Society (that is, the Bronx Zoo) and the AMNH was not lost on Osborn. He deliberately increased efforts to establish connections with both of these institutions and to link them informally with the academic program at Columbia. Like the anthropologist Franz Boas, who during the late 1890s had also harbored a vision of



Vignettes: Personal Assessments

I heard [Peyton Rous] say quietly, “I never did like [Oswald] Avery very much.” When I asked him why, he said, “What would you think of a man who got a medal from the Royal Society and never went to pick it up?”

—Gerald Edelman, in *Bright Air, Brilliant Fire: On the Matter of the Mind* (Basic Books)

I can never develop a social acquaintance into anything more . . . , but people who are forced to associate with me can generally find something to like and I don’t think I’ll drive any of your friends away.

—Macfarlane Burnet writing to his fiancée (1926), as quoted by Christopher Sexton in *The Seeds of Time: The Life of Sir Macfarlane Burnet*

When I read over what I had written about these five brothers [the sons of Charles Darwin], I felt that it might seem that I had made them too good, too nice, too single-hearted to be true. But it was true, for in a way that was what was wrong with them . . . they never seemed to me to have quite grown up. No doubt my attitude to them arose partly from the arrogance of my youth . . . ; but still, when I think of my uncles beside some of their friends, they seem to me to show a sort of innocent lack of imagination, which was exceptional . . .

My grandfather said once: “I have five sons, and I have never had to worry about any one of them, except about their health.” Well, . . . One ought to have to worry sometimes about young people, because they ought to be growing out in new ways and experimenting for themselves. But my grandfather was so tolerant of their separate individualities, so broad-minded, that there was no need for his sons to break away from him; and they lived all their lives under his shadow, with the background of the happiest possible home behind them . . .

At any rate, I know that I always felt older than they were. Not nearly so good, or so brave, or so kind, or so wise. Just older.

—Gwen Raverat, Darwin’s granddaughter, in *Period Piece* (Ann Arbor Paperbacks)

developing a symbiotic relationship between Columbia and the AMNH, Osborn recognized the value of linking an academic program to the resources of a large museum. The latter provided research and educational opportunities for a still marginal academic discipline, and also the prospect of future employment. But for many reasons Boas, in direct contrast to Osborn, failed to form a power base at the AMNH, and ultimately quit to develop his agenda for anthropology in an essentially academic milieu.

Although Osborn continued throughout his career to maintain his academic position at Columbia, his energies, from the mid 1890s onward, are seen to be directed primarily to nurturing his political and research agenda at the AMNH, which involved not only the development of his own special creation, the Department of Vertebrate Paleontology, but ultimately control of the museum itself (achieved in 1908 when he was made president of the Board of Trustees). Rainger's meticulous accounting of these and subsequent events provides some intriguing and tantalizing glimpses into both Osborn's character and his scientific agenda. And perhaps most revealing in this regard are those chapters dealing with two of Osborn's most notable students at the AMNH, William D. Matthew and William K. Gregory. Indeed, these two chapters in themselves are worth the price of the book.

In light of Rainger's obvious command of the archival sources and the period to which they are related, it is hoped that he might undertake a full-blown biography of Osborn. In the meantime, for anyone interested either in Osborn or the development of American vertebrate paleontology during the opening decades of the 20th century, Rainger's book will be required reading.

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Books Received

Advances in Perinatal Thyroidology. Barry B. Bercu and Dorothy I. Shulman, Eds. Plenum, New York, 1991. x, 270 pp., illus. \$72.50. Advances in Experimental Medicine and Biology, vol. 299. From a symposium, Longboat Key, FL, Dec. 1990.

AIDS Testing. Methodology and Management Issues. Gerald Schochetman and J. Richard George, Eds. Springer-Verlag, New York, 1992. x, 219 pp., illus. \$49.

Animal Cognition. C. R. Gallistel, Ed. MIT Press, Cambridge, MA, 1992. viii, 203 pp., illus. Paper, \$20. A Bradford Book. Special issue of *Cognition: An International Journal of Cognitive Science*.

The Artificial Heart. Prototypes, Policies, and Patients. John R. Hogness and Malin VanAntwerp, Eds.

National Academy Press, Washington, DC, 1991. xiv, 298 pp., illus. \$29.95.

Biographies of Scientists for Sci-Tech Libraries. Adding Faces to the Facts. Tony Stankus, Ed. Haworth, Binghamton, NY, 1992. xii, 228 pp. \$29.95. Also published as *Science and Technology Libraries*, vol. 11, no. 4, 1991.

Biology. The Unity and Diversity of Life. Cecie Starr and Ralph Taggart. 6th ed. Wadsworth, Belmont, CA, 1992. xxviii, 921 pp., illus., + supplementary material. \$54.95.

The Biology of Vines. Francis E. Putz and Harold A. Mooney, Eds. Cambridge University Press, New York, 1992. xvi, 526 pp., illus. \$120.

Biotechnology and Nutrition. Donald D. Bills and Shain-Dow Kung, Eds. Butterworth-Heinemann, Stoneham, MA, 1992. x, 468 pp., illus. \$59.95. From a symposium, College Park, MD, 1991.

Captive Invertebrates. A Guide to Their Biology and Husbandry. Fredric L. Frye. Krieger, Malabar, FL, 1992. xx, 135 pp., illus. \$29.50.

¹³C-NMR of Natural Products. Vol. 1: Monoterpenes and Sesquiterpenes. Atta-ur-Rahman and Viqar Uddin Ahmad. Plenum, New York, 1992. x, 967 pp., illus. \$135.

Cell Movements. Dennis Bray. Garland, New York, 1992. xvii, 406 pp., illus. \$44.95; paper, \$27.95.

Cellular and Molecular Mechanisms in Hypertension. Robert H. Cox, Ed. Plenum, New York, 1992. x, 247 pp., illus. \$69. Advances in Experimental Medicine and Biology, vol. 308. From a symposium, Philadelphia, Nov. 1989.

Clovis. Origins and Adaptations. Robson Bonnichsen and Karen L. Turnmire, Eds. Center for the Study of the First Americans, Corvallis, OR, 1992. viii, 344 pp., illus. \$38. Peopling of the Americas. From a symposium, Toronto, 1987.

Compiling With Continuations. Andrew W. Appel. Cambridge University Press, New York, 1992. x, 262 pp., illus. \$34.95.

Computational Fluid Dynamics. An Introduction. John F. Wendt, Ed. Springer-Verlag, New York, 1992. xii, 291 pp., illus. \$89. A von Karman Institute Book. Based on a lecture series, 1985.

Design of Mission Operations Systems for Scientific Remote Sensing. Stephen D. Wall and Kenneth W. Ledbetter. Taylor and Francis, Philadelphia, 1991. xiv, 223 pp., illus. \$66.

Diamond and Diamond-like Films and Coatings. Robert E. Clausing *et al.*, Eds. Plenum, New York, 1991. xvi, 911 pp., illus. \$175. NATO Advanced Science Institutes Series B, vol. 266. From an institute, Castelvecchio, Piacenza, Italy, July 1990.

DNA Profiling. Principles, Pitfalls and Potential. A Handbook of DNA-Based Evidence for the Legal, Forensic and Law Enforcement Professions. Simon Eastale, Neil McLeod, and Ken Reed. Harwood, New York, 1992. xii, 227 pp., illus. \$45.

Dynamics of Fractal Surfaces. Fereydoon Family and Tamás Vicsek, Eds. World Scientific, River Edge, NJ, 1991. xii, 480 pp., illus. \$78; paper, \$38.

Eat for Life. The Food and Nutrition Board's Guide to Reducing Your Risk of Chronic Disease. Catherine E. Woteki and Paul R. Thomas, Eds. National Academy Press, Washington, DC, 1992. x, 179 pp., illus. \$18.95.

Ecology of an Underwater Island. Robert W. Schmieder. Cordell Expeditions, Walnut Creek, CA, 1992. xii, 98 pp., illus., + plates. Paper, \$20.

Economic Geology, U.S. H. J. Gluskoter, D. D. Rice, and R. B. Taylor, Eds. Geological Society of America, Boulder, CO, 1991. viii, 622 pp., illus., + supplementary material. \$80. Geology of North America, vol. P-2.

Effects of Resource Distribution on Animal-Plant Interactions. Mark D. Hunter, Takayuki Ohgushi, and Peter W. Price, Eds. Academic Press, San Diego, CA, 1992. xii, 505 pp., illus. \$89.

Environment in Peril. Anthony B. Wolbarst, Ed. Smithsonian Institution Press, Washington, DC, 1992. xii, 233 pp., illus. Paper, \$17.50.

Family Issues in Pediatric Psychology. Michael C. Roberts and Jan L. Wallander, Eds. Erlbaum, Hillsdale, NJ, 1992. x, 277 pp., illus. Paper, \$27.50.

Fetal Neural Development and Adult Schizophrenia. Sarnoff A. Mednick *et al.*, Eds. Cambridge

University Press, New York, 1992. xii, 244 pp., illus. \$89.95. Longitudinal Perspectives in Schizophrenia Research.

A Field Guide to Western Trees. Western United States and Canada. George A. Petrides. Illustrated by Olivia Petrides. Houghton Mifflin, Boston, MA, 1992. xii, 308 pp. \$24.95; paper, \$15.95. Peterson Field Guide Series, 44.

From First Words to Grammar. Individual Differences and Dissociable Mechanisms. Elizabeth Bates, Inge Bretherton, and Lynn Snyder. Cambridge University Press, New York, 1992. xii, 326 pp., illus. \$44.95; paper, \$18.95. Reprint, 1988 ed.

From Memex to Hypertext. Vannevar Bush and the Mind's Machine. James M. Nyce and Paul Kahn. Academic Press, San Diego, CA, 1991. xii, 367 pp., illus. \$39.95.

Gastrulation. Movements, Patterns, and Molecules. Ray Keller, Wallis H. Clark, Jr., and Frederick Griffin, Eds. Plenum, New York, 1991. xii, 332 pp., illus. \$85. Bodega Marine Laboratory Marine Science series. From a colloquium, Bodega Bay, CA, Sept. 1990.

Get Funded! A Practical Guide for Scholars Seeking Research Support from Business. Dorin Schumacher. Sage, Newbury Park, CA, 1992. xvi, 287 pp. \$38.95; paper, \$18.95.

Grasses. An Identification Guide. Written and illustrated by Lauren Brown. Houghton Mifflin, Boston, MA, 1992. x, 240 pp. Paper, \$11.95. Reprint, 1979 ed.

Hans Krebs. Vol. 1, The Formation of a Scientific Life, 1900-1933. Vol. 1. Frederic Lawrence Holmes. Oxford University Press, New York, 1991. xx, 491 pp., illus. \$49.95. Monographs on the History and Philosophy of Biology.

Harriet Brooks. Pioneer Nuclear Scientist. Marlene F. Rayner-Canham and Geoffrey W. Rayner-Canham. McGill-Queen's University Press, Montreal, 1992. viii, 168 pp. + plates. \$29.95.

Heredity and Your Family's Health. Aubrey Milusky. Johns Hopkins University Press, Baltimore, MD, 1992. xx, 488 pp., illus. Paper, \$18.85. New edition of *Choices, Not Chances*.

Immunobiology of Proteins and Peptides VI. Human Immunodeficiency Virus, Antibody Immunocjugates, Bacterial Vaccines, and Immunomodulators. M. Zouhair Atassi, Ed. Plenum, New York, 1991. xiv, 298 pp., illus. \$79.50. Advances in Experimental Medicine and Biology, vol. 303. From a symposium, Scottsdale, AZ, Oct. 1990.

The Incas and Their Ancestors. The Archaeology of Peru. Michael E. Moseley. Thames and Hudson, New York, 1992 (distributor, Norton, New York). 272 pp., illus. \$35.

International Workshop on Geldium. J. A. Juanes, B. Santelices and J. L. McLachlan, Eds. Kluwer, Norwell, MA, 1991. xviii, 203 pp., illus. \$110. Developments in Hydrobiology, 68. From a workshop, Santander, Spain, Sept. 1990. Reprinted from *Hydrobiologia*, vol. 221.

Killer Bees. The Africanized Honey Bee in the Americas. Mark L. Winston. Harvard University Press, Cambridge, MA, 1992. xvi, 162 pp. + plates. \$19.95.

Kimberley Rainforests of Australia. N. L. McKenzie, R. B. Johnston, and P. G. Kendrick, Eds. Surrey Beatty, Chipping Norton, Australia, 1992. xvi, 490 pp., illus., + plates. A\$93.

Landforms of Iowa. Jean C. Prior. Designed and illustrated by Patricia J. Lohmann. University of Iowa Press, Iowa City, 1992. xiv, 153 pp. \$32.95; paper, \$14.95. A Bur Oak Original.

The Late Prehistory of the Eastern Sahel. The Mesolithic and Neolithic of Shaqadud, Sudan. Anthony E. Marks and Abbas Mohammed-Ali, Eds. Southern Methodist University Press, Dallas, 1991 (distributor, Texas A&M University Press, College Station). vii, 292 pp., illus. Paper, \$29.95.

Lectures on Elliptic Curves. J. W. S. Cassels. Cambridge University Press, New York, 1992. vi, 137 pp., illus. \$59.95; paper, \$22.95. London Mathematical Society Students Texts, 24.

The Manual of Cultivated Orchid Species. Helmut Bechtel, Phillip Cribb, and Edmund Launert. 3rd ed. MIT Press, Cambridge, MA, 1992. 585 pp., illus. \$85.

The Maze of Ingenuity. Ideas and Idealism in the Development of Technology. Arnold Pacey. 2nd ed.