Spontaneous Current Sheets in Magnetic Fields is a major work that should be read by anyone interested in magnetohydrodynamics or plasma astrophysics. It will be an influential book for a long time to come.

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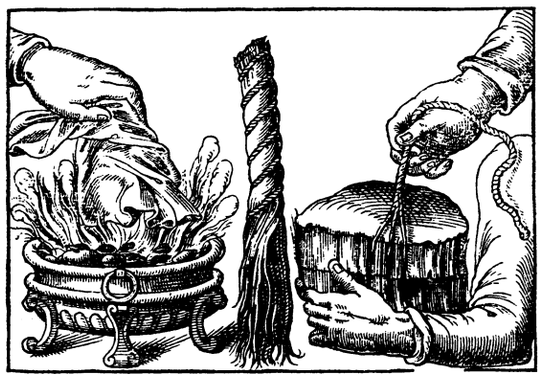
Courtly Naturalism

Possessing Nature. Museums, Collecting, and Scientific Culture in Early Modern Italy. PAULA FINDLEN. University of California Press, Berkeley, 1994. xviii, 449 pp., illus. $55 or £42. Studies on the History of Society and Culture, 20.

Paula Findlen's study contributes in important new ways to our understanding of science in the 16th and 17th centuries, the period of the "Scientific Revolution." The development of physics and mechanics in the period has received most of the attention from historians of science in the last 40 years. Findlen's book is one of several that have recently taken up other aspects of early modern science. By exploring two related developments in Italy during these two centuries—the foundation of museums and the establishment of natural history as a discipline—Findlen is able to shed light on the growth of scientific culture in Europe. Focusing on the ideas and practices of Ulisse Aldrovandi (1522–1605) and Athanasius Kircher (1602–1680), but including accounts of many other naturalists resident in Italy during the period, Findlen explores the attitudes of the time toward "collecting and the interrogation of nature." She looks at the new naturalism in both its relationship to changing Aristotelian ideas and its dependence on Renaissance courtly culture. She is interested in the audience for the new natural science as much as in its most illustrious practitioners, in how and where it was practiced as much as in why.

Ulisse Aldrovandi as depicted in his *Ornithologiae hoc est de avibus historiae libri XII* (Bologna, 1599). A legend accompanying the portrait reads, "Non tua, Aristoteles, haec est, sed Ulyssis imago: Dissimules vultus, par tamen ingenium." [From *Possessing Nature*]



Experiments with asbestos as depicted in Ferrante Imperato's *Dell'historia naturale* (Naples, 1599). "Imperato was instrumental in establishing an experimental culture that moved away from the humanist view of knowledge as a textual entity and toward a more artifactual understanding of nature. . . . Physicians such as Bartolomeo Maranta and the Lincean Nicola Antonio Stelliola collaborated closely with Imperato in their research on theriac and other medicines. . . . The experiences that occurred within Imperato's museum were not dissimilar to those in Aldrovandi's *studio*, although Imperato more often personally demonstrated artifacts for his visitiors whose social status, as physicians, was higher than his own." [From *Possessing Nature*]

Findlen's study develops a number of important arguments. First and foremost is that the contemporary culture of the Italian courts is a key to explaining the development of the new science. Museums and natural history emerged from humanists' emphasis on sociability as much as from their interest in exploring (and, soon, in correcting) ancient literature. Without the courtly audience for the new learning, the naturalists would not have found patrons for their endeavors or markets for their books. In light of the importance Findlen attaches to courtly culture in this regard, she examines the ways in which values such as memory, civility, and curiosity shaped the new science, and she does so impressively. In the concluding chapters, she even makes much of the ways in which the new and protean possibilities of exploring the self could be mirrored through exploring nature. Second, Findlen finds the major shift in attitudes toward nature occurring among some groups just after the beginning of the 17th century, when the private *studio* became the public *galleria* and when the relation of authority between experience and ancient texts reversed itself, so that where once the credibility of experience was derived from the authority of the texts experience came to be seen as a guide to their interpretation. Not everyone adopted these changed attitudes immediately, however, so Findlen has many telling remarks about the differences between proponents of the new science such as Francesco Redi and exponents of an older view, such as Kircher. And third, in the latter parts of her book, Findlen is clear about the strong relationship between the new naturalism and contemporary medical studies, with their connections to botanical gardens, anatomy theaters, and medicines.

Findlen's concentration on courtly culture may be too strong for some. She has many intelligent things to say about academic traditions, new markets, and the explosion of interest in the new worlds of east and west, but she keeps coming back to courtly life as her explanatory device. Although she is aware that museums and natural history could grow in soil that was not Italian, aristocratic, or courtly, she concludes that "the museum was the quintessential product of the patronage culture of early modern Europe" (p. 346) and that "mastery of nature went hand in hand with the rhetoric of absolutism; museums were an eminently visible reminder of how political might, new forms of knowledge, and power over nature could be combined" (p. 407). Whether this is a general causal explanation or only a fine description of the way things often worked in Italy must be left for others to decide.

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Other Books of Interest

The Aye-Aye. Madagascar's Most Puzzling Primate. ANNA C. FEISTNER and ELEANOR J. STERLING, Eds. Karger, Farmington, CT, 1994. iv, 180 pp., illus. Paper, $78.50 or sFR 98 or DM 117. Folia Primatologica, vol. 62, no. 1–3.

In its native habitat *Daubentonia madagascariensis*, the subject of this work, is, according to the editors, alternately feared, perse-

cuted, and revered by the populace. The aye-aye has also been variously regarded by taxonomists, "its seemingly haphazard combination of curious features—continuously growing front teeth, inguinal nipples, a long bushy tail, large naked ears and extraordinary, attenuated fingers—[having] resulted in its being classified at various times as related to tarsiers, squirrels, and even kangaroos" and its position among the primates still not beyond question. Known to Western science since the 1780s, the species was thought to be extinct at the middle of this century, and it is only in the last few decades that it has become the subject of a serious research effort. This volume brings together a sampling of the results. The treatment opens with a historical and taxonomic overview, including an account by E. L. Simons of the giant subfossil form *D. robusta*. The remaining 16 papers include reports of both captive and field studies, the former predominating. The field studies of these nocturnal, somewhat solitary animals document diet, ranging and nesting patterns, and social and motor behavior and give particular attention to foraging behavior; the aye-aye uses its highly adapted hands to accomplish "percussive foraging," occupying a niche that has been compared to that of the woodpecker elsewhere. The first recorded births of aye-ayes in captivity occurred only in 1992, and many of the captive studies reported have been of short duration; their subjects include sexual behavior, infant development, hand preference, olfactory communication, vocalization, and maintenance issues. Comparative studies of field and captive aye-ayes suggest that the species has an extended breeding season and does not require a diet high in fat or protein. It appears to be generally adaptable in terms of habitat preference. The editors of the volume see conservation as important for its future but do not address the issue directly because of the current insufficiency of relevant data.

Katherine Livingston

The Ecology of Loch Lomond. K. J. MURPHY, M. C. M. BEVERIDGE, and R. TIPPETT, Eds. Kluwer, Norwell, MA, 1994. xvi, 170 pp., illus. $144 or £94.50 or Dfl. 225. Developments in Hydrobiology, 101. Reprinted from *Hydrobiologia*, vol. 290. From a symposium, Stirling, Scotland, 1992.

Loch Lomond, a 70-square-kilometer body of fresh water near Glasgow, Scotland, not only is known through song for its bonny banks but has, in the words of Roger Tippett's introduction to this volume, "a long and interesting place in the history of the study of limnology." Scientific studies of the loch date back at least to the work of Harry Slack in 1938 and to the establishment by the University of Glasgow of a field station—the first of its kind in Britain—in 1946 at Rossdhu on its western shore. This collection of papers derives from a symposium held to mark the 25th anniversary of the re-establishment of the station at Rowardennan on the eastern shore. Following some introductory material is a set of six papers describing the physical and chemical environment of the loch. The loch, in brief, lies on the boundary between the Lowlands and the Highlands and is "formed of a chain of discrete basins of increasing width and decreasing depth from North to South," thus offering a "gradient of environmental conditions." It has a catchment of 781 square kilometers, but its hydrology has been relatively little studied. Chemically it is regarded as generally oligotrophic, and data obtained from sediment cores reflect both the Flandrian marine transgression of 5500 to 7000 years ago and anthropogenic environmental changes. The other main section of this anniversary volume consists of ten papers devoted to biology and ecology. The first two of these deal with land and aquatic vegetation, two others are devoted to plankton, and one focuses on the River Endrick, the loch's main inflow. The remainder are devoted to the fish that inhabit the loch. Included are an overview of the relatively diverse fish community and an account of the three species of lamprey present, as well as several more specific studies. Given the heavy recreational use the area receives, conservation is of considerable concern in all these cases, and the volume closes with a summary of a discussion focused on this issue.

Katherine Livingston

Vignettes: Objects of Wonder

I remember birding with Roger Tory Peterson—or the "King Penguin," to refer to him by his bird name—on a small plot of land called High Island, which is on the Texas coast down the line from Galveston. . . . On this particular day the word got around that King Penguin was in the sanctuary. Someone recognized him. Instantly he became the center of attention. I don't believe that the arrival in the treetops of such a rare sighting as, say, a Cape May Warbler, would have unfocused their attention.

—*George Plimpton*, in *Roger Tory Peterson: The Art and Photography of the World's Most Famous Birder* (Roger Tory Peterson and Rudy Hoglund, Eds.; Rizzoli)

In the past the Grand Canyon invited reflection on human insignificance, but today much of the public sees it through a cultural lens shaped by advanced technology. The characteristic questions about the canyon reported by Park Service employees assume that humans dug the canyon or that they could improve it so that it might be viewed quickly and easily. Rangers report repeated queries for directions to the road, the elevator, the train, the bus, or the trolley to the bottom. Other visitors request that the canyon be lighted at night. Many assume that the canyon was produced either by one of the New Deal dam-building programs or by the Indians—"What tools did they use?" is a common question.

—*David E. Nye*, in *American Technological Sublime* (MIT Press)

Books Received

Anthropoid Origins. John G. Fleagle and Richard F. Kay, Eds. Plenum, New York, 1994. xvi, 708 pp., illus. $139.50. Advances in Primatology. Based on a conference, Durham, NC, May 1992.

The Apartheid of Sex. A Manifesto on the Freedom of Gender. Martine Rothblatt. Crown, New York, 1995. xiv, 178 pp. $21.

Approaching Hysteria. Disease and Its Interpretations. Mark S. Micale. Princeton University Press, Princeton, NJ, 1995. xii, 327 pp. $29.95 or £24.95.

Beyond the Crisis. Preserving the Capacity for Excellence in Health Care and Medical Science. Henry M. Greenberg and Susan U. Raymond, Eds. New York Academy of Sciences, New York, 1994. xiv, 199 pp., illus. $30. Annals of the New York Academy of Sciences, vol. 729. Based on a conference, New York, Feb. 1994.

Biogeography and Ecology of Turkmenistan. Victor Fet and Khabibulla I. Atamuradov, Eds. Kluwer, Norwell, MA, 1994. viii, 653 pp., illus. $270 or £185.50 or Dfl. 475. Monographiae Biologicae, vol. 72.

Biological Degradation and Bioremediation of Toxic Chemicals. G. Rasul Chaudhry, Ed. Dioscorides (Timber Press), Portland, OR, 1995. 515 pp., illus. $69.95.

The Cambridge Encyclopedia of Human Evolution. Steve Jones, Robert Martin, and David Pilbeam, Eds. Cambridge University Press, New York, 1994. xiv, 506 pp., illus. Paper, $34.95. Reprint, 1992 ed.

The Chocolate Tree. A Natural History of Cacao. Allen M. Young. Smithsonian Institution Press, Washington, DC, 1995. xvi, 200 pp., illus., + plates. $24.95. Smithsonian Nature Books.

Chromosome Techniques. A Manual. Arun Kumar