

unfair one. Darwin's spare, analytical prose contrasts strongly with Green's, which is marked by overblown descriptive passages. Viewing the Andes from La Campana, a hill inland from Valparaiso, Darwin admires "the wonderful force which has upheaved these mountains," while Green observes that "the Andes rose from [the valleys] as a phoenix, laughing maniacally at the ashes below".

Readers hoping for insights into the workings of the young Darwin's mind, or for a sense of on-the-road kinship with Darwin, will be disappointed. But, as a straight travel book, Green's has many charms, though his superficial preoccupation with Darwin both distracts and detracts from its account of an extraordinary journey. *Saddled with Darwin* does indeed seem uncomfortably (and unnecessarily) saddled with Darwin. □

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Mainstreaming monsters

Wonders and the Order of Nature 1150–1750

by Lorraine Daston and Katharine Park
Zone Books: 1998. 511 pp. \$35.95, £22.50

The Ambonese Curiosity Cabinet

by Georgius Everhardus Rumphius
Yale University Press: 1999. 567 pp. \$45, £30

Harriet Ritvo

Pigs with human heads and feet may now seem the incontestable province of tabloid newspapers, but they and similarly astonishing violations of the quotidian order played an important role in shaping the thought of natural philosophers and natural historians of the medieval period, the Renaissance and the Enlightenment. Over the past few decades, monsters have emerged, once again, from the shadowy corners of the history of science, to bask and wriggle in the full glare of academic scrutiny. No longer stigmatized as mere antiquarian oddities, they have taken their place among more traditional topics of scholarly investigation.

This signals a larger alteration in our understanding of the scientific past. The objects of elite investigation and vulgar curiosity have ceased to appear so widely separated, and we no longer focus on the antecedents of current orthodoxy to the exclusion of ideas and methods that may have seemed equally plausible, or even more so, at the time when they were formulated.

In *Wonders and the Order of Nature, 1150–1750*, Lorraine Daston and Katherine Park assert the intellectual importance of wonder, the now-discredited emotion that such inexplicable phenomena often inspired in scholars, as well as in relatively naïve



Boo: the Krakow monster of the 1540s portrayed like a demon, with heads on its joints.

observers. They emphasize the extent to which not only modern attitudes, but also the categories that we automatically deploy, such as the dichotomy between the natural and the supernatural, or between the natural and the artificial, may obscure our perception of earlier world views.

They magisterially survey developments in the content and function of wonder over a period of six centuries, stretching from the high Middle Ages to the Enlightenment, at which point wonder was, they argue, decisively banished from the intellectual arsenal of respectable European science. Monsters are not the only subjects of this handsomely designed and generously illustrated volume, but they offer the most compelling and vivid examples of its larger concerns.

But the trajectory the authors delineate was far from straightforward. The fortunes of wonder, and of the marvellous objects in which it was embodied, rose and fell, as religious, intellectual and political commitments shifted. At its medieval zenith, the admiration and accumulation of marvels struck members of both the spiritual and temporal ascendancies as a way of confirming the established order. As is normally the case, however, consensus was neither absolute nor stable. Dissenting scholars associated wonder with ignorance and fear. The intellectual stock of wonder rose again with the European voyages of discovery, which revealed incontestable marvels previously undreamed of, but then fell as the religious and political turmoil of the seventeenth century reconfirmed their association with disruption and fearsome portents.

After a brief renaissance early in the Enlightenment, marvels retreated to the disreputable position that they have occupied ever since. This very brief summary can only gesture at the richness and complexity of the story that Daston and Park have to tell. Indeed, one of the most impressive features of the book is the skill and clarity with which its authors explicate subtle alterations in

points of view and philosophical positions — despite their obscurity and counter-intuitiveness to modern sensibilities.

Daston and Park present an authoritative rereading of premodern ideas about the natural order. Like any similarly ambitious project, it has limitations and omissions. The authors point out, for example, that, despite their efforts at contextualization, they have focused on elite ideas. And the ineluctable need to reach a conclusion has led them to exaggerate reports of their subject's ultimate demise.

However strong their triumphalist protestations, eighteenth-century naturalists did not definitively jettison the marvellous. The flotsam of the midway continued to fascinate and trouble scientists well into the nineteenth century, for the same reasons that anomalies had captivated their predecessors. Exceptions to the order of nature were illuminating, if they could ultimately be made to fit — and if they couldn't be made to fit, then they had to be debunked, in order to eliminate a threat that was both intellectual and social.

Georgius Everhardus Rumphius (also known as Rumpf), a cog in the elaborate Dutch colonial machinery of the seventeenth century and the author of *The Ambonese Curiosity Cabinet*, does not appear in Park and Daston's extensive bibliography of sources. Nevertheless, his elaborate catalogue — which deals primarily with marine invertebrates native to Indonesian waters, but which also describes miscellaneous other wonders, including remarkable minerals, as well as potent stony objects extracted from the innards of cats, pigs, deer and people — is representative of one large category of material upon which they draw in the second half of *Wonders and the Order of Nature*.

As such, it gives a concrete sense of the scope and difficulty of the research that underlies their argument. It also suggests why many of their primary sources, although they have been published at some point, remain inaccessible to most modern readers — doubly immured in libraries of rare books and in Latin or in obscure early versions of modern languages. At the core of the new edition of *The Ambonese Curiosity Cabinet* is a translation by the editor, E. M. Beekman, from seventeenth-century Dutch. The edition is well illustrated and includes extensive apparatus: background discussions of Rumphius's life and career, and of the special problems posed by the translation; a bibliography of his work; an elaborate general bibliography; and extensive notes. It constitutes a valuable contribution to the study of early colonial science — but it is easy to see why such editions do not exist for every equally interesting early work of natural philosophy or natural history. □

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