David Philip Miller and Peter Hanns Reill, eds., *Visions of Empire: Voyages, Botany, and Representations of Nature.* Cambridge: Cambridge University Press, 1996. Pp. 370, illus., index. US$64.95 cloth.

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In one of the essays in this volume, Lisbet Koerner remarks that the mid-1700s constituted a "peculiar moment in the history of European imperialism" (p. 117). The momentous discoveries lay in the past but most of the great political empires were yet to be realized. En route to those empires, Euro-

peans sought to systematize nature. Among the more ambitious exponents of this project was Joseph Banks. His botanical activities—the discovery, collection, and transfer of exotic plant species to British soil—contributed much to Europe's expanding vision of the larger world.

Visions of Empire is a response to the recent publication of Banks's *Florilegium,* which documents and illustrates his Pacific voyages. The essayists recognize that those voyages, while ostensibly scientific in nature, were motivated by a rich panoply of interests and concerns. The approach, then, is interdisciplinary, and the scope of the inquiry is extensive, often ranging beyond Banks and his immediate affairs. If there is a leitmotif, it is that new botanical understandings reflect and inform shifting cultural practices and attitudes, and so this is not a book that portrays science as an unambiguous march toward truth.

For Banks and other participants of the era, however, science was generally regarded as an instrument of truth. This sets up an interesting tension in the book, with many of the contributors describing the era in terms different from those subscribed to at the time. Only Koerner, as she treats the aims of Carl Linnaeus, acknowledges the matter directly: "Positivist, structuralist, *and* feminist analyses . . . all focus on issues inaccessible to eighteenth-century people themselves" (p. 120). Her study, then, is a deliberate attempt to step away from such approaches in order to recapture the Linnaean frame of reference.

To get maximum benefit from the book, the reader must be able to recognize the overlay of modernist and postmodernist theory on historical detail. The general effect of that overlay is to complicate the narrative in ways that both enrich and obscure. All this is consonant with the idea that history is a study of the past informed and shaped by contemporary concerns and predilections. Still, there is something refreshing about sensing that one has put on a different, if now somewhat outdated, thinking cap, and, to be fair, the book offers ample opportunity for this sort of experience. Under Koerner's analysis, for instance, Linnaeus emerges as a somewhat quixotic figure wanting to promote Swedish autarky through the transplantation of tropical plant species to the northern climes of Scandinavia.

This sort of naiveté also shows up elsewhere, although not always in ways that seem so quaint. In Christopher Lawrence's study of the British attempt to control scurvy, we are reminded of the wide-angle ecological approach to disease once taken by Western medicine. Before scurvy was attributed to a lack of vitamin C, sea captains and ship physicians tended to assign its outbreak to moral and social factors that were felt to be entwined with physical circumstances regarding food, air, and cleanliness. It is interesting that even though physicians were unable for many years to effect a precise cure for

scurvy, they were yet able to enhance their professional status by learning to talk judiciously about the disease. This judicious discourse seems almost to have required the careful balancing of a variety of considerations, only one of which involved diet.

Other essays are also engaging. Janet Browne and Alan Bewell give us the Enlightenment fascination that attended the growing realization of the sexuality of plants, scandalous for some in its import. These essays dovetail nicely with Martin Kemp's, which offers insight into how the period's botanical representations encoded cultural concerns. Further, Barbara M. Stafford cogently describes the revelations ushered in by the microscope: worlds within worlds receding into ever smaller nooks and crannies. Here was a provocative counterbalance to the macroscopic discoveries of European explorers—one that stretched the mind in the opposite direction.

Stafford argues that the microscope enabled people to learn to think objectively. In terms of absolute distance, the small details of nature were close at hand, but when one peered into the microscope, things seemed remote, even otherworldly. It became easy, then, to feel oneself a spectator to nature's operation and assume an objective stance. At the same time, however, the marvelous images presented by the microscope tended to decenter humankind by shifting attention to new and startling life forms. Although Stafford does not say it, one senses here the stirrings of a biological replay of the cosmological reorientation ushered in earlier by Copernicus, Galileo, Kepler, and Newton. In view of nature's extraordinary fecundity and diversity, humans were beginning to question their distinctiveness as a species.

This is only part of the story, however. Scholars such as Owen Chadwick have long noted that Western intellectual thought proceeds by paradoxical leaps: the "outrages" or debasements of humankind suffered at the hands of philosophy and science ironically elevate those callings and, by implication, the human race. One can find in any era, then, scientists like Alexander von Humboldt who are not particularly bedeviled by the phenomena they study. According to Michael Dettelbach, Humboldt's scientific aims and methodology were very different from those of his British counterparts. Coming from central Europe, he lacked the firm sense of political empire possessed by Banks and Captain Cook, and consequently his voyages possessed a different scientific character. While they wished to collect species and artifacts that engaged the senses, particularly that of vision, Humboldt sought through measurement to secure a "physical portrait" of the earth. Most remarkably, he believed that his measuring instruments could reveal lines of commonality (isothermal and isodynamic lines, etc.) stretching across continents and bringing the planet into organic unity.

To an extent, Humboldt was a scientific romantic, and Dettelbach holds that his thinking was marked by Friedrich Schiller's notion of "aesthetic empire." This and the fact that Prussia, his homeland, was not scrambling to impose its might on the world, freed him from the commercial and political concerns that inevitably shaped the British expeditions. His ultimate goal was to view the entire planet synchronically, in a single moment of vision. By contrast, the British were content to work away at nature diachronically, perhaps because their imperialism had a more mundane emphasis that affirmed change and becoming.

In his generally favorable response to Kemp, Stafford, and Dettelbach, Peter Hanns Reill insists that much work needs to be done to bring the Enlightenment forward in its true complexity. In Reill's mind, this means, as a first step, developing more nuanced understandings of people like Humboldt who do not fit neatly into any of the categories traditionally invoked to explain Enlightenment impulses. To call Humboldt a romantic, for example, misleadingly identifies him with a crowd of thinkers who reacted against the mechanical excesses of Newtonian science. What Reill is recognizing, of course, is that archetypal personages exist only in the abstract and that no interesting historical figure stands still long enough for precise characterization. But he is also recognizing that nature does not respect our taxonomies of nature and so the ground constantly shifts beneath our feet as we peer into the past. Thus, Reill's insistence on greater complexity is fully justified, and Simon Schaffer, reasoning from similar principles, effectively declares the field of Enlightenment scholarship wide open. In my mind, Reill's and Schaffer's calls for new complexity are less interesting than, say, Koerner's descent into the thoughtworld of Linnaeus, but those calls are necessary reminders of the tentative and highly imaginative character of our engagement with the past.