

kind of epitaph—something more impure and for that reason more uplifting. One suspects that Muir might actually agree with Schwarzenegger, who, standing beside the quarter-dollar image of the apostle of nature, said, “Here in California, growth, progress, wilderness protection and the protection of the environment go hand in hand, even though some people believe that you can only have one or the other, we want to be committed to make it go hand in hand.”

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## HISTORY OF SCIENCE

# The Kingdom of Plants

John C. Waller

When Joseph Dalton Hooker returned to England in 1843 from a Royal Navy expedition sent to the South Magnetic Pole, he could only lament the state of British botany. Leading scientists were talking of the decline of science as a result of state parsimony, but the outlook for aspiring botanists like Hooker was particularly bleak. The discipline to which he wished to devote his life remained a poor relation of the physical sciences or zoology. Its practitioners had made few of the bold and brilliant generalizations that marked out a science as being truly “philosophical,” while gardeners and amateur collectors sporting trowels, bags, and prettily illustrated handbooks laid as much claim to the title “botanist” as did the head of a vast herbarium like Kew Gardens in west London. In fact, even Kew was still making the transition from royal park to a state-funded center of botanical research.

Hooker deplored the lowly status of botany, and he had strong personal reasons to want to hurry it into a state of maturity. Intelligent, educated, and well-traveled, Hooker was also out of pocket. Even when he had gained a salaried position at Kew, the rewards for his labors were only modest. And, to make matters worse, he realized that many of his contemporaries considered the pursuit of pure knowledge to be sullied by earning a wage.

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In *Imperial Nature*, Jim Endersby shows how the person who was to become Britain’s foremost botanist and Darwin’s right-hand man strove to get botany invited to the high table of Victorian science. In doing so, Endersby focuses on the practical dimensions of Hooker’s drive to establish the reputation of Victorian botany: how he obtained properly preserved specimens from far-flung regions of the globe, reconciled his gentlemanly status with drawing a wage from doing science, and sought to make botany economically useful to his nation by having trees and plants (such as rubber and sisal) shipped from one part of the empire to another.

Endersby’s story is as much about the exercise of power as the acquisition of legitimate expertise: scientific advance and self-interest went hand in hand as Hooker and his allies elevated botany to a higher plane. Accordingly, several chapters follow Hooker in his dogged attempts to assert the primacy of metropolitan botanists like himself over a multitude of amateur enthusiasts and colonial collectors.

To this end, isolated colonial collectors, many of them incorrigible taxonomic “splitters,” were told that they lacked the broader perspective needed to say where one species ended and another began; only metropolitan experts had access to the extensive herbaria and libraries necessary for conducting proper systematics. Similarly Hooker and company claimed

sole authority to name the empire’s plants, to the disappointment of collectors like William Colenso in New Zealand, who would have preferred to use Latinized versions of Maori terms for the specimens he sent to Hooker at Kew. Collectors had to be kept sweet, but they were still taught to see themselves as “worker bees.” Hooker keenly resisted the attempts of some of his collectors to indulge in theorizing, arguing that those armed with only local knowledge were unfitted to grapple with the bigger, abstract issues. And it was theorizing, for Hooker, that would make botany into a recognizably scientific endeavor, allowing the metropolitan expert to move beyond dry lists of species and genera.

Endersby (a historian of science at the University of Sussex) astutely reveals the difficulties of the relationship between metropolitan botanist and colonial collector. And his book usefully reminds us that underpinning



**Fashion setter.** Hooker’s *Rhododendrons of Sikkim Himalaya* (1849) led many British gardeners to grow the genus for its colorful blossoms.

many of the advances in theory made by naturalists of the 1800s were the efforts of vast networks of these collectors. Without the often-unpaid work of those who labored in jungles, forests, and marshes; on mountains; and along shores in search of rare examples of fauna and flora, neither Hooker nor Charles Darwin could have made the breakthroughs they did.

Endersby also argues that the directors of herbaria, like Kew, were inclined to be taxonomic “lumpers” rather than splitters in part because they would otherwise have been overwhelmed by the sheer number of plants to classify. This brings us to Hooker’s relationship with Darwin. One of the reasons that Hooker became a Darwinian, says Endersby, is that the theory of natural selection chimed with his own preference for lumping. Darwin’s emphasis on variability allowed Hooker to insist that naturalists must not let slight differences between one plant and another mislead them into erecting more and more species categories.

*Imperial Nature* is not a conventional scientific biography. The usual fare of birth, love, and death is largely absent. Instead, Endersby give us a detailed, scholarly account with a deeper point: that science is about more than the grand battles of competing ideas. In doing so, he provides a richly textured account of a period in which the status of natural science was far more precarious than it is today. And the book will hopefully stand as a reminder, during next year’s Darwin celebrations, of just how many unsung individuals contributed to the scientific progress of the age.

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CREDIT: PLATE 30 FROM RHODODENDRONS OF SIKKIM HIMALAYA (1849)/NATURAL HISTORY MUSEUM, LONDON/ALAMY