

circulation of peoples and animals through the Atlantic' (p. 109). A final chapter analyses images of cannibalism in sixteenth-century maps, with a historical and cultural critique concerning how those images reified and reinforced anthropological stereotypes.

In her conclusion, Metcalf cites a traditional history of cartography argument – that of J. B. Harley – which states that maps are an exercise of power, objects that make legitimate a state's claim to territory and the authority of the state's military conquests. Metcalf argues a contrary point, stating that the first recording of the Atlantic regions by map-makers betrays no clear sense of this kind of 'control'. These early cartographers made their own decisions in terms of depictions and representations, and determined how the Atlantic world would come to be visualized and understood. For Metcalf, 'chartmakers and mapmakers were historical actors', with a marked degree of independence of terms of how they created works for their audience (p. 141).

For historians of cartography, the maps presented by Metcalf are well known, and some of the accounts and descriptions here – such as that concerning the Waldseemüller map – have been presented by other recent writers. However, *Mapping an Atlantic World, circa 1500* places those cartographic pieces in a different perspective, and indeed Metcalf describes herself as a 'social and cultural historian' entering 'into the world of historical maps' (p. xi).

For historians of science who do not specialize in cartography, Metcalf's book thus provides an excellent introduction to both mapping of this period and the building of an Atlantic locus in terms of European views of the world, and subsequent exploration and trade. The book is well organized and systematic in its historical presentation, and the reproductions, including several colour plates, are both attractive and useful. It should be noted that while the bibliography includes a listing of all the cartographic works discussed in the book, the author also has set up a website (<https://acm5.blogs.rice.edu>) that has digital reproductions of all the figures and plates from the book. These are highly recommended, as readers should examine these maps and their imagery in detail.

*Mapping an Atlantic World, circa 1500* will be a highly engaging book for historians of science who wish to learn about the practice and importance of cartographers in this period. In addition, the book presents the beginnings of an intriguing argument that, through the work of mapmakers, along with explorers and navigators, the focus of European attention shifted to the western seas, and created new concept – that of the Atlantic world.

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## **Nancy Rose Marshall (ed.), *Victorian Science and Imagery: Representation and Knowledge in Nineteenth-Century Visual Culture***

**Pittsburgh: University of Pittsburgh Press, 2021, Pp. 365, ISBN 978-0-8229-4653-3. \$55.00 (hardcover).**

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A welcome development in the history of science in recent decades has been an increased focus on the interactions between the sciences and the visual arts. Nancy Rose Marshall

seeks to build on and extend this work with her recent edited volume on Victorian art and science. She begins with a salutary observation: in Victorian culture, the arts and the sciences were not separate and distinct spheres, but rather interpenetrated. If artists and scientists were often investigating the same phenomena and asking the same kinds of questions about them, she suggests, then a comparative study can illuminate the shared epistemological goals and standards that characterized the broader culture.

Two principal themes run through the essays. The first is methodological. Most studies of the interactions between Victorian science and the broader culture have been written by historians of science or literary critics. Marshall seeks to foreground instead the methods of art history. This entails in the first instance a particular attention to the medium and the formal elements of the images under consideration. Marshall also decries what she sees as the tendency of much scholarship to search exactly for documentation of influence – to seek to uncover, for example, ‘precise proof’ of the effect of a scientific theory on later artistic expressions. In Marshall’s view, the demand for proof is stifling; she prefers interrogations of ‘intersection[s]’ and shared ‘associations’ to unidirectional tracings of influence (p. 20). In the end, she concludes that the techniques and tools of art history can be ‘uniquely generative in revealing resonances’ between the visual arts and systems of thought (p. 112).

Marshall’s second theme is substantive and relates to the shared interest in, and anxieties about, vision that run through much Victorian art and science. Many of the phenomena that captured the attention of scientists during this period were not visible by the human eye. Moreover, the fixed-point perspective pioneered by Filippo Brunelleschi in Renaissance Florence that had come to dominate painting implies the existence of an objective – even a ‘God’s-eye’ – view of those phenomena that *can* be seen. By the nineteenth century, however, it was becoming increasingly clear that vision is always and necessarily embodied, implying the inherent subjectivity, even the imperfection, of human visual experience. These anxieties were explored as much by visual artists as they were by scientists who dissected eyes in order to reconstruct their mechanisms of operation, making these anxieties especially apt for an exploration of the common epistemological grounding of artistic and scientific modes of investigation.

Each of the various essays that comprise the book touches more or less directly on Marshall’s various themes. Rachael Z. DeLue’s chapter on a moving panorama of the Mississippi valley examines the challenges and opportunities not only of representing what lies invisible below the earth’s surface, but also of representing time itself. Alison Syme offers a close reading of a single illustration by Edward Burne-Jones for the Kelmscott Chaucer in the context of contemporary images of glaciation to interrogate the connections between the geological and the human. Carey Gibbons reads the illustrations for a children’s story personifying the North Wind against emerging techniques for visualizing meteorological phenomena. Marshall herself looks at a John Everett Millais painting of a man visited in his bed by a woman (or a hallucination, or a ghost) and asks how it resonates with scientific inquiries into vision and the unconscious mind. Naomi Slipp examines the use of daguerreotypes to document an invisibility – the way that ether can seemingly dissolve physical pain – and interrogates the role of such visual artefacts in the emerging professionalization of medicine. Keren Rosa Hammerschlag examines an idealized image of the internal anatomy of a human torso in a surgical atlas; in the original English edition, the man was black, but he was rendered as a white man in the American edition of the same atlas. She asks what this episode of ‘white-washing’ can tell us about contemporary attitudes about race. Barbara Larson examines the late nineteenth-century emergence of aestheticism – in which ‘art for art’s sake’ was esteemed over ‘realistic’ representation – in the context of post-Darwinian physiological psychology, with its focus on the corporeal and affective aspects of mind. And

Caitlin Silberman invites us into James McNeill Whistler's Peacock Room. She sees it as a paean to the unique creative power of the artist, opposed equally to John Ruskin's view of beauty as a gift from God and to Charles Darwin's grounding of beauty in animals' reproductive choices.

*Victorian Science and Imagery* is a first-rate piece of work. It offers fresh perspectives on the ideas and anxieties that reverberated through Victorian culture. It will also be of more general interest to students of the relations between the sciences and the visual arts, as the book more than lives up to its promise to show how the tools and practices of art history can open up new perspectives on those relations.

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## **Raf de Bont, *Nature's Diplomats: Science, Internationalism, and Preservation, 1920–1960***

**Pittsburgh: University of Pittsburgh Press, 2021. Pp. x + 373. ISBN 978-0-8229-4661-8. \$55.00 (cloth).**

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The term 'nature's diplomats', which titles Raf de Bont's admirable study of early to mid-twentieth-century international environmental networks, is one that raises eyebrows. Diplomats represent states, organs of political power for whom diplomacy is a means of communicating with peer entities. Nature has no such institutional standing. But as De Bont notes, to be a diplomat is also to perform a set of behaviours characterized by adherence to conventions, to *act* in a particular manner within an international context. Thus is the peace kept, the existing order of things maintained, and outsiders kept at bay. The diplomats in this book were not acting on nature's orders so much as acting on their own desires to protect what they deemed valuable in nature. As such, the study focuses on how privileged actors used and lost power more than on the development of scientific ideas – though De Bont ensures that these are woven into his analysis. Chronologically the book occupies a niche between the early years of the twentieth century and the 1960s. Before the flowering of modern interest, De Bont argues, came a period of international coordination and organizing through 'civic, internationally conceived, and scientifically inspired organizations' and networks, through which many of the central assumptions and conventions of the modern conservation movement were developed (p. 9). The nature that these well-heeled individuals sought to protect was found around the world, but its saviours were overwhelmingly based in Western and Northern Europe and the East Coast of the United States.

De Bont begins with a world that will be familiar to historians of environmentalism, of national romantic conceptions of natural heritage and concerns for imperial fauna. Most notable perhaps was Paul Sarasin, a Swiss naturalist who sought to make nature protection an international concern in both conceptual and practical terms – which De Bont singles out as significant for taking existing traditions and reframing them in universalist terms. Sarasin passed the torch to Pieter Gerbrand van Tienhoven, whose bulging address