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**Ted Benton, *Alfred Russel Wallace: Explorer, Evolutionist, Public Intellectual – a Thinker for Our Own Times?***  
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Ahren Lester

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(p. 256) of Hooker's 1851 folio volume on *Victoria*—source for some of the most widely circulating period images of the lily.

Adding to these issues, there are Dickensian and similarly fictional reconstructions, which Holway uses to fill in evidentiary gaps. Usually signalled as such ('there's no complete record' and 'We have Dickens', p. 122), the hypothetical interludes only further muddy already hazy distinctions between fact and fiction plaguing the book. Holway correctly notes the exclusion of a 'genealogy of water lilies currently growing in Britain' (p. 256) from Hooker's 1851 folio, but her extended speculation over why Hooker made the omission has no documentary basis. Nor does her guess that the folio's dedication (not by Hooker, as she errs, but by Fitch) was made to the Duchess of Northumberland as a means of 'securing her patronage for Kew' (p. 257). (As I show in my forthcoming study of the *Victoria* folios, Hooker letters extant both in Kew's and the Duke of Northumberland's archives explicitly describe the dedicatory motives and, among them, cultivating a patroness is not even implied.)

Such misgivings notwithstanding, this is a tale that has beckoned to be told, and Holway has done so in a way that will captivate readers with both a general interest in Victorian floriculture and a specific interest in *Victoria*'s rise to worldwide renown. The main contours of the tale may be reliably useful, but unfortunately its historicity is not so usefully reliable.

DONALD L. OPITZ  
DePaul University

TED BENTON, *Alfred Russel Wallace: Explorer, Evolutionist, Public Intellectual – a Thinker for Our Own Times?* Manchester: Siri Scientific Press, 2013. Pp. 223. ISBN 978-0-9574530-2-9. £21.00 (paperback).  
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The year 2013 may well mark a watershed in Wallace studies. The co-discoverer of natural selection and 'father of biogeography' has, as Peter Bowler highlighted, been 'rediscovered' many times. However, the innumerable lectures, conferences and publications to mark the centenary of his death have piqued fresh interest in this Victorian intellectual great. Benton's contribution to this explosion of Wallace-related material is a little unusual. As the front cover playfully asks, is Wallace 'a thinker for our own times?' Such a question may suggest to some a worryingly 'presentist' angle of research. However, it is handled with aplomb.

Benton recognizes that his approach may create 'irritation' amongst historians (p. 13). However, any 'presentist' tendencies are carefully rationed and reasoned throughout. Benton is well placed to undertake this approach in a responsible and rigorous manner. With a background in sociology, philosophy, biology and ecological politics, his immersion in current debates relating to Wallace's broad-ranging interests is transparently obvious. Similarly, he comes bearing a long-standing interest in Wallace and his views on human evolution and humanity's relationship with nature. Combined with the close and perceptive reading of Wallace's writing evident throughout, we are left with a charming and challenging historical assessment of this Victorian scientific great.

The first two main chapters can be described as biographical background. For those familiar with Wallace's life it provides little that is new. However, drawing upon both Wallace's own later recollections of his life and expeditions, it offers a bouncy and enjoyable Wallace 101. His early life and detailed accounts of his famous journeys in South America and the Malay archipelago are set alongside a comprehensive description of his long post-expedition life.

Nonetheless, as Benton himself acknowledges, this is not a simple biography. His chief concern is Wallace's thought. From Chapter 4, Benton unpacks Wallace's world view by describing his intellectual journey towards independent formulation of the theory of natural selection. Chapter 5 broaches the issue of sexual selection, female choice, and the evolution of beauty. Benton reveals the incredible productivity derived from Wallace's attempts to defend natural selection from the

encroachment of sexual selection. Chapter 6 then analyses Wallace and Darwin's differing responses to the implications of natural selection for man's place in nature. Benton vividly describes the complex tension in Wallace's thought in which man was both one *with* and one *above* nature.

The following two chapters turn to Wallace's political development, especially in relation to the future evolution of man. Chapter 7 offers an account of Robert Owen's political philosophy and the complicated influence of Wallace's early Owenism on his later socialistic thought. Chapter 8 outlines Wallace's detailed and ever-evolving attitudes towards landownership and the fundamentals of a socialist future within an increasingly tempestuous and radical sociopolitical environment.

This work displays an impressive scope and coherence. More impressively still, deep and detailed discussion has not been sacrificed at the altar of breadth. A common trend throughout the work is the prominence of inherent tensions in a vast array of Wallace's intellectual explorations. Antagonistic contradictions such as these were ubiquitous across the whole spectrum of Victorian society and culture. Wallace – in this aspect – was a typical Victorian.

Amongst Wallace scholars, such contrasts have developed into deeply debated research threads. Benton's contribution in this regard is worthy of note. For Benton, Wallace's incorporation of female choice into future human evolution whilst simultaneously denying it in animals was not a *volte-face*. It was consistent with Wallace's belief that, both in civilized man and in nature, conditions were uncondusive for genuine female choice. Consequently, humanity could – and should – adjust society in order for female choice to become a meaningful mechanism for evolution. It is a compelling argument. Nonetheless, an exploration of Wallace's understanding of what made women the ideal selectors in man, and whether these traits were exclusively human or shared with the rest of nature, remains undeveloped.

Contrastingly, Wallace's spiritualism emerges as a subtle yet dramatic change of mind. His philosophical metamorphosis from 'naturalism' to 'spiritualism' brought with it a desertion of long-held uniformitarianism and a plethora of concomitant readjustments. Such a view is, as Benton notes, controversial, with Charles Smith arguing for the continuity of Wallace's philosophical stance in this regard. Benton marshals his evidence and arguments well and raises convincing doubts as to Wallace's ability to hold a 'stable, inclusive or internally consistent' world view (p. 12). Although far from conclusive, it is an intriguing counterpoise to Smith's work.

The confidence in drawing clear lines of descent between Wallace's thought and present-day biological and ecological concepts is also highly engaging and a pleasant by-product of Benton's unusual approach. The link between Wallace and modern ideas of environmental sustainability and the 'handicap principle' (p. 121) is perhaps familiar. However, that between Wallace and the concept of 'metabolic rift' (p. 185) is much less so and hopefully will breed further research in such directions. It is of little doubt that Wallace still offers invaluable insights for contemporary scientists as well as historians of science.

There is little not to like in this work. However, the absence of an index in a book with such a variety of topics under assessment is a glaring omission. It is also lamentable that Wallace's anti-vaccinationism is not discussed due to it having supposedly 'less contemporary relevance' (p. 207). Wallace's anti-vaccinationism was central to his understanding of the rapidly evolving relationship between science and politics and was a prominent dimension of his position as a public intellectual. Its contemporary relevance is still apparent through the deceptive similarity between arguments deployed by the likes of Wallace and present-day anti-vaccinationists. Consequently, a study of Wallace as a 'public intellectual' feels a little incomplete without it being considered.

Nonetheless, Benton's probing and perceptive questions and assessments of Wallace's thinking are undoubtedly thought-provoking contributions. As a result, it is certainly a valuable addition to

scholars working in subjects across the historical spectrum, especially the history of biology, environmental history and political history.

AHREN LESTER  
*University of Southampton*

MITCHELL G. ASH and JAN SURMAN (eds.), *The Nationalization of Scientific Knowledge in the Habsburg Empire, 1848–1918*. Basingstoke: Palgrave Macmillan, 2012. Pp. xi + 258. ISBN 978-0-230-28987-1. £50.00 (hardback).

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In the well-established research field of science and nationalism, this volume edited by Mitchell Ash and Jan Surman is a welcome addition. Most studies in this area ask how certain scientific practices have contributed to ‘build’ a nation. The political unity in question, a nation, already existed or was about to come into being. Yet *The Nationalization of Scientific Knowledge in the Habsburg Empire, 1848–1918* looks at a presumably premodern political unity; not at a nation, but at a multiethnic empire that ceased to exist in 1918. The narrative which one may expect – and is suggested by the title – is a narrative of budding Czech physicists and Croatian chemists forming national communities. The authors of this volume have a more complex story to tell. Their approach is in tune with recent historiography on the Austro-Hungarian Empire that tries to avoid any kind of teleology according to which this *Vielvölkerreich* was doomed to collapse under the onslaught of rising nationalisms.

As Jan Surman and Soňa Štrbáňová show in their chapters, nationalism and science were not fully commensurable. What language, for example, were Polish or Czech chemists supposed to publish in? German, the lingua franca at the time, was at odds with their own nationalist agenda. But writing in the vernacular would limit their readership substantially, risking self-inflicted marginalization. What is more, chemists in particular were only about to develop a specialist terminology in their own language. Who would decide which specific terms should be used? The way to a national nomenclature was marked by disagreements and littered with linguistic schemes that failed. Trying to cater for both of their communities, national and international, Polish and Czech scientists resorted to a double rhetoric that was – as contradictory as it may sound – both nationalist and universal. This focus on the use of scientific language neatly shows that nationalization and internationalization in science were simultaneous.

In these cases science was a resource to strengthen one’s national consciousness and to ‘build’ the nation through a specific scientific terminology, but also with national journals and associations. We may label this the nationalist–emancipatory agenda articulated from the ‘periphery’. Yet the Habsburg Empire also allowed for the reverse case – what we may label the imperialist–conservative agenda articulated from the ‘centre’. Recent historiography suggests understanding the Habsburg Empire as a colonial power with ‘proximate colonies’ that were not overseas, but at the margins of a vast territory. (In 1914 the Austro-Hungarian Empire was second only to Russia in size.) It is possibly the greatest forte of this volume to address this ‘colonial’ question from the perspective of the history of science. The editors and authors use the model of ‘centre’ and ‘periphery’, always in quotation marks in order to indicate that these categories are historically constructed and need to be applied with caution. As regards this ‘imperial science’ the chapters of Deborah Coen and Marianne Klemun are most pertinent. They analyse attempts to use sciences such as cartography, meteorology and geology in order to strengthen the unity of the Habsburg Empire as such. They describe the challenge of collecting data in the different regions of the monarchy and feeding it into a standardized regime of knowledge. Klemun’s case is the making of the ‘Geological Survey Map of the Austro-Hungarian Empire’, which took nearly twenty years to produce and was eventually published in 1867 by a Viennese-based imperial institution, the Geologische Reichsanstalt. This stratigraphic map ‘was both a record of nature and, at the same