A.R. Wallace in the light of historical method

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ABSTRACT

Over the past fifty years the now well-known story of the great Victorian naturalist Alfred Russel Wallace has transformed to one very different from that familiar during his lifetime and for decades after his death in 1913. The new Wallace story is attractive and inspiring in many ways. It sells well and infuses many with a sense of purpose, but that it has changed so much remains unknown. This transformation is due largely to most writers on Wallace since the 1960s not having been trained as historians. Whereas some modern writers on him are seen as conspiracy theorists, most have simply followed what has been written or broadcast about him in recent decades. Unwittingly, however, this has culminated in a story of Wallace incompatible with historical method and contextual analysis.

Keywords: Wallace, Darwin, biography, historiography, history of science

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INTRODUCTION

Stories about the great Victorian naturalist Alfred Russel Wallace (1823–1913) that appear today are remarkably consistent. What remains unknown, however, is how different the modern stories are from those told by his contemporaries and writers for the half century following his death. Popular themes in the modern Wallace story include:

1. Wallace was working-class or from the opposite side of the social spectrum than Charles Darwin;
2. As a youth Wallace was forced to leave school early at age 14 because the family money ran out;
3. He went to the Amazon with H.W. Bates to 'solve the problem of the origin of species';
4. He later went to the Malay Archipelago on the same quest;
5. An overarching goal during these journeys was to discover the 'mechanism' for evolution;
6. On the Moluccan island of Halmahera, he derived the idea of natural selection from the population theory of Thomas Malthus (just as Darwin had);
7. His evolutionary theory written in 1858 was identical to Darwin's;
8. Wallace wrote this essay in order to send it to Darwin;
9. When Darwin said he received the essay seems doubtful or impossible because another letter Wallace sent at the same time to someone else arrived in England earlier than Darwin claimed to have received his;
10. Darwin's colleagues published Wallace's essay without his consent;
11. They put Darwin's contribution first which robbed Wallace of his priority;
12. Nevertheless, for decades it was known as the Darwin–Wallace theory of evolution;
13. Wallace was the greatest field biologist of the 19th century;
14. He is also the father of biogeography;
15. His book *The Malay Archipelago* has never been out of print;
16. At the end of his life he was the most famous scientist in the world; and
17. He has become strangely forgotten.

Everything in the above list is historically incorrect. The aim of this paper is to provide a more accurate understanding of Wallace by using rigorous historical methods.

DISCUSSION

Although abundant evidence and historical arguments exist to explain each of the points listed above, the following discussion of each illustrates the difference between accounts that follow historical method and those that promote the hero-underdog Wallace, whose fame or credit must be resurrected.

1. This view of Wallace emerged in the 1960s–1970s. Wealth was not the determiner of class identity in the 19th century—Wallace and his family were middle class. His father trained as a solicitor and was listed as a 'gentleman' on Wallace's birth certificate. The house where Wallace was born is sometimes compared to the *much* larger and grander house where Darwin was born. Nevertheless, Wallace's detached house was the grandest in an area where the norm was peasant cottages or terraced houses. Darwin and Wallace were not from opposite ends of the social spectrum, but from different parts of the

middle class, and so had more in common than social differences.

2. This was first put forward in 1980. Wallace left school at the normal leaving age of 14. After all, he was qualified to later become an assistant teacher in Leicester. This error derives from Wallace's autobiographical description (Wallace 1905; van Wyhe 2012) of his family's financial situation in his final school phase and modern popular writers unaware of the leaving age for schoolboys in England during the Victorian period.

3. Wallace went to the Amazon to work as a specimen collector. He always said so, both at the time, and in later life. All the historical evidence supports this and there is no evidence, that he went to discover evolution or pursued any such activity while there (van Wyhe 2014), except for one apparent piece. At the start of his 1863 book *The Naturalist on the River Amazons*, H.W. Bates published a modified version of an 1847 letter from Wallace that said nothing about an expedition. Bates claimed that Wallace wrote that they should go on an expedition 'towards solving the problem of the origin of species'. (Bates 1863, vol. 1, p. 3). By comparison, the original letter, states: 'I should like to take some one family [of insects in England], to study thoroughly, principally with a view to the theory of the origin of species' (Wallace 1905, pp. 256–7). Portraying Wallace as motivated to travel to the Amazon to solve a problem of species has became increasingly popular in recent years.

4. The belief that Wallace then went to the Malay Archipelago on the same quest is based on the above error and has no contemporary evidence to support it. He wrote, at the time and later, that he went to be a specimen collector—a task at which he was enormously successful. To describe a figure as on a quest to solve a great scientific mystery is nearly always naïve given that historians of science have repeatedly found that such claims are romanticised retrospective accounts, and not how science normally transpired.

5. There is no evidence that Wallace was searching for any mechanism or solution. In contrast, his writings from the Malay Archipelago at first ridicule the idea of adaption or that every feature of an organism had a purpose. This was probably based on his contempt for natural theology with its stress on the providential design of living things. For example, he argued that the large canine teeth of orangutans served no purpose (Wallace 1856, p. 29). Wallace already believed that living things changed over time, but adaptation was not yet part of his thinking. Only after the publication of Charles Darwin's *Origin of Species* (1859), did Wallace describe his earlier activities as searching for the solution to a problem. Wallace seemingly adapted to a widespread shift in language following Darwin's book, in which a solution to the problem was presented. Thereafter thousands of writers began to refer to 'the' problem of the origin of species. Thus this is a post-1859 manner of speaking. It is the essence of historical understanding to distinguish between retrospective re-tellings and contemporary evidence as to what occurred. Modern writers typically use the word 'mechanism' in this context (i.e. Wallace was searching for the 'mechanism') but such language emerged only around 1900. Yet this way of describing Wallace as on a long-term quest to solve the problem of species is becoming ever more common in writings about him.

6. Wallace conceived of natural selection and wrote his essay on the island of Ternate in February 1858. The error of believing he was on the neighbouring island of Gilolo/Halmahera is the result of fallacious reasoning by H. Lewis McKinney (1972). He concluded that because Wallace wrote in a 25 January letter that he planned to go to Halmahera in about a week, that he must therefore have done so. However, the only dated document from that time, (February 1858) is the essay itself, which is signed and dated 'Ternate' (van Wyhe 2013, pp. 202 ff). Evidence from the time and place outweighs any projection of future plans. Trying to explain what seemed an anomaly, many writers have invented explanations for why the essay was signed Ternate if it was actually written on Halmahera. For example, several writers have claimed that he signed it with his postal base (Ternate). Not only was this contrary to the convention of writers in the 19th century, but Wallace's other surviving documents are all signed according to his actual location, never according to the nearest post office. Furthermore, Wallace always recounted that he had conceived of natural selection and written his essay in his house on Ternate.

   Another example of Wallace retelling his story is that Malthus's (1826) theories are only mentioned in his later recollections *after* he had read Darwin and his mention of Malthus. Therefore, this is not independent evidence and insufficient to conclude that Wallace thought of Malthus in 1858. There is no mention of Malthus in Wallace's Ternate essay. The Malthus-like statements are based on his copy of Charles Lyell's *Principles of Geology* (1835), such as 'the tendency of population to increase beyond the means of subsistence' and 'In the universal struggle for existence, the right of the strongest eventually prevails' (Lyell 1835, vol. 3, pp. 94–95 and p. 9), which Wallace had with him when he wrote his essay. If Wallace also thought of Malthus, which he may have done, there is no contemporary evidence of this. Nevertheless, this has not prevented modern writers telling the story according to Wallace's later, and historically unreliable, recollections.

7. Wallace's original theory was in some ways similar and parallel to Darwin's, but also quite different. The more historians of science have analysed it over the past decades, the more differences emerge (Bowler 1984; Ruse 1996; Kottler 1985; van Wyhe 2013, pp. 208 ff).

8. Wallace *recollected* decades later that he wrote the essay 'in order to send it to Darwin' (Wallace 1905, vol. 1, p. 363). However, the only evidence we have for his original intentions is an 1887 letter: 'I *had* the idea of working it out, so far as I was able, when I returned home' (Wallace 1887). Although a recollection, it conforms with Wallace not sending

his essay to anyone on the following monthly mail steamer in March. Only after he received a letter of high praise from Darwin (on the March steamer) mentioning that Charles Lyell also thought highly of his earlier work, did Wallace send the essay to Darwin by the following, April, mail steamer—requesting that it might be forwarded to Lyell who was the main opponent addressed in the essay. (van Wyhe & Rookmaaker 2012)

9. This belief also traces back to McKinney (1972) who found a letter to someone else that arrived in England two weeks earlier than Darwin's and *assumed* that the letter to Darwin must have been sent at the same time. McKinney's (1972) assumption that they were sent the same day launched decades of fruitless speculation. Wallace was replying to the letter from Darwin that arrived on the March steamer. This was part of a sequence of letters from (and replying to) Darwin, not one written out of sequence to Darwin that was not a reply. Wallace's reply and his Ternate essay went on the following April steamer. The mail connections from that date arrived in London exactly on 17 June 1858—these connections have all been verified and there is no scope to consider them as uncertain or conjectural, and Darwin's home was one day by post from London. Darwin wrote to Lyell on the 18th saying he had received an essay from Wallace that day. There is no mystery and only failure to follow correct historical practice ever introduced the mistaken notion that there was one. (van Wyhe & Rookmaaker 2012; van Wyhe 2013, pp. 220 ff)

10. Wallace's essay was published in accordance with the standards of the day. The notion that it was done 'without consent' was created by Beddall (1968) and launched decades of repeated assertions to this effect. Conventions of the day dictated that only if the essay had been marked 'private' or not for publication would any rules have been broken. Hence, Wallace was aware that it could be published if the recipients, especially the great geologist Charles Lyell, thought proper. Wallace expressed no surprise that it had been read before the Linnean Society in his 6 October 1858 letter to his mother: 'I have received letters from Mr Darwin & Dr Hooker two of the greatest most eminent Naturalists in England which has highly gratified me. I sent Mr Darwin an essay on a subject in which he is now writing a great work. He shewed it to Dr Hooker & Mr Darwin Sir C Lyell, who thought so highly of it that they immediately read it before the 'Linean Society'. This insures me the acquaintance and assistance of these eminent men on my return home' (van Wyhe & Rookmaaker 2013, p. 180).

11. Wallace's and Darwin's contributions were communicated by Charles Lyell and Joseph Dalton Hooker to the Linnean Society on 1 July 1858 'in the order of their dates' (Darwin & Wallace 1858, p. 45). However, there was no singular 'priority' in Victorian science. At least three types were widely recognised in the 19th century. Darwin already had two of the three: 1) the first to conceive of an idea and 2) the first to share an idea with colleagues. Darwin shared the third form of priority equally with Wallace, i.e. the first to publish. The idea of a unitary 'priority' issue between Wallace and Darwin is derived from modern conventions about publication and priority in science. Even if Wallace's paper had been published on its own ahead of Darwin, it was already known that Darwin had conceived of the idea and shared it with colleagues long before.

12. It was seldom described as the Darwin–Wallace theory of evolution because their joint papers were almost unknown compared to Darwin's controversial and internationally discussed *Origin of Species*. Furthermore, 'the theory' is an oversimplification since the *Origin of Species* contains more than the idea of natural selection. 'The theory' discussed by their contemporaries consisted of a host of elements that Wallace had never thought of such as sexual selection and recapitulative appearances in embryology. Contemporary discussions of the *Origin of Species* seldom referred to it as a theory that emanated equally from both men.

13. To say that Wallace was the greatest field biologist of the 19th century is meaningless hyperbole. This flattering title goes back to 1959 but only became common after a popular science book by David Quammen (1997).

14. Wallace was first described as founding 'the science of zoogeography' by zoogeographer and Wallace biographer Wilma B. George in 1964. However, Wallace came two generations *after* the advent of biogeography or the study of 'geographical distribution' which has long been traced to Buffon (1707–1788) although others attribute it to Alexander von Humboldt (1769–1859). The bookshelves of Wallace's day already groaned under volumes on this subject before he began to write his classic *The Geographical Distribution of Animals* (1876).

15. Wallace's great work *The Malay Archipelago* (1869) was out of print from 1922–1962. (van Wyhe 2015). A reviewer of John Bastin's 1986 reprint remarked that Oxford University Press 'deserves our thanks for bringing this long out of print classic back into general circulation' (Harper 1988)

16. Wallace was given this title around the year 2000. A large number of interviews and obituaries in which Wallace was often described in such superlative terms was discovered and republished online by Charles Smith (2000a, b) even though Wallace was not even close to being so famous in his lifetime. The reverent statements by journalists and obituarists that someone was the 'most famous' or 'greatest' naturalist was also applied to many others at the time. Examples described with exactly the same words include such luminaries as Richard Owen, R.L.C. Virchow, William Crookes, T.H. Huxley, Nicola Tesla, Marcellin Berthelot, I.I. Metchnikoff and Madame Curie. Such rhetoric does not show that any of these scientists was *the most famous*, but that such language was commonly used by journalists to describe an eminent subject they were writing about. There are also many examples flatly contradicting the belief that Wallace was the most famous, such as a piece that ran in a San Francisco newspaper in 1900 entitled 'The fifty greatest men of the nineteenth century'. Under the heading 'scientists' were

Alexander von Humboldt, Charles Darwin, Michael Faraday, T.H. Huxley and Louis Pasteur (Anon 1909). Some of the historically verifiable candidates to such a title around 1900 would be Oliver Lodge, Lord Kelvin, Louis Pasteur, John Fiske, E. Ray Lankester, Luther Burbank, Francis Galton or William Crookes.

17. The idea that Wallace is forgotten is the most fundamental and widely believed feature of Wallace today. Wallace is no more forgotten than dozens of other prominent men of science of the later 19th century. Almost all of the others are far less well known now than Wallace is. Wallace's fame is far greater than most other 19th-century naturalists. New books and articles on him appear every year.

    Whereas everyone familiar with Wallace agrees on what an admirable man he was—so curious, enthusiastic, intelligent, persevering, modest, good-humoured and a profoundly gifted observer of nature and more—that so many things written about him a century later are historically inaccurate has no bearing on his worth. So, how was the view of Wallace as a heroic-victim created in recent decades?

EARLY NARATIVES

It is unappreciated that Wallace's story was told during his lifetime and for 50 or so years afterwards in a greatly different way than it is today. For many years his accomplishments were celebrated but without any notion of his being forgotten, cheated, wronged or in any way being a figure for whom the record needed to be set straight, even though those writers had almost all of the historical evidence that we do. This proves that with the same evidence two radically different stories can be told—one following proper historical method and the other promotional literature. Although an entire volume could be filled with examples and explanations, the following instances serve to illustrate these dramatic differences.

In 1871 Darwin's brother, Erasmus, mentioned in a letter that 'in future histories of science the Wallace–Darwin episode will form one of the few bright points among rival claimants' (Litchfield 1904, vol. 2, p. 242). Their story was described as 'one of the brightest in the annals of science' (Woodall 1884). The American palaeontologist Henry Fairfield Osborn wrote in 1909 that 'the entire Darwin–Wallace history up to and including Wallace's noble and self-depreciatory tribute to Darwin on July 1 of last summer, is one of the brightest chapters in the history of science' (Osborn 1909, p. 328; 1928). When introducing Wallace in 1908, the President of the Linnean Society, Dukinfield Scott, remarked 'There is nothing in the history of Science more delightful or more noble than the story of the relations between yourself and Mr. Darwin, as told in the correspondence now so fully published—the story of a generous rivalry in which each discoverer strives to exalt the claims of the other' (Anon 1908, p. 4). In 1925, palaeontologist Richard Swann Lull described the story as 'a splendid act of chivalry for [Darwin] thus to bring forth the work of the younger man, but it did not in any way lessen Darwin's credit as the true discoverer and demonstrator of this important factor' (Lull 1925, vol. 1, p. 335.). Lull added 'At first, Darwin was inclined, out of chivalrous friendship for the young man, to suppress his own laboriously elaborated work and to publish Wallace's to the world. Fortunately the good counsels of his friends Hooker and Lyell prevailed and as a result a joint paper setting forth the views of both authors was read.' In 1952, the entomologist Arthur Ward Lindsey called it 'a fine example of cooperation and individual generosity' (Lindsey 1952, p. 27).

By 1980, however, Wallace's story was markedly different. The journalist Arnold Brackman claimed that the whole affair with Darwin was 'the greatest conspiracy in the annals of science', and that Wallace was the 'victim of a conspiracy by the scientific aristocracy of the day and was robbed in 1858 of his priority' (Brackman 1980, p. xi). Brackman, and zoologist and scientific administrator John Langdon Brooks (1984) wrote the first book-length conspiracy theories of Darwin vs. Wallace, plying accusations of lying, plagiarism and cheating against Darwin and his colleagues. In 1986 the American philosopher James Rachels, who specialised in ethics and animal rights—also with no training in the history of science—in an article entitled 'Darwin's moral lapse' called it a 'shabby affair' and a 'lamentable story of human weakness, in which some good men treated another good man disgracefully' (Rachels 1986). In 2000 Ghillean Prance, the President of the Linnean Society, wrote in a foreword to a new biography that Wallace was 'a 'forgotten naturalist' in comparison with the attention that has been given to Darwin's contribution. Various authors have sought to redress the injustice that befell Wallace and it is always good to welcome another book that seeks to set the record straight' (Wilson 2000). More recently, a trio of biologists opined that 'Wallace's contribution to the theory of evolution was not given the recognition it deserved and he was undoubtedly shabbily treated at the time' (Lloyd *et al*. 2010, p. 339). An article in *New Scientist* in 2013 by journalist Stephanie Pain declared 'the arrangement was as dodgy then as it would be now' (Pain 2013). Comedian Bill Bailey made a two-part BBC programme on Wallace in 2013, asserting in a tone of moral outrage 'they never even asked Wallace's permission to publish. The establishment were not going to let *their* man lose priority. So they cooked up this connivance…Wallace was robbed!' (Bailey 2013).

THE RISE OF VICTIM NARRATIVES

It was only in the late 1960s and 1970s that the original story of Wallace began to change. The first phase had nothing to do with Wallace but Darwin. In line with the values of those decades, a high-status, wealthy, privileged and immensely famous figure like Darwin was no longer acceptable or palatable to some. Some writers began to suggest that a forgotten, low-born figure was the true genius who deserved the fame and credit of the unfairly lauded Darwin. Other men were put forward as the overshadowed and forgotten victims from William Wells, James Prichard, William Lawrence and especially Edward Blyth and Patrick Matthew. Only then was Wallace cast in the same light with nearly identical claims made on his behalf. Whereas the other figures have mostly faded from view, Wallace has been written about ever since in ever stronger terms as truly great, truly disadvantaged,

and unfairly treated and forgotten. Making accusations against a famous and privileged figure on behalf of a supposedly disadvantaged and obscure underdog has become extremely attractive to many, quite apart from how accurate or inaccurate such claims might be. In the past 40 years, this theme pervades the literature on many historic figures—so primed are modern audiences to feel outrage at historical injustices that one need only make the accusation that a figure was a victim to win the moral high ground.

Some of the best-selling popular histories of science of recent decades make use of this theme. Well-known examples include John Harrison, the supposedly persecuted working-class hero of Dava Sobel's (1995) *Longitude*: *The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time*; William Smith, the working-class hero of Simon Winchester's (2001) best-selling *The Map that Changed the World*; and Brenda Maddox's (2002) *Rosalind Franklin: the Dark Lady of DNA* who, according to the book blurb, was 'airbrushed out of the greatest scientific discovery of the twentieth century'. Similarly, admirers of Nikola Tesla see him as an unfairly forgotten genius cheated out of his due fame and credit because of the fame and recognition given to mainstream Thomas Edison and Guglielmo Marconi. Recent accounts of Florence Nightingale and Mary Seacole parallel accounts of Darwin and Wallace. Nightingale was born into a wealthy family and because of her work training nurses and introducing a regime of hygiene and cleanliness in field hospitals during the Crimean War, and later in Britain, was recognised as the founder of modern nursing. Like Darwin, she became a household name in Victorian Britain. Mary Seacole was a mixed-race British Jamaican who travelled on her own to the Crimea where she set up the 'British Hotel' behind the lines for convalescent officers and treated many with traditional herbal remedies. Today she has a large and passionate following who believe that she, and not the privileged Nightingale, is the true hero. One could replace their stories with Darwin and Wallace's, so similar are the themes and claims even though Seacole played no role in modernizing the nursing profession.

The claim has become commonplace that Wallace did not become such a famous name as Darwin or that his fame has not survived as long because he was of lower social status. This idea also flies in the face of proper historical method. It is not enough to make an assertion—comparison must be made to others. Despite the elitism and overtly accepted social hierarchy of the time, there were many Victorian men of science from humble backgrounds who achieved towering reputations such as Humphry Davy, Michael Faraday, William Whewell, Adam Sedgwick, Richard Owen, David Livingstone, Herbert Spencer and T.H. Huxley, the latter born above a butcher's shop—a far humbler background than Wallace's.

Hagiography

To treat a figure from the history of science as a hero underdog needing resurrection goes against almost every principle of modern historical method. Historians rather contemptuously call such hero worship by journalists and popular writers 'hagiography'. Such writings sell well but these are not motives that lead to a dispassionate, critical and contextually nuanced account in which the evidence must form the basis of any assertion. Historians seek to understand what historical actors did and meant in terms of their own time and culture without overly apportioning praise or blame, even though book promotions and dust jackets etc. typically take literary license. Historians aim to challenge old-fashioned and uninformed histories and to add new information, elements or interpretations to earlier accounts. Similarly, Whiggish approaches, i.e. those treating the past as if it were an inevitable trajectory of progress and judging the past according to modern values and norms, have no place in rigorous historical analysis.

So great is the concern to not appear to be writing about a hero, Darwin scholars go out of their way to point out when Darwin was mistaken or to question the propriety of his behaviour—for example supposedly using his ill health as an excuse to avoid unwelcome guests or social activities and responsibilities. Another example is his labelling of his finch specimens in the Galapagos.

CONTEXTUALISM

One of the most powerful tools in the historian's toolkit is contextualism in which historical writings are interpreted according to an understanding of the period with an emphasis on the reconstruction of the actors' world. Students of the history of science learn how to read a work in this way as opposed to a naïve modern reading. Almost any historical document from the Bible to Shakespeare can be read by anyone today but, unless the original historical contexts are taken into account, their understanding will bear little relation to that of the original writers and readers. The constellation of ideas and issues they were addressing or silently referencing are significantly different from what a modern reading of one of their writings will produce—they were not taking part in a timeless debate about unchanging topics or questions

Timelessness is another refuted perspective. No historian of science could say that 'science works like X' without qualification. The science of the mid-19th century or the early 16th century or today are greatly different, so it is meaningless to say without qualification that in science, priority is established by X.

Actors' categories

Historians seek to understand what figures in the history of science were doing in terms of so-called actors' categories. One attempt to do this was seen when historians began to use the word 'transmutation' instead of evolution because the former term was used before the word evolution was used in its modern sense. However, use of 'transmutation' is widely imitated by non-historians without understanding why it is used and what it means. If a writer simply says that transmutation is what evolution was called in the past, this misses the point. The point is not vocabulary. If transmutation and evolution meant exactly the same thing then insisting on the term transmutation would be pointlessly pedantic and pretentious. The reasons historians often stress earlier terms is that they *did not mean* the same thing that

modern people mean when they say evolution. Use of these archaic terms is an attempt to convey the fact that people in the past had very different ideas about various kinds of changes in organisms—ideas that are difficult to understand and appreciate today. There was no solitary notion of 'evolution'. To write as if J.B. Lamarck, Erasmus Darwin, Geoffroy Saint-Hilaire, Robert Chambers, Darwin and Wallace, for example, all had 'the' idea of evolution is nonsense. Their ideas and theories often had almost nothing in common.

Weightings for historical evidence

In explaining myths in the history of science, historian Alberto Martinez stresses the responsibility qualified historians have to correct popular but historically inaccurate stories: … if such corrective stories about myths are not clearly told and retold, the myths grow again, like tree branches in various directions' (Martinez 2011, p. 252). He provides a table of source credibility as used by historians but, unfortunately, rarely are such important principles explicitly laid out. First on his list of twenty is 'Original notes and drafts of the scientist's labors and ruminations'. The second to fourth also stress the high value of contemporary evidence in decreasing degrees of closeness to the events. His sixth is 'Early retrospective accounts by the scientist' whereas he gives later recollections the least value or reliability. An example is the famous Huxley–Wilberforce confrontation at Oxford in 1860, for which Frank James, Nanna Kaalund and other historians found that recollections of this event many years later were extremely unreliable (James 2005; Kaalund 2014).

CONCLUSION

Historians of science are not infallible nor immune from repeating, unwittingly, historically inaccurate stories about Wallace. They have repeated many of the claims discussed here no less than popular writers. This stems both from drawing on the published sources so widely available and the failure to analyse Wallace and scrutinise writings about him with the same rigour as has been the case with Darwin and other prominent figures from the history of science.

The prevalent themes of the modern Wallace story essentially reduce to two basic motifs. Firstly they exalt Wallace, and secondly they emphasise his disadvantages and victimhood in being unfairly treated and forgotten. If something said of Wallace (or any figure from the history of science) does either of these two things, one should be sceptical. Similarly, in too many cases anything proposed about Wallace that supports either motif has been accepted and repeated without question.

As for the difference in fame between Darwin and Wallace—both during their lifetimes and today—the answer is exceedingly simple. No one alive in the late 19th century would hesitate in explaining why one was a household name around the world and the other, although a respected one, never approached the former. Within about two decades of its publication Darwin's *Origin of Species* convinced the international scientific community and much of the literate public that evolution was a fact—a transformation of scientific understanding in which Wallace took almost no part, possibly not making any known converts to evolution in the 1860s–1870s when Darwin's book was most widely discussed and debated. It was because of the *Origin of Species* and later works, especially *The Descent of Man* (1871), that Darwin became, and has remained, so famous. It is no fault of Wallace that Darwin had started twenty years before him and published such unprecedentedly influential works.

Wallace was one of the great pioneers of the zoological exploration of Southeast Asia and proposed the single greatest zoogeographical distinction of the region, named in his honour as the Wallace Line by Huxley (1868). Wallace made countless contributions and discovered thousands of new species. In addition, his great work *The Malay Archipelago* (1869) remains one of the most interesting and delightful travel accounts of an early naturalist in the region, and continues to be read and to inspire new generations. No one can doubt that he deserves to be discussed and celebrated, but he also deserves to be accorded the highest standards of historical practice.

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