

Review Article

Natural Selection: It's Not Darwin's (Or Wallace's) Theory

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Abstract

For nearly 150 years, since soon after the appearance of the *On the Origin of Species*, we have known that neither Charles Darwin nor Alfred Russel Wallace originated the theory of natural selection. This certainty is based on the fact that both of these great naturalists admitted that they were beaten to the theory by at least two other naturalists. Since Darwin and Wallace readily accepted that they did not originate natural selection why do we insist on crediting them with this seminal discovery? Here, I will show how Darwin and Wallace's lack of priority on natural selection has been kept from both the scientific community as well as the general public.

Introduction

The English naturalist, Charles Darwin is universally regarded as the originator of the theory of natural selection, the mechanism by which evolution is, in the main, thought to operate. It will therefore come as a surprise to many to discover that a number of other scientists originated the theory of natural selection long before Darwin and Alfred Russel Wallace announced their versions in 1858. As we shall see, both of these great scientists openly admitted that they were not the originators of natural selection; this much at least is beyond argument. Here, I will highlight the story of how a Scottish arboriculturist, Patrick Matthew beat both Darwin and Wallace to natural selection.

Matthew's ideas are given in the Appendix of his book *On Naval Timbers and Arboriculture*, published in 1831. My aim here is not to show that Matthew was the first to come up with the theory but merely that, by publishing his ideas in 1831, he has priority on the idea over both Darwin and Wallace. As we shall also see, Matthew was himself beaten to the theory by at least three other scientists; clearly, if Matthew was not the first to originate the theory, then neither Darwin nor Wallace can possibly deserve the accolade.

Although mentioned in passing by some historians, Matthew's contribution, like that of the other pre-

Darwin-Wallace originators of natural selection, has been effectively marginalised for more than a century and a half. As a result, I conclude by suggesting that it is now time for the biological community to accept the simple fact that neither Darwin nor Wallace originated the theory of natural selection.

A bolt from the blue

On April 10th, 1860, Charles Darwin wrote to a letter to Charles Lyell in which he mentions a depressing fact, one that he almost certainly hoped he would never have to admit-he had learned that someone had beaten him to the theory of natural selection and there was simply no way of getting around the fact; that someone was a Scottish tree expert, or arboriculturist, called Patrick Matthew.

Matthew was born in Dundee in 1790, into a wealthy family and died in 1874; although he attended Edinburgh University, he appears never to have graduated, but returned to his family's estate in Erol, Scotland where he devoted the rest of his life to growing trees. It was here that he wrote his theory of natural selection, which was published in 1831(Matthew, 1831); that is, at a time when Darwin, still a creationist and opposed to the theory of transmutation, was just about to begin his famous voyage on the *Beagle*.

The letter that Lyell received from Darwin was factual, rather than emotional (Darwin, 1860a):

Now for a curious thing. In last Saturday's *Gardeners' Chronicle*, a Mr Patrick Matthews (Darwin here incorrectly spells Matthew's name) publishes long extracts from his work on "Naval Timber & Arboriculture" published in 1831, in which he briefly, but completely anticipates the theory of Nat. Selection ---I have ordered the book, as some few passages are rather obscure, but it is, certainly I think, a complete but not developed anticipation!... Anyhow one may be excused in not having discovered the fact in a work on "Naval Timber."

Then, in a letter to J.D Hooker, dated April 13th, 1860, Darwin wrote the following (Darwin, 1860b):

Questions of priority so often lead to odious quarrels that I should esteem it a great favour if you would read the enclosed. If you think it proper that I should send it (and of this there can hardly be any question), and if you think it full and ample enough, please alter the date to the date on which you post it, and let that be soon. The case in the *Gardeners' Chronicle* seems a little stronger than in Matthew's book, for the passages are therein scattered in three places; but it would be mere hair-splitting to notice that. If you object to my letter, please return it, but I do not expect that you will but I thought that you would not object to run your eye over it.

Lyell dutifully did as he was requested and the following statement appeared in Darwin's name in the *Gardeners' Chronicle* on April 21st, 1860 (Darwin, 1860c):

I have been much interested by Mr Patrick Matthew's communication in the number of your paper dated April 7th. I freely acknowledge that Mr Matthew has anticipated by many years the explanation which I have offered of the origin of species, under the name of natural selection. I think that no one will feel surprised that neither I, nor apparently any other naturalist had heard of Mr Matthew's views, considering how briefly they are given, and that they appeared in the appendix to a work on Naval Timber and Arboriculture. I can do no more than offer my apologies to Mr Matthew for my entire ignorance of his publication. If another edition of my work is called for, I will insert to the forgoing effect.

Here then, we have Darwin admitting that he was beaten to the theory of natural selection by Patrick Matthew. In a subsequent letter, written in the same month to the, American naturalist, Asa Gray he states:

Have you noticed how completely I have been anticipated by Mr P. Matthew, in *Gardeners' Chronicle*? (Darwin, 1860d).

In a letter he subsequently wrote to J.L.A. Quatrefages

de Bréau on April 25th, 1861 Darwin again admits that Matthew had beaten him, but continues to insert the same caveats, namely the contribution was small, it appeared in an obscure book, and no one noticed it (Darwin, 1861):... an obscure writer on forest trees in 1830 (actually, 1831), in Scotland, most expressly and clearly anticipated my views --though he put his case so briefly that no single person ever noticed the scattered passage in his book.

Darwin seems to becoming somewhat desperate here, since (as we shall see later) he neglects to mention that two reviews of Matthew's book had in fact appeared soon after its publication, both of which mention his reference to the species problem; Darwin's claim that no single person ever noticed Matthew's work, is therefore clearly incorrect. The fact that Darwin admitted that he lacked priority, on what is usually regarded as his theory, has obviously not just come to light, nor was it hidden away in Darwin's letters. On the contrary, it has been in the public domain for nearly a hundred and fifty years.

Darwin eventually included reference to Matthew's work in the "Historical Sketch" he included in later editions (such as the sixth, Darwin, 1872) of the *Origin of Species*. After commenting that Matthew had the same views as Wallace and himself he states that:

Unfortunately the view was given by Mr Matthew, very briefly in scattered passages in an Appendix to a work on a different subject, so that it remained unnoticed until Mr Matthew himself drew attention to it in the "*Gardeners' Chronicle*" on April 7th, 1860. The differences of Mr Matthew's view from mine are not of much importance, he seems to consider that the world was nearly depopulated at successive periods, and then restocked...

Although Darwin admits that he does not understand much of what Matthew, writes, he concedes that: "He (Matthew) saw clearly the full force of the principle of natural selection."

What about Alfred Russel Wallace, the man generally viewed as the co-discoverer of natural selection; what did he think about Matthew's contribution? In a book review on Butler's *Evolution Old and New* of, 1879, Wallace made the following comments (Wallace, 1879):

We come next to Mr Patrick Matthew, who in 1831 put forth his views on the developmental theory in a work on arboriculture: and we think that most naturalists will be amazed at the range and accuracy of his system, and will give him the highest credit as the **first** to see the important principles of human and "**natural selection**," conformity to conditions and reversion to ancestral types; and also the unity of life, the varying degrees of individuality and the continuity of ideas or habits forming an abiding memory,

thus combining all the best essential features of the theories put forward by Lamarck, Darwin and Mr Butler himself (my emphasis in bold) And: These and many other passages, show how fully and clearly Mr Matthew apprehended the theory of natural selection, as well as the existence of more obscure laws of evolution, many years in advance of Mr Darwin, and myself and in giving almost the whole of what Mr Matthew has written on the subject Mr Butler will have helped to call attention to one of the most original thinkers of the first half of the 19th century.

Although Wallace does not state what he means by the "existence of more obscure laws of evolution" in Matthew's work, I assume he is referring to Matthew's mix of natural selection and catastrophism, which I will discuss later.

The "cover up"-marginalising Matthew's work for nearly hundred and fifty Years

I do not intend here to discuss Matthew's theory of natural selection in detail. Fortunately, a full modern account of Matthew's work has been provided in the excellent book by Dempster (Dempster, 1996). Instead, I will concentrate on investigating the simple question-why has Matthew's work been kept from the public for so long; why has there been a cover up and why has it lasted for nearly a hundred and fifty years? However, we can get the gist of Matthew's ideas from the following passage quoted from *On Naval Timbers* by Wallace:

As the field of existence is limited and preoccupied, it is only the hardier, more robust, better-suited-to-circumstance individuals who are able to struggle forward to maturity, these inhabiting only the situations to which they have superior adaptation and greater powers of occupancy than any other kind: the weaker and less circumstance-suited being prematurely destroyed. This principle is in constant action: it regulates the colour, the figure, the capacities, and instincts; those individuals in each species whose colour and covering are best suited to concealment or protection from enemies, or defence from inclemencies or vicissitudes of climate, whose figure is best accommodated to health, strength, defence, and support: in such immense waste of primary and youthful life these only come forward to maturity from the strict ordeal by which nature tests their adaptation to her standard of perfection and fitness to continue their kind of reproduction.

Matthew then goes on to show how this law "tends to the production of almost uniform groups of individuals, which we term species." No wonder then that both Wallace and Darwin were so impressed by Matthew's work and had to concede, somewhat grudgingly on Darwin's part,

that Matthew had beaten them both to the theory of natural selection.

What then of the "cover up"? Why is the fact that Darwin and Wallace, on their own admission, relinquished priority of the theory of natural selection not generally known? Let us go back to the opening quote from the letter which Darwin wrote to Lyell. Darwin spells Matthew's name wrong, but goes on to provide a clear admission of Matthew's priority. Firstly, there is no doubting the date of Matthew's book, 1831, and the fact that his theory of natural selection appeared well before the Darwin-Wallace papers presented at the famous meeting of the Linnaean Society in 1858. Secondly, Darwin states that Matthew "briefly but **completely** anticipates his own and Wallace's contribution. To add more emphasis to this point, Darwin states," it is **certainly** I think, a **complete** but not developed anticipation." It needs to be remembered that this letter appeared in 1860, only a year after Darwin's triumphant release of the *On the Origin of Species*. One can only imagine how disappointed Darwin felt when he realised that, no matter how superb his book was; no matter how well it was selling, and no matter how much praise he was getting for his theory-he simply had not originated the theory of natural selection. He, and his friends, could no longer argue that by working on the theory for so long Darwin deserved credit on the theory. All that Darwin could now do was admit the fact that he had been beaten. His followers meanwhile were then left with a damage limitation exercise.

How then was the frank admission, by both Darwin and Wallace, that Matthew had priority explained away by evolutionists? At this point, I will explain how it was possible for Darwinists to marginalise Matthew's priority on natural selection. The first strategy is the simplest-don't confront the problem, just ignore it. Few major Victorian biologists ever even mentioned Matthew (or the other pre-Darwin-Wallace or natural selectionists) and his name appears only briefly in a small number of books on evolution. Some biologists have however, been honourable enough to mention that a certain Patrick Matthew had suggested a "similar" theory before Darwin but used some amazing slights of hand, which are still used by today's Darwinists, to diminish his contribution. A good example of this is provided by Sir Alistair Hardy, in his book, *The Living Stream* (Hardy, 1965). In a book of some three hundred pages Hardy then, Cambridge emeritus professor of zoology, has only the following to say about Matthew:

I should just mention, before coming to this new stream (of ideas), the idea of natural selection was expressed by Dr Charles Wells in 1813 and Patrick Matthew in 1831.

No mention here of Darwin's comments on Matthew.

The second approach to the “cover up” is-if you do mention Matthew then describe his work using words like “similar” or “brief”. Next, always add implied insults, like “Matthew was a mere gardener”, or “expert on wood growing”, i.e. hide the fact that Matthew was a *bona fide* scientist working in an important area of agriculture; if Matthew can be called an amateur scientist, then so can Darwin and Wallace. Next, never mention the fact that both Darwin and Wallace had absolutely, and unequivocally, stated that Matthew had come up with “their” theory in 1831. Continue by always diluting Matthew’s contribution by pointing out that others had come up with *similar* ideas to Darwin and, for good measure, mention that the Greeks also believed in evolution. Alternatively, you can claim that “natural selection was in the “air”, until Darwin, single handily, clutched it from the ether. Again, always point out that Darwin provided a far more advanced version of natural selection than that proposed by Matthew, but make sure not to mention the fact that Darwin had nearly another thirty years (with all the attended improvements in biological knowledge) in which to develop his ideas. Finally, and this is the usual modern response to Matthew, grudgingly admit that Darwin was not the first, but then add “Well, why does it matter?”

The answer to the above question is simple-why should Darwin have his name added to a theory which, on his own admission, he did not originate? A number of modern evolutionists have used a more complicated slight of hand to overcome this problem. Essentially, they claim that Darwin did not fully understand his own theory and therefore was not in a position to determine whether, or not, Matthew had beaten him to the idea (Wells, 1973). The last named author, by the way, also points out that Matthew gave passing reference to natural selection in his book *Emigration Fields* (Wells, 2002), published in 1839, eight years after *On Naval Timbers* appeared; clearly then Matthew’s commitment to his idea extended over more than a “few lines” given in an appendix.

Yet another sophism used by those wishing to obscure Matthew’s contribution is to state that while the two theories are the same, Darwin and Matthew arrived at them from different standpoints. Darwin, it is concluded, came to “his theory” after long years of deliberation and was aware that it was a “true theory”, i.e. one that could be extended by the addition of new evidence. Matthew in contrast, it is claimed, saw natural selection as an obvious, fact, a law of nature which seemed so self-evident that there was really no need to produce endless examples (as Darwin did in the *Origin of Species*) of man-made selection to demonstrate its veracity. Now there is no doubt that Matthew saw natural selection in this way, but why should this approach

make his conclusions any less valid? Matthew obviously concluded that there was no need to write “the big book”, simply because he saw natural selection as an obvious law of nature. This explanation also covers the argument that Matthew cannot be taken seriously because his exposition of natural selection is too short; why should conciseness, leading to brevity, be a sin?

The next strategy used to marginalise Matthew is not to attack his theory, but to attack the book in which it was published. We have already seen that Darwin claimed that Matthew’s book was obscure and, by implication, of little importance. Admittedly Matthew published his ideas in an appendix which is “rambling” by modern standards, but certainly not so by the standards of the time it was written. The Appendix is, in fact part of an extremely important book. The production of naval timbers was crucial for the operation of the Merchant and Royal Navy in Victoria’s Britain; without such timbers, Britain could not have ruled the waves and extend its ever growing empire. The fact that Matthew places his ideas on natural selection in the Appendix of his book in no way implies that he thought that they were of little value; the Appendix also includes mention of some of his political views, which he obviously expected to be taken extremely seriously.

What does Richard Dawkins have to say about Matthew? Dawkins only reference to Matthew is to claim that he saw natural selection as “a negative force only” (Dawkins, 2008), and he clearly sees no need to dwell on the fact that both Darwin and Wallace admitted that Matthew had priority on the theory of natural selection. In contrast, the late Steven Jay Gould claimed that Matthew’s natural selection refers to a positive, rather than negative, force (Gould, 2002). We therefore have the two great evolutionary writers of our age at odds over a fundamental point- was Matthew’s view of natural selection positive or negative?

Gould accepts that it was almost commonplace for biologists, who gave consideration to evolution, prior to Darwin-Wallace, to think in terms of natural selection, but they tended to regard the survival of the fittest as a *negative* process which led to the elimination of the unfit and thereby preserved the type; even William Paley, it seems, was willing to accept this kind of natural selection. Unlike Dawkins however, Gould thinks that Matthew’s view of natural selection, was (like Darwin’s view) positive.

Of course, not all authors on evolution have felt the need to overlook, or dismiss, Matthew. As early as 1885, Grant Allen in his biography of Darwin (Grant Allen, 1885) calls Matthew:

The unconscious author of the principle of natural selection (What Allen means by “unconscious” is not immediately

obvious).

In 1913, Raphael Zon, of the U.S. Forest Service, wrote an article for the *American Naturalist* entitled *Darwinism in Forestry* (Zon, 1913) in which he makes the following comment:

Here then is a most interesting fact which seems to me of deep significance to foresters. The first Darwinian, who twenty nine years before Darwin formulated the law of natural selection was a forester (He is of course referring here to Matthew) and:

My purpose is... to restore the memory of one who ploughed the same fields as we do now, the name of the forester whose idea, although it did not perish, slumbered almost unknown for nearly thirty years until another and bigger man brought it to life and general recognition.

By the mid 1980s, Matthew's work was becoming better known and evolutionary texts could no longer reasonably avoid mentioning his name. Some, like Soren Lovtrup's in his *Darwin: the Refutation of a Myth* (Lovtrup, 1987) did just that, but as usual in less than glowing terms:

After Darwin's grandfather, Patrick Matthew, was the first person to state the theory of evolution which is called Darwinism. He was a true precursor, but in contrast to Darwin he did little to elaborate or corroborate the theory. Like most other evolutionists, modern and ancient, who refer to Matthew, Lovtrup then goes on to protect the Darwin myth by adding the following:

Patrick Matthew has made a contribution to evolutionary thought modest, but not insignificant. His reward is that he is not the entirely forgotten person he would otherwise have been.

Scant reward, it would seem, for a person who beat both Darwin and Wallace to natural selection, and who was the first to elaborate, what might be regarded as, the modern evolutionary synthesis of natural selection and catastrophism. In regard to the latter, Darwin was a strict gradualist and believed that evolution progressed by a series of small steps over an exceedingly long period of time. He argued against Cuvier's idea that catastrophes played a major role in evolution. It is important to recognise however, that Cuvier believed that catastrophes completely wiped out all of the inhabitants of the Earth and that the planet was then re-populated with completely new species. Matthew, in contrast, believed that catastrophes, by destroying only *part* of the Earth's population, provide a driving force behind new innovation in species; natural selection over long period occurred, but catastrophes also played a major part in evolution. This idea is of course familiar to us because of the generally accepted view that the extinction of the dinosaurs, and event which changed the whole course of evolution, was brought about by an asteroid

impact. Trevor Palmer, in his book on catastrophism, has recently emphasised that Matthew can be considered to be the originator of the most recent view of evolution because his theory includes elements of both natural selection and catastrophe (Palmer, 1999). Palmer, by the way, appears generally more sympathetic to Matthew's cause than most evolution writers. However, even he loses his nerve, as if fearful of losing credibility amongst his fellow Darwinists when he states:

Matthewism might be an appropriate name for a new synthesis. Matthewism is an ugly word and, also, its use would no doubt lead to interminable arguments about what exactly Matthew did or did not say about evolution (in fact he said very little and did not express himself very well). Hence the idea must be rejected.

Even the more sympathetic Palmer then cannot avoid following the usual approach of diminishing Matthew by claiming that he said little (presumably compared to Darwin, nearly thirty years later) and that he should have expressed himself better.

Finally, we have to answer the question-did Darwin know of Matthew's work, and was he influenced by it? Or put less politely-did Darwin steal the idea of natural selection from Matthew?

As I mentioned above, Matthew's work was the subject of two reviews which could have alerted any scientist, or general reader, to Matthew's views on the species question. The first of these reviews, appeared in the *Gardeners' Magazine* of 1832, and emphasised that the book was important to the welfare of Britain and to "her extension of her dominions"; it then discusses the all important Appendix which contained Matthew's ideas on natural selection, as follows:

An appendix of 29 pages concludes the book...one of the subjects discussed in this Appendix is the puzzling one, of the origin of species and varieties; and if the author has hereon originated no original views (and of this we are far from certain), he has certainly exhibited his own in an original manner.

Clearly anyone, including Darwin, who was interested in the "species question" would have read this and wondered what this somewhat elusive quote meant. The other anonymous review, which appeared in the *United Services Journal*, commended Matthew's description of naval architecture and then states:

But we disclaim participation in his rumination on the law of nature.....

The authors of these two reviews were obviously well aware that the book had something significant to say and included an important and novel section on the

development of species, i.e. evolution. These two reviews also give lie to the, frequently expressed, view that Matthew buried his ideas in an obscure, little known, book.

Have we any evidence to show that Darwin ever read Matthew's book or the above reviews? Well, we have to remember that in 1831, Darwin was not interested in the species problem and was still a convinced creationist. By being on board the *Beagle*, he would have missed the publication of Matthew's book and the associated reviews; of course he could have read both the book and the reviews on his return to England when he began opening his notebooks on the species problem.

In fact, there exists more than a hint that Darwin did, in fact, read Matthew's book. This hint revolves around the similarity of language found in the two accounts of natural selection. Matthew states:

There is more beauty and utility of design in this continual balancing of life to circumstances, and greater conformity to those dispositions of nature which are manifest to us, than in the total destruction and new creation.

Now compare this with Darwin:

There is grandeur in this view of, with its several powers having been originally breathed by the Creator into few forms or into one...

Loren Eiseley, in his book on Darwin (Eiseley, 1959) provides evidence that, by 1844, Darwin was well aware of Matthew's book; and that he took the phrase "natural process of selection" from it and modified it to "natural selection". Although the term "selection" was used, by Victorians, in relation to plant and animal breeding, I can find no other reference to the use of a "natural process of selection"; as a result, it cannot be said that Darwin modified a term that was already in wide use.

Although they never met, Darwin and Matthew entered into some friendly correspondence, beginning on the 13th of June, 1862, (Darwin, 1862) when, in response to the suggestion by Matthew that they might meet, Darwin replied that he would like to meet "the first enunciator of the theory of Natural Selection" (yet another admission, by Darwin, of Matthew's priority), but that he had to decline the offer because of his poor health. In 1871, the two scientists had further correspondence in which Matthew complained that he had always been unable to devote much time on to the question of evolution because of his long-standing commitment to politics. He then went on to make the following remarkable statement concerning his views:

There cannot be a doubt that in the scheme of Nature there exists high design and constructive power carried out by general Law and the great probability is that these laws are everlasting, as Nature itself is, tho' under these

laws subject to revolution.. .. That there is a principle of beneficence operating here the dual parentage and family affection pervading all the higher animal kingdom affords proof. A sentiment of beauty pervading Nature, with only some few exceptions affords evidence of intellect and benevolence in the scheme of Nature. The principal of beauty is clearly from design and cannot be accounted for by natural selection. Could any fitness of things contrive a rose, a lilly (sic) or the perfume of a violet.

Matthew then goes on to point out that he is an atheist, and that:

There is no doubt that man is left purposefully in ignorance of a future existence. Their (i.e. the Christians) pretended revelations are wretched nonsense.

Darwin's responded by saying that it was clear that the older man showed no sign in his letter of his four score years, i.e. that he had lost any of his mental faculties. Maybe if some, non-religious, form of design is eventually incorporated into biology then Patrick Matthew might be seen as the author of an entirely novel theory.

But is it Matthew's theory?

An obvious problem facing anyone who is attempting to correct the record on priority in science is that the person one is championing over the, generally accepted, discoverer of a scientific principle may have also been beaten to the idea. Although I have given prominence to the work of Patrick Matthew in this essay, I have not at any point claimed that Matthew was the first to enunciate the theory of natural selection. This pitfall has been avoided simply because at least three other scientists, Hutton, Edward Blyth and William Charles Wells, came up with versions of natural selection before Matthew (and therefore also Darwin and Wallace). William Charles Wells' contribution is particularly interesting because Darwin admitted his priority. Wells' version of natural selection appeared in 1813, some eight years before Matthew's work. The famous Victorian scientist and evolutionist, John Tyndall referred to Wells' contribution during his inaugural address of 1874, (Tyndall,1874) when he stated:

In 1831, Dr Wells founder of our present theory of dew, read before the Royal Society a paper in which, to use the words of Mr Darwin, "he distinctly recognises the principle of natural selection; and this is the first recognition that has been indicated." Tyndall then goes on to add his endorsement of Wells as follows:

The thoroughness and skill with which Wells pursued his work, and the obvious independence of his character, rendered him long ago a favourite with me, and it gives me the liveliest of pleasure to alight upon the additional

testimony to his penetration.”

The reference to Darwin's comments on Wells' priority is given in letter to Hooker he wrote in October, 1865 in which he says:

Talking of the Origin, a Yankee has called my attention to a paper attached to Dr Wells famous Essay on Dew, which he was read in 1813 to the Royal Society, but not printed, in which he applies most distinctly the principle of N. Selection to the races of man. So poor old Patrick Matthew is not the first, and he cannot or ought not any longer put on his Title pages the “Discoverer of the principal of natural selection.

Darwin appears to have been unaware that Wells' paper was in fact published, in 1818. The last sentence relates to Matthew's habit of putting this statement, claiming ownership of natural selection, in his books and on his calling cards. It is noteworthy that Darwin, in expressing his obvious satisfaction in debunking Matthew's claim to be the originator of the theory of natural selection, assigns priority to Wells, and in so doing, once again, admits that he, and Wallace, clearly have no priority on the theory. In his *Historical Sketch*, Darwin somewhat tempered his praise of Wells by stating that:

He applies it (natural selection) only to the races of man and to certain characters alone.

By criticising Wells' priority in this way Darwin is, of course unwittingly, re-asserting Matthew's priority on natural selection.

Conclusion

I hope I have been successful in demonstrating the simple fact that neither Darwin nor Wallace originated the theory of natural selection. In my opinion, there can no longer be any excuse for us to marginalise the contributions of scientists like Hutton, Wells and Matthew. Surely, we can marvel at the work of Darwin and Wallace without exaggerating their contributions to the history of the development of evolution.

Not surprisingly, I am not alone in thinking that, for expediency's sake, we have allowed a big lie regarding the history of the theory of natural selection to continue in the face of all of the evidence (See in particular Dempster, 1996). The mathematicians and astronomers, Sir Fred Hoyle and Chandra Wickramasinghe have commented on the way in which Darwin and Wallace have been falsely given priority on natural selection (in relation to Edward Blyth's claim for priority) as follows:

The failure of biologists to insist on this matter being set right is somewhat surprising....It would seem to us that that a sin of omission remains to be redeemed by the world

of professional biology.

Although we can be certain that neither Darwin nor Wallace originated the theory of natural selection, it is less certain who should be awarded the accolade. I have concentrated here on the contribution of Patrick Matthew, but of course we know that, amongst others, Edward Blyth (Blyth, 1835), Hutton (Pearson, 2003) and the Reverend Baden Powell (Baden Powell, 1856), J.C. Prichard (Prichard, 1813) and Charles Wells (Wells, 1818; Wells, 1973), originated earlier versions of the natural selection; the notorious book by Robert Chambers, *Vestiges of the Natural History of Creation* (Chambers, 1844) also did much to expose the Victorian public to the idea of evolution, or transmutation, prior to the appearance of *On the Origin of Species*. I suppose we could follow Darwin's lead and allocate priority to Matthew (he excludes Wells because he concentrated only on the development of Man). However, while natural selection cannot be credited to either Darwin or Wallace, arguments will continue about who deserves priority on this, one of the most important and influential of all scientific ideas.

Of course, the fact that Darwin and Wallace do not have priority on natural selection does not in any way reduce their contribution to the theory. Nor, to the chagrin of the creationists, does it in any way impact on the theory of evolution.

Finally, it is noteworthy that I sent an article, similar to this in most details, to four leading journals devoted to the history of biology and medicine; all four journals rejected the paper without supplying any editorial criticism whatsoever; such is the power of Darwinist censorship in biology, even today!

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