

Mitochondrial Eve and biblical Eve are looking good: criticism of young age is premature

Carl Wieland

Mitochondrial DNA (mtDNA) indicates that all women have descended from a single woman, called mitochondrial Eve. This does *not* prove that she was the only woman alive at the time, but is *consistent with it*. High mutation rates indicate that this ancestor lived at about the time of the biblical Eve as well.

A critic has tried to discredit this creationist case. However, he has nothing more than special pleading to explain away data that contradict his materialist *paradigm*. And he misrepresents the logic of the case—creationists have always used this as evidence consistent with the Bible, while he misrepresents them as using it as proof.

Creationists have enthusiastically welcomed the ‘mitochondrial Eve’ hypothesis (i.e. that all modern humans can be traced back to one woman) because it clearly supports biblical history and contradicts evolutionary scenarios. A few years ago I reviewed the status of mitochondrial Eve research, showing that the identification of mitochondrial Eve with biblical Eve was becoming stronger as more evidence on measured mutation rates accumulated.¹

I explained how the mitochondrial Eve findings were in line with biblically based expectations. While not proving the biblical Eve, they were consistent with her reality, and were not predicted by evolutionary theory. However, the dates assigned to mitochondrial Eve had been said by evolutionists to rule out the biblical Eve.

But these dates were based upon ‘molecular clock’ assumptions, which were calibrated by evolutionary beliefs about when certain evolutionary events occurred, supposedly millions of years ago. When these assumed rates were checked out against the real world, preliminary results indicated that the mitochondrial ‘molecular clock’ was ticking at a much faster rate than evolutionists believed possible.² That is, it directly ‘challenges’ the evolutionary long-age claim. If correct, it means that mitochondrial Eve lived 6,000 to 6,500 years ago, right in the ballpark for the true

‘mother of all living’ (Genesis 3:20).

In addition, I explained that these real-time findings also seriously weaken the case from mitochondrial DNA, which argues (erroneously) that Neandertals are not true humans.³

Evolutionary counterattack

Not surprisingly, the evolutionary community didn’t allow this empirical support for the biblical record to stand uncontested. A recent article by one Alec MacAndrew published on the web has responded to what he calls ‘Challenges to the view of a 175,000 year date for matrilineal MRCA’. Interestingly, he referred to *two* challenges in his attempt to refute the possibility that mitochondrial Eve is indeed biblical Eve.⁴

His first ‘point’ is irrelevant

In many ways, MacAndrew’s critique of my article appears to have been written more for its ‘effect’ on the average reader, trying to make creationists appear ill-informed or worse.

For one thing, by the end of the snow-storm (snow job?) of ostensibly technical information, MacAndrew says:

‘They do not understand or they deliberately misrepresent the concept of the matrilineal Most Recent Common Ancestor [MRCA] which does not point to the only female human ancestor.’

So the average reader will likely apply that to my article, which MacAndrew’s article purports to critique. Perhaps MacAndrew hopes that they would have forgotten that my article explained this very carefully. I said:

‘Evolutionists do not claim, nor can it be fairly stated, that this evidence proves that there was only one woman alive at any point in the past.’¹

It is easy to verify that I spent several paragraphs explaining this further. So MacAndrew himself has either not understood my article very well or has deliberately misrepresented it. This impinges on his credibility right from the start.

Another polemical tool (propagandistic) is the way MacAndrew says:

‘... the estimate of 150,000 to 200,000 years for matrilineal MRCA was called into question not by one challenge (as Carl Wieland suggests) but by two challenges.’

Implication: Because Carl Wieland hasn’t discussed both ‘challenges’, he doesn’t know what he is talking about. This argument is absurd on the face of it—a second challenge makes life even harder for the evolutionist, but there is not always a need to strengthen a strong argument even further. One is not obliged to play all one’s aces if one will do! But a careful reader would see that the first of his two challenges (in fact it is naïve to talk of just two, anyway—where should we stop?) is totally irrelevant to the single argument I presented in my paper, which, in a

nutshell, is as follows:

Christians who believe in the biblical chronology do not need to be intimidated by alleged ‘absolute dates’ given to mitochondrial Eve because the dates are based on calibrations given by evolutionary assumptions. In fact, some measured mutation rates have given dates, using similar assumptions, consistent with the biblical chronology.

A careful reader would see that the first of MacAndrew’s two challenges is all about the cross-linking, which, if confirmed, would lengthen the dates anyway, so it has nothing to do with the argument in my paper. MacAndrew writes:

‘Note that if recombination does occur, the matrilineal MRCA of humans would be *older* than the current estimate of 150,000 to 200,000 years’ [emphasis in original].

And in any case, as MacAndrew admits, it is at present unconfirmed:

‘At the moment this question has not been settled. The bulk of the opinion is that recombination does not occur, but there has also been some further evidence for it.’

So why even mention it? Presumably, it serves his apparent purpose of adding to the length and ‘scientific impact’ of his paper, despite its being irrelevant.

His response point is special pleading

The second ‘challenge’ (in fact there was, as he indicates, more than one set of results leading to the same sort of challenging conclusion, if one wants to be as nitpicky as he was in his critique) is the one to which my article referred. MacAndrew puts it this way:

‘There have been two papers that have measured unexpectedly high short term mutational rates in the control region of the mitochondrial DNA. The control region is a part of the mitochondrial DNA that does not code for proteins. The normally accepted rate is one mutation every 300 to 600 generations (6,000 to 12,000 years) and this is calibrated, as Wieland correctly says, by counting mutations in great ape and human mitochondria and regressing back to the age of their divergence as determined by fossils dated by radiometric dating.’

It is very significant that MacAndrew admits, both explicitly and implicitly, that the ‘normally accepted’ mutation rate is calibrated by evolutionary assumptions.

This is especially apparent by his misleading claim about ‘counting mutations’. They are counting no such thing, since they haven’t, in this case, seen DNA mutate (change). Rather, the differences are merely *assumed* to be mutations, on the basis of their *belief* that humans and apes have in fact descended from a common ancestor. This reminds me of the recent *faux pas* by the aggressively antitheistic Richard Dawkins:

‘Evolution has been observed. It’s just that it hasn’t been observed while it’s happening.’⁵

Hence, any conclusions on the date of mitochondrial Eve based on such long-age evolutionary assumptions, regardless of any other ‘challenge’ to the long-age scenario from observations, are at best only circular.

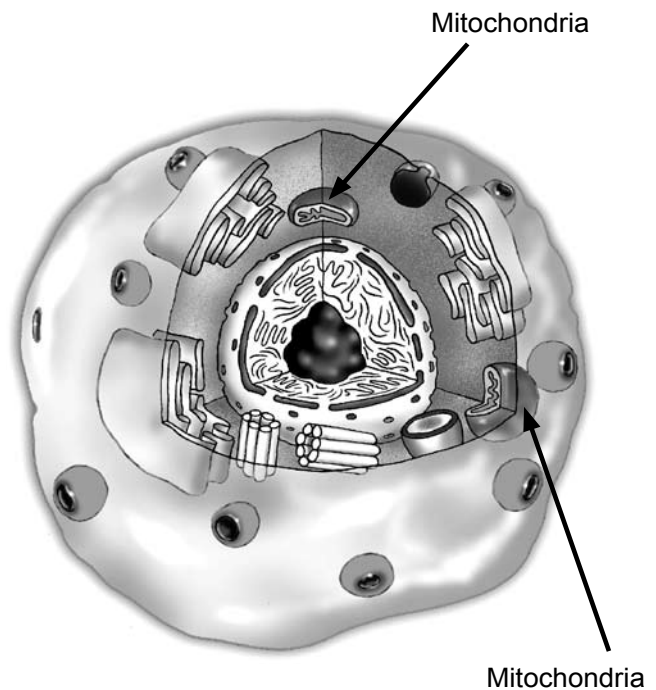
Misunderstanding the logic

MacAndrew writes:

‘No-one in the science community thought that the Parsons *et al.* study supported a matrilineal MRCA of 6,500 years.’

This is an obvious straw man, presumably erected for polemical effect. Not only did I not imply it, but no-one in their right mind would expect an evolution-dominated science establishment to accept a date for the MRCA of 6,500 years, *no matter what the data*. Instead, they would be motivated to search diligently for alternative hypotheses and submodels to explain the data which is outside the paradigm. They can always propose/massage auxiliary hypotheses to protect the core one (in the evolutionists’ case, *naturalism*), as philosopher of science Imre Lakatos showed.⁶ This is normal—creationists do the same in similar circumstances, but let’s be straight about what actually happens in the real world.

The sorts of explanations MacAndrew offers for the results that contradict his paradigm at face value are of course possible, but are at best tentative. And he could, in any case, only strongly criticize my article based on these explanations if I was taking an evidentialist approach—i.e. saying that it is the mtDNA data which prove that Eve lived



Artist’s impression of a eukaryote cell, showing organelles, including mitochondria that contain DNA

at that time. But in fact I take an openly presuppositional approach—my paradigmatic axioms are ‘on the table’ when I say:

‘Since, for example, the creationist’s (true) Eve lived only a few thousand years ago, the mutational substitutions in mtDNA must have happened at a much faster rate than assumed by evolutionists to date.’¹

In my article I then present evidence which is consistent with that presupposition. MacAndrew’s ‘explanations’ are essentially of a defensive nature, to try to show why the data presented in the several papers which found high mutational rates does not, at face value, support *his* axioms.

Explaining away contrary evidence

One of MacAndrew’s possible explanations is ‘Statistical variation in small samples’. But he admits that pooling the data still gives a date which is five times younger than that based on evolutionary assumptions. He talks of needing to consider whether mtDNA ‘does in fact mutate at a fixed rate’. Agreed. But that would simultaneously render vulnerable *any* argument for long ages based on mitochondrial substitutions, and so would tend to neutralize opposition to the possibility of mitochondrial Eve being the biblical Eve. The same criterion of assessment needs to be applied to the rest of his list of ‘possible explanations’, which are subsequently delivered as more or less the assured results of ‘subsequent research’.

Also, it is no surprise to hear him say that RFLP⁷ analysis is ‘not appropriate’ compared to ‘whole genome sequencing’. If RFLP had not delivered results that were antiparadigm, would it have been regarded as inappropriate? The Ingman *et al.* results fit the paradigm, so they are ‘by definition’ appropriate.

Bottom line: I do not find in his paper any independent yardstick by which one could say that they were more appropriate, apart from consistency with the paradigmatically derived longer dates.⁸

Note also my comments in the original paper emphasizing the need to be aware of special pleading to ‘explain away’ the results I highlighted. Special pleading does not mean that one is necessarily wrong, of course, but it helps open a reader’s philosophical eyes to be aware of it. And I do not think that the ‘burden of proof’ I referred to has in fact been adequately met in the MacAndrew article, despite his bold attempt to paper over the deficiencies with a suitably wordy ‘barrage’.

Conclusion

In short, I think MacAndrew is very premature and overconfident when he says that ‘subsequent research has largely resolved’ the challenge presented to long-age dates for ‘mitochondrial Eve’. Note also that prior to the 6.5-ka challenge, creationist literature was still

suggesting that mitochondrial Eve could well be the biblical Eve. Creationists were not bluffed or intimidated by the apparent ‘certainty’ of the long dates because of the tenuous foundation upon which they were erected. The 6.5-ka challenge is really a way of saying ‘See? How can you deny the Word of God based upon something which could be overturned so easily by a set of observations?’

But we would recognize all along (and have often stated) that *no* calculated date (even one that supports a biblical conclusion) is free of non-provable assumptions and hence cannot be used to ‘prove’ the Bible. All that MacAndrew has really done is highlighted this fact, that there are assumptions involved in the 6.5-ka calculations.

If I were an objective outside observer (if there can ever be such a thing), I would think it reasonable to conclude that it is futile to attach much definitive significance to any of the ‘dates’ derived from such calculations, because of the obvious problems and uncertainties. Thus, there is no reason at all why mitochondrial Eve could not be the biblical Eve, which was my article’s main message.

References

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7. Restriction Fragment Length Polymorphism
8. That does not, of course, preclude the possibility that there may be one, but his paper did not provide it.

Carl Wieland has degrees in medicine and surgery from Adelaide University. He practised medicine in Australia until 1986 when he commenced full-time work with the ministry that is now *Answers in Genesis*, Australia. In 1978 Carl founded *Creation* magazine, which now has subscribers in over 110 countries. He is still actively involved in an editorial capacity. He has authored many articles and papers for *Creation* magazine, *TJ* and the *Answers in Genesis* website. Carl has also authored the compact booklet *Stones and Bones*, and co-authored *The Answers Book*, *Answers to the Four Big Questions*, *One Blood*, and *Walking Through Shadows*. He is currently CEO of *Answers in Genesis International Ltd.* and of *Answers in Genesis*, Australia.