Adam, Eve, and Evidence

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What is the Evidence for Adam and Eve? By J.C. Sanford, 2018, in *The Harvest Handbook for Christian Apologetics*, Edited by J. M. Holden, Harvest House Publishers, Eugene, OR.

The importance of Adam and Eve

Chapter one of Genesis describes the creation of mankind in a broad context, chapter two of Genesis describes the creation of Adam and Eve in detail, and chapter three of Genesis describes the biblical Fall and its consequences. These three chapters are foundational in terms of defining the nature of God, the nature of Scripture, the nature of man, the nature of gender, the nature of marriage, the nature of sin, the nature of redemption, the nature of evil, and the nature of spiritual war. No wonder Satan is so fixed on attacking the first few chapters of the Bible!

The historicity of Adam and Eve is validated by Jesus and the authors of the New Testament. The history recorded in the Bible is an unbroken and coherent historical narrative that starts in Genesis 1-3 and continues through the rest of the Bible. There is no rational way to reject Genesis 1-3 as history, and still support the historicity of the rest of the Bible. The Bible provides a coherent history from the very beginning to the very end. This is one of the primary reasons why we can trust it.

The on-going attack on Adam and Eve

The doctrine of a literal Adam and Eve has been foundational for almost all Christian believers from the first century until the "enlightenment". The enlightenment involved a profound reversal—glorifying Intellectual Man and Nature, instead of glorifying God. The leaders of the enlightenment movement were not primarily scientists—they were mostly philosophers, poets, and theologians. An early manifestation of this shift was the popularization of "Higher Criticism", and the infamous "document hypothesis" developed by Wellhausen. He speculated that Genesis 1-3 was a chimeric fabrication written by competing groups of priests who worshipped different gods, and who had conflicting "creation myths" (i.e., chapters 1 and 2 of the book of Genesis). This was the beginning of on-going attacks on Scripture from within respected Christian institutions—reflecting the shift to naturalism. These attacks were against Scripture in general but were especially directed against biblical creation and the biblical Fall. Anti-biblical speculations were being promoted as if they reflected genuine scholarship, and almost every book in the Bible

was being dismissed as being an invalid fiction, which was authored by unknown persons who lived in later timeframes.

All this was happening *apart from science*. The genuine scientists of that era were still mostly Christians, most of whom would have believed in the biblical Adam and Eve. "Naturalism" (rejection of the supernatural) was never a reflection of true science but is itself a type of "metaphysical philosophy" (beyond the realm of scientific investigation). Naturalism has always been philosophical, not scientific. The naturalists typically either deny God outright, or they embrace a vague "god of nature". The rise to power of naturalist philosophy, and the worship of Intellectual Man set the scene for current developments.

The recently published book *Adam and the Genome*[1] militantly attacks the idea of a literal creation, a literal Adam and Eve, and a literal Fall. The book conveys hostility and even contempt toward those Christians and scholars who are more inclined to be faithful to the biblical perspective and the orthodox Christian tradition. Most importantly, *Adam and the Genome* is likely to undermine the faith of millions of Christians—so a very firm response is necessary.

In *Adam and the Genome*, a scientist and a philosopher/theologian join forces to transform biblical creation and the biblical Fall into *vacuous abstraction*. Ever since Darwin, theistic evolutionists and atheistic evolutionists have locked arms in militant defense of naturalism and evolution. Naturally, those same people have teamed up to oppose the anti-thesis of naturalism, which is a miraculously created first couple. Together theistic and atheistic evolutionists have very successfully conflated *evolutionary theory* with *science*—as if they were synonymous. In reality, evolution is at best a minor aspect of what is called *historical science*, which is not a hard science at all but is actually a soft (and ever-changing) science.

Historical and Genealogical Evidences for Adam and Eve

The historical evidences for Adam and Eve include the following: Jewish scripture and tradition, Christian scripture and tradition, and Muslim scripture and tradition. In addition, ancient genealogical records represent very powerful historical evidence. There are many genealogies that record Adam as our universal ancestor. This includes the genealogies in Genesis 5, 10, 11, First Chronicles 1-3, and Luke 3. Luke shows the unbroken maternal genealogy of Jesus Christ, tracing back to David, Jacob, Abraham, and finally to Adam, and shows that the "father" (Creator) of Adam was God Himself. How can sincere Christians deliberately ignore Luke 3? In addition to these biblical genealogies, there are a great many ancient secular genealogies that trace back to Adam. For example, most Arab tribes have genealogies that go back to Ishmael, and from there, back to Adam. The same is true for many Europeans. A large fraction of the medieval European kings had genealogies that went back to Adam, and many Europeans can now trace their ancestry back to these European kings, and so they can actually trace their own personal genealogies back to Adam. New genetic services like ancestry.com and 23andme are giving many people much deeper and converging lineage records, so more and more people will soon discover that their own personal genealogy will trace back to Adam.

Genetic Evidences for Adam, Eve, and the Fall

God's perfect creation is not just reflected in the beauty we see around us, it is also seen in the *exquisite design of the world*, the *programming of life*, and the *singular attributes of man*. By God's grace, to complement these intuitively obvious evidences for a miraculous creation, there is now abundant genetic evidence that supports the existence of a literal Adam and Eve. This evidence is too extensive and too technical for this short chapter but is detailed in several recent publications.[2] [3] [4] [5] In this chapter, I can only highlight some new developments.

Genetic Entropy – Not only is there strong genetic evidence for the miraculous creation of a literal Adam and Eve, but there is also strong genetic evidence for a literal Fall, which affected God's perfect creation in a profound and tragic way. Evidence for the Fall is not just seen in the sin, suffering, and natural evil that has corrupted God's good creation, it is also seen in the genetic degeneration of life, including the continuous degeneration of our own genomes.

The ubiquitous genetic degeneration of life is documented in the book *Genetic Entropy*.[6] Mutations cause corruption and loss of biological information. The human genome ("the book of life") is the hardware/software that programs us to be human. Mutations are like word-processing errors (or more accurately, programming errors) in that program. This is why mutations are almost always harmful. The human mutation rate is alarmingly high—roughly 100 new mutations per person per generation. So mutations are entering the human population at a rate much faster than natural selection could possibly select away such mutations. The extremely high human mutation rate is a profound problem. An even greater problem is that most harmful mutations only have a tiny effect on fitness. So most harmful mutations are essentially invisible to the natural selection process. What all this means is that the human genome (and apparently all genomes), must be accumulating harmful mutations continuously, such that genomes must slowly "rust out". This inevitable genetic degeneration process has been validated by extensive numerical simulation experiments[7] [8] [9], and also in biological test systems.[10] In addition, the Bible appears to record, in a remarkable way, this systematic degeneration of mankind.[11] It appears that everything, including all life, is subject to entropic decay. This strongly indicates three things: 1) the Fall was real; 2) creation and the Fall had to be quite recent; 3) Adam and Eve should have initially had zero mutations prior to when degeneration began. The painful reality of genetic entropy means that evolution is going the wrong way. It means we are devolving, not evolving. Genetic entropy precludes evolution in general, and human evolution in particular. Looking backward, the sad reality of genetic entropy demands a literal Adam, a literal Eve, and a literal Fall.

Mitochondrial Chromosome Eve – Thanks to DNA sequencing technology, we have been able to not only sequence the human genome, but we have been also able to sequence over 1000 individual human genomes. This genetic database can help us understand the history of certain human chromosomes, such as the mitochondrial chromosome. All people have a mitochondrial chromosome, but this chromosome is only inherited from mother to child, which makes the historical analysis of this maternally inherited chromosome very straight-forward. As this chromosome is passed down through many generations, new mutations

accumulate continuously over time. By looking at many modern mitochondrial sequences, we can actually look backward in time and see where each mutation entered a given lineage. This has enabled us to reconstruct ancestral sequences of women who are now long dead, including haplogroup founders and the primary root sequence (the approximate sequence of Mitochondrial Eve).[12] [13] [14] [15] What we have found is that all the human mitochondrial chromosomes in the world are nearly identical and trace back to a single woman, who has been called "Mitochondrial Eve". In terms of this very special chromosome, Mitochondrial Eve is very literally the mother of us all. The small number of mutations that separate modern people from the sequence of Mitochondrial Eve indicates that Mitochondrial Eve lived in the recent past (see references 12-15 above). There has not been enough time for very many new mutations to have accumulated on this chromosome. Based upon the actual, empirically-observed mutation rate for this human chromosome, studies indicate this Mitochondrial Eve lived recently (just thousands of years ago). Evolutionists have done similar analyses, but rather than using the actually observed mutations rate, they have been compelled to use hypothetical mutation rates that are about 20-fold lower than what is observed. They justify this, based upon certain evolutionary assumptions. The most fundamental assumption they make is that evolution is an absolute fact, and so all data must be force-fitted to support that paradigm. They calculate that Mitochondrial Eve is over 100,000 years old. Regardless of the time, there appears to be a singular woman in history who passed on her mitochondrial chromosome to all living human beings, and in this sense, she is the uncontested mother of us all. These findings are evidence supporting the historical Eve described in the Bible. Space does not allow further elaboration, but evolutionists make the counter-argument of "coalescence", which is not valid when there is not random mating (i.e., when there are dispersed sub-populations). This must be dealt with elsewhere.

Y Chromosome Adam – The Y chromosome is similar to the mitochondrial chromosome, in that it is passed down from generation to generation intact. However, unlike the mitochondrial chromosome (which is only transmitted from mother to child), the Y chromosome is only transmitted from father to son. Remarkably, what is seen is that all of the human Y chromosomes in the world are nearly identical and trace back to a single man, who has been called "Y chromosome Adam". In terms of this special chromosome, the historical figure now referred to as Y chromosome Adam is recognized as being the father of all living men. The small number of mutations that separate modern men from the sequence of Y chromosome Adam indicates that this man lived in the relatively recent past. Based upon the actual observed mutation rate for the human Y chromosome, our studies show that Y chromosome Adam lived just thousands of years ago.[16] [17] These findings are strong evidence supporting the literal Adam of the Bible.

The terms *Y chromosome Adam* and *Mitochondrial Eve* were coined (tongue in cheek) by leading evolutionists. Little did they realize that the history of these two special chromosomes would independently provide strong evidence supporting both a literal Adam and also a literal Eve, who lived in the same timeframe, just thousands of years ago.

Biological Information – A biological revolution is taking place, thanks to advances in genomics and molecular biology.[18] Most of this research is happening at the NIH, in a host of special programs such as ENCODE.[19] What we are now learning is that life is very

literally programmed. The programming of life is just as essential as the required programming that would be required for the operation of a hypothetical robot-operated factory. However, biological programming is much more wonderful than any imagined robotic factory. Biological programming is happening on the atomic/molecular level, and a single cell contains as much programming as a *robotic city*. In a single cell, there are many layers of information and there are many information networks. Within a single cell, there are millions of molecules that are sending and receiving information every second, representing something like a biological Internet. All these bits of information, all these information systems, all this software and hardware is *profoundly integrated*. No information network can become functional until all the essential components are in place. To create a single functional unit, even to create a specific short string of nucleotides, requires reaching a *functional threshold*. There is a minimal functional threshold for every biomolecule and every byte of information. It is not even remotely conceivable that largely random, isolated, single letter changes could change the programming that specifies "ape", into the programming that specifies "human". The biological programming that specifies "human", could never arise by unguided spelling errors in the ape genome, not even given the limited filtration that natural selection can provide. Natural selection cannot favor any new biological function until the hoped-for function has reached its *functional threshold*. The functional threshold for any hoped-for new function cannot normally be achieved until a host of very specific complementary letter changes are established, which takes inordinate *waiting times*.[20] The only credible way a robotic factory (and its required programming), could arise would be by means of very high levels of intelligent design. The revolution that is happening in our understanding of biological information systems is telling us that complex biological systems can never arise bit by bit, and they can never arise apart from intelligence. The only reasonable way that a human being could ever arise would be by supernatural intelligent design. In light of all this, the miraculous origin of man is not only feasible—it is the only rational explanation for how we could have been so wonderfully and fearfully made.

Debunking Evolutionary Arguments Against Adam and Eve

The book *Adam and the Genome* epitomizes the "state of the art" in terms of diminishing/dismissing/denying biblical creation, the biblical Adam and Eve, and the biblical Fall. Therefore we will focus on addressing the challenges outlined in that book. Although this book was co-authored by Venema and McKnight, only Venema actually addresses the evidence, and so we will focus on his arguments. Because Venema has been so widely featured by BioLogos, and has drawn so much attention to himself, it is important to note that Venema has not done any original research on these things, but is primarily drawing from other sources, and this appears to include his own blog site, and popular atheistic websites. According to his University website, Dr. Venema has only one secular peer-reviewed secular research paper, which dates back to his graduate student days.

Failing Icons of Evolution – For atheistic and theistic evolutionists, evolution is a foundational belief. For them, evolution is absolutely true, and nothing can stand in its way. Therefore, in their eyes, *human* evolution is a foregone conclusion and the debate is over before it even starts—therefore, Adam and Eve could only exist as either fiction or allegory. This is why Dr. Venema begins by reciting the popular evolutionary arguments

such as the fish-to-amphibian story, the wolf-to-whale story, and the story of the spontaneous nylonase gene. These subjects seem to be off topic, but they prove evolution—and evolution supposedly disproves Adam and Eve. It is easy for him to articulate any of these arguments because he did not have to develop any of them, they are easily found on any atheistic website. It is quite clear from his writing that he generally did not actually critically examine the primary literature behind any of these stories, and so his book does not reflect solid scholarship. Indeed, Dr. Venema's portion of the book is primarily just a compilation of his own blog posts. Unlike Dr. Venema, for each one of these "evidences", my colleagues and I have spent months (in some case years) researching the primary literature on each topic. On this basis, we can confidently assert the following: a) Tiktaalik is not a credible transitional form between fish and amphibian.[21] b) There is no credible transitional fossil series from wolf-to-whale[22]. c) The out-dated story of a spontaneous nylonase gene has now been thoroughly debunked.[23] All these more recent "icons of evolution" are failing—even as earlier icons have failed, and even as evolution in general, is increasingly failing. In this light, the logic statement "since evolution, therefore no Adam", also fails.

The Ape-to-Man Fossils Are Now Singing a New Tune – Dr. Venema quips that there is ever-growing fossil evidence that supports the ape-to-man evolution. Ironically, just the opposite is happening. This again reflects poor scholarship. Dr. Venema seems to be completely unaware that the field of paleoanthropology is now openly admitting it is in disarray. My colleague and I have spent years digging deeply into the literature on hominin fossils, and we recently published the book *Contested Bones*.[24] We show that the experts in the field are fiercely contesting every bone (hence our title), and they can agree on very little. The fossil evidence shows that there are only two primary types of hominin bones. The genus *Australopithecus* is Latin for 'southern ape', and these bones are very distinctly apish. The genus *Homo* is Latin for 'man', and these bones are very distinctly human. Recent claims of bridge species between the two genera (either *Au. sediba* or *H. naledi),* are collapsing.

The crisis is accelerating, and all the new developments are bad for human evolution. The conventional dating of the earliest bones of *Homo sapiens* has been revised to be over 300,000 years.[25] At the same time, *Homo naledi* has been re-dated using conventional methods to be only about 300,000 years old, not 2-3 million years old.[26] So *H. naledi* appears to have co-existed with *Homo sapiens* and so is *not* our ancestor. In addition, a human archeological site in California has been conventionally dated to 130,000 years—apparently overturning the Out of Africa Theory.[27] Most recently a new paper suggests that fossil footprints, which are essentially identical to human footprints, have been found on the Island of Crete. These footprints have been claimed to be 5.7 million years old.[28] This seems to indicate that creatures with human feet lived 2.3 million years earlier than the reputed ancestor "Lucy". These footprints seem to be much older than any of the candidate pre-human fossils. This suggests that either: a) man walked upon the earth at least as early as any reputed "pre-human"; b) the standard hominin dating methods are extremely unreliable; or c) both are true.

Fatal Flaws of Evolutionary Theory – There is a growing litany of profound theoretical problems that are devastating for the Darwinian mechanism. These include classic

problems like *Haldane's Dilemma*, *Muller's Ratchet*, and *Kondrashov's Paradox*. More recent problems are described in *Genetic Entropy*,[29] and "*Haldane's Ratchet*".[30] Still more recently, there is a profound *Waiting Time Problem*,[31] which specifically applies to human evolution. It turns out that in a pre-human population it takes an inordinately long time to establish, at a given chromosome site, even the shortest string of specific mutations (as would be required for creating a minimal amount of useful information). Advanced numerical simulations show that in a pre-human population of 10,000, the fixation of *just two* specific and adjacent mutations requires a waiting time of at least 84 million years. Waiting times increase exponentially as more mutations are required for reaching the required *functional threshold*. To establish a functional string of just 8 nucleotides requires over 18 billion years. Yet ape-to-man evolution requires a vast number of very specific sets of mutations of this type. All this has to happen in less than six million years.

Most recently (and most profoundly), the famous *Fisher's Fundamental Theorem of Natural Selection* (see Journal of Mathematical Biology, June 2018, Volume 76, Issue 7, pp 1589-1622) has now been falsified. Lastly, a submitted manuscript clearly falsifies the famous claim that the Nylonase B enzyme arose *de novo* due to a frameshift mutation (posted at http://chemrxiv.org/s/6ab479b666ea1d6ad9e0).

Genetic Arguments Against Adam and Eve – The book *Adam and the Genome* has the sub-title "Reading Scripture after Genetic Science". The sub-title is revealing in that it presumes that evolutionary science leads, and so Scripture must follow. This sub-title suggests that each evolutionary claim requires that Christians rework Scripture. This reflects an inordinately high view of evolutionary theory and an inordinately low view of the Bible. It is increasingly clear that we can maintain a high view of both science and the Bible. Contrary to what Dr. Venema's sub-title implies, there is actually much more genetic evidence that supports the thesis of Adam, Eve, and a literal Fall, than refutes it.

It is important to note that the primary arguments for *defending* a literal Adam and Eve (as given above) are all *genetic* evidences. When we let Scripture lead, we can very easily see how the genetic evidence supports Scripture. Dr. Venema, a Christian, seems to be blind to this, and consequently he seems to have committed his career trying to defend strict Darwinism—while trying to discredit a miraculous creation, a literal Adam and Eve, and the Fall. Some of his key genetic arguments are as follows:

a) He raises the old argument that since apes and man have many biological and genetic similarities, therefore this proves evolution. This is clearly false because similarities can arise either by common ancestry or by *common design*. Furthermore, the ape/human similarities have been greatly exaggerated—especially the genetic similarities.[32]
b) His counter-argument to common design is the old argument that "shared genetic mistakes" prove common ancestry. The shared mistakes argument is false because it is based on the incorrect assumption that any shared DNA sequences that do not encode protein (i.e. most of the genome), are necessarily "junk DNA" and so cannot be attributed to common design. The NIH research program named "ENCODE" is an international consortium of scientists, and this extremely reputable body of scientists has clearly shown that most of the genome is NOT junk but has many

functions apart from protein synthesis.[33] Every day, new NIH discoveries are buttressing this fact. Dr. Venema fails to even mention this, even though this new information is pivotal to his argument. This again reflects poor scholarship. He does not even mention the most famous proof of a shared mistake, which was the B-globin pseudogene. That famous example of a "shared mistake" was totally overturned several years ago, with high profile papers showing that the B-globin pseudogene is not only highly functional, but it is also in fact essential.[34] So the same gene that was the very best proof of a "shared mistake" (thus proving common ancestry), turns out to be a perfect illustration of similarity by design. Regardless of whether Dr. Venema was simply not aware of this, or chose not to mention it, it again reflects poor scholarship. Dr. Venema also cites shared Alu-elements as part of his proof. Perhaps Dr. Venema is not aware of the great deal of scientific literature that shows that many Alu elements are functional. Numerous high profile papers now show that Alu-elements typically have (multiple) functions, and so they are not all junk DNA, and cannot be assumed to be "shared mistakes".[35] Failure to even mention all this current literature again reflects poor scholarship.

c) Dr. Venema uses the old argument that there is irrefutable proof that long ago two chimpanzee chromosomes fused to generate human chromosome 2. Dr. Venema does not seem to be aware of recent work that strongly refutes that very old claim. Regardless of whether he deliberately decided not to cite this information, or was simply not aware of it, again this reflects poor scholarship. Dr. Jeff Tomkins has spent his career as the director of a university genomic sequencing center and has published many research papers relating to genomics. He has recently published a very compelling paper,[36] which shows that the reputed chromosome 2 "fusion site" is not a telomeric fusion site at all, but is a functional transcription factor binding site, and is embedded in a very active pseudogene. This appears to completely invalidate the chr2 fusion hypothesis. In the same paper, Dr. Tomkins shows that the reputed "pseudo-centromere" sequence (said to support the fusion hypothesis), is too small, too divergent, and is (like the reputed fusion site), actually internal to a functional gene. At best, the chr2 fusion hypothesis is now highly questionable.

d) The genetic arguments that Dr. Venema cites in his book are easily available from anti-Christian, anti-ID, and anti-creation blog sites. It appears that Dr. Venema's primary contribution to the Adam and Eve debate is the argument that Adam and Eve could not have given rise to the large amount of genetic diversity, as is now seen within the modern human population. My colleagues and I have been doing research on this topic for several years, and have shown that Venema is wrong—two people can in fact give rise to the human population that we now see.[37] On a superficial level, the answer is very simple—Adam and Eve could easily have been heterozygous at any number of nucleotide sites. So Adam and Eve could account for any number of single nucleotide variants (polymorphisms). On a more advanced level, one can examine human diversity in more detail—for example, one can examine the actual allele frequency distributions and observed linkage patterns. Even at this higher level, we can readily account for human diversity, given a created Adam and Eve, and assuming that their countless reproductive cells were simultaneously created, with the reproductive gametogonia carrying their own specified alleles and linkages. Lastly, our numerical simulations show that even

> without invoking created gametes, various parameter settings can generate the same type of allele frequency distribution as is seen in the modern human population today.

We conclude that there are numerous strong genetic arguments for a literal Adam and Eve, and the evolutionary counter-claims are typically outdated and often reflect sloppy thinking or poor scholarship. Yet in the end, it seems people are free to either use genetics for, or against, God's Word.

The Big Picture

By our faith, we are saved. Yet we are surrounded by so many deceptions, seductions, and so much ridicule. The pressure to retreat or compromise our faith is intense. Like those who went before us, we Christians live in a spiritual war zone. It appears that God sees our great need, and so in his loving mercy, he is giving Christians various evidences to bolster our faith. We have no basis for expecting God to prove Himself or to give us evidences, but when He does, we can be deeply grateful for His provision. Accordingly, we can commit to Love Him more deeply, and we can follow Him more faithfully. Like Abraham, we can choose to believe God.

Why do so many people ignore (even despise), these many graciously-given evidences? Perhaps 2Thes 2:9-12 (NKJV) gives us a clue,

> The coming of the lawless one will be in accordance with how Satan works. He will use all sorts of displays of power through signs and wonders that serve the lie, and all the ways that wickedness deceives those who are perishing. They perish because they refused to love the truth and so be saved. For this reason God sends them a powerful delusion so that they will believe the lie and so that all will be condemned who have not believed the truth but have delighted in wickedness.

A common theme of Scripture is that all souls must be tested. I had a conversation with a theistic evolutionist I greatly respect, and we agreed on two things: 1) evolution is powerful; and 2) the reason it is powerful must be either because a) it is true, or b) it is a powerful delusion. This is a very sobering thought in light of the biblical verses above. I humbly suggest that not only did God intelligently design us, and design the world around us, He also intelligently created *Designed Ambiguity*. God allows deceptions and ambiguity. I suggest that this may be one way that God tests our souls. Here is an ambiguous message: *godisnowhere*. How do you choose to read it—three words or four?

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