

**Review: Don Batten, David Catchpoole, Jonathan Sarfati, Carl Wieland, -
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edition)**

Pages: 263

Worthy Title and Guide on Our Origins

A concise survey of Biblical creation-related 'problems' spanning twenty chapters, averaging ~13 pages each. Length varies according to the subject matter but overall would be fair for a diligent reader.

Topics are semi-technical with some apologetics and all contain grains of knowledge if studied carefully. With a medium to high effort a Christian can attain a good level of understanding in order to defend the faith, deep enough across the vast number of topics sceptics like to bring up. Body text is well footnoted for those after more detail.

The book could also be read for general scientific knowledge-areas like radiometric dating, geology and biology. Atheists/agnostics with a willingness to learn will find a strong scientific and logical basis for the Biblical world-view with many of their queries addressed.

Technical sections are not surprisingly done well using logic, argumentation, and citations (many from hostile secular literature). The reader is free to delve deeper into each topic, advisable on subjects that may be new like Catastrophic Plate Tectonics.

Memorable chapters include:

-Post-Flood Ice Age: The creation model beginning with high levels of precipitation from warm oceans fits with many observable facts.

-Distant starlight in a young universe: A stumbling block that needn't be. Russell Humphrey's model, then John Hartnett's are discussed. The former (now superseded) used the fact time itself is variable and the latter does away with Big Bang dark matter and energy fudge-factors by leveraging Moshe Carmeli's new cosmology.

-Dinosaurs: Perhaps the strongest evidence falsifying the evolutionary model's 65 Ma extinction story. Cultural and scientific evidence agree these animals were 'young' and therefore must have been witnessed by humans.

Apologetics, while generally sound require caution, especially with Biblical references. E.g. in Ps. 104.6-8 on p. 168, footnote 27 the rendering of the AV is thought inferior yet the significance of the preposition 'by' [the mountains, and valleys] is not perceived. A clear give away is the usage of corrupt Roman Catholic versions (e.g. NIV and ESV). Strangely enough the back of the Title Page states quotations are from [Jay P. Green's] Modern King James Version or the King James Version, yet from the beginning (pages 6 and 7) other versions are used. Any deference to the Authorized Version is pretentious.

Ultimately, the totality of evidence presented will evoke a sense of awe and fascination at all the physical processes and how they dovetail with the Bible.

I) Does God Exist? (pp. 7-26)

A proper way to begin the book and set down axioms of creationism, as opposed to other more flexible philosophies like Intelligent Design. It touches on a lot of topics.

Moral decay markers of God-rejecting nations are summarised: political corruption, lying, slander, public debauchery, violent crime, abortion, theft, adultery, drug-taking, gambling and greed. Atheists and groups of like-minded people are at the forefront of promoting many of these behaviours in society.

The ubiquitous social statistics graph is shown – since the 1950s a decline in Church attendance is mirrored by a rise in suicides (per 100 000) and property thefts (per 1 000).

Atheism as a religion of death is exposed by its fruits: Lenin, Mao Zedong, Hitler, Stalin and Pol Pot (this is nearly an invincible argument). According to atheist Sir Arthur Keith, Hitler was simply making Germany conform to the theory of evolution, the “preservation of favoured races in

the struggle for life”.¹

The supernatural origin of the Bible is proven from the following:

*Unity of 40 authors across 1 500 years in 66 books. Beginning and end dovetail perfectly - paradise lost in Genesis 1-3 is regained in Revelation 21-22.

*Preservation despite persecutions and targeted campaigns of destruction (both Bible believers and their Bibles).

*Historical accuracy with references to archaeologists Nelson Gluek, William F. Albright and Sir William Ramsay. Ramsay famously stated Luke was a “historian of the first rank”.

*Scientific facts: Ocean currents (“paths of the sea”), washing using running water, round earth, an uncountable number of stars, suspension of earth in space, first and second law of thermodynamics, etc.

*Prophetic accuracy: Isaiah 48.3,5 is the clear statement of God on prophecy. Jesus' virgin birth, location, sale price, crucifixion, burial and resurrection are among 61 prophecies of Messiah alone.

*Civilising influence: Western nations are the most desirous on earth to live in because of Biblical foundations and are where science flourished. The greatest works of literature (e.g. Shakespeare), art (e.g. Michaelangelo and Leonardo Da Vinci) and music (e.g. Bach) were a product of these environments.

*Raw honesty: Moses and David were murderers, Peter denied Jesus three times, etc. To confound the skeptic, enemies of the Lord (e.g. Artaxerxes, Darius the Mede, Julius Caesar, etc.) are praised.

*Life-transforming power. The gospel changes people's lives unlike any other philosophy or religion.

A summary of some of the later chapters is given under what can be called *general* (i.e. natural) revelation:

¹Subtitle to Darwin's *On the Origin of Species*.

*Incredible claim of molecules turning into man – huge amounts of *information* created simply by mutations. Increasing scientific findings about the cells inner workings along with many irreducibly complex biological systems thwart evolution.

*Lack of candidate transitional fossils.

*Global indigenous accounts of a massive flood.

The classic dichotomy between *forensic* and *operational* science is explained, a key concept for the reader to grasp before being confronted with subsequent chapters. In Hegelian fashion, the common public are easily confused as these are conflated. Importantly, *all* scientists should be assumed to have bias which has a large impact on forensic science 'findings'.

The introduction then answers the old (illogical) canard, who created God?

*Beginning with the premise everything designed must have a cause and accepting God may be this cause, the question is then often turned to who designed/created God, and why couldn't the universe be the cause?

The first cause argument is layed out:

Premise: Everything which has a beginning must have a cause.

Statement: The universe has a beginning.

Conclusion: The universe had a cause.

God, being the creator of time, along with matter and energy, exists outside of it and so has no beginning.

The universe is then shown to have had a beginning by the two fundamental scientific laws of thermodynamics:

I) The total sum of mass and energy in the universe is constant (consequently neither can be created or destroyed).

II) The amount of energy available for work is decreasing (i.e. *entropy* is increasing to a maximum).

A qualitative but useful exponential-type decay of available energy in the universe to time is shown.

By deduction, during the short period of observation it is assumed things are 'wearing out', and continuing will ultimately lead to 'heat-death' or infinite entropy. This last conclusion is key – an ageless universe would have already achieved heat-death.

One counter idea is the oscillating universe theory – but each larger expansion would use *more* energy than the previous one, contravening the second law. Infinite and increasing oscillations imply smaller, decreasing past oscillations to a *beginning* oscillation yet this was the problem to be solved. Finally, there is no mechanism for a 'big crunch' after the oscillation reaches a maximum, nor one to kick start a new expansion.

A base attempt to refute the first cause argument is to accept a finite universe yet not require a cause. Quantum mechanics is often referenced as producing something from nothing, but this is matter and anti-matter potential, not nothing. Logically, without this principle all known science (forensic and operational) would break down.

Five appendices buttress some of the material presented – perhaps this is to cover the readership who may never get past the first chapter:

(i) Natural law: It is obvious things tend from order to chaos (in open systems as well, i.e. where matter and energy can interact with their surroundings). The Big Bang and evolution assume the opposite.

(ii) Living things: Changes in creatures are downhill and popular examples of antibiotic and DDT-resistance are *losses* of information. These examples cannot account for the *creation* of information.

(iii) Fossils: Hostile witnesses are called regarding the total lack of transitional fossils (there should be *millions*). Even with the popular bird *Archaeopteryx* there is no evidence of the transition of scale-to-feather or leg-to-wing as would be expected from a transitional organism.

(iv) Age of things: The low saltiness of seas, C-14 dating of diamonds and coal, surprising strength of the earth's magnetic field, polystrate fossils (e.g. trees), non-sequential geologic strata (impossible under pure

uniformitarianism), lack of helium in the atmosphere [for 4.6 Ga worth of ^{238}U decay – each isotope ultimately produces eight He atoms], low number of supernova remnants and magnetic fields on 'cold' planets, rapid sedimentation and observation of recent catastrophism (e.g. Mt. St. Helens 1980 eruption). These are good to memorise to have a place to begin when discussing 'science'.

(v) Cultural and anthropological evidences: DNA analysis (e.g. mitochondrial eve) and language similarity better fit a Biblical model including the recent separation and dispersion at Babel.

(vi) Complexity and design: Information-containing biological systems such as photosynthesis, blood-clotting mechanism, development of a butterfly (from caterpillar and pupa stages) and the bacterial flagellum confound evolution. Werner Gitt's conditions for reproduction are interesting – information must be impressed on a material substrate by a pre-programmed source, itself having the same (or more) content. There is no known physico-chemical method that can do this.

II) Six days? Really? (pp. 27-52)

This is the crux of the matter for non-believers and believers alike, and out of the latter arise many compromises such as the Gap Theory. A solid chapter with some of the material occurring again in later chapters.

A non-literalist view undermines many key doctrines:

*God's goodness

Death, pain and suffering before the 'very good' creation is finished.

*The Gospel

A *mythical* pre-Abrahamic lineage implies an unreality of sin and pairs a (real) last Adam (Jesus) with a (mythical) first Adam. Death as an enemy is nonsensical if it is part of nature.

*Eschatology

The promise is of a *restored* creation, but to millions of years of death and

suffering? To accomplish this the existing (good?) world is to be rightly destroyed.

*Hermeneutics

Leaving the literal sense without Biblical reasons opens up doubt for other doctrines, e.g. the crucifixion, death and resurrection as merely spiritual truths. Confidence in the rest of the Bible is destroyed.

*Cultural origins

The wearing of clothes and marriage.

The rhetorical is posited - why not believe in 6 days? The answer lies in placing confidence in 'hermeneutical considerations' raised by science! Man's fallen nature means God's word is a prerequisite for scientific investigation. The 'nature/science as the 67th book idea' has no foundation given interpretation of the natural world is carried out by *fallen* man.

An historical survey is made to find the Church's view on Genesis, given contemporary revisionist tendencies. Long ages is found to be rooted in philosophies of Anaximander, Epimenides and Lucretius.

Traditionally, the Church has believed in a literal creation of six 24-hour periods as witnessed by Reformation figures Jean Calvin and Martin Luther. Pre-reformation, Basil the Great's (329-379 AD) *Hexaemeron* took a plain meaning as does the Eastern Orthodox tradition. Alexandrians Augustine and Origen believed in an *instantaneous* creation, not long ages as misrepresented by some (in neo-Platonic fashion, God would not sully himself by condescending to work within natural time!). They also believed in the flood.

A work *The Creationists* by Ronald Numbers is often quoted to prove literalism in Genesis is a modern innovation. Ronald believes history stops with SDA George Macready Price in 1920! Terry Mortenson's Ph. D. thesis work on early 19th century geologists refutes long-ages and no flood.

Next the grammatical structure of Genesis is examined:

*The *vav consecutive* (i.e. And...), and verb tenses (first one is perfect,

qatal, followed by imperfect, *vayyiqtol*s). A strong structural parallel exists in Numbers 7, where each day (*yom*) is numbered and the numbered days are in turn *sequenced*. This sequence is denoted by usage of “in the day that” (v10) and “in the day when” (v84), similar to Genesis 2.4².

*Employing *argumentum ad auctoritatem* to a degree, James Barr (a hostile witness) has himself and all reputable Hebrew scholars believing the author intended literal days, real genealogies, and a global flood. Other scholars-Dr. Robert McCabe, Dr. Andrew Steinmann and Dr. Tim Wang also believe this. Dr. Stephen Boyd's statistical analysis of Hebrew verb types is interesting, concluding Genesis does not fit with poetic books.

Outside Genesis 1, the Hebrew usage of *yom* is used:

*410 times and always means a day.

*Together with 'evening' and 'morning' 38 times.

*With either 'evening' or 'morning' 23 times.

*With 'night' and 'day' 52 times.

This is overwhelming evidence of the plain meaning of day in Genesis 1.

The creation week reference in Exodus 20.11 is an authoritative witness.

Other arguments against six days include:

*Thousand years as a day (II Peter 3.8). This backfires as it only makes sense/holds meaning if a day is 24-hours (the noun is preceded by the numeral 'one' twice). A similar usage is found in Psalm 90.4 where the thousand years is as yesterday or a watch in the night (3-4 hours).

*Contradictory Genesis accounts of chapters 1 and 2.

As chapter two does not tell of light, seas, planetary bodies it cannot be the same account. Rather it focuses on man and the special garden prepared

²Genesis has *b^eyom* while Numbers has *bayom*.

for them to inhabit. Apparent contradictions in Genesis 2.5 and 2.9 are resolved when it is realised these are plants and herbs *of the field*, not the wild vegetation of Genesis 1.12. Similarly, the trees in 2.9 pertain to the garden only.

Another anachronism cited is the creation of beasts *after* man in verse 19. The Hebrew verb tense of *form* (asah) is pluperfect³.

*Impossibility of naming all the animals on day 3. Adam only had to name all *kinds*, not species, and then only *nephesh* or breathing land and air animals. In his unfallen state Adam would have been more than able to carry out the task.

*Existence of days before the creation of the sun on day 4. Only a rotating sphere with a light source is required. There is also no evidence of a variance in earth's rotational speed *after* the creation of the greater light meaning days 5 to 7 were of the same length as 1 to 4.

*Unfinished 7th day escape clause. Being numbered as the others is evidence of a normal day, and this is reinforced again by Exodus 20.11. Hebrew's 4 is used in support of this idea-God entering into his permanent rest means the day never ended. By parallelism with Genesis 1 all the other days could have been long periods as well. It is rightfully pointed out the rest is spiritual, and for Christians only, not the creation as a whole else heathen would also have entered into it.

*Framework hypothesis. This polemic originated with Arie Noordtjiz in 1924 and is the most popular in seminaries. Modern advocates are Meredith Kline and Henri Blocher.

Another innovation is a suggestion of two 'triads' of days in each chapter. Days 1 to 3 are the kingdoms, ruled by the rulers of days 4 to 6: Light and dark ruled by planetary bodies; firmament and waters ruled by fish and birds; plants ruled by man and animals. There are major overlaps and contradictions with these comparisons:

³Meaning perfect *with respect to a past event*. Detractors of 'some English translations' point out a valid translation *had* formed removes any conflict. The AV actually has a semi-colon before the Lord brings them to Adam, implying a separation within the clause.

This is a novel attempt which has some appeal as an interpretation but in the end fails under close scrutiny.

-There was no firmament on day one which is what the heavenly bodies require to exist in.

-Seas proper were not made until day 3, not in day 2 for the fish to rule. No creature is able to 'rule' the waters above the firmament and finally no land existed for the flying creatures to multiply on.

-Nothing on day 6 reproduces or lives in the sea.

A final attempt is taken from Genesis 2.5 where an appeal to naturalism is made as the mechanism through which God worked. This philosophy rules out miracles (*additions* to natural processes) and runs into the difficulty of no evaporation or precipitation for millions of years on the earth (until verse 6).

*“God's days aren't our days”. This is an oxymoron as God is timeless, days are a humanistic concept for man.

*Days of revelation (or revealing).

Finally, a number of other long-age interpretations are raised:

*Incompatible order of events in a Creation account:

-Life from the ocean Vs life from earth.

-Earth a ball of water Vs a molten blob.

-Fish and birds created at the same time Vs birds ultimately evolving from fish.

-Earth exists before sun and stars Vs earth exists after sun and stars.

-Oceans and then dry land Vs dry land then oceans [from water deposited by meteorites!]

-Plants before the sun Vs plants after the sun.

-Man and dinosaurs lived together Vs dinosaurs long extinct before man.

-Land animals after fish Vs whales after land animals.

*Plant requiring insect pollinators (not in existence for 100Ma's!). E.g. moth for the *yucca* plant.

*Adam's stated age of 930 years. Under an unfinished creation week or day-age theory this makes no sense.

III) What About Gap Theories? (pp. 53-65)

These arose in the 19th century in an attempt by 'Christians' to accommodate uniformitarian philosophy - *sola scriptura* was replaced by *scriptura sub scientia*. 'Liberal' Christians, defined as those who see the Bible as merely human writings obviously had no problems with this idea. One such theologian, Marcus Dods (1834-1909) wrote:

“If, for example, the word “day” in these chapters does not mean a period of twenty-four hours, the interpretation of scripture is hopeless.”

The above ideas are assumed the *cause* of such innovations as the Gap Theory, wherein the Hegelian Dialectic is now obvious as a literal six-day [re]creation is bolted on after the gap. The theory postulates billions of years of 'deep time' in Genesis 1. The classical gap is between verses 1 and 2 during which a global flood ('Lucifer's Flood') occurred, supposedly destroying a race of soulless men along with all other unique creatures. The destruction was due to Satan's evil rulership as a fallen angel. Neither the men, fauna and flora alive then are genetically related to today's.

An alternative 'soft' gap, advocated by Gary Gray, which places time between verses 2 and 3 without any 'ruin and reconstruction' (thus solving the problem of death and suffering before sin).

It is noted Gap theorists can't agree on where the gap is!

Other theories involving deep time are the 'Day-Age' theory (e.g. sometimes 1000 years per day - cf. II Peter 3.8) or the 'Framework Hypothesis' (e.g. two 'triads' of 'days' – 1 to 3 as 'Days of Kingdom' matching 4 to 6 of 'Days of Rulers').

Within 'Christian' circles, the Gap theory was first popularised in 1804 by Thomas Chalmers (1780-1847), founder of the Free Church of Scotland. Millions of years were now supposedly consistent with scripture. C. I. Scofield included a note in his 1909 reference bible stating fossil relegation to the 'primitive creation' removed any scientific conflict with the Genesis cosmogony. Arthur Custance wrote *Without Form and Void* to

promote the Gap Theory. Its rebuttal is *Unformed and Unfilled* by Weston Fields.

The classical Gap theory is critiqued from four main angles:

i) It cannot be reconciled with secular Geology, and is (correctly) seen through as an attempt to curry favour with the world.

ii) Death is placed before Adam's sin contrary to a very good creation.

iii) Contradiction of the Sabbath reference in Exodus 20.8-11 which states (using a literary device called a *merism*⁴) that all was created in six ordinary day (there is no word for universe in Hebrew).

iv) Hebrew grammar. The Gap theory rests on a different translation of the word 'was' (Hb. *hayah*) in verse 2 (to 'became' instead) and this is systematically dealt with by analysing the *waw* or *vav* Hebrew consecutive. *Vav* can mean 'and', 'but', 'now' or 'then' and when followed by a non-verb (e.g, 'the earth') is called a *vav disjunctive*, or *vav explicativum*. The phrase is a principal subject-verb clause to be followed by more detailed or explanatory parenthetical clauses. It cannot indicate something following in a time sequence – this is *vav* then a verb (a *vav consecutive*) which is how each day of creation begins⁵ and proof of historical narrative.

It is impossible for *hayah* to be translated 'became' without being attached to the preposition 'to' (Hb. *le*), and this is *not* in the Hebrew text. *Vav*+ [noun]+*hayah* (with *hayah* in the 'qal' form, or 3rd person case and perfect tense) is never translated 'became'.

The Hebrew *tohu va bohu* ('without form and void') is taken to mean the result of a judgment of God as inferred from its later identical use in Jeremiah 4.23. Thought up by Arthur Custance, this is an (anachronistic) exegetical fallacy where a later interpretation is retro-fitted to earlier

⁴The pairing of two opposite words to create a totally encompassing concept, e.g. night and day.

⁵In Genesis chp. 1 after *vav*, God: six literal days, allowing billions of years beforehand for the heavenly bodies.

scriptures. *Tohu* is morally neutral and can mean an initial state like a blank canvas. The state of the land in Jeremiah after the prophesied Babylonian invasion is an allusion back to the creation in its unformed and unfilled state.

Other words such as *bara* (create) and *asah* (make) are abused in support. *Bara* is meant to refer only to *ex-nihilo* creation, and *asah* to pre-existing matter. This is an exegetical fallacy - another word *yatsar* (formed) exists and Isaiah 43.7 evinces interchangeable usage of all three.

Finally, Hb. *male* ('fill' or 'refill'/'replenish') in the AV's Genesis 1.28 is used to support the repopulation of a destroyed earth, however the meaning is simply to fill, or fill by strength echoing the dominion mandate (cf. 'fill' in v22 with 'replenish' in v28).

The 'soft' gap is rebutted in three areas:

(i) Conflict of the *appearance* of the heavenly bodies from underneath an atmospheric cover versus their creation *ex-nihilo*. The word *asah* is twisted to mean uncover. Genesis 1.9 uses a different word *ra'ah* in the sense of uncover.

(ii) The universality of creation in Exodus 20.11. The merism 'heaven and earth' is deemed broken with the mention of 'the sea', so the verse says the Lord 'worked on' the *atmosphere* and the earth in

(iii) Uniformitarianism and radiometric dating. Both 'prove' the old age of rocks (and their fossils), meaning death before Adam - precisely what the theory claimed to have solved. Noah's Flood also cannot be the cause of earth's current topography so the idea runs into even more problems.

In summary, it is claimed the gap theory anesthetized the Church for over one hundred years.

*'said' in vv3,6,9,11,14,20,24,26,29.

*'saw' in vv4,31.

*'called' in vv5,8,10.

*'made' in vv7,16,25.

*'set' in v17.

*'blessed' in vv22,28.

IV) What About Carbon Dating? (pp. 67-86)

A good introduction is given to the process of carbon dating and clarification is made on its false association with radiometric dating - a separate 'long-age' method involving the measurement of daughter radioisotope quantities. This is rightfully a longer section given its importance to evolution and technical nature.

The origin of ^{14}C from proton-to-neutron transfer in ^{14}N due to neutrino bombardment from admitted cosmic rays, assimilation into the biological cycle of all plants and animals via $^{14}\text{CO}_2$, radioactive decay back into ^{14}N via neutron-to-proton transfer (emitting beta particles) in the atmosphere and living things, and the radiocarbon 'clock' in dead organisms are all described.

The fact carboniferous material *can* be dated is given as powerful evidence for a young earth - this is something Bible-defenders should be aware of. Finer detail is also given:

*Lower uptake rate of ^{14}C versus ^{12}C into plants (the initial ratio will therefore be smaller giving an older age bias)².

*Changing historical ratio of $^{14}\text{C}:^{12}\text{C}$ e.g. due to massive carbon release from the Industrial Revolution of the 19th century.

*Atomic bomb testing in the 1950s and associated radiation output increasing the production of ^{14}C from ^{14}N (resulting in a younger age bias as more ^{14}C would be in bio-matter at that time).

*Partial ratio calibration methods using organic matter like seeds from *known historical time lines* (i.e. the historical record!), and dendrochronology which combines radiocarbon dating and tree-rings in a circular manner are tried.

*Increasing cosmic radiation entry into the atmosphere due to the weakening magnetic shield. As ^{14}C production is increasing, the atmospheric ratio of $^{14}\text{C}:^{12}\text{C}$ is higher than the past (when the living matter died and the 'clock' started) so dates would be biased upwards.

*The Genesis flood buried huge amounts of carboniferous matter, so the antediluvian world had a $^{14}\text{C}:^{12}\text{C}$ ratio much lower³ for a time, gradually recovering as life repopulated the earth. The ratio was also exacerbated afterward due to the continuing ^{14}N decay but with no plants/animals alive to capture it.

*Volcanoes emits huge amounts of the ^{12}C isotope and this activity during the flood ('breaking up the fountains of the deep') would give dead organisms small starting ratios, meaning today's higher ratio would make them seem much older.

Overall, a paper from *Creation Research Society Quarterly* estimated an adjustment of approximately 35-40k years to existing dates to account for all the above. There is a simple but useful graph on page 72 to visualise the ratio and important global events across time.

The scope of radiometric dating is explained – igneous rocks which after solidification are supposedly 'closed systems'. It is also reinforced concentration measurements, while extremely precise, are *not* dates. The helpful hourglass analogy is given to explain underlying assumptions: closed system (e.g. no parent or daughter isotopes can be added or leached out); constant decay rate of parent to daughter isotope, and initial amounts of parent *and* daughter isotopes are known. Meditation on these assumptions is crucial to be able to identify and classify potential problems with the method.

Inconsistent dating results are looked at for the important 'transitional fossils' of *Australopithecus ramidus* and *KNM-ER 1470*. The former was originally dated ~123 Ma from basalt rocks, far too old given the evolutionary model. The dates were reduced by cherry-picking other samples, eventually settling to a more acceptable 4.4 Ma. Similarly, KNMR was originally dated 212-230 Ma (again too old for an ape ancestor) so after more samples it came down to 1.9 Ma.

The shaky foundation and bias of radioisotope dating is evident from the beginning of the process, given they request an estimated age *before* carrying out any dating!

Collisions with reality are given, the technique has been proven *not* to work with *known* ages, so the auxiliary hypothesis it will work with

unknown ages and not known ages is farcical. At Mt Ngauruhoe, NZ on three occasions (1949, 1954 and 1975) igneous rocks from volcanic eruptions were dated *millions* of years old.

Geologist Dr. Andrew Snelling reported radiocarbon-dated charred wood in a 'tertiary' basalt deposit was 45 Ka, however the basalt was dated at 45 Ma! Then there is the mystery of carbon-datable graphite (which came from an inorganic source) even though it can't be contaminated with ^{14}C .

Dr. Steve Austin tested the Rb/Sr method by dating rock from lava flow deposited at the base of the Grand Canyon with the base itself and inexplicably found the former was 270 Ma *older!*

The capstone of radioisotope dating, the isochron method is explained. Ratios of parent-to-third party-stable, and daughter-to-third party-stable isotopes are plotted on a graph, then fitted with a line. If the fit is good the isochron is considered sound, otherwise it is explained away – a convenient isochron nomenclature has been invented for this reason. Also, the 'concordia' method is explained – there exists two Pb decay chains and when both give a similar date the result is considered 'concordant'⁶.

Perhaps due to complexity, the isochron method is explained as flawed by the citing of a (hostile) witness on the isochron terms and admittance of unreliability, and internal inconsistency – how can one part of the ratio (not line as stated?) be age-independent, and the other due to age?

V) How can we see distant stars in a young universe? (pp. 87-98)

This is a more difficult chapter for the reader as any deep dives into the science would likely lose them quickly. Nevertheless the qualitative descriptions and concepts will be powerful enough to counter most sceptics.

To start with the popular 'Big Bang' hypothesis is explained as having the

⁶Even though this commits the logical fallacy of *affirming the consequent*.
Major premise: The date is good if both Pb methods are concordant
Minor premise: Both Pb methods are concordant
Conclusion: The date must be good. **False as the date may be good for an entirely different reason!**

same problem as the Creation model, both being as 'bad as each other' in a sense. This is a clever tactic to neutralise the evolutionist before moving into an area where the evidence for creation is defensible but not yet quite overwhelming.

Time is calculated according to the simple equation $\text{Time} = \text{Distance}/\text{Speed}$ and large distances certainly imply long time durations. If a star is one billion light years away for example and the speed of light is constant, the elapsed time *must be* one billion years, clearly longer than the Biblical time frame of approximately 6 000 years.

In the Big Bang model a 'fireball' from the hypothetical singularity must have had heterogeneous temperatures⁷. Given the size of the universe (greater than 13.8 Ga could account for), there must have been a *faster* than light ('FTL') expansion ('inflation') factor that occurred to the space. This naturalistic miracle can then even out the temperature to today's constant observable heat radiation⁸. Light itself could have been faster in the past in order to radiate the heat away. Creationists were/are mocked for these sorts of hypotheses!

An earlier Creationist theory is the 'cdk', or 'light decay', popularised by Barry Setterfield and Trevor Norman in 1990. This would also explain faster radioactive isotope decay rates and the 'long-ages' inferred from these dating methods. Einstein's Theory of Special Relativity is explained to demonstrate a changing speed of light *is* possible – it says c is identical from the position of the source and observer *independent* of their speeds. So whether c is increasing, decreasing or stable Special Relativity would still hold. A Nobel prize-winning experiment in the Milky Way galaxy on light from co-orbiting neutron stars (one was a pulsar) falsified cdk though. The loss of energy was in agreement with Einstein's Theory of *General* Relativity, implying the value of c has remained constant since the light left the stars *which are thousands of light years away*.

The older Creationist theory from the 1970s was 'creation-in-transit', as antagonised by evolutionist questioners in the great Plimer Vs Gish debate⁹. Originally this hypothesis has God creating photons for Adam and

⁷This is mentioned as critical for the formation of galaxies.

⁸Called the Cosmic Microwave Background (CMB) radiation, it is uniform to one part in one hundred thousand across the universe.

Eve to see as representations of past events. Observational evidence from today, e.g. supernovae, show light waves with predictable patterns, as well as accompanying neutrinos, X-rays and gamma rays. Upon further analysis the idea implies God not only created photons, but a more elaborate type of deception to give people evidence there was a supernova when it was merely made up! An analogy would be the popular straw man of evolutionists claim God created fossils in the ground of non-existent creatures and ones of great age to 'test' people's faith.

With the history of failed Creation theories dealt with, progression is made to Dr. Russell Humphrey's new cosmology. He makes a simple change to the *religious* dogma of the 'Big Bang', that the universe has no centre or edge¹⁰ and a very novel observation from the above time equation, that if speed and distance are constant *time itself must be variable*. It seems quite astonishing nobody had thought of this before!

It is mentioned old Creationist theories like cdk can be discarded in a healthy process of peer review Humphrey's theory uses a part of General Relativity which states time is not constant. It depends

upon gravity, clocks at a higher altitude (higher gravitational potential energy) tick slightly faster than at sea level for example. At 'lower' points matter must be much denser, meaning time ticks slower.¹¹

The other key assumptions are the universe has a centre and an edge, meaning beyond some point there isn't any matter. An analogy is a globe with a depression on top containing all the stars and galaxies. Such a universe then comes from a single point, itself the centre of all the gravitational energy of planetary bodies. The Big Bang theory states gravitational energy is cancelled out by every other body, then no centre is required.

⁹Duane Gish had no plausible theory to offer and was cajoled into admitting the evidence did seem to infer a very old universe.

¹⁰This is known as the 'cosmological principle' and it is blind faith not unlike evolutionary dogma in atheist circles.

¹¹The extreme example is a black hole, where light itself cannot escape and space-time becomes space-space and all physical processes are frozen. At the edge of such a phenomenon, called an 'event horizon', it is said time stands still and everything outside moves at an extraordinary rate.

A centre of gravity would mean the Creation could come from a 'white' hole, simply a black hole in reverse. There is good deductive observational evidence for earth being at a centre: evenly spaced or 'quantized' red-shift radiation measurements from distant stars in all directions (e.g. like shells); polarised light being emitted from galaxies; gravitational rotations having similar alignments.

The above may be one reason why at least 33 scientists from over 10 countries have an internet petition questioning the validity of the Big Bang model (this fact is worth memorising to rebut the No True Scientist and Argumentum Ad Populum fallacies).

Massive gravitational time dilation is predicted by Humphreys model which rests on Einstein's equations of General Relativity. During Creation week an event horizon would at some point have reached earth, at which point time outside would be passing at rates billions of time faster than on earth. This must have happened before day four had ended so the stars were all in place as God said they had been created (implying their possible visibility from earth). Again, due to Special Relativity, c would still measure the same on earth, 'below', or outside the event horizon.

Although promising, Humphreys theory does not provide the correct amount of time dilation and so is not a complete theory. The assumption of earth at the centre does have some experimental support with acceleration observations of the pioneer spacecraft towards the sun.

The latest innovation is Dr. John Hartnett's Cosmological Relativity theory, which takes Russell's assumptions, Einstein's theory of Special Relativity re: effect of motion on time, and work done by a physicist Dr. Moshe Carmeli. The result does away with dark energy and dark matter¹² fudge factors by limiting the number of dimensions to five: x, y, z, time and *space expansion velocity*. This last dimension accounts for the missing ('dark') mass of orbited bodies implied by Newton's equation $M=v^2r/G$ the larger r becomes. Time is 'sped' up outside of the centre (i.e. earth), not by net gravitational forces from a white hole event horizon (i.e. Humphreys

¹²In the Big Bang model, dark matter supposedly accounts for 25% of the universe and dark energy 70%. The real stuff that remains, i.e. what we can see, is called 'Baryonic' matter.

model), but the stretching of (energetic) space, just as God “stretcheth out the heavens” (Isaiah 40.22).

The conclusion is a stark reminder for Christians to hold fast to the truth in spite of 'undeniable' evidence which will ultimately fall away.

VI) How did bad things come about? (pp. 99-108)

A brief chapter focusing on explanations of the obvious violence in the animal kingdom, as well as Biblical life before the Fall.

The beginning position is a very good creation free of evil, all animal (land, air and sea) being vegetarian, and there was no death. Exceptions are non *nephesh chayyah* life, the distinction being drawn from Genesis 1.30, i.e. *breathing* creatures. From Leviticus 17.11 comes a characteristic of life – flesh which has blood in it. An absence of blood would rule out life in a Biblical sense – plants, bacteria/micro-organisms and possibly insects/invertebrates. From Genesis 2.19 comes another definitive criteria – those animals ('living creatures') named by Adam.

In raising this question the assumption of a previous good state is implicit, for under the evolutionary paradigm there *is* no good or evil.

From the Bible the following are true statements:

*Initially there was no carnivorous part of the food chain (lions were vegetarian and sharp teeth (e.g. on bats and pandas) were not for tearing meat, mosquitoes didn't suck blood, etc.)¹³.

*Meat-eating was only *authorised* after the flood (Genesis 9.3). From Genesis 6.12 though the likelihood is strong this behaviour happened pre-flood.

*The world will one day experience a restoration (Revelation 21.5) from bad to good.

¹³Some plants have hemoglobin, insects do have a form of blood and today only the female mosquito drinks blood (the male lives on sap).

Some educated guesswork is then involved explaining present observations of so-called 'defence attack structures', or 'DAS' in the plant and animal kingdoms – how and when did they arise?

These are creationist positions:

I) DAS did not exist before the Fall, were never designed and therefore arose by mutation. This suffers from a number of defects:

-Obvious design in animals: sharp teeth (e.g. *Carcharodon carcharias*); hypodermic snake fangs with venom-producing glands¹⁴, triceratops' horns, programmed predatory behaviour (e.g. crocodile death-roll, spider web making, big-cat stalking, etc.)

-Utilises the same (undirected) mechanisms of mutation plus natural selection of evolution in accounting for obvious design. This makes using the teleological position hypocritical.

In its favour the goodness of God is defended, but to what end? A [weak] question is raised of culpability by non-action, e.g. God being responsible for the resulting post-Fall carnage by simply refusing to help, as a doctor refusing to administer life-saving treatment to a dying patient.

Also in favour, some biological systems defined as DAS *are* better explained as originally being non-DAS. E.g. viruses which transfer genes between organisms to maintain/promote health (i.e. genetic diversity). Mutations could easily have made them destructive by acquiring and altering genes from their hosts - truly 'successful' viruses end up destroying themselves when they kill them!

II) DAS were designed:

i) God created all DAS creatures post-fall-they weren't part of the original creation.

This is an understandably rare and 'gapesque' position as no such re-

¹⁴Interestingly the venom works by simultaneously preventing blood from clotting and attacking the central nervous system (CNS) to stop respiration.

creation can be found in the scripture. Exodus 20.11 is again raised as a counter – the creation was completed in six days and therefore unable to be reopened.

ii) God created all DAS' as part of the original very good creation. Their usage was prevented by the power of God until the fall, after which this restriction was removed and/or they were caused by natural selection.

iii) God re-designed the creation as part of the curse causing DAS as we now see them. This is similar to position I) above except evolution is replaced by God's intentional intervention. Plants would now bring forth thorns, serpents would be legless and crawl, soils would be less fertile, etc. This is different from a re-creation as the changes are all deleterious and cumulative with time, leading to the current state.

An interesting hypothesis of meat-eating lions is given – to have changed from grass-eating would have required genetic modification suggesting a change back would require a *reversal* of the change.

To conclude it is admitted a mixture of some of the above positions may have occurred, also that certainty cannot be known.

Finally, a neat appendix addresses an objection of the multiplication mandate, that the earth would have been overpopulated without death. To answer, animal populations can reduce their reproductive rate dramatically if conditions arise.

VII) What About Similarities and Other Such Arguments for Evolution? (pp. 109-126)

A foundation stone of evolutionary theory is similarity (homology) between organisms, whether at the biochemical (i.e. DNA) or morphological (i.e. organs/appendages) level. This is a lengthy chapter and aims in a simple way to demolish evolutionary falsehoods which are still indoctrinating students to this day. Given this is standard evolutionary dogma it is a good idea for the reader to memorise these cases as a foil. The material is kept factual and to a minimum for easy consumption, especially the vestigial organ and missing link sections.

The biblical account is clearly at odds with evolution, reproduction being

programmed after its own kind and never from another. One evolutionary interpretation of Genesis is cleverly discounted via *reductio ad absurdum*—chapter 3.19 where the creation of man from dust (read 'ape') and his return to it would imply being changed back to an ape!

The strongest claim of this argument is taken from chimp and human DNA studies. Early scientific studies showed a 97-99% similarity, however these were only based on a 'small' fraction of the genetic code. The chimp genome was fully decoded in 2005 then scientists put it at 96% or less similarity.

Given each complement of DNA (contained in every human cell) has 3×10^9 chemical compound ('nucleotide') base pairs (of either adenosine and cytosine, or thymine and guanine – these are read **three** at a time during the transcription process¹⁵), even a 4% difference translates to 120×10^6 nucleotide base pairs. This is a chasm of improbability to traverse in terms of information creation over the alleged 2 Ma ape-man evolutionary time frame.

The above is compounded by gene control sequences – large chunks of DNA can be 'switched' on or off by the small control sequences. Also, areas of DNA exchange between chromosomes are not similar and the human 'Y' chromosome is much larger than in apes.

Despite it being such a high number, the whole argument rests on the premise similarity implies relation (i.e. descent). The Biblical position is it implies common design, yielding a stalemate of sorts.

The infamous biogenetic law (of the 1860s) a.k.a. embryological recapitulation a.k.a. 'ontogeny recapitulates phylogeny' is discussed. This falsehood is used to justify evolution, that until a point in time during pregnancy a human embryo is *not* human, rather the animal is tracing its evolutionary pathway through at that point in time. This is powerful pro-life knowledge as a human *was always a human from conception*.

The evidence for this are Ernst Haeckel's imaginary false woodcut prints,

¹⁵This involves the production of amino acids of which there are *twenty* different types. Each chain forms a protein.

the human embryo interpreted as having gill-slits and a tail. As early as 1868, Zoological Professor L. Rutimeyer showed the prints to be fraudulent. In 1965, evolutionist George Gaylord Simpson stated Haeckel's theory was falsified and until the 1990s science textbooks (including at the university level) stated the biogenetic law as fact.

It is worth studying the gill slit and tail claims for their refutation. The 'tail' (coccyx) is actually a group of important muscle attachments. The 'gill slits', known as 'pharyngeal clefts', never become slits or had any breathing function. These develop into the thymus and parathyroid glands, and the middle ear canals.

Further to the homological argument, an analogy of the potter is used in the early development of an embryo. At the beginning it may resemble a large number of animals, then grows increasingly specialised into its own kind (*baramin*). Of course in reality the development is fixed by the kind from conception. The biological term to describe this is *von Baer's Laws*.

There is a twist to von Baer's Laws - for vertebrate embryos (subphylum), at the 'pharyngula' stage (when the 'gill slits' appear) they *converge* to a uniform design. After this they again diverge as per von Baer's Laws. As written by Sir Gavin de Beer in 1971, this convergence intermission has no satisfactory evolutionary hypothesis.

An example of foot development between mammals and amphibians is given, a common design has two *different* developmental patterns. In mammals toes grow from a plate and appear when the material between each dissolves, but with amphibians they grow direct from buds.

Another stronghold of evolutionary indoctrination is then discussed, vestigial organs: emu wings, pig toes, male nipples, rabbit digestion, legless lizards, the human appendix, whale hip bones, and embryonic baleen whale teeth. Logically, it is impossible to prove in any of these cases an organ is useless - in over a hundred cases functions have actually been found (similar to the 'junk' DNA argument). Secondly, a *loss* of information causing the vestigial organ is the *opposite* of what evolution claims to explain in particles-to-people transition. The Biblical model has no problem with bona fide cases though, in mutational degeneration from the fall combined with natural selection.

On the emu, strong wings still offer benefits of balance, increased speed and protection (including visual displays). A situation akin to the beetles on the windy island could have arisen - the ones that could fly were quickly selected out of the population by natural selection.

On pigs, their two hind toes may be used for flotation or the traversing of soft/muddy ground, as well as their muscles giving support to the beast's ankle.

On male nipples, these develop in the pre-pharyngula stages of both sexes, afterwards diverging as per von Baer. This may be evidence of design economy, or as mentioned above a function is yet to be found. Under the evolutionist model there is *no* sensible theory for male nipples (e.g. female devolution, male 'mothers'?).

On the rabbit, it produces two types of dung pellets, soft and hard. The soft ones have been enriched by bacteria produced in their *caecum*, an organ which exists at the junction of the small and large intestines. This is a design feature and contributes to the rabbit's great breeding success. Contrary to skeptic interpretations of Leviticus 11.6, faecal pellets are cud.

On legless lizards, the loss of information fallacy is simply applied. As per Genesis 3.14 this agrees with the Biblical model.

On the human appendix, it was found to contain lymphatic tissue which helps control the flow of bacteria entering into the intestines. Tonsils function in a similar way - they help fight throat infections.

On whale hip bones, evolution is a problem as they are different between the sexes, also they assist reproduction by making copulation easier.

On baleen whale teeth, they provide an embryological guide for their great jaws. In explaining baleen whale evolution from other whales, the evolutionist has no mechanism how the teeth would all be replaced by baleen (whalebone).

The final section addresses the most widely produced 'proof' of human evolution – that of 'ape-men' 'transitional fossils'. The popular species are given and this is another section that should be studied in depth for apologetics.

A group of defunct fossils is listed: *homo sapiens neanderthalensis* (Neandertal man - a human); *Ramapithecus* (an orangutan); *Eanthropus Dawsoni* (Piltdown man - a 40 year hoax based on a human skull cap and orangutan jaw); *Hesperopithecus Haroldkooki* (Nebraska man – reconstruction from a single pig's tooth); *Pithecanthropus* (Java man – a human); *Australopithecus africanus* (one-time missing link but now non-transitional); *Sinanthropus* (Peking man – a human).

Accepted transitionals are very few: *Australopithecus* ('Lucy' – inner ear, skull and bone comparative studies reveal a non-human nature); *Homo habilis* (fake mix of *Australopithecus* and *Homo erectus* parts); *Homo erectus* (fully man based on anatomical and archaeological/cultural findings).

VIII) Who Was Cain's Wife? (pp. 127-139)

The relatively simple answer to this question is implied at the start, but the reasoned conclusion is left to the end building on the interesting theory of genetics, mutation and morality.

To the biological 'problem' it is admitted incestuous marriage today now carries a great risk of mutation in offspring (25% for any given mutation if both brother and sister have inherited a damaged gene-they come in pairs of which we have ~25 000-this makes the [binomial] probability of at least one mutation quite high). Mistakes in genetic reproduction are cumulative, the biological terms being *burden* or *load*. This is evidence against an 'old' human race as we would already have crossed an 'error-catastrophe' threshold, genetic degradation leading to the extinction of the human species. Anecdotally, each person carries hundreds of genetic defects yet with at least one good copy of the gene diseases don't usually manifest (it is stated some diseases are caused by having only one defective copy).

Some common genetic diseases are hemochromatosis, sickle-cell anaemia, cystic fibrosis, diabetes (inability to produce insulin) and down-syndrome. The fruits of genetic mutation are horrific, yet somehow the evolutionist believes this is the mechanism for 'uphill' evolution.

As there must exist a positive correlation between relatedness of parents and risk of genetic disease, God's commandments at the time of Moses (c. 2500 A.M.) are moral. It is cruel to effectively allow/encourage genetically

damaged babies to be born. It is noteworthy Abraham married his half-sister c 1700 A.M. without it being an issue of the day (neither Pharaoh nor Abimelech chastised him for this specifically).

As mutations are a compounding function of firstly environmental/biological factors, then time, we can regress back to the beginning of creation and theoretically a *perfect* genome. This would mean there is no biological issue with brother-sister marriage to create offspring.

As to availability of women for marriage, the great ages of genetically pure sons of Adam combined with reasonable generation times of 25-30 years would lead to rapid population growth. As an aside sometimes the land of Nod where Cain went to build a city is mentioned as the place where he found his wife. If so she still would have to have been born from Adam and Eve. Also, Cain's fear of retribution for killing Abel makes more sense if the revengers were related *by blood* to Abel.

There is also the created people argument [and offspring from Adam's legendary first wife Lilith] to provide a wife for Cain. Scriptural evidence is pointed out as completely lacking, as well as fatal doctrinal problems of Dominion and Soteriology with a race of quasi-humans. Eve herself was from Adam (his rib), so any offspring outside of these two would never qualify for redemption by Jesus' blood, nor be able to partake in stewardship of God's creation.

The moral argument is dealt with elegantly by the shepherd-fence analogy: care for the sheep may require a *more* restrictive and secure boundary be built (i.e. no incest) as external threats manifest (i.e. genetic load).

A solid understanding of this old atheist canard is likely to equip the Christian apologist well – only a little genetic and historical homework is required to do so.

IX) Where the 'sons of God' and/or the *nephilim* extraterrestrials? (pp. 141-149)

This is a brief chapter summarising the strong Biblical case of extra-terrestrial encounters as merely devil activity. The polemic and scientific cases against alien existence are also given.

It is stated 80% of people believe in the existence of alien life. Influencing factors may be:

*Popularisation from sci-fi icons such as Carl Sagan and Isaac Asimov.

*Hollywood movies like *Independence Day* and *ET*.

*TV series such as X-Files, Star Trek, Star Wars, Battlestar Galactica, and Bladerunner.

*Urban legends of alien autopsies at Roswell U.S. Airforce Base, New Mexico, and Government 'cover-ups'.

*Nanofossil finds from an alleged Martian meteorite in Antarctica, 1996, weighing 2kg (claims have subsequently been dismissed as magnetite whiskers or 'artifacts' of the experimental analysis process).

Biblically, alien life is unbelievable for the following reasons:

*It nullifies the dominion mandate given to Adam in Genesis 1.26. Superior alien technology would render man inferior and unable to prevent such beings from taking over. Inferior alien life at unknown locations and out of man's technological reach are also not under man's dominion so can be excluded.

*Any alien life would have been subject to the curse, however being non-human they could not be redeemed by Jesus' sacrifice. The Bible also excludes multiple Messiah's (e.g. one per alien race). This would make God seem unfair in selective redemption of humans only.

*The *Nephilim* (Hb. 'fallen ones'), offspring of the Sons of God (*beney ha elohim*¹⁶) and daughters of men cannot be interpreted as alien beings. There are at least four views:

-Evil angels possessed men and their progeny became the nephilim.

-Evil angels took on physical form ('leaving their own habitation', cf. Jude

¹⁶Cf. Job 1.6, 38.7 for the same Hebrew phrase.

6) and took wives of human females. This is an 'irrational' view to many but is the most plain and straightforward, not violating any Biblical rules.

-Great and tyrannical kings, and mighty men (e.g. like Nimrod) were these sons of God.

-The sons of Seth (Sethites) indiscriminately married the daughters of men giving rise to an evil human race. This is the [very weak] view of Hebrew scholar Henry C. Leupold: the translation method would not be formal as 'Seth' is not in the text; morality is not guaranteed through progeny¹⁷; how these humans genetically could be giants and other humans not has no obvious scientific basis.

*The stars, greater and lesser lights were created for man in our solar system. They would be no use to an alien race as they would presumably have their own solar system and planetary bodies for navigation.

Scientifically, belief in alien life is unfounded:

*SETI (Search for Extraterrestrial Intelligence) has been running since October 1984 in Sacramento, California and found nothing.

*Ideal conditions are required such as temperature (for liquid water), breathable atmosphere, etc. These are very rare.

*Spontaneous generation is chemically and biologically impossible for many reasons. Hope is being transferred to [directed] panspermia but how could alien life have spontaneously generated?

*Interstellar distances. The closet star to the Milky Way galaxy is Proxima Centauri (a red dwarf which is part of the trinary star system α -centauri), 40.7×10^{12} km away. At the speed of the Apollo flights to the moon the duration would be 870 000 years. At c (3×10^5 km/s) it would take 4.3 years to reach, at $c/10$ it would take 43 years. To add to the problem, each cubic km of space contains an estimated 100 000 dust particles each weighing 0.1g. A collision with just one of these at vast speed would blow up a space craft!

¹⁷Here the 'godly line' argument is self-refuting with the Sethites themselves becoming wayward.

The real answer to supposed metallic craft sightings or UFOs can be found in II Th. 2.9-10, the working of Satan and his angels. It is much clearer to attribute these works to him when one accepts the reality of angel manifestation in our dimension (e.g. in Gn. 6.2).

An interesting appendix contains energy calculations pertaining to (i) travel requirements, and (ii) collision explosions. Both use a scenario of a 10kg craft traveling at a velocity of $c/10$:

(i) Energy expenditure to attain the velocity is given by the relativistic equation:

$$E = \frac{1}{2}mv^2$$

where m =object mass in kg, v =velocity in m/s

$$\begin{aligned} \text{Therefore } E &= \frac{1}{2} * 10 * (10^{-1} * 3 * 10^8)^2 \text{ kg.m/s} \\ &= 4.5 * 10^{15} \text{ kg.m/s} \\ &= 4.5 * 10^{15} \text{ J/s}^{18} \end{aligned}$$

To give a perspective, the largest hydroelectric power station in the world at Itaipu, a Paraguayan and Brazil joint venture, generates $14 * 10^9$ W, or $14 * 10^9$ J/s¹⁹

Therefore, Itaipu would have to run for $(4.5 * 10^{15}) / (14 * 10^9)$ s or $(4.5/1.4) * 10^5$ s which is approximately 3.7 days.

Slowing down to zero would require this energy again and combined with stopping and starting consumption would be huge. Energy for a large craft as in *Independence Day* is not calculated.

One solution may be an matter/anti-matter drive which with perfect efficiency (total annihilation) could produce $E=mc^2$ in energy.

From above, we know for the craft to reach $c/10$ equates to an energy requirement of $4.5 * 10^{15}$ W. The fuel required would be

¹⁸One joule (J) is the work done when one Newton of force is applied throughout a distance of one metre.

¹⁹One watt is defined as one joule per second.

$(4.5 \times 10^{15} \text{ W}) / (3 \times 10^8 \text{ m/s})^2 = 4.5/9 \times 10^{-1} \text{ kg}$ or 5kg, half the mass of the space ship.

(ii) The kinetic energy released upon impact with a hypothetical stationary dust particle of mass 0.1g can also be found by the equation $E = \frac{1}{2}mv^2$:

$$\begin{aligned} E &= \frac{1}{2} \times 10^{-4} \times (10^{-1} \times 3 \times 10^8)^2 \text{ kg.m/s} \\ &= 4.5 \times 10^{10} \text{ kg.m/s} \\ &= 4.5 \times 10^{10} \text{ J/s} \end{aligned}$$

For perspective, TNT²⁰ has a combustion energy of 4520kJ/kg, $4.52 \times 10^3 \text{ kJ/kg}$, or $4.52 \times 10^3 \times 10^3 \text{ J/kg}$, or $4.52 \times 10^9 \text{ J/T}$. A collision then equates to $(4.5 \times 10^{10} \text{ J/s}) / (4.52 \times 10^9 \text{ J/T})$, or ~10T of TNT exploding.

X) Was the Flood Global? (pp. 151-160)

At first a 'lighter' chapter with many reductio ad absurdums, it contains deeper Biblical arguments and brings to bear geologic evidence.

The local flood idea can fit many philosophies, except for straightforward and plain Biblical Christianity. Given the bombardment of evolution and uniformitarianism, even Bible-believers may hesitate at affirming the watery global cataclysm.

Archaeological evidences of a local Mesopotamian flood include a (fossilized?) layer of mud in the Middle East and past flooding of the [large] Black Sea (which borders Turkey, Russia, Ukraine and Eastern Europe). While past local flooding has no doubt occurred, it is a non sequitur this precludes or was a substitute for Noah's flood.

The following Biblical answers are given against a local flood:

*Anybody could have walked outside the flood region and survived (at 20 km/day over six months ~3 500km could have been traveled).

*Birds, to be taken aboard for survival could have flown to safety.

*The gathering of *every* land animal would be redundant as kinds outside

²⁰Trinitrotoluene.

the flooded region would be safe.

*The Ark would not need to be such a size to accommodate local fauna only.

*Justice: God promised universal punishment for sin. The only option is no one lived outside the local region (making the global/local distinction a moot point). This would be incredible given the approximate 1700 A.M. flood date and preceding population growth.

*Integrity: God promised never to destroy the earth again by water, yet local flooding has and still occurs today (e.g. Indonesia).

*Hebrew hermeneutics and terminologies: Genesis 7.19 has produced as a double usage of 'all' (Hb. *kol*), both the mountains and heavens, removing any possibility of ambiguity. The AV has *one* 'all', and translates the second *kol* as 'entire heaven'. Interestingly, the author suggests a more 'accurate translation' would be 'all the high mountains under the *entire* heaven,' agreeing more with the AV reading. *Kol* is also used 21% in chapters 6-9 out of its entire usage in Genesis' 50 chapters. Sometimes Luke 2.1 is raised to confuse the interpretation of *all* and taking a word out of context. The taxing, being made by Caesar could only ever apply to his realm as outside of it he held no power to enforce the decree.

*Physics: As the water covered all the high hills it would eventually overflow. Seeking its own level outside areas must also have been flooded¹. Also, given a 370 day²¹ flood in a local area it would be unlikely mountain tops remained invisible.

*Human race: The Bible states all those alive today are descendant from Noah, not true given exo-local flood survivors. As to positive evidence, many cultures have a flood tradition handed down, the most notable being the Gilgamesh epic.

*Hebrew terminology:

-The earth (*erets*): Using a word count argument, *erets* is found 46 times in Genesis chapters 1 and 6-9. [quoting Genesis 6.13, a grammatical error is made stating God will destroy all flesh *and* the earth. The preposition *with*

²¹Cf. Gn. 7.14 (terminus a quo), 8.13-14 (termini ad quem).

is being assumed in the sense of *accompaniment* rather than the plain meaning of *by means* or *instrument*. As the ante-diluvain peoples filled the earth with their violence God saw fit to destroy them using the earth. Clearly, the earth has not been destroyed.]

-Upon the face of the earth: Gn.1.29; 7.3; 8.9; 11.8-9 all use this. It clearly means the whole earth *without* reservation.

-Face of the ground: From Genesis 2.6 and the watering of the *whole* earth, this phrase is found five times in the flood account.

-All flesh (*kol-basar*): Used (12) times and only in the Flood account.

-Every living thing (*kol chai*): From Genesis 1.28 and the universal dominion mandate, the same appears in Gn. 6.19; 7.4, 21-23; 8.1,17.

-Under the whole heaven: From Genesis 7.19, in the rest of the Old Testament it always has a universal application (e.g. Job 41.11).

-All the fountains of the great deep: In Genesis 7.11, emphasis should be placed on the word **all**. Also, the deep (*tehom*) is the same word in Genesis 1.2 which refers to the single global ocean at creation.

-Flood (*mabbul*): In the OT used only outside the flood account in Ps. 29.10. In the NT the Greek word is κατακλυσμος (e.g. Mt. 24.39) from whence *cataclysm* is derived.

*Parallel decree in chapter 9 with chapter 1: The only consistent interpretation is a second universal mandate.

*New Testament witnesses: Jesus, Peter and Paul state the whole world (*κοσμος*) was destroyed and that only eight-survived.

Apart from the meaning of 'all', two major objections are raised against a global flood:

(i) Identical pre and post flood geography: The supporting argument is the existence of the Tigris and Euphrates rivers in Asia, these being mentioned in Genesis 2 *before* the flood. The falsification of this idea is the common recycling of names in completely *different* places, e.g. New York in the U.S., Newcastle in NSW, etc.

(ii) Lack of geological evidence for a global flood: The contrary is true (“I wouldn't have seen it unless I believed it”) - polystrate fossils, rapid burial of dinosaurs in labour, rain-drop imprint fossils, *curved* sedimentary rock layers and billions of fossilized dead creatures across the whole earth. There are also polystrate sedimentary rocks ('clastic' dykes and pipes) – where dense and plastic water-laden sediment subject to pressure can be squeezed into cracks and holes in higher layers. There is also the Morrison

(sedimentary) Formation which runs from Texas to Canada, clearly something not occurring today.

XI) What About Continental Drift (pp. 161-180)

A more difficult topic for those with no knowledge of geology, nevertheless effort is recommended as the evidence here supporting the Biblical model is compelling.

Before 1960, a stationary model of the land surface was assumed. Plate tectonics as a concept was first put forward by creationist Antonio Snyder in 1859, based on his reading of Genesis 1.9-10.

Supporting evidence for the existence of plates from a single land mass include:

*'Fit' of the continents, including the shelves. E.g. Europe and America (especially from viewing an aerial shot).

*Correlation of marine fossils and sedimentary formations across continents.

*Zebra-striped pattern of parallel volcanic rock formed along plate ridges ('sea-floor spreading'). This is caused by the reversing of the magnetic field of the rock during formation.

*Seismic identification of slabs of what was ocean floor now inside the mantle.

The above seems quite convincing.

Plate tectonics in general explains the earth's surface as a mosaic of plates undergoing friction with each other, the three main cases being:

*Separation: Pulling apart along rift lines.

*Horizontal slipping (transform faulting): Plates slipping past one another (e.g. San Andreas Fault).

*Compressional deformation: Collisions, usually involving subduction where one plate is submerged under another (e.g. Pacific rim). Non-subduction involves mountain range formation (e.g. Himalayas at the European and Indian-Australian plate boundary).

This introductory theory is helpful in understanding the material presented.

Magnetic rock-reversal is given further attention. Vertical drilling through ridge-adjacent basalt crust yielded samples with no magnetic similarities, falsifying a uniformitarian theory of formation. Dr. Russell Humphrey's predicted quick formation of thin rock layers from lava flows, combined with multiple magnetic field reversals during the Flood. Secular researchers Coe and Prevot have found evidence of astonishingly rapid magnetic reversals.

Given current low rates of continental movement (2-15cm/year), the creationist model has to account for large mountain ranges and great distances from an original super-continent. The formation of mountains is incredulous under uniformitarianism given the impotent forces from such a slow velocity.

Dr. John Baumgardner has used supercomputers to build a 3-D catastrophic plate tectonics model, the first and currently best of its kind in the world. The theory behind it is also founded in Genesis 1.9-10. Combining the gathered seas and dense ocean rock would form a cold and heavy 'cutting edge'. This would progressively sink into the softer mantle base and under the newly created plate edge. This is known as *runaway subduction*. On the opposite 'side' of the continent large forces would cause tearing and the formation of rifts (separation).

Heat is a key factor in the above – the subduction causes friction and the associated heat acts as a positive feedback to reinforce the subduction. The whole mantle would eventually become unstable leading to great seismic activity – 10 000km oceanic rifts with new sea floor creation bearing a zebra-striped magnetic pattern.

Magnetic reversals are explained by the heat potential between adjacent 'viscous' (plastic) rock deep inside the mantle, i.e. where the cooler intruded sea floor causes convection *at the mantle-core boundary!* Importantly, these are now proven to be slabs *unassimilated* into the surrounding rock.

It is thought breaking up of the mantle is what is known as the fountains of the great deep (Gn. 7.11,8.2). Magma from the lithosphere would instantly boil sea water at rifts/holes, shooting up jets to the surface only to fall

down as rain (“it rained for forty days and nights”, Gn.. 7.12).

The model explains why the ocean floor is hotter in the upper 100km layer than below, as well as higher global sea levels (hotter rocks are less dense, and expand which in turn raises sea levels – perhaps 1 000-2 000m than pre-flood). This would have caused continental flooding, covering large areas with sedimentary rock deposits and marine fossils, exactly what is observed (e.g. the Grand Canyon).

As to the end of the flood Psalm 104.6-8 is mentioned, where the cooling dense sea floor sinks back down causing the flood waters to recede into the deeper ocean trenches. A footnote explains the KJV is inaccurate as having *the waters* the subject of going up and down. The blindness of this interpretation is amazing, for the emphasis is on the object in each case (i.e. mountains, valleys) caused by the use of the preposition *by*. Without these two geological processes the waters wouldn't have gone anywhere!

The graphic of Baumgardner's model ('pangea initialisation and subsequent radial viscosity variation') is interesting, his main variables are: depth (100km); time (70 days); max. velocity (~1m/s).

Vertical tectonic forces are described as dominant at the close of the Flood, including mountain formation from plate compression. The mountains of Ararat where the Ark came to rest after 150 days is thought to be at the junction of **three** plates which intuitively makes sense given water seeking a level at the edges of each plate.

The success of Baumgardner's model is damned in conclusion with the caveat it may be replaced in the future by something more accurate.

XII) Noah's Flood – What About All the Water? (pp. 171-180)

After the previous chapter the material here will be much easier for the reader to digest as it tends to augment it. The answer to most of the questions are rooted in the *catastrophic plate tectonics* model which the reader should study separately in depth.

The biblical sources of the water are examined: fountains of the great deep and the windows of heaven (including the waters above the earth).

The fountains of the *great* deep (only mentioned once in Genesis 7.11) are set apart from the fountains of the *deep* (e.g. Proverbs 8.28) although they could be one and the same. Since a fountain draws water from a reservoir emitting it as a stream, the source could be water aquifers encapsulated during the gathering together of the seas and land formation (pangea), on day two of creation week. The mechanism for water release would have been catastrophic plate tectonic movements (mainly subductions).

Perhaps complementing the above were oceanic volcano eruptions – 70% of their ejecta constitute *water* vapour. Evidence for volcanic activity during Noah's Flood is found in volcanic rock *interspersed* throughout strata layers. Volcanic eruptions match the imagery of Genesis more than plate subductions.

Next the windows of heaven which prevailed for forty days and nights. The 'No Rain Argument' is pointed out as refuted by Genesis 2.5 - here the authors *add* in the word 'yet' to bolster their case. This combines with the 'No Rainbow Argument' until God's promise after the flood (Genesis 9.12-17). This is debunked by the earth's hydrologic cycle and massive amounts of evaporation which physically *must* condense into water-laden cloud.

The waters above are commonly thought to be a water canopy. This theory is explained in a sensitive way, both given the benefit of hindsight and the plastic nature of science. Dr. Dillon, now one D. E. Rush and Dr. Larry Vardiman worked on it. An orbital equatorial ice-ring (like Saturn) was proposed as once existing. Volcanic dust particles (i.e. remaining 30% of ejecta, less poisonous gases like H₂S) could have reached the atmosphere layer of this ring. The ice crystals would have nucleated (i.e. 'stuck' to the dust particles) then fallen under gravity as rain.

Such a canopy would create a greenhouse effect making the whole climate (including the poles) sub-tropical. Coal beds at the poles from vegetation grown in that locale are thought to be evidence. It is stated plate movements of Baumgardner's model could also account for their strange location.

The theory has an Achilles heel - any canopy with a significant volume would cause unbearable surface temperatures. In accommodating this the maximum ring thickness was calculated at only 2m. Such a value could not meaningfully contribute to the forty days and nights. A non-meaningful

contribution would suggest scripture should have remained silent on the 'windows of heaven'.

Dr. Russell Humphrey's intriguing interpretation is then given. As the firmament of Genesis 1.6 seems to include interstellar space (fowls fly *in* it, also stars-interstellar objects- are seen *in* it), these waters would be at the edge of the universe itself. Psalm 148.4 mentions *contemporaneous* (i.e. post-flood) waters *above* the heavens. This verse is perhaps the death-knell of the Canopy Theory.

Next the seemingly obvious question of where the water went is dealt with. If the earth were a smooth sphere it would be submerged to a depth of 2.7km of water, also the surface itself by area is 70% water. Regarding coverage of high mountains, even Everest (at just under 9km) has marine fossils in its upper strata layers - this is strong evidence it was once covered by water.

The Baumgardner model mechanism for water assuasion is cooling of the *new* ocean floor, making it denser than the surface land (which includes the newly raised mountains from plate compression). This process *begins* once the old cold sea floor has been heated up sufficiently in the mantle to stop the *thermal runaway subduction*¹. Deep ocean basins are formed as the cooling new floor sinks into the mantle. The continental flood waters then run off into these basins. The rising and falling mechanics are a consequence of the *isostasy* principle in geology, i.e, less dense continents 'float' on top of the denser mantle.

As to post-Flood topography, the breaking of natural dam formations as well as glacial melting from the post-Flood ice age²² explains identical *earth*-wide sedimentary rock layers, valleys with residual river flow, etc. For Australian audiences Ayers Rock (Uluru) in NT and The Olgas (Kata Tjuta) in central Australia are mentioned, the former the result of tilting and uplifting of water-laden *rough* sand grains²³, the latter an unsorted mixture of boulders, sand and mud.

²²Ibid.. Ice ages *always* require great moisture. This water freezes at the cooler poles then progressively spreads.

²³Under a Mya process *smooth* grains would be expected, having been rounded during the long transportation and deposition period into a drying lake bed.

XIII) How did the animals fit on Noah's Ark? (pp. 181-188)

The chapter question is broken down to two main sub-questions and providing plausible answers: (i) how many types of animals did Noah need to take? (ii) was the Ark's volume large enough to carry all these types

Historically these have already been answered, back in 1961 with Henry M. Morris' *The Genesis Flood*, followed by a recent, exhaustive and comprehensive work by John Woodmorappe in 1997: *Noah's Ark, a Feasibility Study*.

From Genesis 6.19-20; 7.2-3 is deduced all land dwelling vertebrates, reptiles and birds were taken on-board. Appeal is made to the lexical Hebrew meaning of words (e.g. *behemah* and *remes*) to work out what is meant, whereas using the AV, *flesh* clearly means land animals, *fowls* covers all flying creatures, and *creeping things* suggests reptiles as well as insects. Only sea creatures are absent, of which every kind God deemed fit to live would have done so in their own habitat (which is the sea).

As to categories, clean animals (these included all fowls-__7.3) were taken on in sevens, unclean in twos. Insects are distanced as not having life like flesh animals as they breath through tiny pores called *trachea*, also they could survive outside the ark on floating vegetation mats as evidenced in wild storms. The 'clean' classification is not precise as no detail is available until Leviticus, c1000 years later with Moses, yet it is assumed this is a codification of prior revelations from God combined with his unchanging nature.

The 'kind' (*baramin*) is then discussed. The only way to confirm two animals as belonging to a kind is if they can reproduce together, though the opposite (i.e. non-fertilisation) doesn't disprove membership. In modern taxonomy a 'kind' is a *genus*, 'kinds' a *genera*. Animals of different genera may also be able to breed so *family* may be the 'kind' level as well.

Woodmorappe estimated 8 000 genera existed, also despite modern taxonomists listing 87 dinosaur genera only 12 are confirmed. The number of kinds can never be truly known due to some animals going extinct. Common kinds are the horse (inc. zebra and donkey), auroch (inc. cattle and possibly bison and water buffalo), cat (inc. lions and tigers as evidenced by ligers and tigons) and dog (coyotes, hyenas, wolves, etc.).

Proven rapid speciation is an ally in explaining 'evolution' of species today.

According to Woodmorappe, only 11% of animals would have been larger than a sheep, the average would be the size of a rat and juveniles rather than adults taken on board. These include dinosaurs as well – seeing as their eggs weren't bigger than a football their young *must have been small* (i.e. in proportion to this size).

Germs are brought up – the key is realising they may have mutated *post-flood*, so requiring an account for *today's* species is not logical. Viruses become deadlier with protein-coat mutations and given short generation times the number of deadly mutations will be in inverse proportion. Viruses are also hardier - able to survive in a frozen state, as insects on floating vegetation mats, inside animal guts, on/in corpses, etc.

Next the size requirements are dealt with. The Biblical dimensions of the ark in cubits (300(L)*50(B)*30(H) or in metres-137*23*13.7) is equivalent to 43,169m³ or ~522 shipping containers²⁴ each of which could hold 240 sheep. Taking Woodmorappe's 8,000 genera by two (i.e. approximating all as unclean animals) and assuming 0.075m³ volume per animal would take up 14 of the containers. If insects were to be included a volume of 1,000m³ (12 containers) is given as required (no detail behind this number is provided). So ~500 containers remain for foodstuffs and Noah's family. The *floorspace* of the ark given three decks (v. 16) would be 9,453m², which would only accommodate 318 of the 522 40ft containers (at 29.72m² footprint for each one).²⁵

It can therefore be proven sufficient room was available on the ark to house all the animals. Foodstuffs are estimated at taking up 15% and drinking water 10% (this may be replenished by rainwater). Witty storage methods could have been employed: matching/storing food with certain animals, cage-stacking, usage of slatted cage-floors with sloping traps (for

²⁴A 40ft containers is 86.6m³ (in metres 12.192(L)*2.438(B)*2.591(H)) in volume which seems to be approximately what this calculation is based on.

²⁵4.25-square base containers would equate to 522-worth of containers. The height would be 4.8m or 14.4m for three decks, approximately 30 cubits.

'flushing' of excretory material).

Finally hibernation is mentioned – this would reduce (but not eliminate) energy requirements. This is a speculation.

XIV) How did Freshwater and Saltwater Fish Survive the Flood? (pp. 189-192)

A short but important answer to a clever objection raised by skeptics. The problem is in the chemistry of salt and osmosis – higher salt concentrations draw surrounding water into body tissue, lower release it²⁶. Animals in a high saline environment will die of dehydration, and 'salty' ones in low salinity will be over saturated.

Biologically, many marine animals can survive and adapt across a range of salinity, especially those whose habitat is closer to land or inland estuaries. Starfish for example can live in 16-18% of normal salinity, barnacles 10%. Others spawn in freshwater but mature in seawater (and vice versa) and many fish 'families' contain fresh *and* saltwater species. As with virii (and *post*-diluvian natural selection-induced mutation), *ante*-diluvian survival abilities of fish should not be underestimated.

Seeing they don't obtain oxygen from water, air-breathing marine animals do not require an apology. Also, floating plants (e.g. on volcanic pumice) can survive in salt water for months (as proven by Charles Darwin!) as it impedes germination. Some can sprout asexually.

Geologically, huge amounts of salt would have been deposited during the flood with the breaking up of the *fountains of the great deep* (Gn. 7.11) – the aquification of rock minerals from the mantle via volcanic activity. Also, erosion when the waters assuaged off the continents would have transferred minerals from land to sea. Interestingly this may have caused lower (denser) 'salty' ocean layers supporting upper freshwater ones, provided high turbidity did not persist.

XV) Where are all the Human Fossils? (pp. 193-200)

²⁶Salty water enters marine animals via their *gills*, from which oxygen is extracted.

The central question of this chapter is how human fossils are not found in the same strata as dinosaurs? The central Biblical proposition is the flood explains the fossil layer, rather than millions of years of evolution (with trilobites at the bottom and humans at the top). A number of evidences falsifying long ages and slow strata deposition are then given to 'soften up' the reader before the creationist model is portrayed:

*Vast Coconino sandstone (100m thick spanning 250k m² area) cross-bedded and lacking any erosion suggests it was laid down very quickly.

*Bent yet *uncracked* Kaibab Upwarp (of the *whole* Grand Canyon sequence) which couldn't possibly have remained soft for 300Ma.

*Polystrate tree fossils, particularly in coal seams, which couldn't have survived in that state for millions of years without rotting.

An adjustment mechanism is the release of large amounts of water (by saltwater species in fresh water) [but not urea by freshwater species in salty water?] by the kidneys into the urine.

*Fossilised delicate and fine features such as ripple marks and footprints – these would have eroded away with long-ages.

*Rock unconformities – breaks in the formation are not visibly uniform in the same rocks in the same strata elsewhere. Unconformities do evidence a break in time.

*'Clastic' dykes and pipes which are sand/water mixtures squeezed up like toothpaste from pressure into higher strata. The sand is supposed to be millions of years older than the penetrated layers.

*Ayers rock made of *tilted* sandstone of *rough* grains (no smoothing over long ages). Long ages in wet conditions would have baked the rock into clay.

*'Living fossils' such as starfish, brachiopods, clams and snails²⁷. These are supposedly 530Ma old yet are conspicuously *absent* from middle strata

²⁷A German scientist, Dr. Joachim Scheven has collected samples of over 500 specimens.

layers which supposedly represent millions of years.

*Human and dinosaur co-habitation: cultural references and uncanny artwork (e.g. triceratops and sauropod dinosaurs); unmineralised dinosaur bones containing many different *preserved* proteins; dinosaur fossil-bearing strata do not contain any plant matter yet they had huge energy requirements! This is a clever observation and implies we are not seeing what we should - fossilised *ecosystems*.

*Discordant fossils – a general statement is made how such finds used to be published in secular journals before the paradigm bias became too strong. A revealing quote from J. Horgan in *Scientific American* is given that any paper failing to comply with editorial beliefs will be blocked. An interesting 914 page Westernised Hindu work *Forbidden Archaeology* is mentioned which documents these examples.

*Evidence of fossil sorting – the Yallourn coal seam in Victoria has 0.5m thick layer constituting 50% pollen. Experiments of material layering under fast-flowing water does indeed produce layering.

Under the CPT model there is a low expectation of fossil finds. Woodmorappe for example assumes a global pre-Flood population of 10M and a deluge of $700 \times 10^6 \text{ m}^3$ of rock giving an average of only one fossil per 700 m^3 of rock. One disputed example in a Cu mine in Moab of two skeletons was found, but this was brushed off as a 'stratigraphic leak' or intrusion (from higher to lower stratum).

Known human fossils are all post-Flood and Genesis 6.7 is quoted suggesting God's destruction of pre-Flood man may be the reason no extant fossils have been found.

The creationist burial model is outlined graphically – from low to high it is a progression of animals close to the flood waters in habitation, offset by physical survival abilities including intelligence. Further, the model also covers post-flood phases where creatures *known* to have died then are found (e.g. kangaroos which are only found fossilised in Australia, post-pangea separation).

The order is:

- *Sedentary sea life.
- *Swimming sea life.
- *Coastal life (plant and amphibians).

- *Animals in low-lying habitat, e.g. dinosaurs.
- *Animals in higher latitudes, including fowls of the air.
- *Post-flood animals, e.g. kangaroos, emus and woolly mammoths.

In terms of quantities, the model predicts a greater number in the lower orders seeing animals higher up could escape sedimentary burial only to die in water, their bloated carcasses scavenged or destroyed by flood or post-flood continental erosion forces. This is exactly what is found – most fossils are invertebrate marine creatures, and plants in the form of coal and oil. Vertebrate fossils are rare.

Cope's 'Rule' which predicts increasing fossil sizes up the strata layers is questioned – both the unintelligent mechanism that should necessarily make everything bigger (e.g. dinosaurs to birds!), also larger marine creatures found higher up are often less dense than smaller ones.

Overall, much is qualitative and speculative given the difficulty in reconstructing such a complex event. Despite this all the hypotheses seem more reasonable than long-ages.

XVI) What about the Ice Age? (pp. 201-212)

An important topic and heavy chapter that is probably seen by many as secondary to explaining the flood itself. Knowledge of the biblical model will help expose the evolutionary paradigm. It also contains basic geological terms regarding glaciers and rocks.

The evolutionary model is of repeating ice ages (every 20-30M years), the last one going from 2Ma to 11ka years ago, punctuated 10% of the time by warm 'inter-glacial' periods²⁸. As no physical mechanism exists to explain this phenomenon it is a mystery.

Physical evidence of an ice age are seen in the U-shaped valleys carved

²⁸Cf. Genesis 1.9.

out by the melted glaciers. It should be stressed the central creationist proposition is *one* ice age only.

Passed over bedrock is ground up to form *till*². Rocks in the glacier gouge out deep parallel grooves overland, called *striations*. During glacial melting, rock 'flour' is released into surrounding glacial lakes settling in alternating (why?) fine and coarse layers known as *varves*². Another phenomenon are 'dropstones', large rocks found within *undisturbed* varve layers that dropped out of melted glacial ice chunks.

Evolutionists see similarities in 'earlier' ice age rocks and the above rock features. As with the fossil record, falsifying evidences are listed as a counter:

*'Lower' layer 'tillite' covers a small marine area and is thick whereas modern tillite is thin and covers a vast area on *land*.

*Limestone and dolomites are associated with their tillites, however these form from carbonates in *warm* water.

*Largest dropstones are much smaller than today's.

*Underwater mass flows (such as in the flood) create tillite deposits as well as striated bedrock and stones. The tillite become *laminae* (i.e. rhythmites, or laminated sedimentary deposits).

Operational science supports *fast* laminae formation given the right conditions: Controlled water flow tank experiments with two different sized grains; on 12/6/1980 at Mt St. Helens an 8m-thick laminae deposit was formed; in Walensee, Switzerland, five couplets of varves formed in only *one* year.

*Lack of laminae disturbance from dropstones which would have caused damage.

The extent of the icesheet is shown in a good map from digwis.com - all of North America, Greenland, Britain, Iceland, western coast of South America, and the Caucasus are all shown (this may be from where Job's reference to the northern cold in Job 37.9 came from). As with continental movement from the flood, effects of the Ice Age are still with us today in

visible glacial formations, mountain ice caps and the large Greenland and Antarctica ice sheets. It is stated the maximum ice-coverage was 1/3 of the earth's land surface.

Interestingly, while high *latitude* and *altitude* areas were experiencing glaciation from freezing higher precipitation levels, the same increase in rain nearer the equator caused desert areas like the Sahara, Gobi and Arabian peninsula to blossom. Archaeological evidence in support are irrigation channels. At the same time *neandertals* were inhabiting cold areas of western and southern Europe. It is suggested their short stature was due to rickets from vitamin D deficiency (caused by lack of sunlight in the cold dark climate), also arthritis and poor overall diet.

Prerequisite ice-age conditions are given: warm oceans at mid to high latitude (to cause rainfall in the right area) combined with cold land surfaces especially in summer (to limit evaporation and accommodate ice-sheet formation).

A good diagram is shown on p. 206: warm oceans-->evaporation (volcanic dust/aerosol sun-blockout)-->cloud formation-->snow (over cold landmass-warmer land masses are conducive to *rain*). Volcanic activity and associated ejecta continued post-flood as evidenced by volcanic rock in what is called 'Pleistocene' age sedimentary layers most likely formed during continental run-off.

The secular model has the earth cooling gradually, which could only result in a *permanent frozen desert*. As the temperature falls enough to inhibit ocean evaporation, insufficient water is available for snow and ice sheet formation.

The CPT model needs warm ocean floors to raise them and flood the continents and Dr. Larry Vardiman has found evidence of these warmer oceans. Oxygen isotope ratios indicating warm water have been measured in old shells of *foraminifera* (tiny marine animals).

The abovementioned glacial maximum is theorised to have occurred 500 years post-flood, at the height of a convective atmospheric storm system caused by the contact of warm ocean waters and cold poles. These storms would have been critical to the snow dispersions and ice sheet formations, extending even over the cool oceans.

The ice age duration is dependent upon a number of factors, including the ocean temperature. It is thought the decrease was from 30°C to 4°C today with 10°C the tipping point for warm oceans to begin *reducing* ocean evaporation. The other variables are ongoing volcanism and dust/aerosol dispersion which reduces radiation reflection. When combined the time of 500 years for maximum ice coverage comes out and the whole period 700 years.

Ice core drilling is a popular evolutionary weapon, supposedly containing thousands of ice layers each representing a year. Post-ice age flood layers would be real, but further down the layers become less distinct and can be explained as laid down by post-flood hurricane conditions. Back to oxygen isotope ratios, these lower layers have differences because the ratio is determined by the *original water source* and hurricanes in different directions pick up water from *different* parts of the ocean. The lower layers do not then have to represent *annual* temperature changes.

A mystery of the mammoths is then raised, there being thousands of frozen remains found in northern Europe, Siberia and Alaska. These places if frozen would have not had enough liquid water or food to sustain the large mammoth populations. The carcasses are also found with undigested stomach contents. To counter this, remains have been found as far south as Mexico, and today the plant species inside the bodies grow in warmer climates with greater precipitation.

Evidence suggests they were post flood as remains are found in silt layers sitting *on top of* Flood sedimentary layers. The proposal by Michael Oard is a late Ice-Ae burial. Because of the warm oceans, the ice sheets did not cover the sea leaving temperate habitat close to the Arctic Ocean and coastal islands to live in. As the oceans cooled/rainfall subsided the ice sheets melted back exposing the land which began desiccating. Their habitat being destroyed, large sand and silt dust (*loess*) storms buried the mammoths and after further cooling their remains froze where they can be found today.

XVII) How did animals get from the Ark to places like Australia? (pp. 213-220)

This section is prefaced with the disclaimer reconstructing an unrepeatable

historical event will always be deficient in some way.

Getting to the ark is no problem seeing there was a single continent, Pangea, combined with the fact God brought the animals to Noah – he didn't have to go and collect them all (e.g. the Kangaroo, Koala, Kiwi, etc.)!

From recent events a precedent can be seen. The Krakatoa²⁹ eruption in 1883 destroyed two thirds of the original island, leaving a number of remnants. After a few years insects, reptiles, small animals and birds had repopulated the lands, somehow crossing the Java sea.

Modern geologists believe the Bering Strait, an 82km wide ocean expanse at its narrowest point between Amadyr Plateau, Russia and Alaska was once a dry land bridge. The Ice Age would have locked up the water enabling land to appear. Thus a way for Asian peoples to migrate to America is feasible.

Similarly, Australasian land bridges were an accepted mechanism for migration out of Europe. The evolutionist's ice age has tectonic movement and sea-floor lowering phenomena. Hard evidence of these bridges comes from *monotreme* (i.e. egg-laying mammals) like the platypus, and marsupial fossils (i.e. opossums) unearthed in South America.

As to post-flood migration, animals like the kangaroo are popular cases to bring up. While an original single pair is obviously not required to have travelled the whole distance in one lifetime, the greatest objection is an absence of fossilised kangaroos in lands *en route*. This is not implausible given fossilisation is a rare event requiring rapid burial, such conditions present under catastrophism (i.e. the flood, and the post-flood ice age events). Absence as evidence comes from lions in Israel (no extant fossils) and [millions of] bison in America (again no extant fossils).

The argument of unique organisms is largely one of faulty premises – i.e. if there was a common dispersal of fauna (and similarly for flora), then organisms today couldn't be restricted to one location. Examples are the

²⁹Krakatoa was a volcanic island just off the west coast of Java Madura and east of Sumatra island. It is now a (growing!) island called *Anak* ('child of') Krakatoa.

Livingstonia mariae palms in Palm Valley, central Australia and kangaroos. This is standard uniformitarianist thinking which breaks down under its own paradigm – even the Sahara and central Australia were once considered warmer and wetter. These 'unique' organisms might have been ubiquitous but simply died out in places where conditions turned unfavourable.

More difficult cases raised are the koala, panda and sloth. Combinations of specialised diets and locomotive limitations on the surface present problems. As above, there is no reason requisite plants and animals did not live along post-flood migratory paths. The koala for example can feed on 20 of the 500 species of eucalypt tree and it has recently been proven they can eat non-eucalypt leaves³⁰. Another factor may be genetic mutation and/or natural selection causing a reduction in fitness of today's visible species. The St. Bernard dog is one example – it has an overactive thyroid³¹ and lives in colder climates to avoid overheating.

Again the hypocrisy of evolutionists are laid open regarding migratory abilities of animals. They hypothesise primates travelled hundreds of miles across the ocean on vegetation mats caused by storms. This has scientific support given iguanas travelled on mats between the Caribbean islands.

An interesting closing point regarding fossil distribution in Africa is made – since humans refused to disperse³², animals including apes overtook them meaning their bones should consistently be found below humans and this is exactly what is found.

XVIII) How did all the different 'races' arise (from Noah's family)? (pp. 221-237)

The established fact of Noah's flood and the dispersion at Babel, combined with basic biological principles gives a tidy explanation of the people dispersions as well as the reality of what a 'race' is. The number of medical facts given is quite useful and betrays the background of the authors. The

³⁰Babies become addicted to eucalypt from leaf chemicals in their mother's milk. Pandas are also carnivorous so don't require bamboo to survive.

³¹The thyroid being a large endocrine (hormone-producing) gland in the neck.

³²Genesis 11.1-5.

chapter also explains cultural and technological differences, not limiting itself to just physical ones.

Basically a race is a prolonged geographical and therefore biological separation from an original population group. This group must have had *all* the genetic information available to produce *all* the traits seen in *every* 'race' alive today. Roughly half the genetic material is passed from father and mother in the cells nucleus.³³ All this material is available from *conception* or egg fertilisation.

Scientifically, all human beings share 99.8% DNA and of the remainder variation, 85% is *within* each specific 'race', 9% between related ethnic groups (e.g. Chinese and Japanese), and 6% outside (e.g. Caucasians). Although the macro differences are minute (0.2%), the breakup is surprisingly counter-intuitive (nearly all of this would be expected in people of completely separate 'races'?).

A gene is coded in a section of DNA (not mtDNA) which can be read multiple ways (i.e. partially and backwards). Genes come in pairs to further insure against copying mistakes in offspring and these mutations cause crippled protein production (e.g. hemoglobin, a blood oxygen transporter).

Anthropologists generally classify people as Caucasoid (white), Negroid (black), Mongoloid (yellow), and Australoid (Australian aboriginals). These groups are believed descended from a common ape-ancestor yet separated for thousands of years during which time obvious characteristics 'evolved'.

On skin colour, this is colloquially known to be affected by 'melanin', which is an over-simplification. Colour is technically a function of:

*The protein elastin fibres.

*Pigmentation from carotene.

³³What is called mitochondrial DNA (mtDNA) is that material residing only in the mitochondria which is outside the cell's nucleus and only carried by the female. This is the reason why it can be used to study female lineage.

*Density and positioning of the blood capillary network.

*Thickness of the [clear] dermal and sub-dermal layers.

*Melanocyte cell production. These produce the [dark] pigment eumelanin (which increases in response to sunlight exposure), and [reddish] pheomelanin. It is hypothesised a genetic mutation prevents eumelanin production in redheads (who have a large amount of pheomelanin). Both pigments collectively make up what is known called 'melanin'.

Melanin's biological function is to protect against UV radiation damage³⁴ and is therefore beneficial in high exposure areas, e.g. desert, high altitudes or the poles where the magnetic field strength is weaker. It impedes vitamin D absorption so is a disadvantage in low sunlight areas due to vitamin D-associated diseases such as rickets and some cancers.

Different eye shapes are controlled by a small ligament in the corner near the upper nose which in Asian peoples is retained after the first six months of life (all young babies eyes look Asian!)

		Father	
		$M_a m_b$	$m_a M_b$
Mother	$m_a M_b$	Gene <u>a</u> can have $M_a M_a$, $m_a M_a$ (or vice versa) and $M_b M_b$.	
	$M_a m_b$	Likewise, gene <u>b</u> can have $M_a M_a$, $m_a M_a$ (or vice versa) and $M_b M_b$. The above means <i>all</i> combinations (very light to very dark) are possible in the progeny of a single generation.	

With the knowledge of skin colour the reader is then shown how various colours could easily arise even in a single generation if conditions are right. Using a (simplified) two-gene (i.e. a and b per per parent) punnet square matrix,

beginning with light and dark for each gene:

In Albinos for example melanin production is turned off so their skin appears white.

A compelling takeaway is race mixing can quickly reverse or bring back traits previously lost but which Noah and his family (and ultimately Adam and Eve) must have had. Given prolonged artificial separation such mixing could also create new 'races.'

The Babel dispersion is key to cultural differences. Language barriers would have caused distrust and immediate splintering into groups.

³⁴This is admittedly a simplification.

Physically different members of these groups sharing a common language may have been shunned/isolated and/or their traits bred out over time by the majority. (Once their genetic information was *lost* through natural selection it could never be created.)

'Strange' groups such as pygmy tribes are thought to be splinters off the large surrounding ethnic group due to language similarities. The more isolated and subject to environmental, natural and mutational pressures the more physically alien a group can become.

A binding cultural force is the Biblical history (e.g. cataclysmic flood stories), and the gospel

message is the foundation stone for reaching these peoples. Two appendices address common misconceptions: (i) black skin as a curse on Hamitic peoples; (ii) 'stone age' peoples.

(i) It is rightfully stated Noah's curse was pronounced on Ham's son Canaan and given knowledge of modern genetics there is no reason why Japheth could not have been black with his line becoming progressively lighter.

(ii) Technology due to specialisation is naturally localised to a small subset of each population (modern analogies abound). This means some unlucky groups like Neandertals and Aboriginals may not have had (or later lost) the ocean-liner and tower-building skills after separation and had to make do with simple technology until European colonisation.

XIX) What about the Dinosaurs? (pp. 239-257)

Perhaps the most promising chapter in terms of apologetics has been left to the end.

The basic dilemma is one of ages – the evolutionist has *homo sapiens* existing for 100Ka or so and dinosaurs dying out 65Ma ago. Acceptance of this dogma obviously rules out their coexistence.

Given historical data is being dealt with paleontologist, biologists and anthropologists are pointed out as being at an extreme disadvantage in reconstructing the past not having any eye witnesses.

On a technical note only terrestrial animals are considered dinosaurs by scientists today, and only those with column-like legs (not splayed out like the Komodo Dragon for example.)

Fossils are good evidence for creationists – there are *billions* of them, including dinosaurs. These specimens are well preserved meaning rapid burial (time would result in oxidisation in the decay process and scavenging by scavengers). Fossilised sauropod *footprints* [Oxfordshire, UK] and females with eggs visible in the body cavity [Jianxi Province, China] are further evidence.

One large repository is in Patagonia, South America where the 14-m long *Giganotosaurus* was found. A family of six were found buried together with no sign of attack or scavenging – even evolutionists believe this was the result of [a] flood – other causes are death at the bottom of an ancient lake or sea. Another case was seven of the family *Mapusaurus roseae*, creatures up to 12.5m long.

The famed paleontologist Jack Horner in the Gobi Desert found 67 skeletons in one week. He also found many specimens at Hell Creek, Montana that *still smelled*, yet this did not register with him.

A brief summary of the Biblical history of dinosaurs is given – created on days 5 and 6 of creation week, cursed along with the creation after Adam's sin, only pairs onboard the ark survived the flood, afterwards they had the fear of man like all other animals.

On post-flood encounters the cultural historical evidence is vast. St George and the dragon grew from an account in 1405 in the town of Bures, England where a crested-headed dragon killed a shepherd and many sheep. Circa 900AD, an Irish account of a large animal, strong claws and nails on its tail is recorded. Then there is Richard Bell's brass fillet engraving of two neck-entwined sauropod-like dragons.

The Chinese lunar calendar cycle and character for dragon (tail-spiked creature) are also affirming cultural evidences.

A biblical reference to what is most likely a dragon is given to show the reader the Bible is not silent on dinosaurs (Job 40.15-19).

A major stumbling block for evolutionists is addressed – how could dinosaurs have fitted on the ark? *Seismosaurus* for example based on fossil reconstructions was thought to attain a length of 45 metres. There are four key points in the answer:

*Fully grown dinosaurs were not required to be taken on the ark, and most juveniles were less than one metre tall.

*Paleontologists are now having to downsize the number of dinosaur species as closer fossil analysis suggest they are of the same 'kind', one example being *Apatosaurus* and *Diplodocus*. There are an estimated 55 kinds of dinosaurs today.

*Dinosaurs seemed to have had a sigmoid, or s-shaped growth pattern over their lifetime. The maximum growth rate was ~5466kg p.a. These facts have been ascertained from studies of bone rings. The timing could have easily been worked out by God so large growth spurts coincided with the end of the flood and ark disembarkation. This would protect the animals from predation.

*Having an estimated tonnage of 15 000 the ark had more than enough room.

Fossils are again returned to – evidence of out of order specimens which falsify the standard evolutionary model:

**Repenomamus robustus* – a large mammal found with a dinosaur (*psittacosaur*) in its stomach. Only small shrew-like mammals were thought to have existed with dinosaurs. Another surprise is the find of a 165Ma beaver.

*Existence of (five types of) grass in fossilised dinosaur coprolites. The problem here being grasses are only thought to have evolved 55Ma, 10Ma after dinosaurs went extinct! Plant fossils are conspicuously absent from dinosaurian strata yet they had huge energy requirements. The biblical explanation is plants are found in lower strata because they are immobile and unable to escape as dinosaurs could.

*Anachronistic bird-like dinosaur fossils, e.g. [all?] are younger than the

infamous *Archaeopteryx* , which is a confirmed bird.

The complete lack of scientific evidence of the dinosaur's extinction is important to remember. Wild stories of eggs eaten by mammals, narcotic plants, climate change, etc. The most popular is an asteroid but unfortunately no crater dates correlate with the 65Ma extinction date.

Primitive weapons by today's standards, combined with human ingenuity would have sufficed to kill even the largest dinosaur. Whalers for example achieved this kind of feat in the past. The many cultural tales of heroic dragon-slayings may be based on killing of these creatures.

Many dinosaurs may have become extinct due to hunting, also because of environmental conditions post-flood – including the Ice Age – the end of which caused desiccation. Dinosaurs needed a lot of water so this may have been one cause.

'Living fossils' or 'Lazarus taxa' such as the Wollemi pine and the *coelacanth* are the popular falsifying evidences against the standard story. Rumblings of a living dinosaur in Papua New Guinea are astutely pointed out as being a potential *major* shock for the indoctrinated evolutionist, but not so for the Bible-believer.

Perhaps the most powerful evidence is left till last, that of dinosaur biological material finds by Dr. Mary Schweitzer – branching blood vessels containing red blood cells and soft tissue. These cannot be 65Ma but the evolutionary dogma is so powerful one of Mary's correspondents said *no* data would be able to convince him [of their young age].

Apart from fear of men, there is no reason for the Church to be silent on the issue of dragons given the amount of available evidence. One other barrier may simply be laziness over doing the research.

XX) What can I Do? (pp. 259-263)

A brief concluding chapter.

A standard salvation message is given at the end, however the words 'blood' and 'hell' are conspicuously absent. For the Christian, magazine subscriptions, tract/book giveaways, DVD screenings. CMI invites, and

giving creationist talks are suggested as ways to reach the lost.