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Paleontology and the Explosive Origins of Plant and Animal Life

A Dialogue with an Evolutionary Geologist on Gradualism and Intelligent Design

According to the Darwinian concept, minor racial differences are to be gradually increased to become species traits, and then, by adding more and more small alterations, become generic, family differences, etc. The variety of forms would then increase towards the end of the individual phyla, and there would be the greatest abundance of orders, families and genera, that is to say, differences of a higher degree. **The opposite is the case**.

A new Bauplan (body plan) of the systematic range of a class or order ***normally appears absolutely abruptly*** in the fossil record, without long rows/successions of links that would show us a gradual formation from another order forming its root."

Distinguished German paleontologist Otto H. Schindewolf[1]

The fossil record suggests that the major pulses of diversification of phyla occurs before that of classes, classes before that of orders, and orders before that of families", say Erwin and his collegues. "This is not to say that higher taxa have originated before species..., **but the higher taxa *do* *not* seem to have diverged through an accumulation of lower taxa.** …[The paleontologists] Jablonsky and Bottjer were able to show that the pattern is *not an artifact of preservation: it is real* and therefore must be saying something about evolutionary mechanisms. The most obvious message is that a simple extrapolation from one level to another is an unlikely explanation of evolutionary innovation.

Roger Lewin in *Science*

As this pattern [of abrupt appearances of new life forms] has become more and more pronounced, it has **become ever more improbable that the absence of intermediate forms reflects a sampling bias**.

Mike Foote and John J. Sepkoski Jr

1 Text of the original German article: "Nach darwinistischer Vorstellung sollen geringfügige Rassenunterschiede sich allmählich zu Artmerkmalen verstärken und diese dann durch Addition immer neuer kleiner Abänderungen zu Gattungs-, Familienunterschieden und so weiter werden. Die Formenmannigfaltigkeit müsste alsdann gegen Ende der einzelnen Stämme zunehmen; dort wäre die größte Fülle von Ordnungen, Familien und Gattungen, das heißt von Unterschieden höheren Grades zu erwarten. **Das Gegenteil ist der Fall**. Ein neuer Bauplan von dem systematischen Range etwa einer Klasse oder Ordnung erscheint **gewöhnlich völlig unvermittelt auf der Bildfläche**, ohne lange Reihen von Bindegliedern, die uns eine allmähliche Herausgestaltung aus einer anderen, seine Wurzel bildende Ordnung vor Augen führen würden."

Introduction to and Background of the Following Discussion

On 7 November 2017 an Italian geologist obviously critically examining the Bible with his Bible believing friend sent me an e-mail with several questions, the first three were the following:

> "1 - What do you think about creation and evolution?
> 2 - Why do you think that scientists are in error about evolution?
> 3 - How did you arrive to [at] an intelligent designer?"

After an exchange of several e-mails discussing our views on these questions, I continued to concentrate on his main objections, namely that "evolution is an evidence of the nature that you can see" in the fossil record as well as in the present time (the term "evolution" is always used here in the sense of **macroevolution**). Later in an e-mail he repeated his view: "…But I continue to say that: evolution is an evidence of the nature that you can see... In the future, I hope, these gaps will be filled." The ensuing text is my answer on these main points.

I apologized twice (mail and text) that I had repeated his statements too often[2] and he answered "Hi my dear Wolf, yes I'll read soon your files, sorry if I've been too "tough/hard" in previous mail in some answers..." (e-mail 18 February 2018).

Nevertheless, my interlocutor appears to be a very humble, peaceful and friendly man – enduring my scientific[3] attacks on his views with a certain calmness/coolness/composure that attests to an exemplary gentle character, which I appreciate very much.

Although I could not agree with his opinion that the gaps of the fossil record explain the evolutionary problems presented by paleontology (a view, which appears to be contrary to almost the entire amount of scientific evidence cited below), I respected, of course, his personal decision first to stick to that **still generally prevailing view** *of not only most neo-Darwinians, but also of many geologists and paleontologists and the general public alike.* But on 31 March 2018 he seems to have revised his view somewhat stating "I have read your very long pdf. It is true: nor can we affirm with certainty clear evidence of evolution,…" (see, however, full text below). I answered that I think that his comment would be a step into the right direction.

Anyway, against the generally "**favored escape** of most paleontologists from the embarrassment of a record that seems to show so little of evolution directly" (Gould), the ***various facts and arguments*** of this discussion could be also relevant, instructive and perhaps even illuminating, for many further intelligent students examining these questions – laymen and specialists alike. So, this discussion is now available for them in the form of the present document.

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[2] Also, some of the adjectives for the student (your inquisitive, investigative, curious/inquiring/humble student etc.) may be a bit too much.
[3] as I evaluate them .

In the following discussion with Dr. ABC., I refer extensively to the paper by Günter Bechly and Stephen C. Meyer (2017, pp. 331-361): ***THE FOSSIL RECORD AND UNIVERSAL COMMON ANCESTRY*** of the 1007 pp. volume *THEISTIC EVOLUTION* (edited by J. P. Moreland, S. C. Meyer, C. Shaw, A. K. Gauger, and W. Grudem; Foreword by S. Fuller)[4]; I also quoted some passages of Meyer's well-known *DARWIN'S DOUBT* (2013 and 2014)[5].

For the readers who are interested also in all the other relevant topics presented by Bechly and Meyer in their chapter (*Introduction*, *Logical Structure of the Argument, Case for Universal Common Descent with Modification from Paleontology, Morphologically Intermediate Fossils* (*Possible* "*Missing Links*"), *Morphologically Intermediate and Temporally* "*Transitional Series*", *The Evidence against Universal Common Descent from Paleontology* (the full text of IV), *The Polyphyletic Interpretation of the Fossil Record, The Polyphyletic View and Morphological Intermediates, The Polyphyletic View, Discontinuity, and Alledged Transitional Intermediates, Other classes of Evidence and the Theory of Universal Common Descent*, and the *Conclusion*), *cf*. consult and check, please, carefully the full original chapter 10 of the book.

P. S. (3 July 2018): As for Günter Bechly (2018): Search, please, "Bechly" at https://evolutionnews.org/ You may also like to listen to the following podcasts:
https://www.discovery.org/multimedia/audio/2018/02/bechly-fossils-1/
https://www.discovery.org/multimedia/audio/2018/02/gunter-bechly-on-fossils-and-common-descent-pt-2/

Discussion (from 17 November 2017 to 9 April 2018)

Dear ABC.,

first, thank you very much for your mail with your many interesting questions. You state: "I'm sorry, but now I do not agree with you." Well, no problem ABC., that may be the basis for a further fine discussion. As to your questions: Perhaps several of them will already be answered by my following proposal:

In medias res:

Now, please, let us play a little game: You are my teacher and I am your student knowing almost nothing about paleontology. Also, [let us assume that] at home my parents have instructed me for many years that the Bible was inspired by God and that creation as told in Genesis was an absolutely true record of what had really happened concerning the origin of the universe and life including the creation of humans.

However, now I'm studying geology and paleontology with dottore ABC. teaching me – in strong contrast to everything that I have learned so far at home – that evolution is true: "*I think that scientists are right about evolution because*

[4] Crossway, Whearon, Illinois.
[5] Stephen C. Meyer (2013): Darwin's Doubt. The Explosive Origin of Animal Life and the Case for Intelligent Design. HarperOne, New York. And with a new epilogue responding to critics 2014.

it's an evidence of nature[6] *that you can see,...."* and "*You can see the proof of evolution by*[7] *real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as*[8] *I said*."

Even so, I'm a very inquisitive student, and I have just studied the following article mostly written by another contemporary paleontologist, dottore Günter Bechly (together with Stephen C. Meyer, who had written a bestseller on the Cambrian Explosion; see below) (2017, pp. 331-361): *The Fossil Record and Universal Common Ancestry*[9]. (In fact, your student has just spoken with him about that topic about two hours ago while writing this mail).

Also, your investigative student thought that it would be very appropriate first to introduce that paleontologist to you. Well, now, who is Günter Bechly?

"Günther Bechly is a German paleontologist and senior research scientist at Biologic Institute. His research focuses on the fossil history of insects, discontinuities in the history of life, and the waiting time problem. He earned his Ph.D., summa cum laude, in paleontology from the Eberhard Karls University of Tübingen (Germany), where he studied the evolution of dragonflies and their wings. He worked from 1999-2016 as curator for amber and fossil insects at the State Museum of Natural History in Stuttgart, as successor of Dieter Schlee and Willi Hennig. **He has described more than 160 new fossil taxa including three new insect orders, and published more than 70 scientific articles in peer-reviewed journals and a book with Cambridge University Press**. His research has received broad international media coverage, in particular his discoveries of *Coxoplectoptera* and the predatory roach *Manipulator*."

But before starting to quote from the text pp. 338-352 of Bechly and Meyer, your curious/inquiring/humble student tells you that he had read also something about Darwin and that the latter had provided the basic idea of continuous evolution – still almost absolutely dominant in current modern biology and paleontology – more than 150 years ago by postulating:

> "*innumerable* slight variations", "*extremely* slight variations" and "*infinitesimally* small inherited variations" (he also spoke of "infinitesimally small changes", "infinitesimally slight variations" and "slow degrees") and hence imagined "steps not greater than those separating fine varieties","insensibly fine steps" and "insensibly fine gradations", "for natural selection can act only by taking advantage of slight successive variations; **she can never take a leap**, but must advance by the shortest and slowest steps" or "the transition [between species] could, according to my theory, be effected only by ***numberless small gradations***" (emphasis added, see http://darwin-online.org.uk/).

Your enthusiastic student has also detected that a lot of similar statements have been made by Dawkins (2017) and many other contemporary authors.[10] He thinks

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[6] Originally "the nature", see also the next two footnotes
[7] "with"
[8] "like"
[9] Bechly is the main author of that article together with Stephen C. Meyer in *Theistic Evolution*. Crossway, Wheaton, Illinois (1007 pp., 2017).
[10] Dawkins, R. (2017): Science in the Soul: Selected Writings of a Passionate Rationalist. Bantam Press, New York. As to an elaborate documentation of the role of micro-mutations for the present synthetic theory (neo-Darwinism), see, for instance, also my book of 2011 on: The Evolution of the Long-Necked Giraffe (Giraffa camelopardalis L.): What do we really know?: Testing the Theories of Gradualism, Macromutation, and Intelligent Design. Monsenstein und Vannerdat OHG, Münster. Lönnig (2014): Unser Haushund: Eine Spitzmaus im Wolfspelz: http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf; Lönnig (2017): http://www.weloennig.de/jfterrorchipmunks.pdf; Bethell (2017): Darwin's House of Cards. Discovery Institute Press, Seattle.

especially of textbook author and leading evolutionary biologist Douglas Futuyma, who comments on the present state of evolutionary theories (2017):

> "Newly discovered molecular phenomena have been **easily accommodated in the past by elaborating orthodox evolutionary theory**, and it appears that the same holds today for phenomena such as epigenetic inheritance. In several of these areas, empirical evidence is needed to evaluate enthusiastic speculation. Evolutionary theory will continue to be extended, but **there is no sign that it requires emendation**."[11]

And Carl Zimmer reported (2016) that Futuyma emphasized at the Royal Society Meeting on *New trends in evolutionary biology: biological, philosophical and social science perspectives*[12] concerning the strength and Modern Synthesis:

> ""**We must recognize that the core principles of the Modern Synthesis are strong and well-supported**," Futuyma declared. Not only that, he added, but the kinds of biology being discussed at the Royal Society weren't actually all that new. The architects of the Modern Synthesis were already talking about them over 50 years ago. And there's been a lot of research guided by the Modern Synthesis to make sense of them."[13]
> "We illustrate how careful genetic studies have repeatedly shown that ***apparently puzzling results in a wide diversity of organisms involve processes that are consistent with neo-Darwinism***. They do not support important roles in adaptation for processes such as directed mutation or the inheritance of acquired characters, and therefore no radical revision of our understanding of the mechanism of adaptive evolution is needed."[14]

See also the following concise characterization of today's main evolutionay theory – the Modern Synthesis or neo-Darwian theory of evolution with its focus on gradualism – by Gerd B. Müller (2017):

> "Even though claims have been made that classical evolutionary biology has continuously incorporated aspects from new conceptual domains, **the majority of tenets and explanations that appear in characterizations of the current theory are still derived from the MS** [Modern Synthesis] **account and its population genetic principles**. In a condensed form, these tenets are as follows: (i) all evolutionary explanation requires the study of populations of organisms; (ii) populations contain genetic variation that arises randomly from mutation and recombination; (iii) populations evolve by changes in gene frequency brought about by natural selection, gene flow and drift; (iv) genetic variants generate slight phenotypic effects and the ***resulting phenotypic variation is gradual and continuous***; (v) genetic inheritance alone accounts for the transmission of selectable variation; (vi) new species arise by a prevention of gene flow between populations that evolve differently; (vii) ***the phenotypic differences that distinguish higher taxa result from the incremental accumulation of genetic variation***; (viii) natural selection represents the only directional factor in evolution."

Now, back to paleontologist Günter Bechly and Stephen C.Meyer, who have just published an article (as mentioned above), which your student has carefully studied and from which he will quote the following text – and, as you can expect, your inquisitive student has, of course, some questions which – so he hopes – his instructor will be able to answer satisfactorily for him by *evidence of nature that you can see*. (Almost all emphasis in the quotations above and below by W.-E. L.)

IV. The Evidence *against* Universal Common Descent from Paleontology

"In particular, the fossil record […] manifests large "morphological gaps" and discontinuities between different groups of organisms, especially at the higher taxonomic levels (of phyla, classes, and orders) representing the major morphological differences between different forms of life. With very few exceptions the major groups of organisms come into the fossil record abruptly without discernible connection to earlier (and generally simpler) alleged ancestors in the fossil record. Indeed, leading

[11] Futuyma, D. J. (2017): Evolutionary biology today and the call for an extended synthesis. Interface Focus http://rsfs.royalsocietypublishing.org/content/7/5/20160145.

[12] https://royalsociety.org/science-events-and-lectures/2016/11/evolutionary-biology/

[13] Zimmer, C. (2016): Scientists Seek to Update Evolution. https://www.quantamagazine.org/scientists-seek-to-update-evolution-20161122/ See also the angry comment by Laurance A. Moran: http://sandwalk.blogspot.de/2017/08/the-extended-evolutionary-synthesis.html

[14] Deborah Charlesworth, Nicholas H. Barton, Brian Charlesworth (2017): The sources of adaptive variation. http://rspb.royalsocietypublishing.org/content/284/1855/20162864

evolutionary biologists and paleontologists have long acknowledged this pattern of discontinuity. Evolutionary biologist Ernst Mayr, one of the fathers of the modern neo-Darwinian synthesis, famously noted that "[w]herever we look at the living biota ... **discontinuities are overwhelmingly frequent**. …The discontinuities are **even more striking in the fossil record**.""

Now, some questions of your student W.-E. L: Well, my instructor and teacher, you asserted that you "*think that scientists are right about evolution because it's an evidence of the nature that you can see*,...." But in the face of **overwhelmingly frequent discontinuities - *why should I see evolution*** in spite of all these discontinuities? And why should I give up my parent's instructions on the origin of life that God created all its basic kinds? All these discontinuities are exactly what I have expected from what I was taught in the Genesis record. Thus, the **evidence that I can see** confirms, verifies, corroborates and validates exactly what my parents have taught me on the origin of life and its basic forms.

Bechly and Meyer continue:

"Moreover, since the publication of *The Origin of Species* in the late 19th century, ***our knowledge of the fossil discontinuities can no longer be explained away as a consequence of alleged incomplete sampling of the fossil record***. In fact, paleontologist Michael Foote of the University of Chicago has noted that as more and more fossil discoveries have been made, the new forms that these discoveries document consistently fall within existing higher taxonomic groups (e.g., phyla, subphyla, and classes). In other words, these new discoveries have repeatedly failed to document the rainbow of intermediate forms expected in the Darwinian view of the history of life (especially, at the higher taxonomic levels). Foote has shown, using statistical sampling analysis, that as this pattern has become more and more pronounced, it has ***become ever more improbable that the absence of intermediate forms reflects a sampling bias*** — that is, an "artifact" of either incomplete sampling or preservation[15]. Increasingly, paleontologists accept that ***fossil discontinuities are real*** and need to be explained, not explained away. As Hickman et al. (1988)[16] note "most major groups of animals appear abruptly in the fossil record, fully formed, and with no fossils yet discovered that form a transition from their parent group". Indeed, numerous fossil "radiations" or "explosions" of new forms of life are characterized by such abrupt appearances. To get a sense of how pervasive this discontinuous pattern is, and how significant these events are in the history of life, consider these short descriptions of several of the salient examples of the abrupt appearance of new forms of life in the fossil record:"

Question of your zealous student W.-E. L: If the fossil discontinuities are real – as maintained/emphasized/affirmed by many of the best informed, most excellent, brilliant and eminent paleontologists – why do you assert that "*You can see the proof of evolution with real evidence... in the fossils*"?

Bechly and Meyer proceed (p. 340; my enumeration[17]):

(1) The Origin of Life

"Evidence suggests that the first living cells arose very early in the history of planet Earth, almost as soon as conditions on our planet would permit. Over the last several decades most origin-of-life biologists and geochemists have placed the origin of the first life at about 3.8 billion years ago (bya),

[15] Mike Foote and John J. Sepkoski Jr., "Absolute measures of the completeness of the fossil record," *Nature* 398 (1999): 415–417.
[16] Cleveland P. Hickman et al., *Integrated Principles of Zoology* 8th ed (St. Louis: Times Mirror / Mosby College Publ., 1988).
[17] Changed somewhat compared to my original PDF to ABC.

just after the cessation of the meteorite bombardment of the earth called the Late Heavy Bombardment (4.1-3.8 bya). The latest evidence from biogenic carbon in zircon crystals suggests that life was already present 4.1 bya in the Hadean era, even before the Late Heavy Bombardment when life could survive only in subterranean niches[18]. Either way, life seems to have arisen abruptly about as soon as it possibly could, given conditions on the early Earth."

Well, your student has carefully listened (in fact, several times intensely) to the talk of professor James Tour https://www.youtube.com/watch?v=_zQXgJ-dXM4 and has also corresponded with him.

An abrupt origin of life is exactly what your contemplative student has expected from what he was taught at home. Hardly any better affirmation, verification, attestation possible! Your student now asks you: How, then, can you say: "*I see those evidence clearly in the present and in the past both, as I said*."?

Bechly and Meyer go on (pp. 340/341):

(2) The Origin of Photosynthesis

"The origin of photosynthesis was a key event that made later plant and animal life on Earth possible. Photosynthesis involves two intricate and integrated sets of complex biochemical processes known as photosystems I and II, which are in turn made of many equally complex proteins. The earliest existence of cyanobacteria, the first photosynthetic cells, is documented by stromatolites from 3.7 billion year old rocks from the Isua supracrustal belt in Greenland[19]. Nevertheless, indirect evidence suggests an even earlier origin of photosynthesis about 3.8 billion years ago[20]. Because the Late Heavy (meteorite) Bombardment (4.1-3.8 bya), "repeatedly boiled away the existing oceans into steam atmospheres" and only left subterranean environmental niches[21], photosynthesis was only possible in the Earth's oceans after the bombardment ceased. That implies that photosynthesis with all its integrated biochemical complexity originated abruptly as soon as the Earth first offered a stable and suitable environment for the process to occur."

Now, your deferential student's next question: Thousands of papers and books have been written on photosynthesis – it is so enormously, tremendously, awfully, almost infinitely complex that the best scientists of the world do not understand it yet fully (one researcher and specialist on the topic told us at the MPI that we understand perhaps no more than 10% of its complexity so far, but some researchers are more optimistic). Anyhow, this phenomenon "*with all its integrated biochemical complexity* ***originated abruptly*** *as soon as the Earth offered a stable and suitable environment for the process to occur*" – well, how then is it possible, your student asks, **that you see** the evidences for a totally mindless, accidental, continuous evolution *"clearly in the present and in the past both"*? *Cf.* more on the topic here: https://evolutionnews.org/2017/04/new-study-on-the-evolution-of-photosynthesis-a-very-advanced-capability/

[18]Elizabeth A. Bell et al., "Potentially biogenic carbon preserved in a 4.1 billion-year-old zircon," Proceedings of the National Academy of Sciences USA 112 (2015): 14518–14521.
[19] Allen P. Nutman et al., "Rapid emergence of life shown by discovery of 3,700-million-year-old microbial structures," Nature 537 (2016): 535–538..
[20] Norman H. Sleep, "The Hadean-Archaean Environment," Cold Spring Harbor Perspectives in Biology 2 (2010): a002527; Jeff Hecht, "Photosynthesis began on Earth 3.8 billion years ago," New Scientist 2905 (2013): 9; Ernesto Pecoits et al., "Atmospheric hydrogen peroxide and Eoarchean iron formations," Geobiology 13 (2015): 1–14.
[21] Simone Marchi et al., "Widespread mixing and burial of Earth's Hadean crust by asteroid impacts," Nature 511 (2014): 578–582.

Bechly and Meyer pursue (p. 341):

(3) Archaean Genetic Expansion

"This event is not so much documented by real fossils as by the identification of "fossil genes" through genomic studies. David & Alm (2011) found that the "genomic fossil record" indicates that the collective genome of life expanded between 3.3-2.8 billion years ago[22]. During this period, 27% of all presently existing gene families came into being by rapid evolutionary innovation. Arguably, the generation of this amount of new genetic information vastly exceeds the creative power of the neo-Darwinian mechanism of mutation and natural selection, given the extreme rarity of functional genes and proteins within the space of possible DNA and amino acid sequences. As Meyer argued in Chapter 2, a randomly driven mutational search is overwhelmingly more likely to fail than to succeed in finding even one functional gene, let alone all the many genes that arose during this Archaean expansion, in available evolutionary time[23]."

Now, of course, your student's question: Assuming that the identification of unseen "fossil genes" be true (this is, in fact, a deduction from the unproved presupposition of continuous evolution by the neo-Darwinian theory), and that "*a randomly driven mutational search is overwhelmingly more likely to fail than to succeed in finding even one functional gene, let alone all the many genes that arose during this Archaean expansion, in available evolutionary time*" (an induction by the genetic facts discovered), why – to repeat your statement – do you *"think that scientists are right about evolution because it's an evidence of nature that you can see*"?

Well, your eager and openminded student is going to repeat your three statements, as already quoted above, ***also for all*** in the following texts and quotations discussing the ***explosions, abrupt biodiversity events and radiations*** and especially the Top-Down Pattern of Appearance of new life forms in the fossil record (regular question behind it all: are your statements corroborated by the paleontological evidence or are they in opposition to the facts cited?) so that he respectfully expects your answers by *evidence of nature that you can see*, "*real evidence*", real proofs for continuous evolution as taught by the leading evolutionary biologists of today.

Bechly and Meyer move on (p. 342):

(4) Avalon Explosion

"During the Ediacaran, the latest period of the Precambrian era, an enigmatic group of organisms appear abruptly in the fossil record. Radiometric dating studies fix the date for the first appearance of

[22] Lawrence A. David and Eric J. Alm, "Rapid evolutionary innovation during an Archaean genetic expansion," Nature 469 (2011): 93–96.
[23] Douglas D. Axe, "Estimating the prevalence of protein sequences adopting functional enzyme folds," *Journal of Molecular Biology* 341 (2004): 1295–1315; Douglas Axe, *Undeniable: How Biology Confirms Our Intuition That Life Is Designed* (San Francisco: HarperOne, 2017); see also a discussion of the waiting time problem in: Michael J. Behe and David W. Snoke, "Simulating evolution by gene duplication of protein features that require multiple amino acid residues," *Protein Science* 13 (2004): 2651–2664; Michael J. Behe, *The Edge of Evolution: The Search for the Limits of Darwinism* (New York: Free Press, 2007); Rick Durrett and Deena Schmidt, "Waiting for two mutations: with applications to regulatory sequence evolution and the limits of Darwinian evolution," *Genetics* 180 (2008): 1501–1509; Ann K. Gauger and Douglas D. Axe, "The Evolutionary Accessibility of New Enzymes Functions: A Case Study from the Biotin Pathway," *BIO-Complexity* 2011: 1–17; Stephen C. Meyer, *Darwin's Doubt. The explosive origin of animal life and the case for intelligent design* (New York: Harper One, 2013).

these Ediacaran fauna at about 575–565 million years ago. These strange marine organisms ("Garden of Ediacara") include microbial mats covering the sea bottom and enigmatic large sessile organisms that lack any visible feeding apparatus, and mostly have a quilted body with glide symmetry and fractal growth. Late Precambrian-era sediments around the world have yielded three main types of Ediacaran fossils. The first group consists of the Precambrian sponges. The second is the distinctive group of fossils from the Ediacaran Hills in Australia. The creatures fossilized there include such well-known forms as the flat, air mattress-like body of *Dickinsonia*; the enigmatic *Spriggina*, with its elongated and segmented body and alleged "head shield"; and the frond-like *Charnia*. The third group of fossils named *Kimberella*, discovered in the cliffs along the White Sea in northwestern Russia, have been claimed to be primitive mollusks, but this identification is highly controversial[24]. Nevertheless, apart from sponges and a few controversial fossils that have been attributed to algae, cnidarians and primitive mollusks, the Ediacaran fauna have no obvious relationship to later life forms, and their systematic status is highly disputed, ranging from identifications as giant protists, to representatives of an independent multicellular kingdom, to metazoan animals, or even lichens. Whatever their classification, ***all groups originate abruptly without any known putative ancestors*** during what is now known as the Avalon Explosion 575-565 mya[25]. Indeed, the Ediacaran fossils provide evidence of a puzzling leap in biological complexity. Before the Ediacaran organisms appeared, the only living forms documented in the fossil record for over 3 billion years were single-celled organisms, colonial algae, and possible sponges. Although the humble Ediacaran biota look simple beside most of the later Cambrian animals, they exhibit a much higher degree of complex organization than the single-celled organisms and colonial algae that preceded them."

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Your student's question: Well, how can you see evolution when "***all groups originate abruptly without any known putative ancestors***"?

(5) Cambrian Explosion

Bechly and Meyer, pp. 343/344: "The Cambrian explosion refers to a dramatic period in the history of life when many new and anatomically sophisticated animals appeared suddenly in the sedimentary layers of the geologic column without any discernible evidence of simpler ancestral forms in the earlier layers below. Fossil discoveries during this period attest to the ***first*** **appearance of animals representing more than twenty phyla** (the largest division of animal classification) as well as many more subphyla and classes, each manifesting distinctive body plans, where a body plan represents a unique arrangement of body parts and tissues. Indeed, animals representing most of the body plan that have ever existed on Earth first appear during this **explosive event**. One especially dramatic fact of the Cambrian explosion is the first appearance of many novel marine invertebrate animals (representatives of separate invertebrate phyla, subphyla, and classes in the traditional classification scheme). Some of these animals have mineralized exoskeletons, including those representing phyla such as echinoderms, brachiopods, and arthropods, each with their clearly distinct and novel body plans. Several unexpected features of the Cambrian explosion from a Darwinian point of view are: (1) **the sudden appearance of**

[24] John A. Cunningham, "The origin of animals: Can molecular clocks and the fossil record be reconciled?" *Bioessays* 39 (2017): 1600120; Graham E. Budd and Sören Jensen, "The origin of the animals and a 'Savannah' hypothesis for early bilaterian evolution," *Biological Reviews* 92 (2017): 446–473.

[24] Bing Shen et al., "The Avalon Explosion: Evolution of Ediacara Morphospace," *Science* 319 (2008): 81–84.

novel animal forms; (2) **an absence of transitional intermediate fossils connecting the Cambrian animals to simpler Precambrian forms**; (3) a startling array of completely novel animal forms with novel body plans; and (4) a pattern in which **radical differences in form in the fossil record arise before more minor, small-scale diversification and variations**. *This latter pattern turns on its head the Darwinian expectation of small incremental change only gradually resulting in larger and larger differences in form*. The abruptness of the explosion is also dramatic from both a geological and evolutionary the standpoint. Most experts date the duration of the Cambrian explosion between 10-25 million years of the Cambrian Explosion around 540-515 mya[26]. Others emphasize that the main pulse of this event occurred within only 530-520 mya[27]. Other studies even suggest that between 13-16 new animal phyla arose within a narrow 5-6 million year window of the larger explosive radiation[28]. In any case, most Cambrian experts agree that the majority of Cambrian animal phyla lack any putative fossil ancestors within the preceding Ediacaran biota[29].Thus, the Cambrian Explosion has been variously called "Evolution's Big Bang"[30] and "Darwin's Dilemma"[31]."

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,...*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Now again your student's question: How is it possible for my teacher to see "the proof of evolution by real evidence in the fossils" in complete, outright, absolute contrast to "*the sudden appearance of novel animal forms*", in clear opposition to the "*absence of transitional intermediate fossils connecting the Cambrian animals to simpler Precambrian forms*" and, among other points, also in downright contradiction to the "*pattern in which radical differences in form in the fossil record arise before more minor, small-scale diversification and variations*"? According to several evolutionary scientists, ***at least ¾ of the entire phylogenetic tree are missing from the very beginning of the tree of life*** (some even say 7/8 are absent). Is it really incorrect for your student to conclude that the tree of life has ***no evolutionary roots***? He also asks: Where is the "real evidence" for continuous evolution? And: Could ingenious,

[26] Samuel A. Bowring et al., "Calibrating Rates of Early Cambrian Evolution," *Science* 261 (1993): 1293–1298; Douglas H. Erwin et al., "The Cambrian Conundrum: Early Divergence and Later Ecological Success in the Early History of Animals," *Science* 334 (2011): 1091–1097; Charles R. Marshall, "Explaining the Cambrian "Explosion" of Animals," *Annual Review of Earth and Planetary Sciences* 34 (2006): 355–384; Graham E. Budd, "The earliest fossil record of the animals and its significance," *Philosophical Transactions of the Royal Society B* 363 (2008): 1425–1434; Graham E. Budd, "Animal Evolution: Trilobites on Speed," *Current Biology* 23 (2013): R878–R880; Michael S. Y. Lee et al., "Rates of Phenotypic and Genomic Evolution during the Cambrian Explosion," *Current Biology* 23 (2013): 1889–1895; Degan Shu et al., "Birth and early evolution of metazoans," *Gondwana Research* 25 (2014): 884– 895.

[27] Charles R. Marshall and James W. Valentine, "The importance of preadapted genomes in the origin of the animal bodyplans and the Cambrian Explosion," *Evolution* 64 (2010): 1189-1201; Douglas H. Erwin and James W. Valentine, *The Cambrian Explosion: The Construction of Animal Biodiversity* (Greenwood Village: Roberts and Co., 2013).

[28] We generally follow Erwin, Valentine and other Cambrian experts in dating the duration of the Cambrian explosion as a whole to about 10 million years. But in *Darwin's Doubt*, Meyer also shows—by conjoining the conclusions of two separate analyses, one by Douglas Erwin, and one by MIT geochronologist Samuel Bowring—that between 13-16 new animal phyla arose abruptly within just a 5-6 million year window of the middle Cambrian. See: Samuel A. Bowring et al., "Calibrating Rates of Early Cambrian Evolution," *Science* 261 (1993): 1293–1298; Douglas H. Erwin et al., "The Cambrian Conundrum: Early Divergence and Later Ecological Success in the Early History of Animals," *Science* 334 (2011): 1091–1097; Stephen C. Meyer, *Darwin's Doubt: The Explosive Origin of Animal Life and the Case for Intelligent Design* (New York: Harper One, 2013), 73.

[29] Simon Conway Morris, "Cambrian "explosion": Slow-fuse or megatonnage?" *PNAS* 97 (2000): 4426–4429; Simon Conway Morris, "Darwin's dilemma: the realities of the Cambrian 'explosion'," *Philosophical Transactions of the Royal Society B* 361(2006): 1069-1083.

[30] Evolution's Big Bang, Time, December 4, 1995.

[31] Simon Conway Morris, "Darwin's dilemma: the realities of the Cambrian 'explosion'," *Philosophical Transactions of the Royal Society B* 361 (2006): 1069-1083.

innovative, creative and artful **design** the real, actual and true reason behind "the startling array of completely novel animal forms with novel body plans"?

(6) Great Ordovician Biodiversification Event (GOBE)

Bechly and Meyer, pp. 344/345: "While general animal body plans representing distinct phyla, subphyla and classes first appeared in the Cambrian Explosion, these marine invertebrate groups greatly diversified on lower taxonomic levels (e.g., about 300 new families) during a relatively short period of time in an event known as the Great Ordovician Biodiversification about 485-460 mya[32]. **This explosive diversification of marine life has been called "Life's second Big Bang" by O'Donoghue** (2008)[33], who mentions "that the 'Ordovician explosion' was every bit as momentous for animal evolution as the Cambrian one.""

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Your student's question on the ***second Big Bang of life***: Since all the ca. ***300 new families appear abruptly in the fossil record***[34] – where does my instructor "see the proof of evolution by real evidence"?

(7) Devonian Nekton Revolution

Bechly and Meyer, p. 345: "Klug et al. (2010) described a radical change in the composition of the marine fauna of the Early Devonian[35]. While previously the marine ecosystems were dominated by planktonic (drifting) and demersal (near sea bottom) taxa, between 410-400 mya a very sudden and enormous expansion of marine nektonic (actively swimming) animals occurred in which groups such as ammonoid cephalopods and jawed fish make their first appearance. Within just 10 million years such active swimmers increased from only 5% to about 75% of the marine fauna."

(8) Odontode Explosion

Bechly and Meyer, p. 345: "The term "odontode explosion" was coined by Fraser et al. (2010) for the sudden appearance of vertebrate dentition[36].Within 10 million years (425-415 mya) between the Late Silurian and Early Devonian all major groups of jawed fish with teeth and tooth-like structures (odontodes) **appear abruptly in the fossil record**. These include stemgnathostomes like the arthrodiran *Entelognathus* (423 mya), spiny sharks or Acanthodii (*Nerepisacanthus*, 423-419 mya), the oldest known cartilaginous fishes or Chondrichthyes (sharks like *Stigmodus* and *Plectrodus*, 423-419 mya), and the oldest known bony fishes or Osteichthyes, the latter already with the modern subgroups of lobefinned Sarcopterygii (*Guiyu*, 423.5 mya) and ray-finned Actinopterygii (*Meemannia*, 415 mya)."

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[32] Thomas Servais et al., "The Great Ordovician Biodiversification Event (GOBE): The palaeoecological dimension," *Palaeogeography, Palaeoclimatology, Palaeoecology* 294 (2010): 99–119; David A. T. Harper et al., "The Great Ordovician Biodiversification Event: Reviewing two decades of research on diversity's big bang illustrated by mainly brachiopod data," *Palaeoworld* 24 (2015): 75–85.
[33] James O'Donoghue, "The Ordovician: Life's second big bang," *New Scientist* 2660 (2008): 34–37.
[34] *Cf.* Michael Benton (Ed.) Fossil Record 2. Springer Netherlands (1994).
[35] Christian Klug et al., "The Devonian Nekton Revolution," *Lethaia* 43 (2010): 465–477.
[36] Gareth J. Fraser et al., "The Odontode Explosion: The origin of tooth-like structures in vertebrates," *Bioessays* 32 (2010): 808–817.

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records*…" "*I see those evidence clearly in the present and in the past both, as I said*."

Your student's question, is of course: Since "all major groups of jawed fish with teeth and tooth-like structures (odontodes) ***appear abruptly in the fossil record***" – where is the evidence for evolution that you can see? And your inquiring student dares to repeat his question: *Rather, could ingenious, innovative, creative and artful* ***design*** *the real, actual and true reason behind the* ***sudden appearance*** *of* "all major groups of jawed fish with teeth and tooth-like structures" that "include stemgnathostomes like the arthrodiran *Entelognathus* (423 mya), spiny sharks or Acanthodii (*Nerepisacanthus*, 423-419 mya), the oldest known cartilaginous fishes or Chondrichthyes (sharks like *Stigmodus* and *Plectrodus*, 423-419 mya), and the oldest known bony fishes or Osteichthyes, the latter already with the modern subgroups of lobefinned Sarcopterygii (*Guiyu*, 423.5 mya) and ray-finned Actinopterygii (*Meemannia*, 415 mya)"?

(9) Silurio-Devonian Radiation of Terrestrial Biotas

Bechly and Meyer, pp. 345/346: "The sudden origin and diversification of vascular land plants (Tracheophyta) in the Late Silurian and Early Devonian is one of the great mysteries in the history of life. One of the two oldest known vascular land plants, ***Baraghwanatia*****, already belongs to the modern subgroup of clubmosses**. Bateman et al. (1998) conclude that "the Siluro-Devonian primary radiation of land biotas is the terrestrial equivalent of the much debated Cambrian 'explosion' of marine faunas.[37]""

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records*…" "*I see those evidence clearly in the present and in the past both, as I said*."

Your analytical student has also made a special study of the abrupt appearance of the oldest vascular plants, especially of *Baraghwanatia longifolia*. Well, is he wrong to conclude that there is no convincing evidence for continuous evolution also for these organisms in the past?

(10) Carboniferous Insect Explosion

Bechly and Meyer, p. 346: "In the Pennsylvanian (Upper Carboniferous) era between 318-300 mya, when the world was dominated by vast swamp forests, **a large diversity of different winged insect groups appeared suddenly without any known transitional forms in the older Mississippian**

[37]Richard M. Bateman et al., "Early Evolution of Land Plants: Phylogeny, Physiology, and Ecology of the Primary Terrestrial Radiation," *Annual Review of Ecology and Systematics* 29 (1998): 263–292.

(Lower Carboniferous) or Devonian strata[38]. These do not only include giant palaeopterous insects like the extinct palaeodictyopterans, mayflies, and dragonflies, or "primitive" neopterous insect orders like stoneflies, roaches, and orthopterans, but also thrips, bugs, and even advanced holometabolans like wasps, beetles, and scorpionflies."

> ABC.: "*I think that scientists are right about evolution because it's an evidence of the nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Your student's question: Where does my teacher see clear evidence for continuous evolution in the **sudden emergence** "*of a large diversity of different winged insect groups **without any known transitional forms** in the older Mississippian (Lower Carboniferous) or Devonian strata*"?

(11) Triassic Explosion

Bechly and Meyer, p. 346: "This event was also called the Early Triassic metazoan radiation or post-Permian radiation. No new phyla and classes, **but many new orders and families originate abruptly after the end-Permian mass extinction** (about 252 mya) among marine invertebrates (e.g., bivalves and ceratites), insects (e.g., Coleoptera and Diptera), and tetrapods (see below). Ward (2006) explains that "the diversity of Triassic animal plans is analogous to the diversity of marine body plans that resulted from the Cambrian Explosion. It also occurred for nearly the same reasons and, as will be shown, was as important for animal life on land as the Cambrian Explosion was for marine animal life[39]."""

> ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

My instructor will probably already know what the next question of your student will be: *Where* is the clear evidence for continuous evolution for the (abrupt) origin of all the new orders and families after the end-Permian mass extinction? And he repeats his question: *could ingenious, innovative, creative and artful design the real, actual and true reason behind the sudden appearance of all these new life forms?*

(12) Early Triassic Terrestrial Tetrapod Radiation

Bechly and Meyer, p. 347: "Directly after the great Permo-Triassic mass extinction **the first representatives of modern tetrapod taxa appear suddenly within a short window of time between**

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[38] Arthur N. Strahler, *Science and Earth History: The Evolution/Creation Controversy* (Buffalo: Prometheus Books, 1999; Conrad C. Labandeira, "The Fossil Record of Insect Extinction: New Approaches and Future Directions," *American Entomologist* 51 (2005): 14–29; David Grimaldi and Michael S. Engel, *Evolution of the Insects*. (Cambridge: Cambridge Univ. Pr., 2005); David B. Nicholson et al., "Changes to the Fossil Record of Insects through Fifteen Years of Discovery," *PLoS ONE* 10 (2015): 1–61; Yan-hui Wang et al., "Fossil record of stem groups employed in evaluating the chronogram of insects (Arthropoda: Hexapoda)," *Scientific Reports* 6 (2016): 38939.

[39] Peter D. Ward, *Out of Thin Air* (Washington: Joseph Henry Press, 2006), 160.

251-240 mya[40]. These include the first dinosaurs (*Nyasasaurus*), the first turtles (*Pappochelys*), the first lizard-relatives/Lepidosauromorpha (*Paliguana*), the first croc-relatives/ Crurotarsi (*Ctenodiscosaurus*), and the first mammal-like animals/ Mammaliaformes (*Haramiyida*). Except for the latter two groups, they all appear virtually out of thin air without discernable connections to any known ancestors[41]."

> ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*.

Well, your student may continue to ask: In the absence of any proof for continuous evolution – could, perhaps, the sudden appearance of the first representatives of modern tetrapod taxa have been *the ingenious result of inventive and prolific design*?

(13) Early Triassic Marine Reptile Radiation

Bechly and Meyer, p. 347: "After the great end-Permian mass extinction **fifteen different families of marine reptiles appear abruptly between 248-240 mya in the Early Triassic**. They include, for example, ichthyosaurs, plesiosaur-like pistosaurids, hupehsuchians, nothosaurs, thalattosaurs, pachypleurosaurs, tanystropheids, placodontians, and the enigmatic *Aptodentatus*. A vertebrate paleontologist who is an agnostic and a renowned scientist specializing in ichthyosaurs, and who must remain anonymous to protect his career, told us that the sudden appearance of viviparous fully formed fish-like ichthyosaurs within 4 million years after the Permo-Triassic mass extinction made him doubt the neo-Darwinian story."

(14) Mid-Triassic Gliding Reptile Radiation

Bechly and Meyer, pp. 347/348: "Within only two million years of the Mid-Triassic (230-228 mya) **there is a sudden appearance of gliding and flying reptiles**, like *Sharovipteryx* (with wings on the legs), *Mecistotrachelos* and the unrelated Kuehneosauridae (with gliding membrane across lateral rib-like projections), *Longisquama* (with long feather-like scales on the back), and the earliest pterosaurs like *Preondactylus*."

> ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Thousands of transitional forms would be necessary for the origin of gliding and flying reptiles from cursory reptiles in a scenario of continuous, uninterrupted evolution. However, in stark contrast to the predicted Darwinian evidences and proofs, paleontologists have to speak of the *sudden appearance*

[40] Martin D. Ezcurra, "Biogeography of Triassic tetrapods: evidence for provincialism and driven sympatric cladogenesis in the early evolution of modern tetrapod lineages," *Proceedings of the Royal Society B* 277(2010): 2547–2552.
[41] Peter D. Ward, *Out of Thin Air* (Washington: Joseph Henry Press, 2006)

of these remarkable, extraordinary, impressive (for many of them even awe-inspiring) animal forms. And your student might repeat his principle question: Why not brilliant, astute, rational *intelligent design* for the origin of the enormous amount of ***new information*** necessary for these creatures?

(15) Mosasaur Radiation

Bechly and Meyer, p. 348: "Sudden discontinuous origins are not only found in the history of higher taxa but also within subordinate groups. A good example is **the abrupt origin and diversification of Mosasaurs** in the last 25 million years of the Upper Cretaceous[42], when they are said to have evolved from one meter long shore-dwelling lizards (Aigialosauridae) into fully marine snake-like giants of up to 17 meters length (Mosasauridae). They quickly diversified into numerous species around the world, filling different ecological niches. Putative ancestors of mosasauroids prior to the Late Cretaceous are not known. Moreover, even its proposed sister taxon *Coniasaurus* is of Late Cretaceous age and thus not a plausible ancestral precursor[43]. Any evolutionary relationship to recent monitor lizards and/or snakes is also contested and a matter of considerable debate among specialists[44]."

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Your student might raise similar questions for the abrupt origin and diversification of Mosasaurs as raised for plant and other animal groups above.

(16) Radiation of Flowering Plants

Bechly and Meyer, pp. 348/349: "Charles Darwin called the abrupt origin of flowering plants during the Cretaceous period an "abominable mystery." Indeed, **nearly all early fossils of modern angiosperms first appeared abruptly in the Cretaceous** and then rapidly diversify between 130-115 mya. Darwin was deeply bothered by the pattern of their origin because "the seemingly sudden appearance of so many angiosperm species in the Upper Chalk conflicted strongly with his gradualist perspective on evolutionary change[45]." Though paleontologists in China have recently found a few angiosperms from the Mid-Jurassic period (such as *Euanthus*, *Juraherba* and *Yuhania*), the classification of these fossilized plants as modern angiosperms remains in some dispute. There is also **no evidence that these plants were ancestral to the later Cretaceous groups** and the paleontologists who have classified them have not proposed them as such. Indeed, none of these mid-Jurassic period plants can be unambiguously attributed to any subgroup of modern angiosperms, all of which *did* first appear in the Early Cretaceous. Thus, the enigmatic rise of angiosperms still represents an "inextricable knot" —an unresolved puzzle for those who assume the common ancestry of all forms of life[46]."

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[42] Michael J. Everhart, "Rapid evolution, diversification and distribution of mosasaurs (Reptilia; Squamata) prior to the K-T Boundary," *Tate 2005 11th Annual Symposium in Paleontology and Geology, Casper, WY* (2005): 16–27

[43] 42 Michael W. Caldwell, "Squamate phylogeny and the relationships of snakes and mosasaurs," *Zoological Journal of the Linnean Society* 125 (2008): 115–147.

[44] Ibid; Jack L. Conrad, "Phylogeny and systematics of Squamata (Reptilia) based on morphology," *Bulletin of the American Museum of Natural History* 310 (2008): 182 pp.; Jacques A. Gauthier et al., "Assembling the Squamate Tree of Life: Perspectives from the Phenotype and the Fossil Record," *Bulletin of the Peabody Museum of Natural History* 53 (2012): 3–308

[45] William E. Friedman, "The meaning of Darwin's 'abominable mystery'," *American Journal of Botany* 96 (2009): 5–21.

[46] Laurent Augusto et al., "The enigma of the rise of angiosperms: can we untie the knot?," *Ecology Letter*s 17 (2014): 1326–1338.

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

Instead of solving Darwin's *abominable mystery* during the last 150 years, the problems for the idea of continuous evolution have *steadily increased*. This is a special topic, on which a longer paper could be written from the viewpoint of intelligent design. And "as this pattern [of abrupt appearances of new life forms] has become more and more pronounced, it has ***become ever more improbable that the absence of intermediate forms reflects a sampling bias***".

(17) Radiation of modern placental mammals

Bechly and Meyer, p. 349: "**The first orders of placental mammals also appear abruptly in the fossil record in during the Paleocene epoch between 62-49 mya, without known precursors**[47]. Paleontologists call this series of events the "mammalian radiation." According to Archibald[48] "within approximately 15 million years of dinosaur extinction most of the 20 extant orders of placentals had appeared along with some 16 other orders that are now extinct. **This was a truly explosive radiation and diversification**." Not only do many (probably about 15 of the extant) mammalian orders appear suddenly, but when they appear they are already separated into their distinctive forms. For example, the orders Carnivora (which include bears), Chiroptera (which include bats), and Perissodactyla (which include horses) **all first appear and are clearly differentiated from each other by their distinctive forms and features**. The first fossil bat, for instance, is unquestionably a bat, capable of true flight. Yet, we find nothing resembling a bat in the earlier Mesozoic fossil record."

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution with by evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

See, for instance, for a detailed discussion of the "truly explosive radiation and diversification of placental mammals" pp. 353-369 of the book on the domestic dog: http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf

(18) Radiation of Modern Birds

Bechly and Meyer, pp. 349/350: "The lineages of 95 percent of modern bird species also originated abruptly in during the Paleocene epoch or the Tertiary (or Paleogene) period as did most of the mammalian orders. Just like the placental mammalian radiation, the abrupt appearance of modern birds has been dated to a similarly narrow window of time from 65-55 mya. The recent genomic analysis by Richard Prum presented a comprehensive time-calibrated phylogeny of modern birds[49]. This work suggests that only 4 bird lineages (ancestral species of Ratites, Galloanseres, Strisores, and the common

[47] Maureen A. O'Leary et al., "The Placental Mammal Ancestor and the Post–K-Pg Radiation of Placentals," *Science* 339 (2013): 662–667.
[48] J. David Archibald, "Eutheria (Placental Mammals)," In *Encyclopedia of Life Sciences / eLS* (Chichester: John Wiley & Sons, 2012).
[49] Richard O. Prum et al., "A comprehensive phylogeny of birds (Aves) using targeted next-generation DNA sequencing," *Nature* 526 (2015): 569–573.

ancestor of all remaining Neoaves) predated and survived the mass extinction event marking the Cretaceous-Tertiary (or Cretaceous-Paleogene) boundary. The most species-rich group Neoaves originated abruptly and diversified rapidly after this event[50]. This **avian radiation, has been appropriately called the "explosive evolution of avian orders"[51], "avian explosion"[52], and even "Big bang for Tertiary birds"**[53]. Moreover, no undisputed fossils of crown-group Neoaves have been found in sediments from the Cretaceous or older[54], rendering dubious molecular studies placing the origin and diversification of modern avian orders prior to the Cretaceous/Tertiary boundary."

> ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,...*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, like I said*."

Well, also the acclaimed German paleontologist Oskar Kuhn once commented that "The birds, too, emerged explosively…"[55] and – as far as your student can understand – there is no real and clear evidence for a continuous evolution as an explanation for the "***explosive evolution of avian orders***", "***avian explosion***", and the "***big bang for Tertiary birds***". Otherwise the evolutionary authors would have spoken of the *gradual* evolution of avian orders, the *continuous emergence* of birds, and the very slow radiation by "infinitesimally small changes", "infinitesimally slight variations" and "slow degrees and hence by "steps not greater than those separating fine varieties", "insensibly fine steps" and "insensibly fine gradations" (Darwin, see please above).

(19) Origin of Genus *Homo*

Bechly and Meyer, pp. 350/351: "Hawks et al.[56] suggested that our own genus *Homo* originated abruptly 2 million years ago with sudden interrelated anatomical changes. This inspired a press release with the headline "New study suggests big bang theory of human evolution"[57]. Hawks et al. also emphasize "**that no gradual series of changes in earlier australopithecine populations clearly leads to the new species, and no australopithecine species is obviously transitional**. This may seem unexpected because for 3 decades habiline species have been interpreted as being just such transitional taxa, linking *Australopithecus* through the habilines to later *Homo* species. But with a few exceptions, the known habiline specimens are now recognized to be less than 2 Myr old[58] and therefore are too recent to be transitional forms leading to *H. sapiens*." (See Chapter 11, by Casey Luskin, for a more detailed discussion of the hominid fossil record)."

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[50] Stephen L. Brusatte et al., "The Origin and Diversification of Birds," *Current Biology* 25 (2015): R888–R898. .
[51] Steven Poe and Alison L. Chubb, "Birds in a bush: five genes indicate explosive evolution of avian orders," *Evolution* 58 (2004): 404–415.
[52] Gavin H. Thomas, "Evolution: An avian explosion," *Nature* 526 (2015): 516–517.52
[53] Alan Feduccia, "'Big bang' for Tertiary birds?," *Trends in Ecology and Evolution* 18 (2003): 172–176.
[54] Gerald Mayr, "The origins of crown group birds: molecules and fossils," *Palaeontology* 57 (2014): 231– 242; Gerald Mayr, *Avian Evolution: The Fossil Record of Birds and its Paleobiological Significance* (Chichester: Wiley, 2016).
[55] Oskar Kuhn. Die Fossilen Vögel. Verlag Oeben, Krailling bei München (1965).
[56] John Hawks et al., "Population Bottlenecks and Pleistocene Human Evolution," *Molecular Biology and Evolution* 17 (2000): 2–22.
[57] Diane Swanbrow, "New study suggests big bang theory of human evolution," *Univ. Michigan press release* Jan. 10 2000 (http://ns.umich.edu/Releases/2000/Jan00/r011000b.html).
[58] Craig S. Feibel et al., "Stratigraphic context of fossil hominids from the Omo group deposits: northern Turkana Basin, Kenya and Ethiopia," *American Journal of Physical Anthropology* 78 (1989): 595–622.

ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

As noted by Günter Bechly, there is further material presented in the same book of 2017 discussing of the fossil hominid record (Casey Luskin: pp. 363-401 and 437-473). The authors resume: Universal common descent is challenged by many new lines of evidence. "*When our genus Homo appears, **it also does so in abrupt fashion, without clear evidence of a transition from previous ape-like hominins*** (p. 437 of Chapter 14: *Missing Transitions: Human Origins and the Fossil Record*). If you like to study all the details of these papers, your student will be happy to send you a copy of the two chapters.

Your student's additional question: Could there, perhaps, be an important, significant and essential truth in the following well-known words?:

> "Then God said: "***Let us make man in our image***, according to our likeness, and let them have in subjection the fish of the sea and the flying creatures of the heavens and the domestic animals and all the earth and every creeping animal that is moving on the earth." ***And God went on to create the man in his image, in God's image he created him; male and female he created them.***

(20) The "Top-Down" Pattern of Appearance

Bechly and Meyer, pp. 351/352: "This pervasive pattern of fossil appearance raises **an additional difficulty for the theory of universal common descent and the Darwinian picture of the history of life**. Darwinian theory (both classical and modern) implies that as new animal forms first began to emerge from a common ancestor, they would be quite similar to each other, and that **larger differences in the forms of life**—what paleontologists call *disparity*—**would only emerge much later as the result of the accumulation of many small incremental changes**. In its technical sense, *disparity* refers to the major differences in form that separate the higher-level taxonomic categories such as phyla, classes, and orders. In contrast, the term *diversity* refers to minor differences among organisms classified as different genera or species. Put another way, *disparity* refers to life's basic themes; *diversity* refers to the variations on those themes.

According to the theory of universal common descent and current understanding of how the mutation/natural selection mechanism works, the differences in form, or "**morphological distance," between evolving organisms should increase gradually** over time as small-scale mutations accumulate by natural selection to produce increasingly complex forms and structures (including, eventually, new body plans). **In other words, one would expect small-scale differences or *diversity* among species to precede large-scale morphological *disparity* among phyla**. As the former Oxford University neo-Darwinian biologist Richard Dawkins puts it, "What had been distinct species within one genus become, in the fullness of time, distinct genera within one family. Later, families will be

found to have diverged to the point where taxonomists (specialists in classification) prefer to call them orders, then classes, then phyla.[59]"

Darwin himself made this point in *On the Origin of Species*. In explaining his famous branching-tree diagram, he noted how higher taxa should emerge from lower taxa by the accumulation of numerous slight variations[60].

The actual pattern in the fossil record, however, contradicts this expectation. Instead of more and more species eventually leading to more genera, leading to more families, orders, classes and phyla, the fossil record shows representatives of separate phyla appearing first followed by lower-level diversification on those basic themes. For example, during the **Cambrian Explosion** representatives of many higher taxa such as phyla and classes (each representing distinctive body plans) **first appear abruptly in the fossil record**. Only later, do order- and family- and genus-level representatives of those distinctive body plans originate (in events such as the Great Ordovician Biodiversification Event or the Mammalian Radiation, for example). As paleontologists Douglas Erwin, James Valentine, and Jack Sepkoski note: "**The fossil record suggests that the major pulse of diversification of phyla occurs before that of classes, classes before that of orders, orders before that of families. … The higher taxa do not seem to have diverged through an accumulation of lower taxa**.[61]" Yet, the common descent depicts (and predicts) just the opposite—the proliferation of species and other representatives of lower-level taxa occurring first and then building to the disparity of the highest taxonomic differences such as those between different phyla or different classes. Thus, the top-down pattern of appearance on display in the fossil record provides another evidential challenge to UCD."

> ABC.: "*I think that scientists are right about evolution because it's an evidence of nature that you can see,....*" and "*You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…*" "*I see those evidence clearly in the present and in the past both, as I said*."

However, as far as your humble (but – he admits – rather repetitive) student can understand it, the real evidence on the ***explosions, abrupt biodiversity events and radiations*** seems to be, in fact, completely, best, fully, stunningly, overwhelmingly in accord with what he has learned during all the years of his youth from his parents at home.[62]

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[59] Richard Dawkins, *Unweaving the Rainbow* (Boston: Houghton Mifflin Harcourt, 1998), 201.

[60] Charles Darwin, *On the Origin of Species* (London: John Murray, 1859), 120-125.

[61] Douglas H. Erwin et al., "A Comparative Study of Diversification Events," *Evolution* 41 (1987): 1177– 1186, 1183. See also Douglas H. Erwin et al., "The Cambrian Conundrum: Early Divergence and Later

[62] Your eager student also detected the following statements made by leading evolutionists, geologists and paleontologists: http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf (p. 344):

Ernst Mayr (2001, p. 195): "The complete standstill or stasis of an evolutionary lineage for scores, if not hundreds, of millions of years **is very puzzling**."

Donald R. Prothero (2007, p. 81): Evolution: what the fossils say and why it matters. "Some biologists tried to explain away stasis with mechanisms such as stabilizing selection (selection against the extremes of a population, reinforcing the mean tendency), **but this does not explain how some fossil populations persist unchanged through millions of years of well-documented climatic change (surely a strong selection pressure)**, as documented by Prothero and Heaton (1996) and Prothero (1999). As Gould (1980a, 2002) pointed out, ***the persistance of fossil species through millions of years of intense selection pressure suggests that they are not infinitely malleable by selection, but instead have an integrety of some sort of internal honeostatic mechanism that resist most external selection***." Prothero betont weiter, dass diese These "still hotly controversial" ist und dass sie von Seiten der Vertreter der Synthetischen Evolutionstheorie zumeist nicht akzeptiert wird ("…many biologists are unconvinced that the fossil record can't be explained by some Neo-Darwinian mechanism (see chapter 4))."

Steven M. Stanley (1981, p. XV): "The record now reveals that **species typically survive for a hundred thousand generations, or even a million or more, without evolving very much**. … After their origins, most species undergo little evolution before becoming extinct."

Stephen Jay Gould (2002, p. 749) "[T]he tale [of the correspondence between Darwin and Falconer] itself illustrates the central fact of the fossil record so well – **geologically abrupt origin and subsequent extended stasis of most species**. …Most importantly, this tale exemplifies what may be called the **cardinal and dominant fact of the fossil record**…: the great majority of species appear with **geological abruptness in the fossil record and then persist in stasis until their extinction**. Anatomy may fluctuate through time, but the last remnants of a species look pretty much like the first representatives. In proposing punctuated equilibrium, Elderdge and I did not discover, or even rediscover, this fundamental fact of the fossil record. Paleontologists have always recognized the longterm stability of most species, but we had become more than a bit ashamed by this strong and literal signal, ***for the dominant theory of our scientific culture told us to look for the opposite result of gradualism as the primary empirical expression of every biologist's favorite subject*** – evolution itself." (P. 755:) "[...]George Gaylord Simpson, the greatest and most biologically astute paleontologist of the 20th century (and a strong opponent of punctuated equilibrium)

Now, please, convince your humble student – item by item/point by point (perhaps even seriatim) that Bechly and all the other paleontologists quoted here are almost totally in error and why your student should be able – in clear opposition and strong contrast to the paleontological facts cited – *to "see the proof of evolution with real evidence... in the fossils*" implying, of course, that he is totally wrong to believe in the Genesis record further on.

Last not least, some additional words on **living fossils**. You have told your student that: "Living fossils, such as the six-gills sharks, the coelacanths, the crocodiles, and other species, have remained almost unchanged for hundreds of millions of years. The answer is quite obvious: they do not need to change in their ecological system in which they live."

You probably remember that in my last very short mail I had quoted paleontologist Niles Eldredge that your hypothesis: "…doesn't explain why still other groups do change even though they share the same supposedly constant environment."

Now, please, explain to your student why such change has been assumed to be possible in the same supposedly constant environment?

And why do leading evolutionary biologists have problems with living fossils (discussing them to this very day) and my teacher does not?

Additionally, your student has detected the following comments on living fossils:

"Moreover, as to the general idea of Darwinism concerning evolution due to adaptation to the environment: If the answer to the origin and formation of plants and animals, including the important question of how such forms can be constant (within the limits of genera and families) over enormous periods of time and even under strongly changing environments, were adaptation, ***we would expect everything except living fossils***, i. e. life forms that remain constant in contrast to all major (and minor) environmental changes, even over hundreds of millions of years!"

"The sudden appearance and the constancy of the classes, orders and the multiplicity of living fossils (practically all today living animal and plant species and genera are "living fossils"!) clearly prove that these questions cannot be answered by 'adaptations to the environment' (at least not scientifically convincingly and sufficiently). ***Usually the constancy of form is demonstrably/verifiably independent of adaptations to the geo-historically and geographically continuously changing environment***."

"The theory of evolution, which has tried to explain the emergence of all forms of life as adaptation phenomena (especially Darwinism and now the synthetic evolutionary theory) is thus demonstrably wrong. However, much of this has already become clear from the previous remarks: ***The living fossils show an "inner" constancy that***

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acknowledged the literal appearance of stasis and geologically abrupt origin as the outstanding general fact of the fossil record and as a pattern which would "pose one of the most important theoretical problems in the whole history of life" if Darwin's argument for artifactual status failed." "...stasis is data... Say it ten times before breakfast every day for a week, and the argument will surely seep in by osmosis: "stasis is data; stasis is data"..." (p. 759.)

Niles Eldredge (1998, p. 157): "**It is a simple ineluctable truth that virtually all members of a biota remain basically stable, with minor fluctuations, throughout their duration**.. (Remember that by "biota" we mean the commonly preserved plants and animals of a particular geological interval…)"

Once again: Donald R. Prothero (1992, p. 41): "Eldredge and Gould not only showed that paleontologists had been out-of-step with biologists for decades, but also that **they had unconsciously trying to force the fossil record into the gradualistic mode**. The few supposed examples of gradual evolution were featured in the journals and textbooks, but paleontologists had long been silent about their "dirty little trade secret": **most species appear suddenly in the fossil record and show no appreciable change for millions of years until their extinction**. http://chaos.swarthmore.edu/courses/SOC26/PunctEquil.pdf

Tom S. Kemp (1985, pp. 66-67): "As is now well known, most fossil species appear instantaneously in the record, persist for some millions of years virtually unchanged, only to disappear abruptly - the 'punctuated equilibrium' pattern of Eldredge and Gould."

makes them largely independent of the changing environmental conditions of geological time periods and geographical distances. But this fact of inner constancy of forms was neither predicted nor can it exist according to the theory of neo-Darwinian evolution. The theory is false."

Now, please, my teacher and instructor, explain to your student this ***inner constancy*** as described by so many paleontologists independently of each other as quoted above.

Of course, your contemplative student also wondered why almost all these geologists and paleontologists – in spite of all the evidence being in sharp conflict with their theory – are still convinced evolutionists.

The answer has been given by Richard Lewontin by his often quoted admission (*in spite* and *a priori* by Lewontin in italics):

"Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take the side of science *in spite* of the patent absurdity of some of its constructs, *in spite* of its failure to fulfill many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a **prior commitment, a commitment to materialism**.

It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, **that we are forced by our *a priori* adherence** to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, **no matter how counter-intuitive, no matter how mystifying to the uninitiated**. Moreover, that **materialism is absolute**, for we cannot allow a Divine Foot in the door."

And, as already noted above: "Eldredge and Gould not only showed that paleontologists had been out-of-step with biologists for decades, but also that ***they had unconsciously been trying to force the fossil record into the gradualistic mode***. The few supposed examples of gradual evolution were featured in the journals and textbooks, but paleontologists had long been mum [silent] about their "dirty little trade secret": most species appear suddenly in the fossil record and show no appreciable change for millions of years until their extinction."

So much for this document.

All the best,

Wolf-Ekkehard

P.S.

11 and 12 December 2017

Tom Bethell notes – among many other intriguing things – in his really excellent book *DARWIN'S HOUSE OF CARDS* (2017, p. 135):

> "Interviewed at the American Museum of Natural History in the early 1980s, Donn Rosen (1929-1986), formerly ***chairman of the museum's Department of Ichthyology***, summarized the dilemma for Darwinists: "***Darwin said that evolution happened too slowly for us to see it***. Gould and Eldredge said that it happened ***too quickly for us to see it***. Either way, ***we don't see it***."

You'll probably already know what my next question will be: If many of the best evolutionary paleontologists of the world do not see gradual/continuous evolution in the fossil record – ….?

Also, I had referred to the paleontologists Douglas H. Erwin and James W. Valentine (2010/2013) on the Cambrian Explosion as follows:

> "[A] great variety and abundance of animal fossils appear in deposits dating from a geologically brief interval between about 530 to 520 Ma, early in the Cambrian period. During this time, ***nearly all the major living animal groups (phyla) that have skeletons first appeared as fossils*** (at least one appeared earlier). Surprisingly, a number of those localities have yielded fossils that preserve details of complex organs at the tissue level, such as eyes, guts, and appendages. In addition, several groups that were entirely soft-bodied and thus could be preserved only under unusual circumstances also first appear in those faunas. Because many of those fossils represent complex groups such as vertebrates (the subgroup of the phylum Chordata to which humans belong) and arthropods, it seems likely that all or nearly all the major phylum-level groups of living animals, including many small soft-bodied groups that we do not actually find as fossils, had appeared by the end of the early Cambrian. ***This geologically abrupt and spectacular record of early animal life is called the Cambrian explosion***" (The Cambrian Explosion, p. 5).

As to the "quite obvious" explanation that the ***living fossils*** did not change very much, because "they do not need to change in their ecological system in which they live – I dare to repeat my question: why did mammals and birds not change in several of "the biggest climatic-vegetational events of the last 50 million years"?:

"In four of the biggest climatic-vegetational events of the last 50 million years, the ***mammals and birds show no noticeable change in response to changing climates***. No matter how many presentations I give where I show these data, no one (including myself) has a good explanation yet for such ***widespread stasis despite the obvious selective pressures of changing climate***."[63]

"Widespread stasis despite the obvious selective pressures of changing climate" appears to apply also to one of your favorite topics – ***Megalodon***:

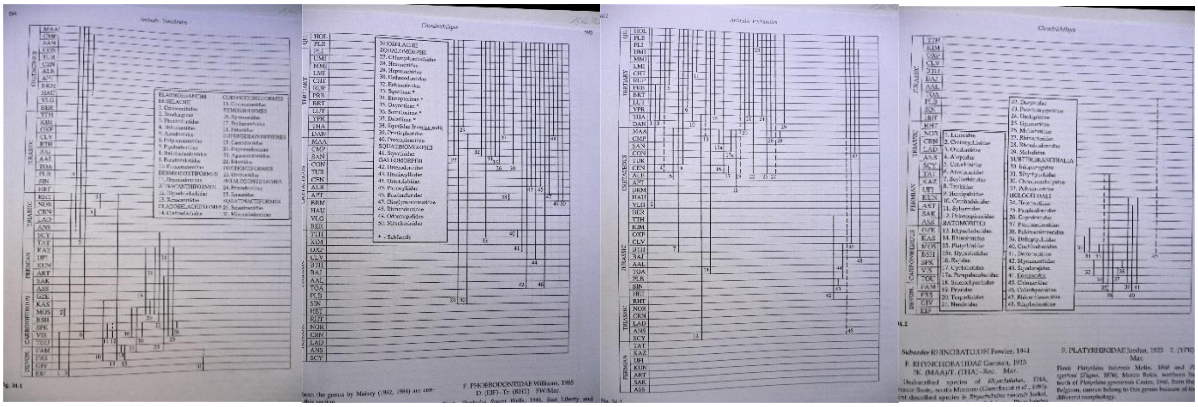
"The Earth experienced ***a number of changes during the time period megalodon existed which affected marine life***. A cooling trend starting in the Oligocene 35 mya ultimately led to glaciation at the poles. ***Geological events changed currents and precipitation***; among these were the closure of the Circumtropical Seaway between the Americas and through the Tethys Sea, contributing to the cooling of the oceans. The stalling of the Gulf Stream prevented nutrient-rich water from reaching major marine ecosystems, which may have negatively affected its food sources. As its range did not apparently extend into colder waters, megalodon may not have been able to retain a significant amount of metabolic heat, so its range was restricted to shrinking warmer waters.[68][53][69] (This has been disputed; see below.) Fossil evidence confirms the absence of megalodon in regions around the world where water temperatures had significantly declined during the Pliocene.[22]:77 ***The largest fluctuation of sea levels in the Cenozoic era occurred in the Plio-Pleistocene***, between around 5 million to 12 thousand years ago, due to the expansion of glaciers at the pole, which negatively impacted coastal environments, and may have contributed to its extinction along with those of several other marine megafaunal species.[70] These oceanographic changes, in particular the sea level drops, may have restricted many of the suitable shallow warm-water nursery sites for megalodon, hindering reproduction.[68] Nursery areas are pivotal for the survival of many shark species, in part because they protect juveniles from predation.[71][26]

However, an analysis of the distribution of megalodon over time suggests that temperature change did not play a direct role in its extinction. Its distribution during the Miocene and Pliocene did not correlate with warming and cooling trends; while abundance and distribution declined during the Pliocene, megalodon did show a capacity to inhabit anti-tropical latitudes. It was found in locations with a mean temperature ranging from 12 to 27 °C (54 to 81 °F), with a total range of 1 to 33 °C (34 to 91 °F), indicating that the global extent of suitable habitat should not have been greatly affected by the temperature changes that occurred.[18] This is consistent with evidence that it was a mesotherm.[36]"[64]

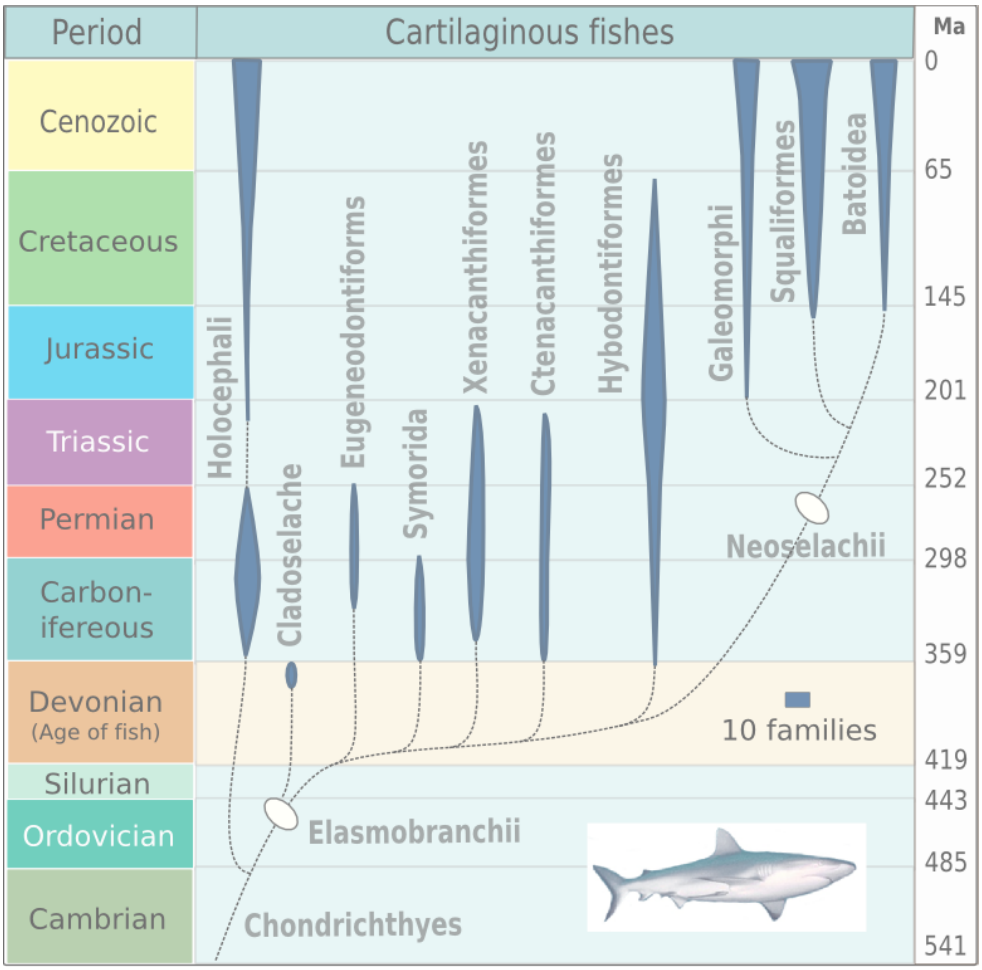
[63] See, please: https://evolutionnews.org/2015/10/stasis_when_lif/

[64] https://en.wikipedia.org/wiki/Megalodon#Taxonomy (retrieved 11 December 2017). See there also: CHANGING ECOSYSTEM

All shark families appear abruptly in the fossil record (Benton: Fossil Record 2):



Below: Several of the larger shark groups appear even simultaneously. ***The many dots linking them genetically, consist of nothing but evolutionary speculations***.[65] (However, the width of the columns for the family numbers is not entirely correct.)



The English zoologist Douglas Dewar once described the evolutionary expectations for the fossil record appropriately and correctly by stating (*cf.* also the "top-down" pattern of appearance as described above by Bechly and Meyer):

[65] Radiation of cartilaginous fishes based on Benton 2005: https://en.wikipedia.org/wiki/Chondrichthyes (retrieved 12 December 2017)

"If the evolution theory be true, the record should exhibit the following features:

I. Every class, order, family or genus would make its appearance in the form of a single species and exhibit no diversity until it has been in existence for a long time.

II. The flora and fauna at any given geological horizon would differ but slightly from those immediately above and below except on the rare occasions when the local climate suddenly changed if the sea flowed over the land, or the sea had retreated.

III. It should be possible to arrange chronological series of fossils showing, step by step, the origin of many of the classes and smaller groups of animals and plants. By means of these fossil series it should be possible to draw up a pedigree accurately tracing the descent of most of the species now living from groups shown by the fossils to have been living in the Cambrian period.

IV. The earliest fossils of each new group would be difficult to distinguish from those of the group from which it evolved, and the distinguishing features of the new group would be poorly developed, e.g. the wings of birds or bats. "

Contrasting these evolutionary expectations and predictions with the text of Bechly and Meyer above and the comments of the paleontologists and biologists in the long footnote pp. 19/20 (and many other biologists), as well as the sudden appearance of the shark families and orders, my impression is that paleontologist professor **Oskar Kuhn was absolutely right** when he wrote after decades of [his own] successful fossil research (published in many papers and books[66]) – as I had quoted him for you in my mail of 23 November 2017:

"The ***prejudice*** that the phylogenetic history of life could only be an accumulation of the smallest variational steps and that a more complete knowledge of the paleontological documents would prove [the assumed] gradual evolution, *is deeply rooted and widely accepted*. ***But the paleontological facts have long spoken against this prejudice!*** Especially German paleontologists such as B e u r l e n, D a c q u é and S c h i n d e w o l f have emphatically pointed out that in many animal groups *such a rich, even overwhelming amount of fossil material exists (foraminifers, corals, brachiopods, bryozoans, cephalopods, ostracods, trilobites etc*.), **that the gaps between the types and subtypes must be viewed as** [**unconditionally**] **real** ["*primär vorhanden*": literally "primary present" or "originally present", "primary in existence" or "presente primario"]".[67]

That same paleontologist sent me a letter (not yet quoted in one of my mails to you) on my book on the origin of the eye[68]

> "Thank you very much for your excellent work on the eye! Those who do not open their eyes [to these facts and arguments] are incorrigible atheists who should no longer

[66] For some of his publications, see https://de.wikipedia.org/wiki/Oskar_Kuhn

[67] Original German Text: "Das Vorurteil, dass die Stammesgeschichte nur eine Summierung kleinster Abänderungsschritte sein könne und bei entsprechender vollständiger Kenntnis der paläontologischen Urkunden die kontinuierliche Entwicklung zu beweisen sei, ist sehr tief eingewurzelt und weit verbreitet. Aber die paläontologischen Tatsachen sprechen schon lange *gegen dieses Vorurteil!* Gerade deutsche Paläontologen wie Beurlen, Daqué und Schindewolf haben mit Nachdruck darauf hingewiesen, dass aus vielen Tiergruppen ein so reiches, *ja geradezu erdrückendes fossiles Material vorliegt* (Foraminiferen, Korallen, Brachiopoden, Moostiere, Cephalopoden, Ostracoden, Trilobiten usw.), dass man die nach wie vor zwischen den Typen und Subtypen bestehenden Lücken als *primär vorhanden* auffassen muss."

[68] *Cf.* http://www.weloennig.de/AuIn.html and http://www.weloennig.de/AuVor02.html saying:

> be considered. You yourself know, for example, that even witnesses of the miracles of Jesus rejected them […]. ***To the insight must come the willingness to agree***."[69]

Of course, only when the data are really correctly described and interpreted.

[69] Original German Text: "Haben Sie herzlichen Dank für Ihre ausgezeichnete Arbeit über das Auge! Wem da nicht die Augen aufgehen, das sind unbelehrbare Atheisten, die man nicht mehr beachten sollte. Sie wissen ja selbst, dass selbst Zeugen der Wunder Jesu diese abgelehnt […] haben. Zur Einsicht muß die Zustimmungsbereitschaft kommen."

Mail of ABC (4 February 2018): “Dear Wolf,

I read your file pdf... this is what a can answer... in italic your quotes... in roman mines

- *Well, now, who is Günter Bechly?*

I know Bechly, he is a great paleontologist and made a lot of discoveries and I appreciate his work about insects (really, I'm not kidding). But there is a little problem: he is a devout catholic. Everyone is free to believe in what he wants, mine is not a criticism. The problem is that I have often noticed that scientists from very religious families struggle to break away from that religious vision.”

W.-E. L.: Well, my dear ABC., may I kindly/friendly point out that in the case of Günter Bechly (as in many further similar cases, several I know of personally) it was totally the other way round, really ***the exact opposite***. Günter came from a completely secular background and later – based on an enormous mass of paleontological and additional biological *facts contrary to the prevailing evolutionary dogma* – ‘had to struggle to break away from that ***neo-Darwinian*** vision’.

This is what Bechly himself has to say on this point:

> “Having been ***born into a highly secular society and raised in an irreligious and agnostic family background*, I have been an atheistic materialist and naturalist for most of my life** until my late thirties, and was only interested in nature and natural sciences.”[70]

He also states: “I have ***not become a theist in spite of being a scientist but because of it***. My conversion was based on *a careful critical evaluation of empirical data and rational arguments, following the evidence wherever it leads*. I am skeptical of the Neodarwinian theory of macroevolution and support Intelligent Design Theory ***for purely scientific reasons***.”[71]

> “My conversion from atheism and naturalism to theism and supernaturalism ***did not involve any prior faith in holy scriptures***, but was ***based on reason and a careful critical evaluation of empirical evidence and philosophical arguments***.
>
> I strongly reject the modern ***surrogate religion of atheistic naturalism*** (esp. "New Atheism"), secular humanism, eliminative materialism, functionalist physicalism, mechanistic determinism, and reductionistic scientism as incoherent, irrational, empirically refuted, and ultimately absurd faith, which is often based on sloppy argumentation and shallow philosophy […], and ultimately implies detrimental nihilism.”[72]

[70] https://gbechly.jimdo.com/beliefs/
[71] https://gbechly.jimdo.com/
[72] Again https://gbechly.jimdo.com/beliefs/

Listen, please, also carefully what Günter Bechly has to say in the film *REVOLUTIONARY* (six minutes; link to the film clip in the midst of the following document (2017): https://evolutionnews.org/2017/02/happy_darwin_da/

Then you continue to mention the following Darwin text (see above) and you obviously agree (see below):

- *"innumerable slight variations", "extremely slight variations" and "infinitesimally small inherited variations" (he also spoke of "infinitesimally small changes", "infinitesimally slight variations" and "slow degrees") and hence imagined "steps not greater than those separating fine varieties","insensibly fine steps" and "insensibly fine gradations", "for natural selection can act only by taking advantage of slight successive variations; she can never take a leap, but must advance by the shortest and slowest steps" or "the transition [between species] could, according to my theory, be effected only by numberless small gradations" (emphasis added, see http://darwin-online.org.uk/).*

ABC.: "Yep, that's correct."

W.-E. L.: Well, I would like to point out that for more than 150 years now a considerable number of very eminent, *totally non-religious*[73] biologists[74] have stated that this is definitely/decidedly not what we have detected for the origin of genera, families, orders and classes neither in the world of live organisms nor for the countless millions of specimen[75] detected in the fossil record (the billions of microfossils not counted).

- *From Carl Zimmer -- ""We must recognize that the core principles of the Modern Synthesis are strong and well-supported," Futuyma declared. Not only that, he added, but the kinds of biology being discussed at the Royal Society weren't actually all that new. The architects of the Modern Synthesis were already talking about them over 50 years ago. And there's been a lot of research guided by the Modern Synthesis to make sense of them."9 [...]: (i) all evolutionary explanation requires the study of populations of organisms; (ii) populations contain genetic variation that arises randomly from mutation and recombination; (iii) populations evolve by changes in gene frequency brought about by natural selection, gene flow and drift; (iv) genetic variants generate slight phenotypic effects and the resulting phenotypic variation is gradual and continuous; (v) genetic inheritance alone accounts for the transmission of selectable variation; (vi) new species arise by a prevention of gene flow between populations that evolve differently; (vii) the phenotypic differences that distinguish higher taxa result from the incremental accumulation of genetic variation; (viii) natural selection represents the only directional factor in evolution."*

ABC.: "Yes, I know Zimmer from Yale, he is great scientist and I appreciate his works. I agree with the quote."

W.-E. L.: Carl Zimmer seems to be more of a very successful (quite sympathetical) *popular science writer and blogger* than a real scientist (so far as I could find out, there are no original research papers nor a PhD in a biological or

[73] In the general usage of the term.
[5] See, for some examples, below.
[75] http://www.askabiologist.org.uk/answers/viewtopic.php?id=1408

other science subject by him)[76]. So, is he really a "great scientist"? Popular science writers are often not scientists themselves but essentially reproduce and write down in a (hopefully) interesting and captivating way the things scientists have detected (or thought to have detected).

Interestingly Zimmer was one of the Stephen J. Gould Prize recipients (he had also met that Harvard paleontologist personally). He was well aware of Gould's theory of punctuated equilibrium – which was (to put it mildly)[77] not so much in agreement with the neo-Darwinian world view described above. Gould: *"…if Mayr's characterization of* ***the synthetic theory*** *is accurate, then that theory, as a general proposition,* ***is effectively dead****, despite its persistence as textbook orthodoxy*"[78]. He later modified is opinion.

By the way, an informative example of how Zimmer – at least sometimes (to it formulate it as kindly as possible) – just ruminated/rehashed some doubtful /dubious/ problematic evolutionary assertions without really assessing/ analyzing them carefully and critically is the case of the *Nervus laryngeus recurrens* of the giraffe. He states:

> "In the *Tangled Bank*, I wrote about how life has to evolve within constraints – constraints of physics, development, and history. One of the examples I used was the laryngeal nerve in giraffes. ***It travels down the giraffe's neck, takes a U turn, and then heads back up again***. It seems ridiculous, but makes sense if you think about how it was laid down in fish without necks, and was then gradually modified – rather than re-engineered outright – as tetrapods grew necks, and then taken to surreal extremes in the long-necked giraffe."[79]

My comment on a similar statement by Jim Holt in the New York Times:

> Apart from the facts that the nerve neither runs from the brain to the larynx nor extends down from the neck to the chest ("On the right side it arises from the vagus nerve in front of the first part of the subclavian artery;..." "On the left side, it arises from the vagus nerve on the left of the arch of the aorta..." – Gray's Anatomy 1980, p. 1080; further details (also) in the editions of 2005, pp. 448, 644, and of **2008, pp. 459, 588/589**), the question arises: why did natural selection not get rid of this "worst design" and improve it during the millions of generations and mutations from fish to the giraffe onwards? Would such mutations really be impossible?
>
> …….. 4. Yet, implicit in the ideas and often also in the outright statements of many modern evolutionists like the ones mentioned above is the assumption that the only function of the Nervus laryngeus recurrens sinister (and dexter) is innervating the larynx ***and nothing else***. Well, is it asked too much to state that they should really know better? In my copy of the 36th edition of Gray's Anatomy we read (1980, p.1081, similarly also in the 40th edition of **2008, pp. 459, 588/589**):
>
> > "As the recurrent laryngial nerve curves around the subclavian artery or the arch of aorta, it gives several cardiac filaments to the deep part of the cardiac plexus. As it ascends in the neck it gives off branches, more numerous on the left than on the right side, to the mucous membrane and muscular coat of the oesophagus; branches to the mucous membrane and muscular fibers of the trachea and some filaments to the inferior constrictor [Constrictor pharyngis inferior]."

[76] https://en.wikipedia.org/wiki/Carl_Zimmer http://carlzimmer.com/bio.html
[77] http://www.stephenjaygould.org/library/zimmer_macroev.html
[78] http://www.bibliotecapleyades.net/ciencia/esp_ciencia_life43.htm
[79] http://blogs.discovermagazine.com/loom/2010/08/30/dawkins-gets-inside-the-giraffes-neck/#.WnsLencxn-g

For a full analysis and systematic refutation of the assertion that the *Nervus laryngeus recurrens* has anything to do with "surreal extremes" (a characterization perhaps more fitting for the *entire* giraffe) and would be an evolutionary proof for macro-evolution in these animals and elsewhere, study, please, very carefully/critically pp. 30-37 of my paper http://www.weloennig.de/Giraffe.pdf

As to the statements of Futuyma, which Zimmer quoted: If this is really the scientifically true, sufficient and adequate explanation for the origin of species – how is it that no evolutionist on this earth – including, of course, Carl Zimmer and Futuyma – can give a convincing/testable explanation of the origin of, for example, the bacterial flagellum[80], the trap mechanism of *Utricularia*[81], the origin of complex plant galls[82], the Cambrian Explosion and thousands of other biological phenomena? Not to speak of the origin of life itself?

Why do evolutionists almost always lose ground in debates in public discussions so that they (with rare exceptions) usually have avoided/shun such debates during the last few years on the – in my opinion – very dishonest pretext and excuse that they do not want to give the "ID-creationists" a public platform in order not to upgrade their false views?

If the criticisms concerning the prevailing evolutionary theory and the intelligent design alternative are so basically and totally wrong as our evolutionary friends always like to emphasize – then they could only win in public debates on evolution and also convince the general public of how scientifically strong, sure and credible their views are and how totally wrong the other side is.

I myself have discussed neo-Darwinian evolution, *inter alia*, with a genetics professor in front of about 300 evolutionists (330 persons were counted – most of them were biologists including several paleontologists, but some critics were also present). He later admitted/confessed to another professor (who told me of that admission) that he himself was of the opinion that had lost the debate – in agreement with the impression probably of all the other persons in the audience. (He was quite unhappy after the discussion and put on a long face).

Could it be that they have lost, not because I and others were/have been so superior rhetorically, but because the "***surrogate religion of atheistic naturalism***" (Bechly) is in utmost contradiction, ultimate conflict, and maximal disagreement with all specified and irreducibly complex biological phenomena and facts (as, for example, shown so convincingly and undeniably for paleontology by Bechly and Meyer 2017 as documented above)?

Regarding evolution from that standpoint, is it wrong that several biologists have also come to the ensuing inference?: (Macro-)Evolution is not just a theory. It is – in their view – a totalitarian, absolutely dogmatic and complete state of

[80] See, please, again https://www.youtube.com/watch?v=7ToSEAj2V0s
[81] http://www.weloennig.de/Utricularia2011Buch.pdf
[82] http://www.weloennig.de/PlantGalls.pdf

mind. Or in the words of catholic priest (Jesuit) Pierre Teilhard de Chardin, who was especially responsible for introducing macroevolution as a fact into the Catholic Church:

> "Is evolution a theory, a system or a hypothesis? It is much more*: **it is a general condition to which all theories, all hypotheses, all systems must bow and which they must satisfy henceforward*** if they are to be thinkable and true. Evolution is a light illuminating all facts, a curve that all lines must follow."[83]

Question: Considering such comments (and there are, in fact, many more of them by world-famous Darwinians, see, please, below), – could it perhaps be that evolution is much more something like a totalitarian non-falsifiable **religion** than a scientific theory?

Or, in the words of Julian Huxley on the Darwinian Centennial on his all-inclusive certainty of and faith in continuous evolution:

> "Future historians will perhaps take this Centennial Week as epitomizing an important critical period in the history of this earth of ours—the period when the process of evolution, in the person of inquiring man, began to truly be conscious of itself. […] *This is one of the first public occasions on which it has been frankly faced **that all aspects of reality are subject to evolution, from atoms and stars to fish and flowers, from fish and flowers to human societies and values—indeed, that all reality is a single process of evolution***…"[84]

And how can Jacques Monod ***know*** and scientifically ***prove*** that:

> "…***man*** knows at last that he is alone in the universe's unfeeling immensity, out of which he ***emerged only by chance***." "It necessarily follows that ***chance alone is at the source of every innovation***, and of all creation in the biosphere. Pure chance, absolutely free but blind, [is] at the very root of the stupendous edifice of evolution…[85]

Moreover, how can George Gaylord Simpson's ensuing verdict be scientifically tested or is it perhaps a clear confession of his materialistic faith?:

> "***Man** is the result of a **purposeless and natural process that did not have him in mind***."

And what about the incessantly/monotonously quoted ***mantra*** of Theodosius Dobzhansky being – in the assessment of the critical paleontologist – in ultimate conflict and disagreement with the paleontological facts as documented above[86]?:

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[83] https://en.wikiquote.org/wiki/Pierre_Teilhard_de_Chardin
Original French: L'**évolution** est-elle une théorie, un système ou une hypothèse ? C'est beaucoup plus : c'est une condition générale à laquelle toutes les théories, toutes les hypothèses, tous les systèmes doivent s'incliner et qu'ils doivent satisfaire maintenant si nous voulons qu'ils soient imaginables et vrais.
[84] https://archive.org/stream/evolutionafterda03taxs/evolutionafterda03taxs_djvu.txt
[85] For the full quotations, see https://www.goodreads.com/author/quotes/275446.Jacques_Monod
[86] And thousands of further biological facts.

“Nothing in biology makes sense except in the light of evolution.”

My impression is that such statements are often made on the imaginary conviction of many evolutionary biologists that "***natural selection comes close to omnipotence***" (John C. Avise 1998, p. 208). Christopher Exley (2009, p. 589) from Keele University is even convinced that "both the beauty and the brilliance of natural selection are reflected in ***its omnipotence to explain the myriad observations of life***". And, as Darwin stated it: ***“[I] can see no limit to the amount of change,*** to the beauty and complexity of the coadaptations between all organic beings, one with another and with their physical conditions of life, which may have been affected in the long course of time through nature's power of selection, that is by the survival of the fittest.”[87]

As for the many strong assertions of Richard Dawkins concerning the unconditional/compelling/never to be doubted/absolute truth of neo-Darwinian evolution (for example: “Never were so many facts explained by so few assumptions [i. e. by “primeval stupidity” and “original brutality” in the words of Anton Neuhäusler for random micro-mutations and the elimination of the weakest by natural selection]. Not only does the Darwinian theory command superabundant power [sounds almost like “supernatural” power] to explain. Its **economy** in doing so [again by “primeval stupidity” and “original brutality”] has a sinewy elegance, a poetic beauty [alluring words for an abominably ugly process; see below] that outclasses even the most haunting of the world's origin myths [all-embracing pejorative comment aiming at Genesis 1 and 2].”), as well as his insults, slander and defamation for all its critics (“holocaust deniers”, “ignorant, stupid or insane (or wicked, but I’d rather not consider that)”, “tormented, “bullied”, “brainwashed” see, please, in http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf *Dawkins's dogma about dogs - why Chihuahuas don't prove macroevolution* pp. 44-51, 79-81, 84-85, 106-119, 124, 145, 154, 223, and 396).

Could perhaps already the diction, the choice of words – *videlicet* for the scientifically untestable, but all-inclusive – hypothesis of materialistic evolution without any purpose and design, as “***a general condition to which all theories, all hypotheses, all systems must bow***”, “***all reality is a single process of evolution***” and "***natural selection comes close to omnipotence***" and “***its omnipotence to explain the myriad observations of life***”, etc., also the outright intolerance and persecution of dissenters[88] point to/or possibly even already reveal the “**surrogate religion** of atheistic naturalism” (Bechly)?

Now, what is a religion?

Bernward Nüsslein mentioned in a letter to the magazine *Focus* on the motto of the Giordano Bruno Foundation "Wissen statt Glauben" (knowledge instead of faith) *inter alia* the following points (Focus 35/2005, emphasis added):

> "The fatal error is not to recognize that **every person has a religion**, i. e. he is - whether he realizes this or is not aware of it – bound to a postulate (*re-ligio*), whether it be the "religion of reason" or the postulate of the futility of the world, these unconscious religions are so dangerous, not because they are religion, but because their "confessors" do not know that they themselves are believers, and thus cannot understand fellow human beings through self-critical skepticism."[89]

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[87] For the references of the last three quotations, see please

[88] See, for example, http://www.weloennig.de/Die_Affaere1.pdf

[89] Original German text: “Bernward Nüsslein kommentierte in einem Leserbrief an das Magazin *Focus* das Motto der Giordano-Bruno-Stiftung "Wissen statt Glauben" u. a. wie folgt (Focus 35/2005; Hervorhebung von mir): "Der fatale Irrtum ist doch, nicht zu erkennen, daß jeder

Definition of ***Religion***: "a cause, principle, system of tenets held with ardor, devotion, conscientiousness, and faith: a value held to be of supreme importance" "Marxism was his religion" (Webster).

Or to quote again Teilhard de Chardin (in concurrence with Julian Huxley):

> "We see not only thought as participating in evolution as an anomaly or as an epiphenomenon; but evolution as so reducible to and identifiable with a progress towards thought that the movement of our souls expresses and measures the very stages of progress of evolution itself. **Man discovers that he is nothing else than evolution become conscious of itself**."[90]

Thus, evolution became his religion. Was he not, as well as the Darwinians referred to above, unconditionally "bound to a postulate (*re-ligio*)", evolution being their "principle, system of tenets held with ardor, devotion, conscientiousness, and faith"? And Teilhard regarded it (in full agreement also with the former and currently leading Darwinian biologists of the world), as we have seen above, to be "a general condition ***to which*** […] ***all systems must bow***". However, is the idea of ***continuous/ gradual/ slow/ progressive /steady/ step by step evolution <u>really</u> a light illuminating all facts***, a curve that all lines must follow?

"Teilhard argued in Darwinian terms with respect to biology, and *supported the synthetic model of evolution*…" including *natura non facit saltum*[91] as an article of his (and Darwin's) faith. Additionally, "He conceived the vitalist idea of the Omega Point (a maximum level of complexity and consciousness towards which he believed the universe was evolving)"[92]. Well, some have asked questions like the following: Was, perhaps, what he preached, to a large part in reality not simply nonsense or "pious bunk", as Nobel laureate Sir Peter Medawar[93] once called his overall worldview, i. e. – biologically and theologically – a doubtful philosophy which he relentlessly tried – and quite successfully so – to unite with Catholicism ('bestselling', at least to large parts of the Catholic world)?

- *"In particular, the fossil record […] manifests large "morphological gaps" and discontinuities between different groups of organisms, especially at the higher*

Mensch eine wie auch immer geartete Religion hat , d. h. er ist – ob er das nun realisiert oder sich dessen nicht bewußt ist – an ein Postulat (rück-)gebunden (re-ligio), und sei es die "Religion der Vernunft" oder das Postulat der Sinnlosigkeit der Welt. Diese unbewußten Religionen sind deshalb so gefährlich, nicht weil sie Religion sind, sondern weil ihre "Bekenner" nicht wissen, daß sie einem Glauben anhängen, also auch nicht durch selbstkritischen Skeptizismus den Mitmenschen verstehen können."

[90] http://www.azquotes.com/author/2738-Pierre_Teilhard_de_Chardin

[91] https://en.wikipedia.org/wiki/Natura_non_facit_saltus ("The principle expresses the idea that natural things and properties change gradually, rather than suddenly. In the biological context, the principle was used by Charles Darwin and others to defend the evolutionary postulate that all species develop from earlier species through gradual and minute changes rather than through the sudden emergence of new forms. … Modern evolutionary biology has terminology suggesting both continuous change, such as genetic drift, and discontinuous variation, such as mutation. However, as the basic structure of DNA is discrete, nature is now widely understood to make jumps at the biological level, if only on a very small scale.) Retrieved 10 February 2018.

[92] https://en.wikipedia.org/wiki/Pierre_Teilhard_de_Chardin (retrieved 6 February 2018)

[93] Medawar, P. (1966). Remarks by the Chairman, p. XI in Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution. Edited by Paul S. Moorhead and Martin Kaplan. The Wistar Institute Press, Philadephia.

> *taxonomic levels (of phyla, classes, and orders) representing the major morphological differences between different forms of life. With very few exceptions the major groups of organisms come into the fossil record abruptly without discernible connection to earlier (and generally simpler) alleged ancestors in the fossil record. Indeed, leading evolutionary biologists and paleontologists have long acknowledged this pattern of discontinuity. Evolutionary biologist Ernst Mayr, one of the fathers of the modern neo-Darwinian synthesis, famously noted that "[w]herever we look at the living biota ... discontinuities are overwhelmingly frequent. ...The discontinuities are even more striking in the fossil record.""*

ABC.: "Certainly, as I said in previous e-mails, the gaps in the fossil record are present, they are often also linked to sedimentological gaps of large formations for millions of years. As a result we will have the gaps. But it does not mean that other time-synchronous formations can, one day, fill the gaps that currently exist. But I continue to say that: **evolution is an evidence of the nature that you can see**... In the future, I hope, these gaps will be filled."

W.-E. L.: Well, I admit that I'm a little bit surprised when you speak of things to be discovered "**in the future**"**,** and that **you** "**hope**" to substantiate your assertion that "evolution is an evidence of the nature that you can see..." Reminds me of a witty change of Paul's definition of "Faith": "***Faith is the substance of fossils hoped for, the evidence of links unseen***." (The Bible, according to Hebrews 11:1 modified by Arnold Lunn. The *King James Version* of 1611 translates: "Now faith is the substance of things hoped for, the evidence of things unseen." Modern translations render the original text more accurately, for example: "Faith is the assured expectation of things hoped for, the evident demonstration of realities though not beheld" (NW).)[94]

However, in my book on the giraffe I stated that [in science] "we obviously cannot start from fossil finds that perhaps someday will be discovered and described. […] Besides, it is possible that further fossil finds may even deepen the mystery of the giraffe ancestry [*and of other evolutionary problems*] – a possibility that most evolutionary theorists deem highly unlikely (*unjustifiedly, as many paleontological examples show*).[95]

You wrote in your mail of 25 November 2017:

> "Fossilization takes place in quite difficult natural conditions, it is not a simple process as most people think, indeed it is very complex, especially with regard to chemical conditions. So it is normal to find gaps in sedimentation, so in fossil records. For example, ***in Italy Appennines, we have a large sedimentary gap between 50 and 37 million years ago* (circa)**. As you will understand, **we will never find fossil species that lived in that time in italic territories** (climatically different, geographically shifted, ecologically different)."

So, before assuming that the Eocene formations are missing in the Apennines ("lasting from 56 to 33.9 million years ago"[96] – dates are varying somewhat in

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[94] A department head at the Cologne MPIZ (now MPIPZ) once said to me after a friendly discussion of some evolutionary questions that "**We have a different faith**".

[95] http://www.weloennig.de/Giraffe.pdf

[96] http://www.stratigraphy.org/icschart/chronostratchart2012french.pdflet's

several charts), I would first like to ask whether the following papers are irrelevant for your statement on "a large sedimentary gap between 50 and 37 million years ago" – essentially Eocene formations and also some strata before and after – and that "we will never find fossil species that lived in that time in italic territories"?

(Just a few papers of many more, not ordered alphabetically here):

Tomasetti et al. (2016): "Middle Eocene seagrass facies from Apennine carbonate platforms (Italy)"[97].

Odin et al. (1991): Reliability of volcano-sedimentary biotite ages across the Eocene-Oligocene boundary (Apennines, Italy)[98].

Savian et al. (2013): Middle Eocene climatic optimum (MECO) in the Monte Cagenero section, Central Italy[99] ("We report results of high-resolution environmental and rock magnetic investigations at Monte Cagnero (MCA) sedimentary section, in northeastern Apennines (Italy). A significant increase in fine magnetic materials during the middle Eocene warming event was observed.")

Spezzaferri, S., D. Basso, and R. Coccioni (2002): Late Eocene planktonic foraminiferal response to an extraterrestrial impact at Massignano GSSP (northeastern Apennines, Italy), J. Foraminiferal Res. 32, 188–199.

Jovane et al. (2006): Astronomic calibration of the late Eocene/early Oligocene Massignano section (central Italy).[100]

Marroni et al. (2010): Anatomy of the Ligure-Piemontese subduction system: evidence from Late Cretaceous–middle Eocene convergent margin deposits in the Northern Apennines, Italy.[101]

Morlotti and Kuhnt (1992): Agglutinated deep-water foraminifera of the Eocene Monte Piano Formation (Northern Apennines, Italy).[102]

Mark et al. (1986): Clay mineralogy of shale-limestone rhythmites in the Scaglia rossa (Turonian-Eocene), Italian Apennines.[103]

Mancin et al. (2003): Middle Eocene to Middle Miocene planktonic foraminiferal biostratigraphy for internal basins (Monferrato and northern Apennines, Italy).[104]

Montanari and Koeberl (Conveners) (2017): 250 Million Years of Earth History

[97] https://www.sciencedirect.com/science/article/pii/S0037073816000464
[98] https://www.sciencedirect.com/science/article/pii/0168962291900507
[99] http://www.geofisica.unam.mx/LatinmagLetters/LL13-03-SP/C/PC02.pdf
[100] http://onlinelibrary.wiley.com/doi/10.1029/2005GC001195/pdf
[101] http://www.tandfonline.com/doi/abs/10.1080/00206810903545493
https://pubs.geoscienceworld.org/cushmanfoundation/jfr/article-abstract/22/3/214/76558/agglutinated-deep-water-foraminifera-of-the-eocene?redirectedFrom=PDF [102]
[103] https://pubs.geoscienceworld.org/sepm/jsedres/article-abstract/56/4/501/113724/clay-mineralogy-of-shale-limestone-rhythmites-in?redirectedFrom=PDF
[104] https://pubs.geoscienceworld.org/micropress/micropal/article-abstract/49/4/341/121110

in Central Italy: Celebrating 25 years of the Geological Observatory of Coldigioco.[105]

Huber et al. (2002): Effects of Bioturbation through the Late Eocene Impactoclastic Layer near Massignano, Italy.[106]

Luterbacher, H., 1964. Studies in some Globorotalia from the Paleocene and Lower Eocene of the Central Apennines. Eclog. Geol. Helvet. 57, 631-730.

Mukhopadadhyay et al. (2000): A 35 Myr record of helium in pelagic limestones from Italy: Implications for interplanetary dust accretion from the early Maastrichtian to the middle Eocene. ("We have determined the helium concentration and isotopic composition of a suite of early Maastrichtian through middle Eocene pelagic limestones in the Italian Apennines.")[107]

Jovane et al. (2006?): The middle Eocene climatic optimum (MECO) event in the Contessa Highway section, Umbrian Apennines, Italy.[108]

[VisitsItaly/Wikipedia (2018)]: "Apennines…In the south the deposits, from the Trias to the middle Eocene, consist mainly of limestones, and were laid down, with a few slight interruptions, upon a quietly subsiding sea-floor."[109] ("Limestone is a very common sedimentary rock consisting of calcium carbonate (more than 50%).")[110]

Galeotti et al. (2000): Integrated stratigraphy across the Paleocene/Eocene boundary. ("An integrated stratigraphic study of the upper Paleocene to lower Eocene Scaglia limestones of the Contessa Road section has allowed us to identify the classical markers of the Paleocene-Eocene transition.")[111]

Bodiselitsch et al. (2004): Delayed climate cooling in the Late Eocene caused by multiple impacts: high-resolution geochemical studies at Massignano, Italy. ("The 23-m-thick section consists of a continuous and complete sequence of pelagic marly limestone and calcareous marls, which contain well-preserved planktonic and benthonic foraminiferal tests suspended in a coccolith and clay matrix, and which are interbedded with several biotite-rich volcano-sedimentary layers (Fig. 2). Stratigraphically, the Massignano exposure covers the upper part of the Eocene and the lowermost part of the Oligocene.")[112]

Now, let us assume that there really would be "a large sedimentary gap between 50 and 37 million years ago (circa)" in Italy, in the Apennines, so that the entire

[105] https://www.geosociety.org/documents/gsa/penconf/reports/17italy-PenroseConfRpt-Abs.pdf
[106] https://link.springer.com/chapter/10.1007%2F978-3-642-59388-8_9
[107] http://sujoym.net/reprints/002_2001_GCA_IDP.pdf
[108] https://core.ac.uk/download/pdf/41146719.pdf
[109] http://www.visitsitaly.com/places/appenines/
[110] http://www.sandatlas.org/limestone/
[111] https://lirias.kuleuven.be/bitstream/123456789/139733/1/Galeotti_et_al_2000%28PETM-Italy-Contessa_BSGF%29.pdf
[112] http://www.somosbacteriasyvirus.com/cooling.pdf

Eocene (and more) would be missing[113], and that "we will never find fossil species that lived in that time in italic territories". – Would that sedimentary gap explain the absence of the large spectrum of the thousands of missing links expected and – at least in the final analysis for well recorded fossil forms – necessary to prove continuous (Darwinian) evolution for the origin of new life forms (genera, families, orders) in the Eocene?

"*Eocene rocks have a worldwide distribution*"[114]. Google Scholar lists **3070** results for "Eocene fossil" and **8770** for "Eocene rocks"[115]. "*The oldest known fossils of most of the modern orders of mammals appear in a brief period during the early Eocene*…"[116]

So, was there not ample opportunity to document the postulated aforementioned Darwinian continuous/ gradual/ slow/ progressive /steady/ step by step evolution in the sediments of Eocene rocks occurring in so many locations worldwide?

As far as I could find out, *fact is* that such a gradual (Darwinian) evolution for the origin of virtually all the new genera, families and orders was definitely not found. And that seems to be true not only for all such the new life forms appearing in the Eocene, but also for the fossil record in general. Otherwise Michael Benton, for example, could regularly have shown the origin/ancestry/descent for most of the branches of the organisms documented in his *FOSSIL RECORD 2*.

On this background we can possibly understand Stephen Jay Gould's verdict: "The absence of fossil evidence for intermediary stages between major transitions in organic design, indeed our inability, even in our imagination, to construct functional intermediates in many cases, has been a persistent and nagging problem for gradualistic accounts of evolution."[117]

And that appears to be also the reason why the paleontologist Oskar Kuhn came to the conclusion (as already quoted) that several renowned German paleontologists "… have emphatically pointed out that in many animal groups such a rich, even overwhelming amount of fossil material exists (foraminifers, corals, brachiopods, bryozoans, cephalopods, ostracods, trilobites etc.), *that the gaps between the types and subtypes must be viewed as real*".

- *But in the face of overwhelmingly frequent discontinuities - why should I see evolution in spite of all these discontinuities? And why should I give up my parent's instructions on the origin of life that God created all its basic kinds? All these discontinuities are exactly what I have expected from what I was taught in the Genesis record. Thus, the*

[113] By the way, it is well known that the *entire* geologic column is found only relatively seldom on this earth (perhaps in no more than on 1% of its surface). Also, according to geologist Stephen Marshak, "there is no single location on Earth where the entire geologic column is exposed. The incompleteness is due to unconformities." http://ijolite.geology.uiuc.edu/03SprgClass/geo100/Lectures/Geology%20100%20Lecture%2014.htm "The fossiliferous part of the geologic column includes perhaps 122,000 metres of sedimentary *rock if maximum* thicknesses are selected from throughout the world. https://www.britannica.com/science/geochronology/Nonradiometric-dating" (Both retrieved 10 February 2018). However, I'm not going to further discuss these questions here.
[114] https://www.britannica.com/science/Eocene-Epoch
[115] Retrieved 10 February 2018
[116] http://www.ucmp.berkeley.edu/tertiary/eocene.php
[117] http://www.bibliotecapleyades.net/ciencia/esp_ciencia_life43.htm

evidence that I can see confirms, verifies, corroborates and validates exactly what my parents have taught me on the origin of life and its basic forms.

ABC.: "Personally I am not a lazy person and I am not satisfied with a mythological paragraph of the bible."

W.-E. L.: It is good to hear that you are a diligent person. So, may I propose to further earnestly/attentively check whether what *prima facie* appears to be a mythological paragraph of the Bible is really so when carefully considering all the facts pro and contra? I would like to repeat here my suggestion to carefully study the book edited by J. P. Moreland et al. (2017): *Theistic Evolution*. In that book the authors analyze in depth what has been looked at by many contemporary researchers as "mythological paragraphs of the bible". Moreover, for the ID question, the thorough study of the books of Stephen C. Meyer (2009) *Signature in the Cell*[118] and (2014): *Darwin's Doubt – The Explosive Origin of Animal Life and the Case for Intelligent Design*[119] would be – in my view – very recommendable. Anyway, there is an enormous amount of scientific literature (books and peer-reviewed papers) – from Cuvier up to the present time – refuting the idea of continuous evolution by biological facts[120].

- *Bechly and Meyer continue: Moreover, since the publication of The Origin of Species in the late 19th century, our knowledge of the fossil discontinuities can no longer be explained away as a consequence of alleged incomplete sampling of the fossil record. In fact, paleontologist Michael Foote of the University of Chicago has noted that as more and more fossil discoveries have been made, the new forms that these discoveries document consistently fall within existing higher taxonomic groups (e.g., phyla, subphyla, and classes). In other words, these new discoveries have repeatedly failed to document the rainbow of intermediate forms expected in the Darwinian view of the history of life (especially, at the higher taxonomic levels). Foote has shown, using statistical sampling analysis, that as this pattern has become more and more pronounced, it has become ever more improbable that the absence of intermediate forms reflects a sampling bias — that is, an "artifact" of either incomplete sampling or preservation11. Increasingly, paleontologists accept that fossil discontinuities are real and need to be explained, not explained away. As Hickman et al. (1988)12 note "most major groups of animals appear abruptly in the fossil record, fully formed, and with no fossils yet discovered that form a transition from their parent group. Indeed, numerous fossil "radiations" or "explosions" of new forms of life are characterized by such abrupt appearances. To get a sense of how pervasive this discontinuous pattern is, and how significant these events are in the history of life, consider these short descriptions of several of the salient examples of the abrupt appearance of new forms of life in the fossil record.*

ABC.: "I do not completely agree, as I said the gaps will find a solution."

W.-E. L: "…***will find***…"– I hope you don't mind too much when I tell you that your comment again reminds me of the witty quotation already given above: "*Faith is the substance of fossils hoped for, the evidence of links unseen*." Well,

[118] https://www.amazon.com/Signature-Cell-Evidence-Intelligent-Design/dp/0061472786
[119] https://www.amazon.com/Darwins-Doubt-Explosive-Origin-Intelligent/dp/0062071483
[120] On page 20 of my paper about Plant Galls I mentioned several further very qualified authors: http://www.weloennig.de/PlantGalls.pdf

this imperturbable/unswerving faith that the gaps will find a solution in the form of a series of connecting evolutionary links to common ancestors by displaying "extremely slight variations" and "infinitesimally small inherited variations", "infinitesimally small changes" etc., had already consistently been shared by Charles Darwin and his disciples more than 150 years ago and they had hoped that further thoroughgoing research would detect these missing lings.

Yet, this is exactly ***not*** what we have detected in the fossil record in the following one and a half centuries of rigorous/in-depth paleontological and geological investigations around the earth. In fact, ***the very opposite is true***. Let's take again the Cambrian Explosion: ***The problems for the theory of continuous evolution have increased at least tenfold***. For instance: A range of entirely new body plans (Baupläne) have been discovered during the last 150 years of fossil research and the number of newly discovered trilobite genera and families and of many other life forms has risen dramatically – all in the absence of the expected innumerable links connecting them with their presupposed common ancestor.

Thus, a scientifically convincing *phylogenetic tree on the basis of fossils* could not and thus has never been documented. To emphasize this key point again: *Really for **not even one of the phyla** found in Cambrian strata or shortly before (as enumerated below) have the postulated series of connecting evolutionary links to their hypothetical ancestors ever been found in spite of all the **ambitious efforts and vigorous endeavors by thousands of evolutionary biologists and geologists during more than one and a half century**.*

Phyla appearing abruptly in the Cambrian or slightly below (the following list has been taken from Meyer 2013, pp. 417/418):

Cnidaria: Chen et al., "Precambrian Animal Life: Probable Developmental and Adult Cnidarian Forms from Southwest China."
Mollusca: Fedonkin and Waggoner. "The Late Precambrian Fossil *Kimberella* is a Mollusc-Like Bilaterian Organism."
Porifera: Love, G. D. "Fossil steroids record the appearance of Demospongiae during the Cryogenian period."
Annelida: Conway Morris and Peel, "The Earliest Annelids: Lower Cambrian Polychaetes from the Sirius Passet Lagerstätte, Peary Land, North Greenland."
Brachiopoda: Skovsted and Holmer, "Early Cambrian Brachiopods From North-East Greenland."
Bryozoa: Landing et al., "Cambrian origin of all skeletalized metazoan phyla—Discovery of Earth's oldest bryozoans (Upper Cambrian, southern Mexico)."
Chaetagnoatha: Szaniawski, H. "Cambrian chaetognaths recognized in Burgess Shale fossils."
Chordata: Chen et al., "A possible Early Cambrian chordate"; Chen, "Early crest animals and the insight they provide into the evolutionary origin of craniates"; Janvier, "Catching the first fish." *Nature* 402 (1999): 21-22; Monnereau, "An early Cambrian craniate-like chordate"; Conway Morris and Caron, "*Pikaia gracilens* Walcott, a stem-group chordate from the Middle Cambrian of British Columbia"; Sansom et al., "Non-random decay of chordate characters causes bias in fossil interpretation"; Shu et al., "An Early Cambrian tunicate from China"; Shu et al. "Lower Cambrian vertebrates from south China."
Coeloscleritophora: Bengtson and Hou, "The integument of Cambrian chancelloriids."

Ctenophora: Chen, J.-Y., et al. "Raman spectra of a Lower Cambrian ctenophore embryo from southwestern Shaanxi, China"; Conway Morris and Collins, "Middle Cambrian Ctenophores from the Stephen Formation, British Columbia, Canada."

Echinodermata: Foote, "Paleozoic record of morphological diversity in blastozoan echinoderms"; Shu et al., "Ancestral echinoderms from the Chengjiang deposits of China"; Zamora et al., "Middle Cambrian gogiid echinoderms from Northeast Spain: Taxonomy, palaeoecology, and palaeogeographic implications."

Entoprocta: Zhang, et al., "A sclerite-bearing stem group entoproct from the early Cambrian and its implications."

Euarthropoda: Cisne, J. L., "Trilobites and the origin of arthropods"; Daley, "The morphology and evolutionary significance of the anomalocaridids"; Grosberg, "Out on a limb: arthropod origins"; Siveter, "A phosphatocopid crustacean with appendages from the Lower Cambrian."

Hemichordata: Shu et al., "Reinterpretation of *Yunnanozoon* as the earliest known hemichordate"; Shu et al., "A New Species of Yunnanozoan with Implications for Deuterostome Evolution."

Hyolitha: Malinky and Skovsted, "Hyoliths and small shelly fossils from the Lower Cambrian of North-East Greenland"; Note that some authors consider Hyolitha to belong to phylum Mollusca, whereas others consider Hyolitha to represent an independent phylum.

Lobopodia: Liu et al., "A large xenusiid lobopod with complex appendages from the Lower Cambrian Chengjiang Lagerstätte"; Liu et al., "Origin, diversification, and relationships of Cambrian lobopods"; Liu et al., "An armoured Cambrian lobopodian from China with arthropod-like appendages"; Ou et al., "A Rare Onychophoran-Like Lobopodian from the Lower Cambrian Chengjiang Lagerstätte, Southwestern China, and its Phylogenetic Implications."

Loricifera: Peel, "A Corset-Like Fossil From The Cambrian Sirius Passet Lagerstatte of North Greenland and its Implications for Cycloneuralian Evolution."

Nematomorpha: Xian-guang and Wen-guo, "Discovery of Chengjiang fauna at Meishucun, Jinning, Yunnan."

Phoronida: Erwin et al., "The Cambrian conundrum: early divergence and later ecological success in the early history of animals."

Priapulida: Wills et al., "The disparity of priapulid, archaeopriapulid and palaeoscolecid worms in the light of new data"; Hu et al., "A new priapulid assemblage from the early Cambrian Guanshan fossil *Lagerstätte* of SW China."

Sipuncula: Huang et al., "Early Cambrian sipunculan worms from southwest China." Some consider sipunculan worms to be a subgroup of the phylum Annelida based on phylogenomic analyses. See Struck et al. "Phylogenomic analyses unravel annelid evolution."

Tardigrada: Muller et al., "'Orsten' type phosphatized soft-integument preservation and a new record from the Middle Cambrian Kuonamka Formation in Siberia."

Vetulicolia: Shu, "On the Phylum Vetulicolia."

Nematoda: Erwin et al., "The Cambrian conundrum: early divergence and later ecological success in the early history of animals."

Nemertea(?): Schram, "Pseudocoelomates and a Nemertine from the Illinois Pennsylvanian." Note that the presence of Nemertea in the fossil record is contested.

Platyhelminthes: Poinar, "A rhabdocoel turbellarian (Platyhelminthes, Typhloplanoida) in Baltic amber with a review of fossil and sub-fossil platyhelminths."

Rotifera: Swadling et al., "Fossil Rotifers and the Early Colonization of an Antarctic Lake."

Several paleontologists like McMenamin (1990) or Erwin et al. (2011) arrive at even higher numbers "by counting groups that some paleontologists count as subphyla or classes as phyla" (Meyer, p. 417). Nevertheless, we have same

situation: ***Total absence, i. e. complete nonappearance of all the fossil series expected and postulated to document the continuous, step by step, slow evolution for the postulated phylogenetic tree***. To repeat your comment: "But I continue to say that: evolution is an evidence of the nature that you can see... In the future, I hope, these gaps will be filled." Well, allow me, please, to say that in my view this is really something like a ***strong faith*** *in the absence of any evidence*.

ABC.: "Moreover, the modern paleontological frontier of Burma and China is showing exceptional discoveries, especially on the plumage of the dinosaurs and their connections with the birds. Like the amber discovered in Burma."

W.-E. L. Yes, very exciting many new exceptional discoveries! As for China and Cambrian Explosion – this is what Stephen C. Meyer records in his bestseller *DARWIN'S DOUBT* (2013/2014, p. 50-51)[121] about a seminar given by professor J. Y. Chen – also a paleontologist who based his criticism of Darwinism solely on the biological/paleontological facts – not on any religious[122] faith:

> "In the spring of 2000 Discovery Institute, where I do my research, sponsored a lecture at the University of Washington geology department by renowned Chinese paleontologist J. Y. Chen (see Fig. 3.1). As the result of his role in excavating a new discovery of Cambrian-era fossils in southern China, Professor Chen's standing in the scientific world was on the rise. The discovery, near the town of Chengjiang in the Kunming Province, revealed ***a trove of early Cambrian animal forms***. After *Time* magazine mentioned the Chengjiang discovery in a 1995 cover story about the Cambrian explosion, interest in the fossils surged. When he came to Seattle, Professor Chen had already published numerous scientific papers about this profusion of novel life forms and had established himself as one of the foremost experts on the fossils in this unique geological setting.
>
> Not surprisingly, Chen's visit generated considerable interest among the University of Washington faculty. He came bearing intriguing photographs and samples of the oldest and most exquisitely preserved Cambrian fossils in the world from an exotic site halfway around the globe, a site, moreover, that was now widely acknowledged to surpass even the legendary Burgess Shale as the most extensive and significant Cambrian-era locality.
>
> ***The fossils from the Maotianshan Shale near Chengjiang (see Fig. 3.2) had established an even greater variety of Cambrian body plans from an even older layer of Cambrian rock than those of the Burgess,*** and they did so with an almost photographic level of realism. The Chinese fossils also helped to establish that **the Cambrian animals appeared even more explosively than previously realized**.
>
> So there was little doubt about the significance of the discoveries that Chen came to report that day. What was soon in doubt, however, was Chen's scientific orthodoxy. In his presentation, ***he highlighted the apparent contradiction between the Chinese fossil evidence and Darwinian orthodoxy***. As a result, one professor in the audience asked Chen, almost as if in warning, if he wasn't nervous about expressing his doubts about Darwinism so freely—especially given China's reputation for suppressing dissenting opinion. I remember Chen's wry smile as he answered. "*In China*," he said, "*we can*

[121] For the corresponding *Figures*, see please the original volume.
[122] In the general usage of the term.

> *criticize Darwin, but not the government. In America, you can criticize the government, but not Darwin*."
>
> Nevertheless, those in the audience that day soon learned that ***Professor Chen had good reasons for questioning Darwin's picture of the history of life.*** **As Chen explained, the Chinese fossils turn Darwin's tree of life "upside down**." They also cast doubt on a surviving version of Charles Walcott's artifact hypothesis, a crucial prop in the case for Darwinian gradualism."

See also, if you like to do so, the following commentary on Graham Budd's discovery of Burgess-Shal-Type fossils found in Greenland: https://evolutionnews.org/2018/01/earlier-burgess-shale-type-fossils-found-in-greenland/

As for "the plumage of the dinosaurs and their connections with the birds", check, please, the following articles on:

> *Feather Design Is Better than Thought*:
> https://evolutionnews.org/2017/03/feather-design-is-better-than-thought/
>
> *Did Complex Flight Feathers "Emerge"*?:
> https://evolutionnews.org/2017/02/did_complex_fli/
>
> VIII. *Whale and Feather Evolution*
> http://www.discovery.org/f/12092

Concerning the Burmese amber, note, please, the ***enormous constancy of the family characteristics*** in, for instance, the Psychomyiidae as analyzed by Wichard et al (2011): https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3260769/ Cretaceous: Early Cenomanian (dated to be around 100 million years old).

And of the subfamily features of dasycerine rove beetles (Coleoptera: Staphylinidae) of the Upper Cretaceous by Yamamoto (2016):
https://www.sciencedirect.com/science/article/pii/S019566711530080X

And of another subfamily of beetles of the family Nemonychidae from Burmese amber, subfamily Rhinorhynchinae by Davis and Engel (2014):
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4023270/

Of tropical Lizards (mid-Cretaceous paleotropics) by Daza et al. (2016). "Twelve specimens from the Albian-Cenomanian boundary of Myanmar (**99 Ma**)…" "The extraordinary preservation allows several specimens to be confidently assigned to groups including stem Gekkota and stem Chamaleonidae."
http://advances.sciencemag.org/content/2/3/e1501080

My question: Now, again thousands of "missing links" would be necessary to connect such families with their assumed common ancestors by gradual evolution over millions of years – just not yet found? Will be really found in the future?

ABC.: *"You can see the proof of evolution with real evidence... in the fossils"?*

"Absolutely yes, my dear Wolf. I certainly do not see them in the bible."

W.-E. L.: It is hard for me to understand and comprehend your ***unconditional faith in gradual evolution*** in spite of all the drastically dissenting paleontological data as documented above (the systematic discontinuity is also strongly

emphasized by non-religious[123] paleontologist like Beurlen, Schindewolf, Gould, J. Y. Chen and many others. As for the Bible, I would like to suggest to study the soon to be published new book by Rolf Furuli (2018): ***Can We Trust the Bible?***

- *Well, your student has carefully listened (in fact, several times intensely) to the talk of professor James Tour https://www.youtube.com/watch?v=_zQXgJ-dXM4 and has also corresponded with him.*

ABC.: "I'll see the video of Dr. Tour."

W.-E. L.: It would be very interesting for me to hear how you assess/evaluate his talk on the origin of life.

- *About photosynthesis. [..] Anyhow, this phenomenon "with all its integrated biochemical complexity originated abruptly as soon as the Earth offered a stable and suitable environment for the process to occur" – well, how then is it possible, your student asks, that you see the evidences for a totally mindless, accidental, continuous evolution "clearly in the present and in the past both"?*

ABC.: "Originated abruptly", you forget that abruptly in geological time is very, very, very slow, it is a very slow mechanist, A LOT OF TIME...it is certainly not sudden in the sense of human time."

W.-E. L.: This seems to be what the (Harvard) atheist evolutionist Stephen J. Gould called – to emphasize: without any religious[54] motivation – "***evolution by creeps***" (for phyletic gradualism when some critics tried to denigrate his theory of punctuated equilibrium as "evolution by jerks").

Now, what do we mean by "abruptly":

Let us come back to the Cambrian Explosion: According to the American Museum of Natural History:

> "***Trilobites emerged fully formed upon the Cambrian scene***. By the time, some 521 million years ago, that the initial members of this ancient line of arthropods began filling oceanic environments around the globe, ***they were already creatures with highly developed eyes, complex digestive systems and admirably functional calcite carapaces***. Quite simply, at that moment trilobites were the most advanced life forms that Planet Earth had ever produced.
>
> Despite their ***sudden and dramatic appearance*** in the fossil record, it is obvious that trilobites evolved from earlier, more primitive organisms."[124]

However, why is it "***obvious*** that trilobites evolved from earlier, more primitive organisms"? – Why should it be "obvious" (meaning "***plain to see, evident***"[125]) *although absolutely nothing can be seen of that evolution by innumerable*

[123] Again in the general usage of the term.
[124] https://www.amnh.org/our-research/paleontology/paleontology-faq/trilobite-website/the-trilobite-files/the-first-trilobites/ (retrieved 11 February 2018.)
[125] https://www.etymonline.com/word/obvious

"insensibly fine steps" and "insensibly fine gradations" etc.[126] over hundreds of millions of years? Or, in other words, why "obvious" in spite of the total absence of the thousands of connecting fossil links to the postulated earlier more primitive organisms? Answer: Because of the unproven extraordinarily dubious presupposition/assumption/postulate of **the *faith* in gradual evolution.** The question should be allowed, whether Planet Earth really produced these advanced life forms just by mutations and selection in the ages before.

Now let us look at the first and thus oldest trilobites detected so far:

> "Indeed, perhaps the first trilobite in the entire fossil lineage, *Profallotaspis jakutensis*, has been documented in adjacent Siberian mudstone layers, marking this remote outpost as one of unique paleontological significance."[127]
>
> "*Profallotaspi*s is an extinct genus from a well-known class of fossil marine arthropods, the trilobites. It lived during the early Atdabanian stage,[1] ***526 million years ago***. *Profallotaspis jakutensis* is arguably the earliest trilobite ever found. Representatives of *Profallotaspis* have been recorded in the provisional Cambrian Stage 3 deposits of Siberia and, probably, also North America."[128]
>
> "The "Fallotaspidoidea" are a superfamily of trilobites, a group of extinct marine arthropods. It lived during the Lower Cambrian (Atdabanian)[3] and ***species occurred on all paleocontinents except for the Gondwana heartland*** (currently Latin America, most of Africa, Australia, Antarctica, India and China). A member of this group, *Profallotaspis jakutensis*, has long been the earliest known trilobite, but recently the redlichiid *Lemdadella* has been claimed as occurring even earlier."[129]
>
> "*Lemdadella* is currently the oldest trilobite genus known, dating back to about ***521 million years ago*** [see footnote]. The International Commission on Stratigraphy has proposed that the first appearance datum of trilobites should be used as the lower boundary of Cambrian Series 2 and Cambrian Stage 3.[6] If this proposal will be defined as a GSSP, it will most likely use the first appearance of *Lemdadella*, a species of *Lemdadella*, or a trilobite zone that includes *Lemdadella*. The age and ***global distribution of Lemdadella*** are therefore of key importance for the Stratigraphy of the Cambrian.[7]"
>
> The following trilobite zones contain Lemdadella (Brackets contain geographic distribution):[7]
>
> Fallotaspis zone (**Spain, Laurentia**)
> Eoredlichia-Yunnanocephalus zone (**Antarctica**)"[130]

On the background and within the framework of the neo-Darwinian gradual/ slow/ steady evolution, which "can never take a leap", the "**sudden and dramatic appearance**" of "fully formed trilobites" being "creatures with highly developed eyes, complex digestive systems and admirably functional calcite carapaces" ***from the very beginning*** – *was absolutely unexpected/unforeseen/stunning*: Thus, ***they originated abruptly***, that is: without thousands and perhaps altogether millions of intermediate links evolving in the long geological periods before (some authors reckon with a ***billion*** (and more) ***years*** of slow evolution before the Cambrian strata).

Dear ABC.: when you assert that by "Originated abruptly", I forget that abruptly in geological time is very, very, very slow, it is a very slow mechanist", I would like to point out that ***you already read and project your evolutionary faith into the geological facts discovered***.

---

[126] See Darwin above.
[127] https://www.amnh.org/our-research/paleontology/paleontology-faq/trilobite-website/trilobite-localities/
[128] https://en.wikipedia.org/wiki/Profallotaspis (retrieved 15 February 2018)
[129] https://en.wikipedia.org/wiki/Fallotaspidoidea (retrieved 15 February 2018)
[130] https://en.wikipedia.org/wiki/Lemdadella (also retrieved 15 February 2018). ***But why is 521 million years older than 526 million years?***

And if the process of trilobite fossilization itself (to touch this rather macabre topic briefly) would have been *very slow*, then nothing would have been left of the organisms (not even imprints) due to disintegration and decomposition by bacteria and other scavengers. So, at least for the first stages, and especially so for the preservation of soft parts, most certainly the process must have been *sudden in the sense of human time*! Indeed often "just a few hours", "but no more than a few days" (see definite scientific, reproducible proof below). For:

> "Spectacularly preserved trilobite fossils, **often showing soft body parts** (legs, gills, antennae, etc.) have been found in British Columbia, Canada (the Cambrian Burgess Shale and similar localities); New York, U.S.A. (Ordovician Walcott-Rust quarry, near Russia, and Beecher's Trilobite Bed, near Rome); China (Lower Cambrian Maotianshan Shales near Chengjiang); Germany (the Devonian Hunsrück Slates near Bundenbach) and, much more rarely, in trilobite-bearing strata in Utah (Wheeler Shale and other formations), Ontario, and Manuels River, Newfoundland and Labrador."[131]

Of course, ensuing petrification and permineralization can demand more time, but even in these cases not always and not necessarily so:

> "Fossils can form in a wide variety of ways. Some common methods include:
>
> 1. The body can leave an impression or mold showing its outer shape in the surrounding sand or mud. This can include footprints and the inside and outside of shells. With the right ingredients and conditions, the mold can harden quickly, like cement.
> 2. Petrification takes place when minerals replace the original material of the plant or animal. These petrified fossils must form quickly, before the body parts have time to decay. Petrified wood is a classic example.
> 3. Permineralization, or encased fossilization, occurs when dissolved minerals fill the pores and empty spaces in the plant or animal but don't replace any of the original material. The chemicals then turn into crystals, keeping the organism safe and preserved. While it is possible for many different chemicals to do this, quartz is the most common. Most dinosaur bones are permineralized.
>
> Fossils can form under all kinds of conditions all over the world. While water and dissolved minerals are usually needed to form the three types of fossils above, many processes—coalification, compression, freezing, desiccation (drying out), to name a few—do not require either." [132]

> "Bacterial attack will also contribute to the process of disintegration. Even in a sterile, low oxygen environment, the flesh rapidly becomes soggy and falls apart,2 leaving no trace of the beautiful structures which the fossil illustrated, for example, shows. That is why, when snorkelling on the sea floor, one does not see thousands of dead fish resting quietly on the ocean bottom in part-way stages of fossilization!
>
> To preserve such features, it is obvious that the creature needs to be ***buried quickly***. Not just that, but the enclosing sediment needs to harden fairly quickly. If it stayed soft and unconsolidated for years, the fact that oxygen, moisture and bacteria could easily access the carcass means that one would very quickly have a disintegrated, stinking mess. To try to imitate how such features as scales and fins can possibly be preserved, the best experimental analogy would be to bury a fish rapidly in wet cement!"[133]

And now some evolutionary sites. For example, on body fossils:

> "The remains of an organism that survive natural biological and physical processes must then ***become quickly buried by sediments***. The probability for an organism to become fossilized increases if it already lives in the sediment, and those on the sea floor are more readily fossilized than those floating or swimming above it. ***Catastrophic burial with a rapid influx of sediment is necessary*** to preserve delicate complete animals such as crinoids or starfish. This explains why most crinoids, for example, are found only as stem pieces. Since crinoids were not usually buried quickly, their hard stem parts are far more frequently found as fossils. ***Observations of rare living crinoids have shown that they will rapidly***

[131] https://en.wikipedia.org/wiki/Trilobite (retrieved 11 February 2017)
[132] https://answersingenesis.org/fossils/how-are-fossils-formed/experiment-fast-formed-fossils/ (retrieved 12 February 2018; why not sometimes quote from a creationist site if the information is correct?) See also http://www.creationconcepts.org/resources/FOSSILS.pdf
[133] https://creation.com/fast-fossils

disarticulate within a few days of death. ***Rapid burial, in contrast, prevents this disintegration***, and thus explains a few localities where beds of delicate crinoids, starfish and brittle stars are preserved in their entirety."[134]

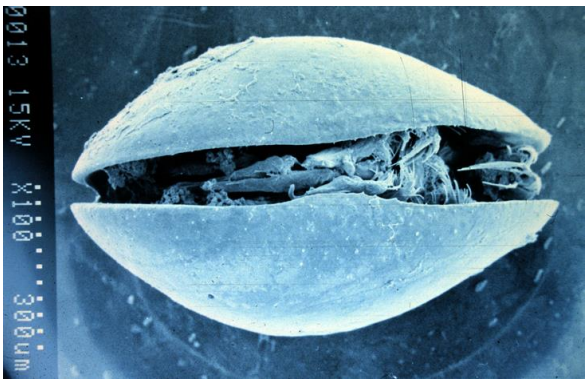
"It is very likely that any organism on Earth will be either eaten by scavengers or decomposed by microorganisms after it dies. Organisms decompose more quickly when they are in contact with oxygen. Most environments exposed to the open air are in contact with plenty of oxygen, so ***the soft tissues of dead organisms, whether plants or animals, decay quickly***. Many, if not most, underwater environments also have a lot of oxygen, since water can dissolve oxygen from the atmosphere.

For an organism to become a fossil, ***it must not decompose or be eaten***. This can happen if the organism either lives within or is moved to a place where it can be buried and kept from decaying. ***When an organism is buried quickly, there is less decay and the better the chance for it to be preserved***. The hard parts of organisms, such as bones, shells, and teeth have a better chance of becoming fossils than do softer parts. One reason for this is that scavengers generally do not eat these parts. Hard parts also decay more slowly than soft parts, giving more time for them to be buried.[135]

And another non-religious source[136]:

"A long-dead fish rears its ugly head. This animal lived 100 million years ago, when dinosaurs still roamed. After it died, ***it fossilized so quickly that its individual cells were preserved in stone***! David Martill, University of Portsmouth."

"In rock after rock, Martill didn't just find a skeleton of the fish. He also found its organs petrified in stone. He found the stomach, intestines and the delicate feather-like gills that the fish used to breathe. In the stomach of one fish, Martill even found the petrified remains of its last meal: the bodies of shrimpy creatures called ostracods. And when he looked closely at the fossil gills under a microscope, he realized that even individual cells had been preserved.



…. "Some ancient fish turned to stone ***so quickly that their last meals got preserved inside them***. This tiny crustacean, called an ostracod, was found in the stomach of a petrified fish. Seen here, thanks to an electron microscope, this one is only as wide as the period at the end of this sentence. David Martill, University of Portsmouth."

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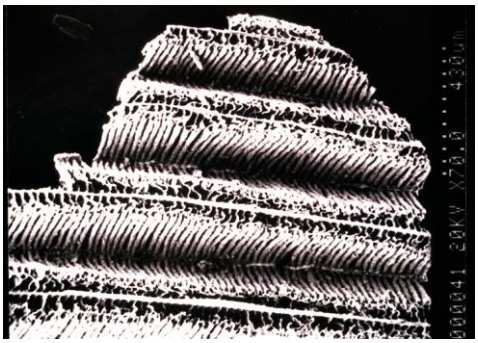
[134] http://www.fossilmuseum.net/fossilrecord/fossilization/fossilization.htm
[135] https://www.americangeosciences.org/education/k5geosource/activities/investigations/fossils/how-fossils-form
[136] https://www.sciencenewsforstudents.org/article/surprise-fossils-flash

….. As Martill looked at his fish-rocks, he realized ***the animals must have turned to stone very quickly***. If not, their guts and gills would have rotted away and disappeared. Martill refers to this as "the Medusa effect." He named it for the mythical monster, with snakes for hair, whose gaze could turn people to stone. It seemed these fish actually ***had turned to stone in the blink of an eye***. How that happened was a mystery. But Martill was determined to solve it. That was the purpose of his fish-rotting experiments.

He took gills of freshly caught trout and let them rot in his lab. It "wasn't very nice" to kill the fish, he admits —"but we ate most of them, anyway. We just wanted the gills."

Every so often he retrieved a sample of rotting flesh and looked at it under a microscope. He wanted to see how long gill cells would stay intact after a fish died. These results ***helped him figure out how quickly the ancient fish must have fossilized in order to preserve the delicate gills from decay***.

Martill found that some features of the gills disappeared within several hours of a fish's death. It led him to an unbelievable conclusion: "***The fossilization process was probably taking just a few hours***," he says, "***but no more than a few days***."



"The cellular structure of a fish's gills, seen in an image made by a scanning electron microscope. This fish died 100 million years ago – 34 million before the dinosaurs disappeared. ***David Martill believes that tiny mineral crystals grew inside the fish within several hours of its death***. David Martill, University of Portsmouth."

So, instead of very, very slow, such processes occur often almost instantaneously.

"**The rapid burial** of remains beneath a blanket of sediment is critical to the process of fossilization because burial separates the remains from the biological and physical processes that would otherwise destroy them. … Why are soft parts sometimes preserved in such lagerstätten? The answer is difficult because the circumstances and styles of preservation of soft parts vary from place to place, but a key factor seems to be **very rapid burial in sediments** with very little oxygen present; such environments are referred to as anoxic (meaning "without oxygen"). The low amount of oxygen is important because it slows the decomposition of soft parts by bacteria, favoring the preservation of the soft parts as thin carbon films or allowing the soft parts to be replaced with geologically stable minerals like pyrite."[137]

You continue to quote:

- *Now, of course, your student's question: Assuming that the identification of unseen "fossil genes" be true (this is, in fact, a deduction from the unproved presupposition of continuous evolution by the neo-Darwinian theory), and that "a randomly driven mutational search is overwhelming more likely to fail than to succeed in finding even one functional gene, let alone all the many genes that arose during this Archaean expansion, in available evolutionary time" (an induction by the genetic facts discovered), why – to repeat your statement – do you "think that scientists are right about evolution because it's an evidence of nature that you can see"?*

[137] http://www.digitalatlasofancientlife.org/learn/nature-fossil-record/the-process-of-fossilization/
See also http://www.digitalatlasofancientlife.org/learn/nature-fossil-record/types-of-fossil-preservation/

ABC.: “Thanks for repeating my statement hundreds of times, but I refer to the fossils that you can see and touch, anyway on this argument I don't know to answer, I'm not a geneticist, so I could agree with you.”

W.-E. L.: You “refer to the fossils that ***you can see and touch***”? Well, in your own words “evolution is an evidence of the nature that you can see... ***In the future***, I hope, these gaps will be filled.”

I apologize for repeating your statements too often (some of your comments “only” sixteen times, others mostly in combination with these, ca. twenty times; my motive: I tried to contrast ***your persevering, loyal faith*** in phyletic gradualism as strongly as possible against the ***undeniably discontinuous paleontological facts*** as documented, for example, by Bechly and Meyer: Avalon Explosion, Cambrian Explosion, GOBE, Odontode Explosion, Silurio-Devonian Radiation of Terrestrial Biotas, Carboniferous Insect Explosion, Triassic Explosion, Early Triassic Terrestrial Tetrapod Radiation, Mid-Triassic Gliding Reptile Radiation, Mosasaur Radiation, Radiation of Flowering Plants, Radiation of Modern Placental Mammals, Radiation of Modern Birds, Origin of Genus Homo, The “Top-Down” Pattern of Appearance, and Living Fossils.)

- *about Avalon ex. ABC. "I think that scientists are right about evolution because it's an evidence of nature that you can see,...." and “You can see the proof of evolution by real evidence... in the fossils, in the geological stratigraphy and its fossil records…” “I see those evidence clearly in the present and in the past both, as I said.” Your student’s question: Well, how can you see evolution when “all groups originate abruptly without any known putative ancestors”?*

“Because there are gaps in the fossil records.”

W.-E. L.: “You can **see** the proof of evolution by real evidence…” ***in the gaps***?

- *About Cambrian Ex. Now again your student’s question: How is it possible for my teacher to see “the proof of evolution by real evidence in the fossils” in complete, outright, absolute contrast to “the sudden appearance of novel animal forms”, in clear opposition to the “absence of transitional intermediate fossils connecting the Cambrian animals to simpler Precambrian forms” and, among other points, also in downright contradiction to the “pattern in which radical differences in form in the fossil record arise before more minor, small-scale diversification and variations”? According to several evolutionary scientists, at least ¾ of the entire phylogenetic tree are missing from the very beginning of the tree of life (some even say 7/8 are absent). Is it really incorrect for your student to conclude that the tree of life has no evolutionary roots? He also asks: Where is the “real evidence” for continuous evolution? And: Could ingenious, innovative, creative and artful design the real, actual and true*

reason behind "the startling array of completely novel animal forms with novel body plans"?

ABC.: "Yeah you are right, and I agree with you, but you forget again the sedimentary gaps..."

W.-E. L.: Well, the topic of sedimentary gaps has been considered (and often also reconsidered) thoroughly, painstakingly, intensively, scrupulously and meticulously by, in fact, many perfectly *non-religious*[138] paleontologists and geologists alike, who have come to the definite conclusion that the sedimentary gaps do not explain the systematic absence of the fossil transitional series so indispensably demanded by phyletic gradualism, the "***evolution by creeps***" (atheist Gould, see above).

This is exactly why Gould and Eldredge had proposed their theory of punctuated equilibrium (see also Stanley and others). And statistical paleontology has explicitly corroborated this conclusion – again by non-religiously[69] motivated researchers like Michael Foot and Michal J. Benton. Check and test critically and carefully the following explication of the topic by Meyer (2013, pp. 60-71, also 2014):

> "Recent work in a field known as statistical paleontology casts further doubt on the artifact hypothesis[139] Since the discovery of the Burgess Shale, Precambrian- and Cambrian-era discoveries have repeatedly uncovered fossil forms that either establish radically disparate new forms of life or, increasingly, forms that fall into existing higher taxonomic groups (such as class, subphylum, or phylum).
>
> As a result, the fossil record amply documents organisms corresponding to the terminal branches on the Darwinian tree of life (animal forms representing new phyla or classes, for example), but it fails to preserve those organisms representing the internal branches or nodes leading to these representatives of novel phyla and classes of Cambrian-era animals. Yet these intermediates are the very forms required to connect the terminal branches to form a coherent evolutionary tree and establish that the representatives of the Cambrian animals did arise by means of a gradual evolutionary process from simpler Precambrian ancestors.
>
> Recall that Louis Agassiz thought that this pattern could not be explained by appealing to an incomplete fossil record, because the fossil record was [or would have been] strangely selective in its incompleteness, preserving abundant evidence of the terminal branches but consistently neglecting to preserve the representatives of the internal branches or nodes.
>
> Contemporary paleontologists, such as Michael Foote at the University of Chicago, have come to a similar conclusion. Foote has shown, using statistical sampling analysis, that as ***more and more fossil discoveries fall within existing higher taxonomic groups*** *(e.g., phyla, subphyla, and classes),* ***and as they fail to document the rainbow of intermediate forms expected in the Darwinian view of the history of life, it grows ever more improbable that the absence of intermediate forms reflects a sampling bias***— that is, an "artifact" of either incomplete sampling or preservation.
>
> This kind of analysis merely quantifies what, in other circumstances, we would sense intuitively. Imagine that you reach into an enormous barrel full of marbles and randomly pull out a yellow, a red, and a blue marble. At this point your brief sampling should leave you undecided as to whether you have a representative sample of the barrel's contents. You might at first imagine that the barrel also contains marbles representing a rainbow of intermediate colors. But as you continue to sample from every place in the barrel and find that the barrel disgorges only those same three colors you begin to suspect that it

[138] Again in the general usage of the term.
[139] Artifact hypothesis: The hoped for evolutionary series of the thousands of links is totally missing due to many different environmental and other circumstances like heat, pressure, forms too small to have been fossilized, sedimentary gaps etc. – "born of frustration rather than the pleasure of discovery" – Gould concerning Walcott's artifact hypothesis].

may offer a much more limited selection of colors than, say, the rack of color samples at your local paint store.

Over the past 150 years or so, paleontologists have found many representatives of the phyla that were well known in Darwin's time (by analogy, the equivalent of the three primary colors) and a few completely new forms altogether (by analogy, some other distinct colors such as green and orange perhaps). And, of course, within these phyla there is a great deal of variety. Nevertheless, the analogy holds at least in so far as the differences in form between any member of one phylum and any member of another phylum are vast, and paleontologists have utterly failed to find forms that would fill these yawning chasms in what biologists call "morphological space." In other words, ***they have failed to find the paleontological equivalent of the numerous finely graded intermediate colors*** (Pendleton blue, dusty rose, gun barrel gray, magenta, etc.) that interior designers covet. Instead, extensive sampling of the fossil record has confirmed a strikingly discontinuous pattern in which representatives of the major phyla stand in stark isolation from members of other phyla, without intermediate forms filling the intervening morphological space.

Foote's statistical analysis of this pattern, documented by an ever increasing number of paleontological investigations, demonstrates just how improbable it is that there ever existed a myriad of as yet undiscovered intermediate forms of animal life—forms that could close the morphological distance between the Cambrian phyla one tiny evolutionary step at a time. In effect, Foote's analysis suggests that since paleontologists have reached repeatedly into the proverbial barrel, sampled it from one end to the other, and found only representatives of various radically distinct phyla but no rainbow of intermediates, we shouldn't hold our breath expecting such intermediates to eventually emerge. ***He asks "whether we have a representative sample of morphological diversity and therefore can rely on patterns documented in the fossil record." The answer, he says, is yes***.

By this affirmation, he doesn't mean that there are no biological forms left to discover. He means, rather, that we have good reason to conclude that ***such discoveries will not alter the largely discontinuous pattern that has emerged***. "Although we have much to learn about the evolution of form," he writes, the statistical pattern created by our existing fossil data demonstrates that "in many respects our view of the history of biological diversity is mature." [Foote, "Sampling, Taxonomic Description, and Our Evolving Knowledge of Morphological Diversity," See also Foote, "On the Probability of Ancestors in the Fossil Record."]

(P. 422) Another statistical paleontologist, Michael J. Benton, and his colleagues have reached a similar conclusion. They note that "if scaled to the … taxonomic level of the family [and above], ***the past 540 million years of the fossil record provide uniformly good documentation of the life of the past***" (Benton, Wills, and Hitchin, "Quality of the Fossil Record Through Time," 534). In another article Benton also writes: "It could be argued that there are fossils out there waiting to be found. It is easy to dismiss the fossil record as seriously, and unpredictably, incomplete. For example, certain groups of organisms are almost unknown as fossils.… This kind of argument cannot be answered conclusively. However, an argument based on effort can be made. Paleontologists have been searching for fossils for years and, remarkably, very little has changed since 1859, when Darwin proposed that the fossil record would show us the pattern of the history of life" ("Early Origins of Modern Birds and Mammals,")

I should note that there is one way in which my analogy to colored marbles in a barrel fails to capture the nature of the challenge of Cambrian fossil discontinuity. If after pulling samples from a barrel for a while you finally came up with a green and orange ball to go along with the piles of red, blue, and yellow balls, you still wouldn't have much confidence that the barrel had a rainbow of ball colors finely grading from one to another. Yet you could at least say that the orange ball stands between the yellow and red ball, and the green ball stands between the blue and yellow balls (like the hybrid produced from two plants). ***But many of the new Cambrian animal forms that have been discovered since Darwin's time aren't seen as intermediates between the previously known animal forms representing known phyla. They aren't evolutionary intermediates between one existing phylum and another***. Instead, scientists consider them as existing out in morphological space all their own, standing not as intermediates but as phyla that themselves are in need of intermediate forms—almost as if, by stretching my analogy, some new primary color had been discovered

ABC.: "…Also you are not thinking three-dimensionally to the distribution of rock formations, especially the ancient ones. Many portions are isolated from thousands of meters of rocks of younger formations [W.-E. L.: ***really not new for me***]; what we see on the surface is a thin film. Many studies will be carried out in the coming decades and scientists will come to solutions, not everything has been explained, Wolf."

W.-E. L.: I agree and I have many strong scientifically tested reasons to agree fully also with Michael Foot that "***such discoveries will not alter the largely discontinuous pattern that has emerged***."

ABC.: "…You reason as if palaeontology has already made its course and now it is a science that is over and buried. it's not as you think.

W.-E. L.: I really don't think that the science of paleontology is over and buried, but I have ample reasons to be in agreement with many non-religious[140] paleontologists and geologists that after 150 years of intense studies of the fossil record (or, as I have called it above after "thorough, painstaking, intensive, scrupulous and meticulous" investigations *inter alia* concerning the sedimentary gap hypothesis) the principal lines – evolutionary continuity or discontinuity – have authentically/ undoubtedly/ truly been established: Discontinuity.

- *Could ingenious, innovative, creative and artful design the real, actual and true reason behind ???* - When the bible will provide such proof, not faith, then I will agree with you."

W.-E. L.: The Bible argues, for example, as follows:

"For his [God's] invisible qualities are clearly seen from the world's creation onward, because they are perceived by the things made, even his eternal power and Godship, so that they are inexcusable" (Romans 1: 20).

"Of course, every house is constructed by someone, but the one who constructed all things is God." (Hebrews 3:4). As for the following scientific question, here are some Bible answers:

"**Did the physical universe have a beginning?**[141]

Leading scientists once felt strongly that the answer was no. Now they generally accept that there was a beginning to the universe. The Bible said that clearly all along.—Genesis 1:1. (In the beginning God created the heavens and the earth.)"

Are the physical heavens subject to decay?

Greek scientist Aristotle, of the fourth century B.C.E., taught that decay happens only on the earth, while the starry heavens could never change or decay. That view prevailed for many centuries. But in the 19th century, scientists formulated the concept of entropy. It suggests that all matter, whether heavenly or earthly, tends to decay. One of the scientists who helped to advance this concept, Lord Kelvin, noted that the Bible says about heaven and earth: "Just like a garment they will all wear out." (Psalm 102:25, 26) Kelvin believed, as the Bible teaches, that God could choose to prevent such decay from destroying His creations.—Ecclesiastes 1:4.

What holds up planets such as our earth?

Aristotle taught that all the heavenly bodies were encased in crystalline spheres, each one nested tightly within the next, with the earth innermost. By the 18th century C.E., scientists were accepting the idea that stars and planets might hang in a void. But in the book of Job, of the ***15th century B.C.E.***, we read that the Creator is "suspending the earth upon nothing."—Job 26:7.

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[140] Also in the general usage of the term.
[141] Watchtower, No. 1 (2018), pp. 6/7

[And a further comment on this point:] “The Bible describes the earth as suspended “upon nothing.” (Job 26:7) There is no mention of our planet resting on the shoulders of a giant or on the backs of elephants that stand on a turtle, as some popular myths of ancient times had it. Rather, the Bible leaves the door open to scientific discovery. In time, Nicolaus Copernicus and Johannes Kepler described how the planets move around the sun driven by an invisible force. Isaac Newton later showed how gravitation governs the movement of all objects in space.”[142]

And just another point of many others:

The link between emotional health and physical health.

Medical researchers and scientists say that positive emotions such as joy, hope, gratitude, and a willingness to forgive have some beneficial effects on health. The Bible says: “A joyful heart is good medicine, but a crushed spirit saps one’s strength.”—Proverbs 17:22.”

Much more can be said on these topics. Professor Rolf Furuli has just finished a book of more than 700 pages on the topic *Can We Trust the Bible*? I would like to tell you when the book is available.

Regarding a thoroughly scientific argumentation for the intelligent origin of life in its basic forms, check please rigorously the books and papers by Axe, Behe, Bethell, Dembski, Denton, Johnson, Leisola, Lönnig, Meyer, Moreland et al. (eds.), ReMine, Sanford, Scherer, Sewell, Swift, Wells, and many others.

As a general contrast between the teachings of the Bible on origins and all-inclusive evolution, I had already quoted this in an e-mail (9 November 2017):

As to the materialistic world view, Michael Egnor, a Professor of Neurosurgery and Pediatrics at State University of New York, Stony Brook stated:

> "Here is how **atheists** explain nature: ***Nothing made everything for no reason*** and made life from non-life for no reason and made meat robots who think they have purposes but don't for no reason." http://www.evolutionnews.org/2016/09/atheism_is_a_ca103154.html

In contrast: This is how the Bible explains the origin of the universe and life:

> “You are worthy, Jehovah our God, to receive the glory and the honor and the power, because you created all things, and because of your will they came into existence and were created.” (Revelation 4:11)

Which of these two possibilities appears to be more reasonable?

- *Ordovician and Odontode - Your student’s question on the second Big Bang of life: Since all the ca. 300 new families appear abruptly in the fossil record – where does my instructor “see the proof of evolution by real evidence”? - Your student’s question, is of course: Since “all major groups of jawed fish with teeth and tooth-like structures (odontodes) appear abruptly in the fossil record” – where is the evidence for evolution that you can see? And your inquiring student dares to repeat his question: Rather, could ingenious, innovative, creative and artful design the real, actual and true reason behind the sudden appearance of “all major groups [..]?*

[142]https://www.jw.org/en/publications/magazines/wp20150601/science-in-everyday-life/

ABC.: "You constantly forget the fact that suddenly (abruptly) in geology means a lot, but really a lot, indeed a lot of time; …."

W.-E. L.: Could my impression perhaps be correct that you constantly project ***your faith*** in phyletic gradualism, the "***evolution by creeps***" into geology? "Suddenly (abruptly)" simply means this, **to repeat** (and extrapolate from this example to the general situation of the origin of new life forms according to the documents given by the fossil record):

> On the background and within the framework of the neo-Darwinian gradual/ slow/ steady evolution, which "can never take a leap", the "**sudden and dramatic appearance**" of "fully formed trilobites" being "creatures with highly developed eyes, complex digestive systems and admirably functional calcite carapaces" ***from the very beginning*** – *was absolutely unexpected/unforeseen/stunning*: Thus, ***they originated abruptly***, that is: without thousands and perhaps altogether millions of intermediate links evolving in the long geological periods before (some authors reckon with a ***billion*** (and more) ***years*** of slow evolution before the Cambrian strata).

ABC.: "I begin to debate the fact that you creationists do not believe in geological time as understood by the international scientific community. And the answer is no: there is no intelligent designer behind these sudden explosions of life, but only evolutionary processes quite evident to me, yet respect your creationist thought."

W.-E. L. Dear ABC., you know that I am not a creationist ("creationists believe that God created the universe in 6 days 10,000 years ago").

But how do you ***really know*** that "there is no intelligent designer behind these sudden explosions of life…"?

However, if you asked me, how I know that there is One, I would answer as follows:

The cell physiologist Siegfried Strugger wrote [with additions in square brackets]:

> "The cell is the most perfect cybernetic system on Earth [consisting of thousands of spatio-temporally precisely matched gene functions, gene interactions, cascades and pathways in a steady-state network of ingeniously complex physiological processes characterized by specified as well as (often) irreducible complexity including an abundance of information in the gigabyte to terabyte range]. All the automation of human technology is, in comparison to the cell, only a ***primitive beginning of man*** in principle to arrive at a biotechnology."
>
> Argumentation for intelligent design: If for the "*primitive beginning*" conscious action, imagination, perception, intelligence, intellect, wisdom, mental concepts, spirit and mind are already absolutely necessary on this path, ***how much more so does this have to apply to the origin of the thousand times more complex cybernetic systems of life forms themselves – including all their specified and irreducibly complex structures***![143]

[143] Original German Text: "Die Zelle ist das vollendetste kybernetische System auf der Erde [bestehend aus Tausenden von raumzeitlich präzis aufeinander abgestimmten Genfunktionen, Geninteraktionen, -kaskaden und pathways in einem im Fließgleichgewicht befindlichen Netzwerk genial-komplexer physiologischer Prozesse, die sich durch specified sowie (oft auch) irreducible complexity samt einer im Giga- bis Terabytebereich befindlichen Informationsfülle auszeichnen]. Alle Automation der menschlichen Technik ist gegen die Zelle nur ein primitives Beginnen des Menschen im Prinzip zu einer Biotechnik zu gelangen." Argumentation dazu: Wenn nun schon "das primitive Beginnen" auf diesem Weg immer bewusstes Handeln, Intelligenz, Geist und Weisheit voraussetzt, - wie viel mehr muss das dann erst auf den Ursprung der tausendmal komplexeren kybernetischen Systeme der Lebensformen zutreffen!

Again Meyer (2013, excerpts from pp. 358-361; emphasis added[144]).

"We have seen that building a Cambrian (or any other) animal would require vast new, functionally specified digital information. Moreover, the presence of such digitally encoded information in DNA presents, at least, a *striking appearance of design* in all living organisms. As Richard Dawkins observes, for example, "**The machine code of the genes is uncannily computer-like**." Similarly, biotechnology specialist Leroy Hood refers to the information stored in DNA as "**digital code**" and describes it in terms reminiscent of computer software. And Microsoft's Bill Gates notes: "**DNA is like a computer program but far, far more advanced than any software we've ever created**."

Yet we've also seen that neither neo-Darwinism nor any other materialistic evolutionary model or mechanism explains the origin of the genetic information (the digital code) necessary to produce the Cambrian animals or even the simplest structural innovations that they exhibit. Could this—from a materialistic point of view—*unexplained* appearance of design point instead to actual *intelligent* design?

…….

Is it possible that this increase of biological information not only represents evidence against materialistic theories of biological evolution, but also positive evidence for intelligent design?

….. It does. Intelligent agents—due to their rationality and consciousness—have demonstrated the power to produce specified or functional information in the form of linear sequence-specific arrangements of characters. Digital and alphabetic forms of information routinely arise from intelligent agents. A computer user who traces the information on a screen back to its source invariably comes to a *mind*—a software engineer or programmer. The information in a book or inscription ultimately derives from a writer or scribe. ***Our experience-based knowledge of information flow confirms that systems with large amounts of specified or functional information invariably originate from an intelligent source***. The generation of functional information *is* "habitually associated with conscious activity." Our uniform experience teaches this obvious truth.

It also suggests, therefore, that intelligent design meets the key "causal adequacy" requirement of a good historical scientific explanation. Certainly, intelligence is a "cause now in operation" capable of generating functional or specified information in a digital form. As I write this, my mind is generating specified information. Intelligent agents generate information in the form of software code, ancient inscriptions, books, encrypted military codes, and much else. ***And since we know of no "presently acting" materialistic cause that also generates large amounts of specified information*** (especially in a digital or alphabetic form), ***only intelligent design meets the causal adequacy requirement of a historical scientific explanation***. In other words, our uniform experience of cause and effect shows that intelligent design **is *the only known cause* of the origin of large amounts of functionally specified digital information**. It follows that the great infusion of such information in the Cambrian explosion points decisively to an intelligent cause.

Intelligent design stands alone as an explanation for the origin of genetic information for another reason: purposive agents have just those necessary powers that natural selection lacks as a condition of its causal adequacy. We have seen that natural selection lacks the ability to generate novel information precisely because it can only act *after* new functional information has arisen. Natural selection can favor new proteins and genes, but ***only after they perform some function*** (influencing reproductive output). The job of generating new functional genes, proteins, and systems of proteins therefore falls entirely to random mutations. ***Yet without functional criteria to guide a search through the space of possible sequences, random variation is probabilistically doomed***. What is needed is not just a source of variation (i.e., the freedom to search a space of possibilities) or a mode of selection that can operate after the fact of a successful search, but instead a means of selection that (a) operates during a search—*before* success—and that (b) is guided by information about or knowledge of a functional target.

……..

What natural selection lacks intelligent design—purposive, goal-directed selection—provides. Rational agents can arrange both matter and symbols with distant goals in mind. They also routinely solve problems of combinatorial inflation. In using language, the human mind routinely "finds" or generates highly improbable linguistic sequences to convey an intended or *pre*conceived idea. In the process of thought, functional objectives precede and constrain the selection of words, sounds, and symbols to generate functional (and meaningful) sequences from a vast ensemble of meaningless alternative combinations of sound or symbol. Similarly, the construction of complex technological objects and products, such as bridges, circuit boards, engines, and software, results from the application of goal-directed constraints. ***Indeed, in all functionally integrated complex systems where the cause is known by experience or observation, designing engineers or other intelligent agents applied constraints on the***

[144]Except some points in italics and underlined now, which were only put in italics by Meyer like "*striking appearance of design*".

> ***possible arrangement of matter to limit possibilities in order to produce improbable forms, sequences, or structures.*** Rational agents have repeatedly demonstrated the capacity to constrain the possible to actualize improbable but initially unrealized future functions. Repeated experience affirms that intelligent agents (minds) uniquely possess such causal powers.
>
> Analysis of the problem of the origin of biological information, therefore, exposes a deficiency in the causal powers of natural selection that corresponds precisely to powers that agents are uniquely known to possess. **Intelligent agents have foresight**. Such agents can determine or select functional goals *before* they are physically instantiated. They can devise or select material means to accomplish those ends from among an array of possibilities and then actualize those goals in accord with a *pre*conceived design plan or set of functional requirements. ***Rational agents can constrain combinatorial space with distant information-rich outcomes in mind***. The causal powers that natural selection lacks—by definition—are associated with the attributes of consciousness and rationality—with purposive intelligence. Thus, by invoking intelligent design to overcome a vast combinatorial search problem and to explain the origin of new specified information, contemporary advocates of intelligent design are not positing an arbitrary explanatory element unmotivated by a consideration of the evidence. ***Instead, we posit an entity possessing precisely the causal powers that a key feature of the Cambrian explosion—the explosive increase in specified information—requires as a condition of its production and explanation***."

- *Your analytical student has also made a special study of the abrupt appearance of the oldest vascular plants, especially of Baraghwanatia longifolia. Well, is he wrong to conclude that there is no convincing evidence for continuous evolution also for these organisms in the past?*

ABC.: Really very interesting, maybe scientists in the coming years will be able to find the solution to this problem.

W.-E. L.: It is a very impressive example not only of another totally unexpected ***living fossil***, but also due to its much ***too early*** abrupt appearance (dated to be 424 million years old).

- *Your student's question: Where does my teacher see clear evidence for continuous evolution in the sudden emergence "of a large diversity of different winged insect groups without any known transitional forms in the older Mississippian (Lower Carboniferous) or Devonian strata"?*

ABC.: "I agree with you but unfortunately the information gaps on fossils are frequent, not for this there is a god behind these lack of sedimentation or fossilization. If you then consider that the process of fossilization itself is extremely complex and that only a small part of the organisms reaches us ... As Michael Crichton said, the history of the planet earth is a bit like a black and white family photo album, with plenty of space between one moment and another, where a lot of information has unfortunately been lost, but it does not mean that there have never been."

W.-E. L.: There is no definitely no lack of fossils in the taxa mentioned by Oskar Kuhn above. Even in the case of the mammals, already about half (48,77%) of all the living genera and 88% of the extant mammal families have been detected/substantiated as fossils; for the details, see http://www.weloennig.de/NeoB.Ana4.html

> Since [in the interim *at least*] half of the recent mammalian genera have so far also been detected as fossils, one can – as a realistic approach to the question of how many genera and species have ever existed – extrapolate the number of the fossil forms in such a way that their numbers would be doubled. But it does not take much calculation to conclude that ***by doubling of the forms hitherto regarded as "links", one can never close the existing enormous chasms***

and gaps! With the paleontologists Beurlen, Daque, Schindewolf, Kuhn *et al*., I conclude that the gaps are present originally. For Kuhn's much fossilized forms (*foraminifers, corals, brachiopods, bryozoans, cephalopods, ostracods, trilobites etc.*), the documentation of genera and families over long distances is virtually complete, so **that the gaps between the types and subtypes must be viewed as** [**unconditionally**] **real** ["*primär vorhanden*": literally "primary present" or "originally present", "primary in existence" or "presente primario"][145]

- *Triassic E - My instructor will probably already know what the next question of your student will be: Where is the clear evidence for continuous evolution for the (abrupt) origin of all the new orders and families after the end-Permian mass extinction? And he repeats his question: could ingenious, innovative, creative and artful design the real, actual and true reason behind the sudden appearance of all these new life forms?*

ABC.: "No, I do not think so. The answer is in ecological niche. When they are emptied, they are filled by some other species. An example are mammals / dinosaurs."

W.-E. L.: A large void will not **automatically** be filled by ingeniously new complex life forms. Does your answer not already ***presuppose*** the neo-Darwinian theory of evolution? An illustration: What will happen if you clear your house (so that nothing is left) – will that new 'ecological niche' **automatically** create ***new and more complex furniture***? For example, new television sets, computers, refrigerators and libraries? "[Darwinism] is and will remain **the greatest imposition** on the human mind that the modern age has ever experienced, perhaps even all of Western history. The challenge of explaining the wonders of the organic world by saying that they came about [automatically] "on their own" [or "by themselves"] (Prof. Walter Höres).

- *Thousands of transitional forms would be necessary for the origin of gliding and flying reptiles from cursory reptiles in a scenario of continuous, uninterrupted evolution. However, in stark contrast to the predicted Darwinian evidences and proofs, paleontologists have to speak of the sudden appearance of these remarkable, extraordinary, impressive (for many of them even awe-inspiring) animal forms. And your student might repeat his principle question: Why not brilliant, astute, rational intelligent design for the origin of the enormous amount of new information necessary for these creatures?*

ABC.: "Still the answer is no. Thousands of transitional forms have been lost..."

W.-E. L.: My answer is – scientifically well-established – YES: One point is: About 100 millions of fossils have been found including several intermediates – nevertheless still there is the '***total absence, i. e. complete nonappearance of all the***

[145] German text: Da rund die Hälfte der rezenten Säugetiergattungen bisher auch fossil nachgewiesen ist, kann man - als realistischen Ansatz zur Frage, wieviele Gattungen und Arten überhaupt existiert haben - die Zahl der fossil nachgewiesenen Formen in der Weise hochrechnen, dass man sie verdoppelt. Es bedarf nun aber keines großen Rechenaufwands, um zu schlussfolgern, dass man mit einer Verdoppelung° der bisher als "Bindeglieder" angesehenen Formen die bestehenden gewaltigen Lücken und Klüfte niemals schließen kann! Mit den Paläontologen Beurlen, Daque, Schindewolf, Kuhn u.a. schließe ich, dass die Lücken primär vorhanden sind. Bei den oben nach Kuhn noch wesentlich besser fossil überlieferten Formen ist die Dokumentation der Gattungen und Familien [Korrektur] über weite Strecken praktisch vollständig, d.h. auch die Lücken zwischen den Typen und Subtypen sind in der Regel endgültig.

fossil series** expected and postulated to document the continuous, step by step, slow evolution for the assumed **phylogenetic tree**' in spite of all the **ambitious efforts and vigorous endeavors by thousands of evolutionary biologists and geologists during more than one and a half century**.* The other aspect is, as mentioned above, that, if for the "primitive beginning" to arrive at a biotechnology, conscious action, imagination, perception, intelligence, intellect, wisdom, mental concepts, spirit and mind are already absolutely necessary, – how much more so does this have to apply to the origin of the thousand times more complex cybernetic systems of life forms themselves – ***including all their specified and irreducibly complex structures![146]

See also the detailed explanations of Meyer above.

- *Instead of solving Darwin's abominable mystery during the last 150 years, the problems for the idea of continuous evolution have steadily increased. This is a special topic, on which a longer paper could be written from the viewpoint of intelligent design. And "as this pattern [of abrupt appearances of new life forms] has become more and more pronounced, it has become ever more improbable that the absence of intermediate forms reflects a sampling bias".*

ABC.: "Are you kidding??? I do not agree, totally."

W.-E. L.: *...as this pattern [of abrupt appearances of new life forms] has become more and more pronounced, it has become ever more improbable that the absence of intermediate forms reflects a sampling bias* – This is an inference by the non-religiously motivated paleontologist Michael Foot (see above). Could it perhaps be that you don't agree because ***your faith*** in phyletic gradualism ("***evolution by creeps***") is in opposition to this fact-based conclusion?

- *The first orders of placental mammals also appear abruptly in the fossil record in during the Paleocene epoch between 62-49 mya, without known precursors...*

ABC.: "Not so suddenly as you think. First of all, the ecological role of the dinosaurs disappeared, was exploited by mammals, already present in various forms. I do not see the very sudden thing between 62 and 49 million years ago (they are 13 million of years -----> A LOT OF TIME)."

W.-E. L.: Here a commentary by Enrico de Lazaro on the paper by O'Leary et al. (2013) in *Science News* (2013; *cf.* http://www.weloennig.de/Hunderassen.Bilder.Word97.pdf)

"The tree of life produced in the study shows that placental mammals arose ***rapidly*** after the KPg extinction, with the original ancestor speciating 200,000-400,000 years after the event. "**This is *about 36 million years later* than the prediction based on purely genetic data**," said co-author Dr Marcelo Weksler of the Museu Nacional-UFRJ in Brazil. The finding also contradicts a genomics-based model called the 'Cretaceous-Terrestrial Revolution' that argues that the impetus for placental mammal speciation was the fragmentationof supercontinent Gondwana during the Jurassic and Cretaceous, millions of years earlier than the KPg event."[147]

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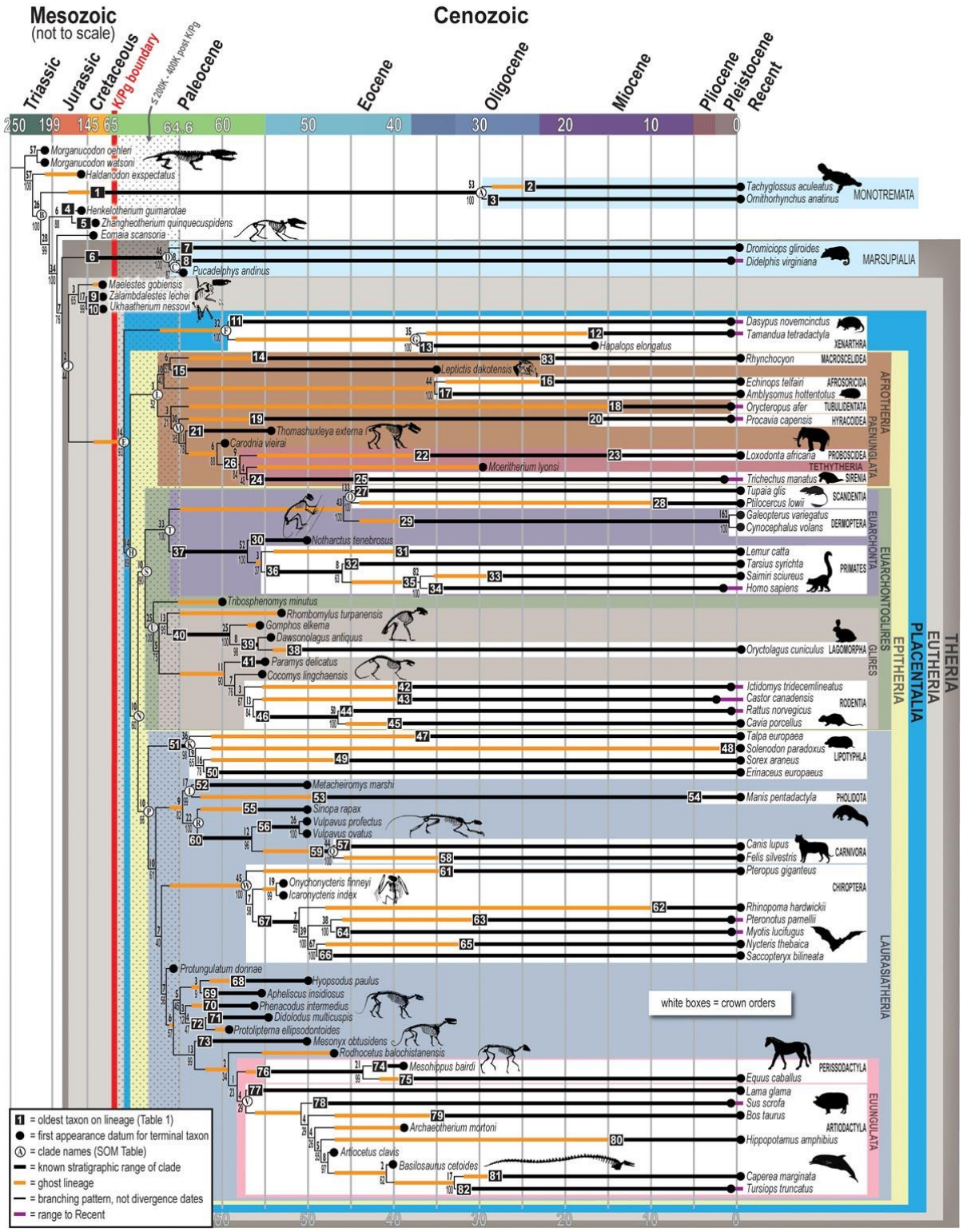
[146] Original German Text: "Die Zelle ist das vollendetste kybernetische System auf der Erde [bestehend aus Tausenden von raumzeitlich präzis aufeinander abgestimmten Genfunktionen, Geninteraktionen, -kaskaden und pathways in einem im Fließgleichgewicht befindlichen Netzwerk genial-komplexer physiologischer Prozesse, die sich durch specified sowie (oft auch) irreducible complexity samt einer im Giga- bis Terabytebereich befindlichen Informationsfülle auszeichnen]. Alle Automation der menschlichen Technik ist gegen die Zelle nur ein primitives Beginnen des Menschen im Prinzip zu einer Biotechnik zu gelangen." Argumentation dazu: Wenn nun schon "das primitive Beginnen" auf diesem Weg immer bewusstes Handeln, Intelligenz, Geist und Weisheit voraussetzt, - wie viel mehr muss das dann erst auf den Ursprung der tausendmal komplexeren kybernetischen Systeme der Lebensformen zutreffen!

[147] Lazaro, E. de (2013): Common Ancestor of Placental Mammals Reconstructed: http://www.sci-news.com/paleontology/article00876.html (der oben abgebildete Stammbaum aus derselben Quelle nach O'Leary et al 2013, p. 663 (artist L. Betti-Nash) und http://cdn4.sci-news.com/images/enlarge/image_876_2_enlarge.jpg)



"Single tree from parsimony analysis of combined molecular and phenomic data mapped onto the stratigraphic record (tables S2 and S3). Crown clade Placentalia diversified ***after*** the K-Pg boundary with only the stem lineage to Placentalia crossing the boundary. Black boxes indicate fossil taxa hypothesized to be on lineages; black lines indicate stratigraphic ranges; ranges and ghost lineages (orange) provide minimum divergence dates. When the matrix includes only one terminal taxon of a crown order, two boxes appear: the oldest hypothesized member of the crown clade (the younger date) and the oldest hypothesized taxon on the stem to the crown clade (the older date). Crown clades (except Eutheria and Metatheria) are defined (table S4). Space immediately younger than 65 Ma not to scale showing early Paleocene interordinal diversification of Placentalia. Crown clades Marsupialia and Monotremata also diversified post K-Pg boundary. Bremer support (BS) (table S8) above nodes, jackknife values below nodes."

Greg Mayer on the assumed common ancestor of mammals (2013):

"**[T]here is no particular known fossil which is being identified as or compared to this placental**

common ancestor; the ancestor in the picture, as stressed here, is hypothetical. Yet, the *Times* article identifies *Protungulatum* as the ancestral placental, O'Leary et al. most definitely do not do so: they identify *Protungulatum* as a member of the lineage that gave rise to (most) hoofed mammals (i.e. quite far from the common ancestor of all placentals). *Protungulatum* is the oldest known member of the clade that includes all extant placentals, ***but that does not make it the common ancestor***."

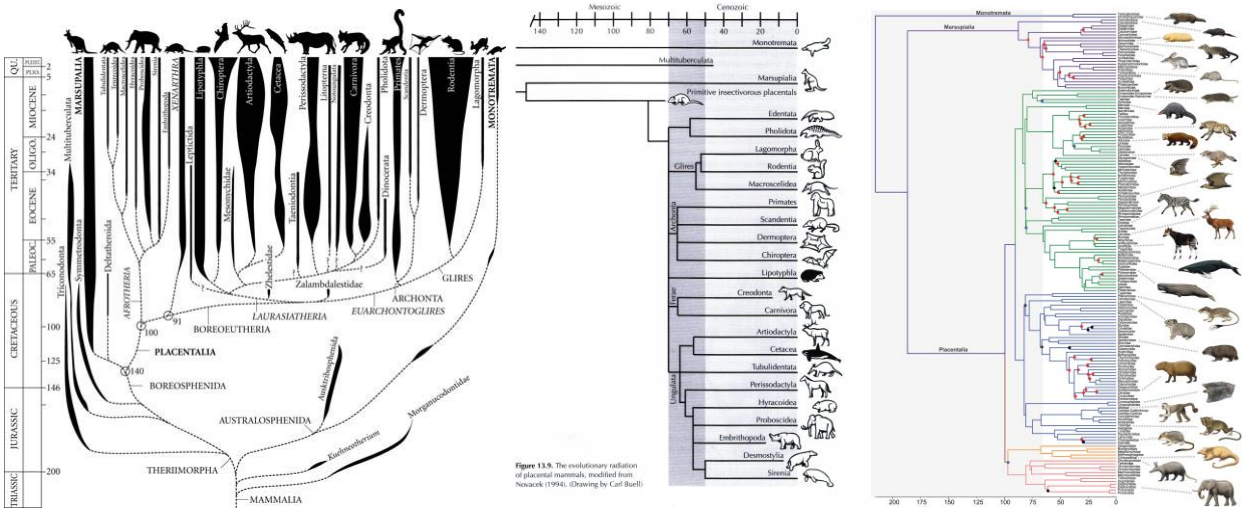
The enormous evolutionary problems of the origin of mammals have been ***known for decades***, and have become still more acute. Otto Heinrich Schindewolf (1950):

"Explosively, almost precipitously, a number of different organizational structures [Organsisationsgefüge] or types are created here in large transformation steps, which then retain their basic character unchanged during the subsequent development." We call this first phase the type genesis or typogenesis

Similarly paleontologist Karl Beurlen (1932, p. 76):

"It is a very general rule that the pathway of evolution within a taxon – irrespective of whether it is a unit of higher or lower rank – is cyclic. ***Evolution starts with a first phase of rich saltation and explosive creation of forms***[148]. It goes on to a phase of orthogenetic continuity that is directional and purposive and does not produce new types of forms. Finally, a phase of degeneration and disintegration of forms leads to extinction."

[148] Man vergleiche weiter zur prinzipiellen Bestätigung der Aussagen von Beurlen und Schindewolf auch die folgenden Abbildungen zur Radiation der plazentalen Säugetiere gemäß Benton und Harper (2009, from Benton 2005), Prothero (2007) und Meredith et al. (2011) (stark verkleinert/strongly scaled down just to illustrate the enormous extent of the explosion; for a full view, see, please, the original books and the original paper):



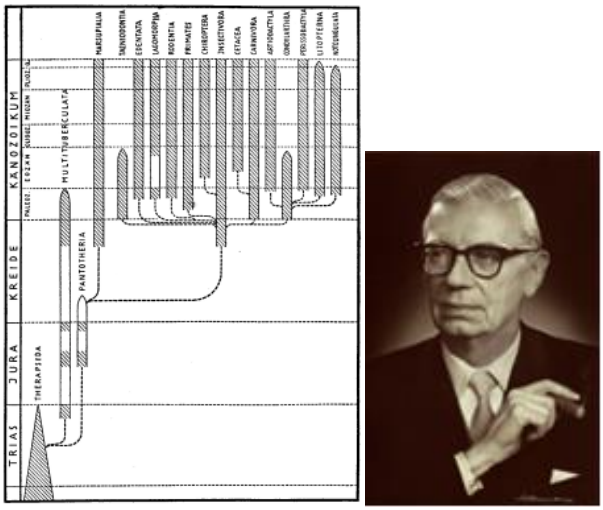
[For a direct comparison with the Schindewolf (1950) for the explosive origin of placental mammals, see next page.]

Links: "Figure 20.7" aus Benton and Harper (2009, aus Benton 2005): "A classic example of a radiation, the pattern of diversification of the placental mammals after the Cretaceous-Tertiary mass extinction. Mammals originated in the Triassic, and diversified at a modest rate during the Jurassic and Cretaceous. **Modern placental superorders originated in the Late Cretaceous**, and the orders began to diversify. Only after the dinosaurs had died out did the placental mammals really diversify and become abundant worldwide. (From Benton 2005.)" Michael J. Benton and David A. T. Harper (2009): Introduction to Paleobiology and the Fossil Record.).Wiley-Blackwell, Hoboken, Oxford, Chichester.

Mitte: "*The evolutionary radiation of placental mammals*" nach Donald R. Prothero (2007, p. 285) in seinem Kapitel 13 "**Mammalian Explosion**" von: Evolution. What the Fossils Say and Why it Matters. Columbia University Press, New York. Er kommentiert (p.286): "What both the anatomical and molecular phylogenies of mammals show consistently is that the **great radiation was already underway before the nonavian dinosaurs vanished at the end of the Cretaceous**. We knew that the most primitive fossils of placentals and marsupials dated back to the Early Cretaceous, about 100 million years ago, but the branching history of all the major Orders of placentals was difficult to decipher with just teeth alone. […] **Now that the new molecular phylogenies are out, they suggest that nearly all the major placental Orders differentiated in the Cretaceous**, and a bit earlier than the traditional phylogeny suggests.The discrepancy is still being resolved, but they point in the same direction: the explosive radiation was already underway with the primitive members of the lineages before the nonavian dinosaurs disappeared." **Almost all wrong according to O'Leary et al. 2013** (see the details above and below).

Rechts: Meredith et al. (2011): "*Phylogenetic timetree of mammalian families*" [159 Familien] aus: Impacts of the Cretaceous terrestrial revolution and KPg extinction on mammal diversification. *Science* **334**: 521-524. Vgl. http://media.longnow.org/files/2/REVIVE/Meredith-Science-2011-.1211028.pdf (Zugriff 5. Juli 2013). Die *hypothetischen* evolutionären Verbindungen existieren entweder in Form von Pünktchen auf den Papier (Schindewolf und Benton) oder durchgezogenen Linien bei den übrigen Autoren. Alle vier Stammbäume ***unterscheiden sich*** beträchtlich ***sowohl untereinander als auch von*** dem von ***O'Leary et al.*** (2013). Es wäre eine größere Aufgabe für sich, dazu sowohl die Ähnlichkeiten als auch die Unterschiede systematisch herauszuarbeiten. Allen gemeinsam ist jedoch die Bestätigung der explosiven Entfaltung der plazentalen Säugetiere.

Of course, 13 million years are a lot of time. Nevertheless, there is the same situation as ever: total absence, i. e. complete nonappearance of all the fossil ***series*** expected and postulated to document the continuous, step by step, slow evolution for the postulated phylogenetic tree [leading to the supposed/hypothesized common ancestor of all mammal orders and families] in spite of all the ambitious efforts and vigorous endeavors by thousands of evolutionary biologists and geologists during more than one and a half century. All the orders appear abruptly in the fossil record. "***Where are the transitional forms that must link the diminutive insectivores of the Mesozoic to today's multitude of mammals***?" – Evolutionary biologist Anne D. Yoder 2013, pp. 656/657 (Fossils Versus Clocks. *Science* 339: 656-657).



Otto H. Schindewolf: Explosive unfolding of placental mammals at the Cretaceous-Tertiary border with basal division into the individual orders.

See, please, for a supplement on the questions just discussed above the article *"Clocks Versus Rocks": Fossil Explosion of Placental Mammals Contradicts "Molecular Clock" Evidence* https://evolutionnews.org/2014/01/clocks_versus_r/

- *About radiation of birds* –

ABC.: "Today it is no longer said that birds descend from dinosaurs, for zoologists they are dinosaurs because they are part of a single clade in the "natural" classification. We talk about avian dinosaurs (birds) and non-avian."

W.-E. L.: This topic is much more complex. See, please, perhaps again the following articles.:

Feather Design Is Better than Thought:
https://evolutionnews.org/2017/03/feather-design-is-better-than-thought/

Did Complex Flight Feathers "Emerge"?:
https://evolutionnews.org/2017/02/did_complex_fli/

VIII. *Whale and Feather Evolution*
http://www.discovery.org/f/12092

See also: http://www.weloennig.de/Archaeopteryx1abc.pdf especially the comparison of Archaeopteryx with a magpie.

As well as https://link.springer.com/article/10.1007/s10336-014-1098-9 for ***another, a strongly different, evolutionary view***:

> Czerkas and Feduccia (2014): "Furthermore, the combination in which highly plesiomorphic non-dinosaurian traits are retained along with highly derived features, yet only the beginnings of salient birdlike characteristics, indicates that the ***basal origins of Aves stemmed from outside the Dinosauria and further back to basal archosaurs***. Impressions of primitive elongate feathers on the forelimbs and hindlimbs suggest that Scansoriopteryx represents a basal form of "tetrapteryx" in which incipient aerodynamics involving parachuting or gliding was possible. Along with unique adaptations for an arboreal lifestyle, Scansoriopteryx fulfills predictions from the early twentieth century that ***the ancestors of birds did not evolve from dinosaurs***, and instead were derived from earlier arboreal archosaurs which originated flight according to the traditional trees-down scenario."

Check, please, especially the recent detailed article by the absolutely non-religiously[149] motivated evolutionary ornithologist Alan Feduccia (2018): *FANTASY VS REALITY: A Critique of Smith et al.'s Bird Origin*:

> "Adherents of the current orthodoxy of a derivation of birds from theropod dinosaurs, criticize the commentary by Feduccia (2013, Auk, 130) [1-12] entitled "Bird Origins Anew" as well as numerous papers by Lingham-Soliar on theropod dermal fibers, using numerous mischaracterizations and misstatements of content, and illustrate their own misconceptions of the nature of the debate, which are here clarified. While there is general agreement with the affinity of birds and maniraptorans, ***the widely accepted phylogeny, advocating derived earth-bound maniraptorans giving rise to more primitive avians (i.e. Archaeopteryx), may be "topsy-turvy***."
>
> …. "With respect to the current advocated unchallengeable orthodoxy of paleontology, that *birds are living dinosaurs*, much of the evidence foundational to the new field, including protofeathers, ***was never based on any extraordinary evidence, but rather appears to accommodate provisional cladograms, and now most studies exhibit a disturbing trend, to simply verify what is thought to be already known***."
>
> ….. "Most disturbingly, Smith et al. [5] are quick to pull out the "creationist card," comparing our arguments to methods of creationists. Yet, it is the current dinosaur-bird nexus of paleontology that has resulted in the creationists calling the field "The Disneyfication of Dinosaurs." And, one well-known creationist following a meeting on birds origins in 1999, stated, "This is not science . . . this is comic relief [83, 8]." *The danger of any field that uses terms like "this debate has been settled" and "overwhelmingly convincing" to describe their findings, runs the risk of becoming a dogma, divorced from the normal scientific stringency required in most fields. Karl Popper noted presciently:* "There is an even greater danger: a theory, even a scientific theory, may become an intellectual fashion, **a substitute for religion**, an entrenched ideology."
>
> ….."Those who question the current model don't pretend to have all the answers on bird and feather origins, but one thing is certain: ***the current phylogeny is replete with problems and is likely topsy-turvy, and the accepted orthodoxy on bird origins is incapable of explaining the observable facts***."

Well, another possibility: birds evolved neither from dinosaurs nor from arboreal archosaurs (if there were a series of fossils showing the continuous, step by step, slow evolution for the postulated phylogenetic tree of the birds – the authors would not disagree anymore on this cardinal point). [For the most detailed and possibly the best recent critique of the present evolutionary speculations, see Reinhard Junker (2017): *Dino-Federvieh: Zum Ursprung der Vogelfeder und Vogelflug*: http://www.wort-und-wissen.de/artikel/sp/b-17-1_feder-und-flug.pdf]

- *"Then God said: "Let us make man in our image, according to our likeness, and let them have in subjection the fish of the sea and the flying creatures*

[149] Again in the sense of the term's common usage.

of the heavens and the domestic animals and all the earth and every creeping animal that is moving on the earth." And God went on to create the man in his image, in God's image he created him; male and female he created them."

ABC.: "Yes very poetic, but not at all scientific. Human evolution is truly fascinating and in recent years many discoveries have been made, even on its cousins, such as Neanderthals or Cro-Magnons. As in the cave of Fumane, near Verona, where it was discovered that the Neanderthals were not as idiots as has always been thought, indeed they were very intelligent men, especially in the art of hunting. [**W.-E. L.:** ***Good correction of a former evolutionary misrepresentation***.] If God created man in his image then why do we have so many races on earth? Chinese, blacks, Indians, Scandinavians etc.? These are proof of evolution...

W.-E. L.: That's just microevolution – no new species of humans have evolved.

> "Today we are but a single species, *Homo sapiens*, and some [7] billion of us have encircled the globe. We are eurytopic: our adaptations are broad and general. Our cultures, diverse as they are, serve to fit us to the physical exigencies of the wide variety of environments in which we live. But ***we are a single species***" (Eldredge and Tattersall).

ABC.: Why do we have wisdom teeth (evolutionary vestiges)? Why do we have evolutionary vestiges of a very near evolutionary past?

W.-E. L.: Are there really vestigial organs? See, please, the thoroughly scientific investigations and the argumentation presented in the following documents:

https://evolutionnews.org/2018/02/bioengineer-asks-what-do-darwinists-hide/
https://evolutionnews.org/2017/12/intelligent-design-and-the-advancement-of-science/
"Design features once assumed to be poorly engineered **were later shown to play essential roles**. Examples include the backwards wiring of the vertebrate eye, the panda's thumb, and so-called vestigial organs such as the human appendix."
https://evolutionnews.org/2017/09/darwins-point-no-evidence-for-common-ancestry-of-humans-with-monkeys/
https://evolutionnews.org/2017/09/theology-in-biology-class-vestigial-structures-as-evidence-for-evolution/
https://evolutionnews.org/2016/12/lsu_ophthalmolo/
https://evolutionnews.org/2016/06/common_descent/
https://evolutionnews.org/2015/07/people_who_unde/
https://evolutionnews.org/2014/12/5_of_our_top_te/
https://evolutionnews.org/2015/02/problem_10_neo/

> "For decades, evolutionists have claimed that our bodies and genomes are full of useless parts and genetic material — "vestigial" organs — showing life is the result of eons of unguided evolution. During the Scopes trial in 1925, evolutionary biologist Horatio Hackett Newman contended that there are over 180 vestigial organs and structures in the human body, "sufficient to make of a man a veritable walking museum of antiquities."[157]
>
> Over time, however, these predictions of vestigial body parts and useless DNA have not held true. As scientists have learned more and more about the workings of biology, important functions and purpose have been discovered for these so-called vestigial structures. Indeed, in 2008 the journal *New Scientist* reported that, since the days of Professor Newman, the list of vestigial organs "grew, then shrank again" to the point that today "biologists are extremely wary of talking about vestigial organs at all."[158] Structures that were previously — and incorrectly — considered to be vestigial include:

- *The tonsils:* At one time, they were routinely removed. Now it's known they serve a purpose in the lymph system to help fight infection.[159]
- *The coccyx (tailbone):* Many evolutionists still claim this is a hold-over from the tails of our supposed primate ancestors,[160] but it's actually a vital part of our skeleton, used for attaching muscles, tendons, and ligaments that support the bones in our pelvis.
- The thyroid: This gland in the neck was once believed to have no purpose, and was ignored or even destroyed by medical doctors operating under false Darwinian assumptions. Now scientists know that it is vital for regulating metabolism.
- The appendix: Darwinian scientists have claimed the appendix is a "vestige of our herbivorous ancestry,"[161] and over eons of evolution its function in humans has been diminished, or lost. But it's now known that the appendix performs important functions, such as providing a storehouse for beneficial bacteria, producing white blood cells, and playing important roles during fetal development.[162] In light of this evidence, Duke University immunologist William Parker observed that "Many biology texts today still refer to the appendix as a 'vestigial organ'" but "it's time to correct the textbooks."[163]

And a creationist's not unreasonable answer on wisdom teeth: "The lack of space in the mouths of certain people – and by no means all people – is a consequence of the degeneration of the human race in regard to both genetics and lifestyles. This is quite contrary to the concept of evolution, which implies that we are improving and adding features."

- *You'll probably already know what my next question will be: If many of the best evolutionary paleontologists of the world do not see gradual/continuous evolution in the fossil record – ....?*

ABC.: "I do not agree at all, there are thousands of scientists in the world that found proof of evolution,..."

W.-E. L.: "***The argument from majority opinion has never impressed me***. Had it been effective a century [and a half] ago, evolution could never have raised its head. It is no more valid now... Science is interested only in truth, not in its adherents or their prestige" (E. Shute).

Also: "Unfortunately, there is no necessary correlation between conviction and fact, anymore than there is between number of supporters and truth...Perhaps the most objectionable aspect of claims of universal acceptance of an idea is the tendency to label in advance any persons who dare to deny the claims as being reactionary or unscientific. This tends to prevent reply, for scientists are only human. Few have the time to prepare replies to unsound, illogical, but attractive claims put forward under the guise of universally accepted principles" (R.E. Blackwelder).

"It would, however, be completely wrong to judge the correctness of a scientific theory quite simply by the number of its followers; for the history of culture teaches us many examples that whole generations of learned men have held assertions to be true and defended them with highest acuteness, which today a layman laughs at as being incorrect" (A. Fleischmann).

ABC.: "…do not be blind by your religion! Do not close your mind..."

W.-E. L.: Could your obviously well-meant admonition possibly also been applied to the **following faith/religion**?: "***Even if all the data point to an intelligent designer***, such a hypothesis is **excluded from science because it is not naturalistic**" (Scott C. Todd in *Nature* http://www.weloennig.de/Die_Affaere1.pdf).

And – as I have already quoted Richard Lewontin in my last letter:

> "We take the side of science in spite of the patent absurdity of some of its constructs, in spite of its failure to fulfill many of its extravagant promises of health and life, in spite of the tolerance of the scientific community for unsubstantiated just-so stories, because ***we have a prior commitment, a commitment to materialism***. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that ***we are forced by our a priori adherence to material causes*** to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, ***that materialism is absolute, for we cannot allow a Divine Foot in the door***."

Did not all the believers in this totalitarian materialistic religion (being "bound to a[n absolute] postulate": *re-ligio*) close their minds to the possibility of an intelligent origin of life?

- *About megalodon: However, an analysis of the distribution of megalodon over time suggests that temperature change did not play a direct role in its extinction. Its distribution during the Miocene and Pliocene did not correlate with warming and cooling trends; while abundance and distribution declined during the Pliocene, megalodon did show a capacity to inhabit anti-tropical latitudes. It was found in locations with a mean temperature ranging from 12 to 27 °C (54 to 81 °F), with a total range of 1 to 33 °C (34 to 91 °F), indicating that the global extent of suitable habitat should not have been greatly affected by the temperature changes that occurred.[18] This is consistent with evidence that it was a mesotherm.*

ABC.: "In the last five years there have been very careful analysis of fossil deposits and on sedimentological aspects, so much so that some scientists were able to isolate the largest gatherings of teeth and to affirm that the distribution of these large sharks in the world was really expanded; the species was abundant between the latitude of 56 ° north and 44 ° south of the globe."

W.-E. L.: Interesting and very good to hear. "*Megalodon* inhabited a wide range of marine environments (i.e., shallow coastal waters, areas of coastal upwelling, swampy coastal lagoons, sandy littorals, and offshore deep water environments…)." Thus, this is an instance for the constancy of a life form for more than 20 million years ***in spite of many different environments***. As you know "*Megalodon* (*Carcharocles megalodon*), meaning "big tooth," […] lived approximately 23 to 2.6 million years ago (mya)."

- *I. Every class, [...] II. The flora and fauna at any given geological horizon [...]or the sea had retreated. III. It should be possible to arrange chronological series of fossils showing, step by step, [...] fossils to have been living in the Cambrian period.*

ABC.: "As I have already said you forget the sedimentation gaps of fossilizations. This is quite difficult. You probably are not aware of the geological processes that occur in these cases. First of all, most of the rock formations in the

world are of marine origin and the interconnections with the continental sedimentary sequences (mainly river and lake deposits) are extremely difficult to find and above all to interpret. Moreover, the continuity of sedimentation, together with the percentage of organisms that reach the fossilization (without being destroyed by decomposing organisms) is really very low. A rock formation in very rare cases is continuous, however there are various methodologies through which it is possible to describe it and date it. Only by studying sedimentology in depth can you find answers to these perplexities."

W.-E. L.: About 100 million fossils (the billions of microfossils not counted) — "fossilization…is really very low"? See, please, all the scientific details given on this question by the many excellent paleontologists quoted above. "*Foote has shown, using statistical sampling analysis, that as this pattern has become more and more pronounced, it has become ever more improbable that the absence of intermediate forms reflects a sampling bias — that is, an "artifact" of either incomplete sampling or preservation."* Or: Since about half of the recent mammalian genera have so far also been detected as fossils, one can – as a realistic approach to the question of how many genera and species have ever existed – extrapolate the number of the fossil forms in such a way that their numbers would be doubled. But it does not take much calculation to conclude that ***by doubling the forms hitherto regarded as "links", one can never close the existing enormous chasms and gaps***! Or: "...the past 540 million years of the fossil record provide uniformly good documentation of the life of the past" (paleontologists Benton, Wills, and Hitchin). See also Meyer's rainbow analogy above. One may perhaps raise objections to "uniformly", nevertheless, "in many animal groups such a rich, even overwhelming amount of fossil material exists (foraminifers, corals, brachiopods, bryozoans, cephalopods, ostracods, trilobites etc.), *that the gaps between the types and subtypes must be viewed as real*".

- [Paleontologist Oskar Kuhn to W.-E. L.]*"Thank you very much for your excellent work on the eye! Those who do not open their eyes [to these facts and arguments] are incorrigible atheists who should no longer be considered. You yourself know, for example, that even witnesses of the miracles of Jesus rejected them […]. To the insight must come the willingness to agree –"*

ABC.: "My luck is that I opened my eyes like an eagle, my dear Wolf, I never closed my mind and never will, in fact I used to believe in a god along the nineties, then I followed my studies, with real proof, real evidence of the nature.

W.-E. L.: You state that you followed your "studies, with real proof, real evidence of the nature?" ***In the gaps?*** — Well, I would like to ask you whether you have ever made any mutagenesis experiments? Moreover, if you have carefully studied genera of plants and/or animals over vast distances of their geographic distribution, you will have noticed that they ***do not*** continuously/steadily merge into other genera neither by *"innumerable slight*

variations", "infinitesimally small inherited variations","slow degrees and "insensibly fine gradations, nor merge into others by any great "leaps".

The main problem regarding natural selection and limited geographical distribution of species has aptly been summarized by the evolutionary biologist Futuyma (1998, p. 535)[150]:

> "[R]ange limits pose an evolutionary problem that has not been solved. A species has adapted to the temperature, salt levels, or other conditions that prevail just short of the edge of its range. Why, then, can it not become adapted to the slightly more stressful conditions that prevail just beyond its present border, and extend its range slightly? And if it did so, why could it not then become adapted to still more demanding conditions, and so expand its geographic range (or its altitudinal or habit distribution) indefinitely over the course of time? These questions pose starkly the problem of what limits the extent of adaptive evolution, and we do not know the answers. We will discuss several hypotheses, citing little evidence because little exists (Hoffmann and Blows, 1994; Bradshaw, 1991)."

In *ARTBEGIFF* http://www.weloennig.de/AesVor.html I referred to the professor of zoology and physiology Gerald A. Kerkut who once described an exam situation and conversation with a biology student so aptly – a hundred times and more often I've experienced something very similar not only in discussions with undergraduates and graduate students in recent years – that I'm going to quote here a few points from his book *IMPLICATIONS OF EVOLUTION*.

First, I can only agree with him when he states (p. VIII):

> "It is very depressing to find that many subjects are becoming encased in scientific dogmatism. The basic information is frequently overlooked or ignored and opinions become repeated so often and so loudly that they take on the tone of Laws."

Which dogmatic method then spares any further testing, reflection and thinking! And since this point applies to an unprecedented extent to the theory of evolution, the author shows us a "paradigmatic interview" with his students, from which I would like to quote some extracts in the following quotation (pp. 4/5):

> "Well, now, if you really understand an argument you will be able to indicate to me not only the points in favour of the argument but also the most telling points against it."
> "I suppose so, sir."
> "Good. Please tell me, then, some of the evidence against the theory of Evolution."
> "Against what, sir?"
> "The theory of Evolution.""But there isn't any, sir."
>
> Here the conversation would take on a more strained atmosphere. The student would look at me as if I was playing a very unfair game. It would be clearly quite against the rules to ask for evidence against a theory when he had learned up everything in favour of the theory. He also would take it rather badly when I suggest that he is not being very scientific in his outlook if he swallows the latest scientific dogma and, when questioned, just repeats parrot fashion the views of the current Archbishop of Evolution. In fact, he would be behaving like certain of those religious students he affects to despise."

Well, ABC., may I ask what you would have answered to the professor?

So, what about the enormous amount of <u>*scientific*</u> literature critical of evolution and Darwinism of the last 200 years (*vs*. evolutionary speculations from the time

[150] For the exact reference *cf*. http://www.weloennig.de/NaturalSelection.html

of Cuvier onwards; *contra* Darwinism starting in 1859/60)? So, I would like to ask you whether you have carefully checked the most important critical *scientific* papers and books – as far as possible? (Even Darwin suggested that "A fair result can be obtained only by fully stating and balancing the ***facts and arguments on both sides of each question***."). My impression so far is that you have become acquainted almost exclusively with only one side of each question, namely the *pro* evolution and *pro* Darwinian literature.

After enumerating many authors critical of Darwinism, I continued as follows (*cf*. http://www.weloennig.de/evolution/PhysalisOriginalPaper.pdf - 2010, p. 2):

"For further authors, see the [more than] 900 scientists of the ***Scientific Dissent from Darwinism*** (Discovery Institute: "We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged."). Among other points, many [scientists] object that (1) ***we have yet to see the genuinely evolutionary relevant induced progressive phenotypes and new species able to survive in the wild***, which have been postulated and predicted by the modern synthesis, asserting to explain the origin of the sum total of all life forms on earth for the last 3.8 billion years by its "two factor-theory" (Mayr 1970), i.e. by mutations and selection. (2) Many of these researchers also raise the question (among others), ***why – even after inducing literally billions of induced mutations and (further) chromosome rearrangements – all the important mutation breeding programmes have come to an end in the Western World*** (instead of eliciting a revolution in plant breeding, either by successive rounds of selected "micromutations" (cumulative selection in the sense of the modern synthesis), or by "larger mutations", which – "under conditions of artificial breeding...can be nursed through to the point where they become suitably buffered", Muller 1946, a point relevant for both, neo-Darwinism and Goldschmidt's hopeful monster hypothesis) and (3) ***why the law of recurrent variation is endlessly corroborated*** by the almost infinite repetition of the spectra of mutant phenotypes in each and any new extensive mutagenesis experiment (as predicted) instead of regularly producing a range of new systematic species by cumulative selection or otherwise, a point which leads up to the experimental part of the present paper."

ABC.: "If one day a God will come and say I exist then I welcome it, but at the moment, despite your efforts to highlight the errors of science, nothing has been done to show evidence of what is stated in the genesis…"

W.-E. L.: Has really "nothing been done…? As for a ***beginning of the universe***, see, please, above. *Cf*. also the clear scientific argumentation and the rather simple short video in https://evolutionnews.org/2017/11/ids-top-six-the-origin-of-the-universe/

Not "the errors of science" but the errors of one-sided/lobsided Darwinism.

ABC.: "...and the proofs of evolution remain well visible in the natural world around us, just open your eyes. thanks for the file, I will read it with pleasure as there are some good insights."

W.-E. L.: As for "…the proofs of evolution remain well visible in the natural world around us, just open your eyes"? Yes, there is microevolution but no macroevolution – the generation of new genera, families and orders (not to mention new classes and phyla).

What does an in depth analysis of the "two factor-theory" (mutations and selection) – as mentioned above – really show? Mutations: Please see above and

http://www.weloennig.de/Loennig-Long-Version-of-Law-of-Recurrent-Variation.pdf
http://www.weloennig.de/ShortVersionofMutationsLawof_2006.pdf

As for natural selection, see, please, http://www.weloennig.de/jfterrorchipmunks.pdf And this what macroevolution by Darwinian natural selection would mean in real life:

"The progress of evolution walks over **billions of corpses**."

Ludwig Plate

"I believe natural selection represents **a truly hideous sum total of misery**."
"We understand that we are here as a result of **a truly hideous process**.
Natural Selection is **an ugly process** that has beautiful consequences."
"The total amount of suffering per year in the natural world is beyond all decent contemplation."
Richard Dawkins

"The evolutionary process is rife with **happenstance, contingency, incredible waste, death, pain and horror**."
David Hull

"Namely, **selection** is the blindest, and **most cruel way of evolving new species**, and more and more complex and refined organisms … The struggle for life and elimination of the weakest is **a horrible process**, against which our whole modern ethics revolts…"
Jacques Monod

The whole of organic nature on our planet exists only by **a relentless war of all against all**.
Ernst Haeckel

According to Darwinism, the origin of species is the result of
"**primeval stupidity and original brutality**" ("**Urdummheit und Urbrutalität**"
for random mutations and the elimination of the weakest by natural selection).
Anton Neuhäusler

Instincts are the "consequences of one general law leading to the advancement of all organic beings, - namely, multiply, vary, **let the strongest live and the weakest die**."
Charles Darwin

Darwinian theory is not only false but its main factors are also horribly stupid and infinitely ugly ("primeval stupidity and original brutality").

ABC.: "NOW suppose that I am the humble and devoted student... Going beyond we have the universal flood, of which there is no geological evidence, except for some major regional events, such as that of the Black Sea Event discovered by geologist Robert Ballard. Flood is another point beyond creation, where the Bible falls."

W.-E. L.: The book by Professor Rolf Furuli (2018) ***Can We Trust the Bible? – With a Focus on the Creation Account, the Worldwide Flood, and the Prophecies*** will soon be published and you can find that the Genesis Flood is another point … where the Bible **stands** (I have seen a Test Copy of the book).

ABC.: "For example: how would an animal living in Australia, like the 50-millions-year-old geographically isolated Koala, come to Caucasus with his beloved companion to climb Noah's Ark? There is no scientific evidence to support this. Or if you prefer a Penguin from Antartica... But I could find dozens and dozens ...DOZENS... of geographically isolated species in North America, North and South America, Africa that are not present in Europe... insects, mammals, reptiles and over and over....

How would they be able to climb the Ark located in the Caucasus? Thousands of miles far away, crossing oceans and seas???"

W.-E. L.: As a geologist you will have heard something about land bridges and continental drift. Also, fossils of marsupial animals have been found in Europe[151], North and South America[152], Africa[153], China[154], and elsewere, not only in Australia. But before saying more on this point, I would first like to pose to you some relevant questions on the geographical distribution of some animal species from an ***evolutionary point of view***. If you can answer them, I would also like to continue to answer your question[155]. I'm going to quote from the book *The Transformist Illusion*[156] written by zoologist/ornithologist Douglas Dewar. Regarding the *problems of neo-Darwinian evolution with geographical distribution* he states (among many further points):

"The facts of geographical distribution […] are most **unfavourable to the theory of evolution**. These facts are so numerous that it is not practicable to deal with more than the merest fraction of them. Here is one. The transformist [neo-Darwinian evolutionist] ***has to believe that every species of each order and every order within a class is derived from a common ancestor***. If this be the case, *the geographical distribution of animals should show clearly the locality in which each order of a class originated, and how the species of each reached their present habitat*. **But in many, if not all, cases this is impossible**. In *IS EVOLUTION PROVED?* I put the following to [H. S.] Shelton [and Dewar added that Shelton – a "defender of evolution in debates" (Braterman)[157] was unable to make any reply]:

> "The Amphibia are a small class formed of only three Orders [or subclasses] and [ca. 60] Families. Here are a few of the ***difficulties you encounter if you expect the evolution theory to account for the present geographical distribution of the Class***. The ***Caecilians*** (legless, worm-like, burrowing amphibia) occur in America from Mexico to Peru, Tropical Africa and the East Indies. How did they come to be thus distributed? One genus, ***Dermophis***, is composed of 6 species, of which 5 inhabit America and 1 West Africa. Another genus, ***Uraeotyphlus***, is made up of 3 species, 2 of which live in the Malabar Hills of South India and 1 in West Africa. Of the tailed amphibia, the genus ***Amblystoma*** has several species in N. America and 1 in Siam. Among the frogs, the family ***Liopelmidae*** is composed of 2 genera, one of which is found only in New Zealand and the other in the N.W. corner of the U.S.A. The ***Dentrobatidae*** is composed of 2 genera, one of which is confined to Madagascar and the other to S. America. Nearly all the species of the ***Cystignathidae*** live in Australia and Tasmania, but a few occur in America south of Mexico. […]
>
> …please ***say where*** [according to the neo-Darwinian theory of evolution] ***each of the above groups originated and how they reached their present habitats***. "

So, please, my dear ABC., how does ***your theory of evolution*** (I hardly dare to repeat your sentence that you can see the proof of evolution … in the present) explain the geographical distribution of these animals?

Again Douglas Dewar:

> "…In my view, the facts of geographical distribution are unfavourable to the evolution theory because they show:
>
> I. Evidence of the Stability of Species. The stability of many species is shown by the wide area over which they are spread. As an example, let me cite the **wingless insect** [Collembola] known as the ***spring-***

[151] https://www.sciencedaily.com/releases/2009/11/091106103510.htm
[152] http://articles.latimes.com/2010/jul/28/science/la-sci-marsupial-20100728
[153] http://www.talkorigins.org/faqs/marsupials.html
[154] https://news.nationalgeographic.com/news/2003/12/1215_031215_oldestmarsupial.html
[155] Following an example by Jesus: *Cf.* Matthew 21:23-27, Mark 11:27-33, Lukas 20: 1-7.
[156] https://www.amazon.com/Transformist-Illusion-Douglas-Dewar/dp/159731031X
[157] P. S. Braterman (2013) in *Scientific American* https://www.scientificamerican.com/article/how-science-figured-out-the-age-of-the-earth/

> ***tail***. The species ***Isotomurus palustris*** occurs in all parts of Europe (including the British Isles, Sicily and Sardinia), in Siberia, Nova Zembla, Spitzbergen, Bear Island, Greenland, Ellesmere Land, Canada, U.S.A., Mexico, Costa Rica, British West Indies, Cuba, Argentina, the Azores, Algeria and Mesopotamia. The individuals living in, say, Siberia, must have been isolated for a very long time from those living in the Argentine and have been ***subjected to very different climatic conditions***, ***yet there is no difference in their appearance***. No one shown a spring-tail of this species could tell whether it lived in Cuba or Spitzbergen or any other particular locality. *A very large number of species of animals of all kinds exist, of which the geographical range is great; and in many cases the range is discontinuous*, e.g., that of the snake ***Polydontophis malanocephalus***, which occurs, as far as is known, only in the Malay Peninsula and Archipelago, Comoro Islands, Madagascar and Central America."

Moreover, "In the layers of a flint-like quartz in Scotland was a fossil of the earliest-known insect. This is a wingless springtail which was on Earth some 350 million years ago."[158] "Springtails are attested to since the Early Devonian. The fossil from 400 million years ago, *Rhyniella praecursor*, is the oldest terrestrial arthropod, and was found in the famous Rhynie chert of Scotland. Given ***its morphology resembles extant species quite closely***, the radiation of the Hexapoda can be situated in the Silurian, 420 million years ago or more."[159]

Yet, the evolutionary statement about Hexapoda radiation already ***presupposes*** neo-Darwinian evolution – but the proofs are again totally missing.

However, since "you can see the proof of evolution by real evidence", where and how did springtails (incidentally no longer considered to be insects but still hexapods) evolve and how has the almost worldwide geographic distribution of Collembola like ***Isotomurus palustris*** been **achieved (all) by slow evolution** and how do you explain the **constancy** of their morphology in spite of being subjected to so many very different climatic conditions over some 400 million years?

Similar questions for *Polydontophis malanocephalus.* Dewar's inference: "The fact of geographical distribution of animals tell heavily against the theory of organic evolution."

Many more examples are found in the books of Dewar. [For a recent discussion of many of the most important geographical problems and facts against common ancestry, see Casey Luskin 2017, pp. 368-372 in Moreland et al. (eds.) in the book referenced above on page 3.]

And now my last questions to you in this letter. Atheist Stephen Jay Gould wrote:

> "***All paleontologists know that the fossil record contains precious little in the way of intermediate forms; transitions between major groups are characteristically abrupt***. Gradualists usually extract themselves from this dilemma by invoking the extreme imperfection of the fossil record—if only one step in a thousand survives as a fossil, geology will not record continuous change. Although **I reject this argument** (for reasons discussed in essay 17[160]), let us grant the traditional escape and ask a different question. Even though we have no direct evidence for smooth transitions, can we invent a reasonable sequence of intermediate forms—that is, viable, functioning organisms—between ancestors and descendants in major structural transitions? Of what possible use are the imperfect incipient stages of useful structures? What good is half a jaw or half a wing? The concept of preadaptation provides the

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[158] https://www.lookandlearn.com/blog/14639/the-origins-of-insect-flight-in-the-primeval-world/

[159] https://en.wikipedia.org/wiki/Springtail

[160] "…Darwin was so wedded in gradualism that he wagered his entire theory on a denial of this literal record.

> [Darwin said:] The Geological record is extremely imperfect and this fact will to a large extent explain why we do not find interminable varieties, connecting together all the extinct and existing forms of life by the finest graduated steps. He who rejects these views on the nature of the geological record, will rightly reject my whole theory

Darwin's argument still persists as the **favored escape of most paleontologists** from the embarrassment of a record that seems to show so little of evolution directly. In exposing its cultural and methodological roots, I wish in no way to impugn the potential validity of gradualism (for all general views have similar roots). I wish only to point out **that it was never "seen" in the rocks**."

> conventional answer by permitting us to argue that incipient stages performed different functions. The half jaw worked perfectly well as a series of gill-supporting bones; the half wing may have trapped prey or controlled body temperature. I regard preadaptation as an important, even an indispensable, concept. But a plausible story is not necessarily true. I do not doubt that preadaptation can save gradualism in some cases, but does it permit us to invent a tale of continuity in most or all cases? I submit, although it may only reflect my lack of imagination, that the answer is no, and I invoke two recently supported cases of discontinuous change in my defense.
>
> **On the isolated island of Mauritius**, former home of the dodo, two genera of **boid snakes** (a large group that includes pythons and boa constrictors) share **a feature present in no other terrestrial vertebrate**: the maxillary bone of the upper jaw is split into front and rear halves, connected by a movable joint. In 1970, my friend Tom Frazzetta published a paper entitled "From Hopeful Monsters to Bolyerine Snakes?" ***He considered every preadaptive possibility he could imagine and rejected them in favor of discontinuous transition. How can a jawbone be half broken?***
>
> Many rodents have check pouches for storing food. These internal pouches connect to the pharynx and may have evolved gradually under selective pressure for holding more and more food in the mouth. But the Geomyidae (pocket gophers) and Heteromyidae (kangaroo rats and pocket mice) have invaginated their cheeks to form external fur-lined pouches with no connection to the mouth or pharynx. **What good is an incipient groove or furrow on the outside?** Did such hypothetical ancestors run about three-legged while holding a few scraps of food in an imperfect crease with their fourth leg? ***Charles A. Long has recently considered a suite of preadaptive possibilities (external grooves in burrowing animals to transport Soil, for example) and rejected them all in favor of discontinuous transition.*** These tales, in the "just-so story" tradition of evolutionary natural history, do not prove anything. But the weight of these, and many similar cases, wore down my faith in gradualism long ago. More inventive minds may yet save it, but concepts salvaged only by facile speculation do not appeal much to me."[161]

Now, ABC., please tell me, how a jaw bone can be half broken and then evolved by "*insensibly fine steps" and "insensibly fine gradations"* into a movable joint on the ***isolated island*** of **Mauritius**. And what good was an incipient groove or furrow on the outside of the pocket gophers and kangaroo rats?

So, please, "just open your eyes", best "like an eagle": Are there testable reasons to assume that **gradualism** – the origin of all life forms by "*extremely slight variations", "infinitesimally small inherited variations",* etc. (Darwin), thus resulting in *"phenotypic variation [that] is gradual and continuous*" ([Müller, similarly] Futuyma) in ***combination with natural selection*** (displaying "***omnipotence*** *to explain the myriad observations of life"*) – is perhaps an illusion, a myth, a gross and groundless misconception? And could *gradualism* by its very claim to be a "general condition to which all theories, all hypotheses, all systems must bow and which they must satisfy henceforward" and even "that all reality is a single process of evolution" possibly constitute a "**surrogate religion**"? In the scientifically substantiated view of many critical biologists this gradualism is fictitious, erroneous and untrue for the present as well as for the past ("**it was never "seen" in the rocks**" – Gould).

I hope to hear from you soon.

All the best,

Wolf-Ekkehard

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[161] http://www.stephenjaygould.org/library/gould_hopeful-monsters.html (**all links, this one and above retrieved between 6 and 17 February 2018**.)

Cologne, 17 February 2018
5 Match 2018

W.-E. L.

Dear ABC.,

good to hear that you'll read the files soon (but perhaps you have already studied some parts during the last seventeen days?).

So, my question is, when are you going to tell me what you think about the facts and arguments presented in this document? If your time schedule does not allow to do so in the near future (?), we may perhaps continue our discussion here in Cologne one day (P. told me that he has forwarded my invitation to you).

Also an important point: No, you have not been too "tough/hard" in your previous mails "in some answers", but just stated your opinion clearly, distinctly and lucidly, which I appreciate.

And as to the new document: Well, [ABC.], you are a free man. If you basically disagree, I will, of course, respect it. I have discussed the basic problems for evolution many of which are also given in that document that I sent to you, for about fifty years now and I'm going on to respect all my evolutionary interlocutors.

So I can only emphasize that I respect also "devout gradualists" – to use your term for the "devout catholic" G. Bechly and I continue to agree with your sentence "Everyone is free to believe in what he wants, mine is not a criticism."

So, please, first I would like to suggest to you just to inform me briefly, whether you found the further facts and arguments presented to be convincing or not so much - and then perhaps all the details later.

As to your question on "a future kingdom where lions do not eat meat" – see, please, the further document in the attachment. This is not meant to decide the question, but just to show some biologic possibilities (from a discussion with Bible students). But we are not dogmatic on this point (see also the last sentence in that document).

All the best,

Wolf-Ekkehard

Saturday 31 March 2018

ABC.:

Hi dear Wolf,

I have read your very long pdf. It is true: nor can we affirm with certainty clear evidence of evolution, but nor can you affirm with certainty the presence of a god, except the faith in it (a very personal thing from what I am seeing); I sincerely continue to see this thing as a legend. My hopes for the future, although you have interpreted them as a sort of scientific faith, are, in fact, based on scientific evidence. However, I agree with you on several points, except the geological parts, because it is difficult to have a complete three-dimensional picture of what can be a million-year-old rock formation, interconnected with dozens and dozens of other things; even we geologists sometimes have difficulty assembling the pieces of these gigantic puzzles. Regarding the geographical distribution you have highlighted interesting points, such as that of the island of Mauritius, however you did not answer my question about how an isolated animal could have reached the ark of Noah, when many "bridges of land" were not present, as I understand the story of Noah are set about 5000 years ago (more or less, but I can be wrong). Many bridges of land did not exist and hundreds and hundreds of animal species were already isolated: so how did they reach the phantom ark of Noah? Where is the evidence of a complete submersion of the planet, considering that the highest mountains exceed eight thousand meters? However, the mysteries are many and I continue to see the bible as a text that tells a story with historical evidence, for the most part, but that unfortunately always falls on science and what derives from it.

A very warm hug Wolf... like I said to P. I'm a black sheep among his students :) ... if you want you can send me other files, I will read them with pleasure...[162]

Cheers

ABC.

Mail by W.-E. L. (9 April 2018):

Dear ABC.,

again many thanks for your kind comment of 31 March 2018.

First, I would like to repeat your "step into the right direction", which I noticed in my last mail [1 April 2018], stating:

Good to hear that you have read my very long PDF.
"....It is true: nor can we affirm with certainty clear evidence of Evolution,....."

Well, I would call this a step into the right direction.

You continue: "...but nor can you affirm with certainty the presence of a god,..."

[162] Dots in the original mail.

Well, my answer is this: Nevertheless, you can affirm with certainty (as far as certainty is possible in science) intelligent design for the origin of life as well as for the genesis of the basic types of plants and animals on the foundation of (among many other scientific discoveries) specified and irreducibly complex structures (*cf.* p. 53 of the PDF which I send to you):

> "The cell is the most perfect cybernetic system on Earth [consisting of thousands of spatio-temporally precisely matched gene functions, gene interactions, cascades and pathways in a steady-state network of ingeniously complex physiological processes characterized by specified as well as (often) irreducible complexity including an abundance of information [at least] in the gigabyte to terabyte range]. All the automation of human technology is, in comparison to the cell, only a primitive beginning of man in principle to arrive at a biotechnology."
>
> Argumentation for intelligent design: If for the "primitive beginning" conscious action, imagination, perception, intelligence, intellect, wisdom, mental concepts, spirit and mind are already absolutely necessary on this path, how much more so does this have to apply to the origin of the thousand times more complex cybernetic systems of life forms themselves – including all their specified and irreducibly complex structures!

I also suggested (p. 52):

"Regarding a thoroughly scientific argumentation for the intelligent origin of life in its basic forms, check please rigorously the books and papers by Axe, Behe, Bethell, Dembski, Denton, Johnson, Leisola, Lönnig, Meyer, Moreland et al. (eds.), ReMine, Sanford, Scherer, Sewell, Swift, Wells, and many others."

ID "is based on science, not on sacred texts" – J. G. West.

In line with this basic argument, let me invite you to look again also at all the additional scientific arguments against the neo-Darwinian idea of continuous evolution - especially the many totally unexpected revolutions, "explosions", abrupt appearances and absolutely discontinuous radiations detected in the paleontological record as documented in the PDF which I prepared for you.

Now, a very important second point: Identifying the intelligent/ingenious designer with Jehovah God of the Bible is, of course, another large step in our journey to the true world view: If somebody is open to and likes to take that large step he is invited to divide that large step in many smaller ones and to do so by a careful research for the veracity of the Bible by the facts (not, of course, by the doubtful theories of the evolutionary propaganda machine) of biology, biblical archaeology, geography, history, prophecy, ethics and many further relevant topics.

In this connection I would like to repeat my recommendation to check the soon to be published book of professor Rolf Furuli (2018) on:

CAN WE TRUST THE BIBLE?
With Focus on the Creation Account, the Worldwide Flood, and the Prophecies.

As soon as it is published I will tell you about where it can be obtained.

You continue: "...except the faith in it (a very personal thing from what I am seeing);..." Yes, in the final analysis, belief in and dedication to Jehovah [through Jesus] as well as baptism it is a very personal thing - but (and this stands in utmost contrast to

the churches of Christendom), it should be a decision of a conscious human being having checked the basic data using his free will to take actions accordingly (which, of course, was and is impossible for all the millions of babies having been "baptized" into "their" churches).

King David admonished his successor on the throne of Israel - Solomon (1 Chronicles 28:9):

> "...Jehovah searches through all hearts, and he discerns every inclination of the thoughts. If you search for him, he will let himself be found by you..."

Or see, please, the text of James 4 : 8

> "Draw close to God, and he will draw close to you."

Or consider, please, the words of Jesus (Matthew 7:7):

> “Keep on asking, and it will be given you; keep on seeking, and you will find; keep on knocking, and it will be opened to you;"

So, belief in God demands a lot of careful/accurate/deliberate/meticulous/mindful research work!

Thus, according to the Bible itself, faith is much more than just taking something for granted without any convincing reasons: "Faith is the *assured* expectation of what is hoped for, the *evident demonstration* of realities that are not seen" (Hebrews 11:1).

And the Bible encourages us not to believe "every word" (Proverbs 14:15), stating:

The naive person believes every word, But the shrewd one ponders each step.

I would like to add "every [evolutionary] word..."

"I sincerely continue to see this thing as a legend."

[W.-E. L.:] Well, no wonder, as long as you have not thoroughly checked the arguments against the legend of continuous evolution (see, please, again also pp. 66/67 of the PDF document) and the many facts to be studied which speak so convincingly for the truth of the Bible (I once checked [all the pages of] a work of 1700 pp. [*Aid to Bible Understanding* – in rather fine print] just for biblical archaeology, prophesies fulfilled, contradictions solved and some other points).

"...the island of Mauritius, however you did not answer my question about how an isolated animal could have reached the ark of Noah, when many "bridges of land" were not present, as I understand the story of Noah are set about 5000 years ago (more or less, but I can be wrong)."

Well, yes, so far I have not tried to answer your question of how an isolated animal could have reached the ark of Noah. But may I tactfully remind you that so far you [yourself] have not convincingly answered any of my questions which I have raised for continuous evolution in the PDF document - from the *origin of life* to the *boid snakes* of Mauritius - that is at least, I guess, more than forty questions (I would probably have to spend several hours to count them exactly).

Just to repeat the first and the last of my many questions:

You will certainly remember that for the origin of life I mentioned the talk of professor James Tour https://www.youtube.com/watch?v=_zQXgJ-dXM4

I hope that you have found the time to listen to it and study it carefully

So, would you agree with him on the massive problems on the origin of life from a evolutionary perspective?

And as to the jaw of boid snakes:

"Now, [ABC.], please tell me, how a jaw bone can be half broken and then evolved by “insensibly fine steps” and “insensibly fine gradations” into a movable joint on the isolated island of Mauritius. And what good was an incipient groove or furrow on the outside of the pocket gophers and kangaroo rats?"

Well, so much for today.

Also a very warm hug!

All the best,

Wolf-Ekkehard

Zurück zur Internet Library