

Wolf-Ekkehard Lönnig10 January 2025 (Preliminary Version of **PART 2** (last update 15 January 2025)(Part 1 here: <http://www.weloennig.de/Koala.pdf>)

Richard Dawkins, the Koala, and the Giraffe

Or How Evolutionists Are Overlooking Signatures of Design

“Evolution is a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt evolution is a fact. The evidence for evolution is at least as strong as the evidence for the Holocaust, even allowing for eye witnesses to the Holocaust. It is the plain truth that we are cousins of chimpanzees, somewhat more distant cousins of monkeys, more distant cousins still of aardvarks and manatees, yet more distant cousins of bananas and turnips ... continue the list as long as desired.”¹

Prof. Richard Dawkins (Public Understanding of Science, University of Oxford)

“The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that evolution is true - unless you are prepared to believe the Almighty deliberately faked the evidence in order to make it look as though evolution is true.”²

Prof. Richard Dawkins (Public Understanding of Science, University of Oxford)

“Evolution not only is a gradual process as a matter of fact; it has to be gradual if it is to do any explanatory work.”³

Prof. Richard Dawkins (Public Understanding of Science, University of Oxford)

“The living world only shows how immutable species are...As a student...I was burdened with the heavy yoke of evolutionist thinking; but when, after thorough research, I realized that the theory of descent is a delusion and a figment of the imagination, I considered it my duty as a scientist to expose this theory as an error that must be rejected.”⁴

Prof. Louis Bounoure (Embryology, University of Strasbourg)

[More than] “One hundred years after Charles Darwin and sixty years after Ernst Haeckel's death - despite all the essentially insignificant modifications - nothing has changed in the basic intellectual form of Darwinism. It is and remains the greatest imposition on the human mind that modern times, and perhaps the whole of Western history, have ever experienced. The challenge of explaining the wonders of the organic world by claiming that they arose “by themselves”.⁵

Prof. Walter Hoeres (Philosophy, University of Freiburg)

“However, it would be completely wrong to judge the correctness of a scientific theory by the number of its adherents; for cultural history teaches us many examples of how whole generations of learned men have considered assertions to be true and defended them with the utmost ingenuity, which today a layman laughs at as incorrect.”⁶

Prof. Albert Fleischmann (Zoology, University of Erlangen)

“There were uncompromising opponents of the theory of evolution among world-renowned geneticists. Above all, there were [the Austrian Gregor Mendel] the Englishmen Galton and Bateson, the Dane Johannsen and some researchers from the Swedish geneticist family Nilsson, whose 1953 book “Synthetic speciation” is a battle against the theory of evolution waged with a great deal of in-depth knowledge. ... The question of whether genetics can provide evidence for the theory of evolution must be answered in the negative.”

Prof. Hans Wartenberg (Botany/Genetics, University of Jena)⁷

To cite Goethe, “thoughts of God” are realized in the regularity of natural bodies; people have also spoken of “thoughts of creation”, according to the embryologist K. E. von Baer, who even particularly liked to call living beings “thoughts of creation”.⁸

Prof. Wilhelm Troll (Botany, University of Mainz)

*Now, for more than one thousand scientists, see the list (of 2023) **A Scientific Dissent from Darwinism** “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.”⁹*

So, for the more than 1000 scientists (Profs and PhDs including almost all branches of biology, chemistry, physics and more) check please:

<https://dissentfromdarwin.org/>

¹Dawkins R (2009): The Greatest Show on Earth. Free Press, New York (2009, p. 8) Emphasis here and in the following citations in the typeface by W.-E.L.

²Dawkins R “The Alabama Insert”. Excerpted from: Charles Darwin: A Celebration of his Life and Legacy. Editors: James T. Bradley and Jay Lamar:

https://archive.org/stream/journalofalabama6869alab/journalofalabama6869alab_djvu.txt

³Dawkins R (2009): The Greatest Show on Earth. Free Press, New York (2009, p. 155)

⁴ See original article here: <https://www.weloennig.de/Bounoure.pdf> (especially last page)

⁵ Original German Text: “Hundert Jahre nach Charles Darwin und sechzig Jahre nach Ernst Haeckels Tod hat sich so - trotz aller im Grunde unwesentlichen Modifikationen - an der geistigen Grundgestalt des Darwinismus nichts geändert. Er ist und bleibt die größte Zumutung an den menschlichen Geist, die die Neuzeit, ja vielleicht die ganze abendländische Geschichte jemals erlebt haben. Die Herausforderung, die Wunder der organischen Welt damit zu erklären, dass sie »von selbst« entstanden seien.”

⁶ Original text: “Es wäre jedoch vollkommen verkehrt, wollte man die Richtigkeit einer wissenschaftlichen Theorie schlechthin nach der Zahl ihrer Anhänger beurteilen; denn die Kulturgeschichte lehrt uns viele Beispiele kennen, dass ganze Generationen von gelehrten Männern Behauptungen für wahr gehalten und mit dem Aufgebote höchsten Scharfsinnes verteidigt haben, welche heute ein Laie als unrichtig verachtet.”

⁷ “Nicht alle Forscher der Genetik sahen in ihrer Arbeit eine Artbildungsphysiologie. Im Gegenteil: Es gab unter den Genetikern von Weltruf entschiedene Gegner der Evolutionstheorie. Vor allem waren es die Engländer Galton und Bateson, der Däne Johannsen und einige Forscher aus der schwedischen Genetikerfamilie Nilsson, in neuerer Zeit Heribert Nilsson, dessen Buch “Synthetische Artbildung” von 1953 ein mit viel gründlichem Wissen geführter Kampf gegen die Evolutionstheorie ist. ... Die Frage, ob die Genetik Beweise für die Thesen der Evolutionstheorie geben kann, muss mit einem Nein beantwortet werden.”

⁸ “In der Planmäßigkeit der Naturkörper sind, um es mit einem Worte Goethes auszudrücken, “Gottesgedanken” verwirklicht; auch von “Schöpfungsgedanken” hat man gesprochen, so der Embryologe K.E. von Baer, der die lebenden Wesen sogar mit besonderer Vorliebe “Gedanken der Schöpfung” nannte.” (Troll war wahrscheinlich der größte Pflanzenmorphologe des 20. Jahrhunderts)

⁹ <https://www.discovery.org/m/securepdfs/2023/05/Scientific-Dissent-List-05012023-2.pdf> (slightly different English translation here: <https://www.weloennig.de/Bounoure%20translation.pdf>)

Abstract: Key Points of the Contents

1. Starting with several citations of Richard Dawkins (see above) on evolution like “Evolution is a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt evolution is a fact.” “The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that evolution is true - unless you are prepared to believe the Almighty deliberately faked the evidence in order to make it look as though evolution is true” and that “evolution has to be gradual if it is to do any explanatory work.”
2. Followed by a series of citations of four biology professors (embryology, zoology, botany, and botany/genetics) and a professor of philosophy all from state universities denying Dawkins’ assertions and presenting a link on <https://dissentfromdarwin.org/> that more than one thousand scientists have signed the list *A Scientific Dissent from Darwinism* (2023), to wit: “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.”
3. Discussion of the fossil record of the Koala showing the constancy of the genus and family to which it belongs over millions of years of the geologic time table. Although the fossil record of the Koalas is rather incomplete at present, I predict that further discoveries will be in full agreement with the facts found for life forms displaying a rich fossil record, citing on the latter the paleontologists Oskar Kuhn and several examples published by Günter Bechly.
4. Coming back to the assertions of Dawkins on the number of clues that sledgehammeringly etc. prove that evolution is true and by Jay Mathers Savage that “we do not need a listing of evidences to demonstrate the fact of evolution any more than we need to demonstrate the existence of mountain ranges” (other Darwinians have put it on par with the fact that the sun is hot, the earth is a sphere, with gravity and other testable phenomena), I have been swapping the “mountain ranges” for evolution: “Mountain ranges are a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt mountain ranges are a fact.” And: “The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that mountain ranges truly exist.” Or: “We do not need a listing of evidences to demonstrate the fact of mountain ranges any more than we need to demonstrate the existence of evolution.” What serious scientist would ever say such curious things?”
5. Finally, I mentioned and discussed an astounding case of convergence between humans and koalas, “the only non-primates with fingerprints” and added a few quotations on the evolutionary problems of convergent characteristics in the living world – Kahle, Meyer et al., Tan, Spetner, Luskin, Dilley et al., Reeves – and eventually by Günter Bechly again now on mammals and birds with a P. S. note as follows:

“After having almost ‘finished’ the second part of preliminary article on the Koalas quoting Günter Bechly 6 times at length on important points (see above) up to Wednesday 8 January 2025 – only the two figures on the previous page and the quotation Schmidt had to be added – later (23:20 on the same day here in Germany) I checked *Evolution News & Science Today* and was stunned to read David Klinghoffer’s “*Farewell to Günter Bechly*”:

“We are shocked and grieved to report the death of our friend and colleague Günter Bechly, on January 6 in an auto accident in Austria. He was 61. “There is no easy way to say this,” said Center for Science and Culture Managing Director John West yesterday morning when we all found out. I could feel my scalp tighten from the grim tone of his voice before I even knew what was coming. Now try in vain to imagine how Bechly’s wife, Luise, and his two young sons are feeling. It seems beyond inadequate to wish them comfort.”

This great loss for his family, friends and scientific co-workers (and science in general) has been further addressed by D. Klinghoffer here: <https://evolutionnews.org/2025/01/farewell-to-gunter-bechly/>

I have learned a lot from several of Bechly’s printed publications – not to mention his public talks and the more than 200 posts at *Evolution News*. It’s really a pity that there will be no new articles by him under the title *Fossil Friday* anymore.

The Fossil Record of the Koala

Age range and collections according to PBDB¹⁰

Phascolarctos (koala)

Mammalia - Diprotodontia - Phascolarctidae

Age range			
Maximum range based only on fossils: base of the Early/Lower Pliocene to the top of the Holocene or 5.33300 to 0.00000 Ma			
Minimum age of oldest fossil (stem group age): 3.6 Ma			
Collections (19 total)			
Time interval	Ma	Country or state	Original ID and collection number
Messinian - Piacenzian	7.246 - 2.588	Australia (South Australia)	Phascolarctos maris (50343)
Early/Lower Pliocene	5.333 - 3.6	Australia (Queensland)	Phascolarctos stirtoni (136787)
Early/Lower Pleistocene	2.588 - 0.781	Australia (New South Wales)	Phascolarctos stirtoni (182621)
Pleistocene	2.588 - 0.0117	Australia (Queensland)	Phascolarctos sp. (136790)
Pleistocene	2.588 - 0.0117	Australia (New South Wales)	Phascolarctos sp. (96015)
Pleistocene	2.588 - 0.0117	Australia (Western Australia)	Phascolarctos cinereus (136225)
Pleistocene	2.588 - 0.0117	Australia (South Australia)	Phascolarctos cinereus (28298 135983 136076 136430) Phascolarctos sp. (136159)
Pleistocene	2.588 - 0.0117	Australia (Victoria)	Phascolarctos sp. (136221)
Middle Pleistocene - Late/Upper Pleistocene	0.774 - 0.0117	Australia (South Australia)	Phascolarctos cinereus (136074 136075)
Middle Pleistocene - Late/Upper Pleistocene	0.774 - 0.0117	Australia (Queensland)	Phascolarctos stirtoni (136730)
Late/Upper Pleistocene	0.129 - 0.0117	Australia (Victoria)	Phascolarctos cinereus (182939)
Late/Upper Pleistocene	0.129 - 0.0117	Australia (South Australia)	Phascolarctos cinereus (182957)
Late/Upper Pleistocene - Holocene	0.129 - 0.0	Australia (South Australia)	Phascolarctos cinereus (136172)
Holocene	0.0117 - 0.0	Australia (Western Australia)	Phascolarctos sp. (183094)

Thus, according to these data the characteristic features of the genus *Phascolarctus* display a **stasis/constancy** of more than **5 Ma**, i.e. for ca. **500 000 generations**¹¹.

One may also check *Nimiokoala* (Family: Phascolarctidae): “Age range: Burdigalian or 20.44000 to 15.97000 Ma. Collections (7 total)”¹².

“*Nimiokoala greystanesi* is an extinct marsupial, **closely related to the extant koala**¹³, that inhabited northwestern Queensland in the early-middle Miocene (23–16 million years ago). It is the only species assigned to the genus *Nimiokoala*. Along with species of sister genus *Litokoala*, it is the smallest representative of family Phascolarctidae.”¹⁴

So far, however, postcranial fossils are absent so that there are only some educated estimates concerning its body length and weight.¹⁵ Concerning molar morphology we are informed:

“The generic name, *Nimiokoala*, is derived from the Latin word *Nimio* "excessive" **referring to its complex molar morphology relative to other koala species.**”¹⁶

¹⁰ https://paleobiodb.org/classic/checkTaxonInfo?taxon_no=40177&is_real_user=1 (retrieved 15 November 2024)

¹¹ “Female koalas raise one young annually, **and their reproductive lifespan is 8–10 years** (Martin and Handasyde, 1999).” David S.L. Ramsey et al. (2021): <https://www.wildlifefertilitycontrol.org/wp-content/uploads/2021/01/Ramsey-et-al-2021-koala-levonorgestrel-pop-control.pdf>

¹² https://paleobiodb.org/classic/checkTaxonInfo?taxon_no=247895&is_real_user=1

¹³ Note please (again) that virtually **all highlighting/emphasis in the typeface by W.-E. L.** (except italics for genera and species names as well as adding a note when the cited authors themselves emphasized certain points).

¹⁴ <https://en.wikipedia.org/wiki/Nimiokoala> (retrieved 17 November 2024)

¹⁵ “In the absence of postcranial fossils, the size of *Nimiokoala* has been estimated from measurements of its surviving teeth. It is estimated to have body length of about 25–30 cm (9.8–11.8 in), and a weight of about 3.5 kg (7.7 lb)”: <https://en.wikipedia.org/wiki/Nimiokoala>. Variability of the extant Koalas: “Der Koala wird 61 bis 85 cm groß und wiegt zwischen **4 und 14 kg**. Körpergröße und Proportionen eines erwachsenen Tieres hängen von Alter, Geschlecht, Ernährung und Region ab.“ (“The koala grows to a height of 61 to 85 cm and weighs between **4 and 14 kg**. **The body size and proportions of an adult animal depend on age, sex, diet and region.**” - Variation for body size etc. will also be relevant for *Nimiokoala* and *Litokoala* but data are still rather scarce on these questions.

¹⁶ <https://en.wikipedia.org/wiki/Nimiokoala>.

Thus, one of the more ancient koala species displays the most complex molar morphology of all the koalas detected so far¹⁷. *Litokoala* is also closely related to the modern koala – its “Age range: base of the Late/Upper Oligocene to the top of the Burdigalian or 28.40000 to 15.97000 Ma.”¹⁸



Reconstruction of the extinct koala *Litokoala*, of the Miocene Riversleigh Fauna <https://en.wikipedia.org/wiki/Litokoala#/media/File:Litokoala.JPG>

However, information on its age varies: “The genus lived about 10–16 million years ago in the middle Miocene Riversleigh of Queensland.”¹⁹ But according to Black et al. (2014, p. 261):

“Species of *Litokoala* have a temporal range spanning the Late Oligocene to the Middle Miocene. *Litokoala kutjampensis*, the most abundant species, spans this time period and also has the largest geographical range (South Australia and Queensland). *Litokoala kutjampensis* has been recorded from Faunal Zone E of the Etadunna Formation, South Australia (24.1–24.0 Ma; Megirian et al. 2010), the Kutjamparu Local Fauna of the Wipajiri Formation, South Australia (23.4 Ma, Megirian et al. 2010), and Riversleigh’s Middle Miocene Faunal Zone C assemblages (Queensland). Both Louys et al. (2007) and Pledge (2010) have noted the apparent age disparity between these deposits. The maximum age of the Kutjamparu Local Fauna has most recently been estimated to be 23.4 Ma (Late Oligocene) based on biostratigraphy of the Wipajiri Formation relative to the underlying magnetostratigraphically dated Etadunna Formation, with an age range of 23.4 Ma to 17.6 Ma (Megirian et al. 2010).”²⁰

Details for the reconstruction, see below²¹. So, according to the present geological time table, the essential characteristics of the koala family have shown a constancy of at least some 23 Ma. Nevertheless, one may argue, of course, that there are differences between the genera and species of the family Phascolarctidae.

For example, much ado has been made recently of a few teeth of the newly-discovered “probably koala” species *Lumakoala blackae*²² – assumed to have lived in central Australia 25 Ma ago (and “it shows how finding new fossils like *Lumakoala blackae*, even if only a few teeth, can revolutionize our understanding of the history of life on Earth” – Salford paleontologist Robin Beck 2023 – co-author of the original article²³).

Question: Can one be reasonably skeptical of their impressive amount of far-reaching evolutionary derivations and speculations on the basis of *only a few teeth*? Rule: The poorer the fossil record, the richer the evolutionary speculations. Their hypotheses somewhat reminded me of the “old paleontological in joke [that] proclaims that mammalian evolution is a tale told by teeth mating to produce slightly altered descendant teeth”²⁴.

Unfortunately, not only is the fossil material for *Lumakoala* very fragmentary but also that for the other genera discussed so far in the literature as well:

“*Madakoala* is a genus of extinct phascolarctid marsupials with three known species, *Madakoala devisi*, *Madakoala wellsi* and *Madakoala robustus*. It is allied to extinct genera *Invictokoala*, *Koobor*, *Litokoala*, *Nimiokoala*, *Perikoala*, *Phascolarctos* and *Priscakoala*, along with *Phascolarctos*, the genus of the existing koala. *Madakoala* went extinct around 280,000 years ago in the Pleistocene epoch. They are known to exist by limited cranial material in fossils, so the existence of some of the subspecies is questionable because of missing dental data.”²⁵

Well, my impression so far is that not only the existence of some of the subspecies is questionable because of missing dental data, but because of missing even nearly all of the *most*

¹⁷ On variation in present and extinct koalas (so far known), see https://www.researchgate.net/figure/Dental-measurements-mm-of-Litokoala-dicksmithi-Abbreviations-AW-anterior-width-L_tbb1_259574114

¹⁸ https://paleobiodb.org/classic/checkTaxonInfo?taxon_no=40175&is_real_user=1

¹⁹ <https://en.wikipedia.org/wiki/Litokoala> (retrieved 18 November 2024)

²⁰ https://www.researchgate.net/publication/259574114_Understanding_morphological_variation_in_the_extant_koala_as_a_framework_for_identification_of_species_boundaries_in_extinct_koalas_Phaseolarctidae_Marsupialia

²¹ <https://commons.wikimedia.org/wiki/File:Litokoala.JPG> Author Apokryltaros (own work) 25 September 2015.

²² Arthur I. Crichton, Robin M. D. Beck, Aidan M. C. Couzens, Trevor H. Worthy, Aaron B. Camens & Gavin J. Prideaux (2023): A **probable** koala from the Oligocene of central Australia provides insights into early diprotodontian evolution. <https://www.nature.com/articles/s41598-023-41471-0>

²³ <https://www.sci.news/paleontology/lumakoala-blackae-12244.html>

²⁴ https://en.wikiquote.org/wiki/Stephen_Jay_Gould

²⁵ <https://en.wikipedia.org/wiki/Madakoala> (there also the references to the original papers). Also: <https://animals.fandom.com/wiki/Madakoala>

important postcranial anatomical (and more) data for the exact overall description of several of these other genera and species as well.²⁶

If, however, the data for *Madakoala*²⁷ were correct, the **stasis/constancy** of that genus would have lasted over a time span of **more than 23 Ma**.²⁸

Now, let's take as a yardstick the history of human paleontology²⁹ during the last say more than 160 years (starting with *Homo neanderthalensis* in 1856, later called *Homo sapiens neanderthalensis*): Considering the many refuted, falsified, disproved, rebutted³⁰ and modified hypotheses on the origin of man including the Neanderthals³¹ – one may likewise expect a similar future history for most of the present hypotheses forwarded for the evolution of the koalas and the family to which it is assigned, the phascolarctidae, not to speak of the marsupials in general.

As for a possible final result on (I hope) many future captivating discoveries (paleontology, anatomy, physiology etc.), I would dare to make the following prediction: ***The answer will be in full agreement with the facts found for life forms displaying a rich fossil record.*** For a summary of the point at issue I have already repeatedly cited the excellent paleontologist Oskar Kuhn as follows:

"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 real.***"³²

The scientific content of this statement has been systematically corroborated by further paleontological research in the following ca. 60 years. To give some examples by **another highly qualified paleontologist**, I first would like to turn the attention of my readers to the following **observations made by Günter Bechly** during the last few years – now **three (3) quotations**:

(1) Günter Bechly (9 August 2024): Example: The origin of winged insects:

"...the **abrupt appearance** of winged insects with great diversity and disparity in the Carboniferous period, which we have called the **Carboniferous Insect Explosion**, is a phenomenon that is highly unexpected under Darwinian assumptions, but well be accommodated within an intelligent design paradigm. ***It represents just one of the many discontinuities in the history of life that strongly contradict the predictions from a neo-Darwinian theory of evolution. The same pattern is found in***

²⁶ Several of the new genera and new species mentioned above were suggested on the study of tooth structures alone: "Many taxa are named on the basis of isolated teeth or at best dentitions (Black, 1999). Only three extinct species are known from cranial material (Black and Archer, 1997b, Louys et al., 2007, Louys et al., 2009, Black et al., 2013a) and not one is known from elements of the postcranial skeleton." (<https://www.sciencedirect.com/science/article/abs/pii/S1342937X13004127>). However, **more than 300 genes are involved in the development of teeth** (<https://pubmed.ncbi.nlm.nih.gov/16838332/> see also <https://www.tandfonline.com/doi/full/10.1080/15476278.2021.2022373>). Although teeth morphology of various koala fossil transcends that of the present koalas (<https://www.tandfonline.com/doi/full/10.1080/14772019.2013.768304>, <https://archive.org/details/biostor-105296/page/n13/mode/2up> – **could not Mendelian recombination also be involved here?** Cf. also <https://www.weloennig.de/Hippo.pdf> pp. 26 – 32. Since direct genetic studies are not possible, we have to rely on genetically and anatomically well-studied comparisons, which may display proportionably similar differences and limits of variations in teeth and other characters – possibly such as the species *Homo sapiens* and some further thoroughly examined genera and species. See detailed analysis by Goldschmidt as shown at <https://www.weloennig.de/Hippo.pdf> pp. 22-26 and the genetic species concept at <https://www.weloennig.de/AesIV3.html>. – As for dental traits I had asked: Now, **how many human species and genera could be created by the "134,217,700 possible combinations of dental traits?"** – p. 32.

²⁷ <https://www.nature.com/articles/s41598-023-41471-0> Crichton et al. (2023): "Here we report the likely oldest-known koala relatives (Phascolarctidae), from the late Oligocene Pwerte Marnte Marnte Local Fauna (central Australia). These include **coeval species** of *Madakoala* and *Nimiokoala*, as well as a new probable koala (?Phascolarctidae).

²⁸ https://paleobiodb.org/classic/checkTaxonInfo?taxon_no=247553&is_real_user=1
²⁹ See, for example <https://www.weloennig.de/HumanEvolution.pdf>

³⁰ Different adjectives with different overtones.

³¹ <https://en.wikipedia.org/wiki/Neanderthal>: "For much of the early 20th century, European researchers **depicted Neanderthals as primitive, unintelligent and brutish**. Although knowledge and perception of them has markedly changed since then in the scientific community, the image of the unevolved caveman archetype remains prevalent in popular culture. **In truth, Neanderthal technology was quite sophisticated**. It includes the Mousterian stone-tool industry as well as the abilities to create fire, build cave hearths (to cook food, keep warm, defend themselves from animals, placing it at the centre of their homes), make adhesive birch bark tar, craft at least simple clothes similar to blankets and ponchos, weave, go seafaring through the Mediterranean, make use of medicinal plants, treat severe injuries, store food, and use various cooking techniques such as roasting, boiling, and smoking... The braincases of Neanderthal men and women averaged about **1,600 cm³** (98 cu in) and **1,300 cm³** (79 cu in), respectively, **which is considerably larger than the modern human average (1,260 cm³ (77 cu in) and 1,130 cm³ (69 cu in), respectively).**" (Retrieved 25 November 2024). Cf. <https://evolutionnews.org/2024/07/neanderthals-were-a-lot-more-like-humans-than-we-realize/>

³² See some more information on this quote at https://ad-multimedia.de/evo/long-necked-giraffe_mU.pdf p. 6.

almost all groups of organisms, in all geographical regions, and in all periods of Earth's history. This is clearly a signal in the data and not just noise. It is a signal that tells about a saltational history of life, with a series *of bursts of biological creativity that can only be explained with the goal-directed infusion of new information from outside the system.*"³³

- (2) Günter Bechly (14 June 2024) on the origin of the Angiosperms ("Darwin's Abominable Mystery Corroborated Once Again"):

"Since this notorious discontinuity in the fossil record did not get any smaller with 160 years of paleobotanical research since Darwin, *but instead became more and more acute and empirically corroborated, we can be very sure that the gap is not a gap of knowledge but a real gap in nature.* This contradicts Darwin's explicit dictum that nature does not make jumps. Nature clearly did make jumps in the history of life (Bechly 2024) and this cannot be explained with an unguided gradual accumulation of small changes over long periods of time, but requires a rapid burst of *biological novelty that is best explained by intelligent design.*"³⁴

- (3) Günter Bechly (12 June 2021) on "Darwin's "Abominable Mystery" Is Not Alone: Gaps Everywhere!":

"Of course, some critics will still claim that the argument from discontinuities in the fossil record is just an argument from ignorance. However, there are gaps and gaps, i.e., *real gaps in nature and apparent gaps based on ignorance or bias* (e.g., undersampling or taphonomic filters). **Actually, we can distinguish these two types of gaps quite easily.** *With increasing knowledge of a field, the apparent gaps will tend to get smaller and smaller and eventually dissolve, while real gaps rather get corroborated and even enforced with growing knowledge.* The latter is clearly the case for events **like the Cambrian Explosion** as well as for Darwin's "**abominable mystery.**" Or did very recent studies solve the mystery?"³⁵

See more by Bechly here: <https://evolutionnews.org/author/gbechly/>. It seems that Richard Dawkins and his Darwinian friends cannot distinguish between these two basically different kinds of gaps.

See on the Cambrian explosion also the article by geologist Casey Luskin (2023) – and the series of links given there as well as his podcast on the origin of man (*cf.* footnote below)³⁶.

On paleontologist Chen Junyuan (2014) we read: "One of the world's leading researchers on the Cambrian explosion is Chen Junyuan from the Nanjing Institute of Palaeontology and he said that *his fossil discoveries in China show that "Darwin's tree is a reverse cone shape"*. A senior research fellow at Chengjiang Fauna [fossil site], said, "I do not believe the animals developed gradually from the bottom up, I think they suddenly appeared."³⁷

In his book *Darwin's Doubt* (2013, pp. 51/52) Stephen C. Meyer reports on another Chinese paleontologist, J. Y. Chen, the following revealing points (among others):

"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 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."³⁸

³³ <https://evolutionnews.org/2024/08/fossil-friday-the-carboniferous-explosion-of-winged-insects/> <http://www.weloennig.de/AngiospermsLivingFossils.pdf>

³⁴ <https://evolutionnews.org/2024/06/fossil-friday-darwins-abominable-mystery-corroborated-once-again/>

See there a long series further references on this and related topics. See also <http://www.weloennig.de/AngiospermsLivingFossils.pdf>, <https://www.weloennig.de/ExplosiveOrigins.pdf>, <https://www.weloennig.de/AesIV5.SysDis.html>, <https://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>, pp.366-368. And again <https://www.weloennig.de/HumanEvolution.pdf>

³⁵ <https://evolutionnews.org/2021/06/darwins-abominable-mystery-is-not-alone-gaps-everywhere/> See also <https://evolutionnews.org/author/gbechly/> ca, **225 articles.**

³⁶ <https://evolutionnews.org/2023/05/faq-the-cambrian-explosion-is-real-and-it-is-a-problem-for-evolution/> and the origin of man

<https://www.youtube.com/watch?v=Bhnb2Y66gXc> (2021)

³⁷ <https://uncommondescent.com/intelligent-design/bryozoa-add-to-cambrian-explosions-impact-35-million-years-earlier-than-thought/>

³⁸ Stephen C. Meyer (2013/2014): *Darwin's Doubt: The Explosive Origin of Animal Life and the Case for Intelligent Design*: https://www.amazon.de/Darwins-Doubt-Explosive-Origin-Intelligent/dp/0062071483/ref=sr_1_2?__mk_de_DE

Briefly Back to Dawkins' Assertions Cited Above

Back to the assertions made by Richard Dawkins as quoted at the beginning of this article

*"Evolution is a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt evolution is a fact. The evidence for evolution is at least as strong as the evidence for the Holocaust, even allowing for eye witnesses to the Holocaust."*³⁹

Prof. **Richard Dawkins** (Public Understanding of Science, University of Oxford)

*"The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that evolution is true - unless you are prepared to believe the Almighty deliberately faked the evidence in order to make it look as though evolution is true."*⁴⁰

Prof. **Richard Dawkins** (Public Understanding of Science, University of Oxford)

As for my Answer see the Reflections from some of my earlier articles (now extended)⁴¹:

The "evolution is a fact" suggestion ("*Suggestion*" in the German sense of the word as especially applied in psychology) is echoed almost everywhere (articles, textbooks, radio- and TV-shows – I have been systematically observing such assertions). Jay Mathers Savage (97⁴²), emeritus professor at the University of Miami and adjunct professor at San Diego State University, once noted, for example, that "No serious biologist today doubts the fact of evolution,..." – a statement endlessly repeated already a hundred years ago and perhaps even more often and emphatically during the more than sixty years after that assertion. Savage continued: "The fact of evolution is amply clear." Also: "The fact of evolution is demonstrated on every side in all fields of biology." And "*We do not need a listing of evidences to demonstrate the fact of evolution any more than we need to demonstrate the existence of mountain ranges.*"⁴³

Well, positing (macro-)evolution on the same level of reality/actuality with the existence of mountain ranges – other Darwinians have put it on par with the fact that the **sun is hot**, the **earth is a sphere**, with **gravity** and other testable phenomena – **could lead to some perhaps humorous and captivating reflections by just swapping, for example, the mountain ranges for evolution:**

"No serious geologist today doubts the fact of mountain ranges, ... The fact of mountain ranges is amply clear. ... The fact of mountain ranges is demonstrated on every side in all fields of geology ... We do not need a listing of evidences to demonstrate the fact of mountain ranges any more than we need to demonstrate the existence of evolution." May one not raise the question, for instance, which rational researcher would ever say such curious things defending the existence of mountain ranges, as if there was anything to defend? Or "*No serious astronomer today doubts the fact that the sun is hot, ... We do not need a listing of evidences to demonstrate the fact that the sun is hot any more than we need to demonstrate the existence of evolution.*" And so on.

Or: "*Mountain ranges are a fact. Beyond reasonable doubt, beyond serious doubt, beyond sane, informed, intelligent doubt, beyond doubt mountain ranges are a fact.*"

"The number of clues, the sheer weight of evidence, totally and utterly, sledgehammeringly, overwhelmingly strongly supports the conclusion that mountain ranges truly exist."

So, what is the basic difference between mountain ranges, that the sun is hot, the earth is a sphere, gravity etc. and evolution, so that no rational mind would ever try to compose such statements to defend the existence of the former phenomena (if ever doubted at all during the last 150 years) by comparing them to (macro-)evolution? Answer: All the various examples given to inculcate "the fact of evolution" into the mind of the reader/listener are – as already hinted at above – testable and demonstrable (scientifically and mostly also by personal experience, at least potentially) whereas evolution is definitely not: "These evolutionary happenings are unique, unrepeatable, and irreversible. It is as impossible to turn a land vertebrate into a fish as it is to effect the reverse transformation. The applicability of the experimental method to the study of such unique historical processes is severely restricted before all else by the time intervals involved, which far exceed the lifetime of any human experimenter" – Theodosius Dobzhansky.

Thus, evolution – including man as a descendant of extinct apes and hence a genetic cousin of the chimpanzee – cannot honestly be spoken of as a fact like mountain ranges, that the sun is hot, like gravity etc. It is definitely not "beyond reasonable doubt", neither "beyond serious doubt", nor "beyond sane, informed, intelligent doubt".

³⁹Dawkins R (2009): The Greatest Show on Earth. Free Press, New York (2009, p. 8)

⁴⁰Dawkins R "The Alabama Insert". Excerpted from: Charles Darwin: A Celebration of his Life and Legacy. Editors: James T. Bradley and Jay Lamar: https://archive.org/stream/journalofalabama6869alab/journalofalabama6869alab_djvu.txt

⁴¹<https://www.weloennig.de/HumanEvolution.pdf> pp. 32 – 33, and p. 61. There the reference and full text of the quotation.

Also: <https://www.weloennig.de/Staatsexamensarbeit.pdf> pp. 83 – 85.

⁴²https://en.wikipedia.org/wiki/Jay_M._Savage "This page was last edited on 3 October 2024, at 14:53 (UTC)." (retrieved 5 January 2025)

⁴³ Full quotation: Jay Mathers Savage (1963): Evolution (New York: Holt, Rinehart and Winston, 1963; quotations from p. V). "**No serious biologist today doubts the fact of evolution**, the development of all living organisms from previously existing types under the control of evolutionary processes. However, there have been and will continue to be differences of opinion on how evolution takes place, just as there are different ideas on the exact processes involved in, for example, the formation of mountain ranges. Thus, while **the fact of evolution is amply clear**, there are different theories regarding the significant processes that have brought about evolutionary change. In this book we are not concerned with enumerating so-called proofs of evolution. **The fact of evolution is demonstrated on every side in all fields of biology and indeed forms the basic unifying principle in the study of living systems. We do not need a listing of evidences to demonstrate the fact of evolution any more than we need to demonstrate the existence of mountain ranges.** Rather, the concern here will be with what is known about the process of evolution and a survey of the several theories proposed to explain the process."

Finally: Just to Mention an Astounding Case of Convergence Between Humans and Koalas: “The only Non-Primates with Fingerprints”

Chelsea Tromans sums up a decisive point of convergence in koalas and humans in her article *9 facts you should know before coming to see koalas in Queensland* as follows (2022):

“Just like us, koalas have fingerprints. In fact, they’re so similar to human fingerprints, it’s extremely difficult to distinguish between the two species, even under a microscope.”⁴⁴

Alissa Greenberg interviews Maciej Henneberg (known to be the discoverer of the koala’s fingerprints in 1996), professor of anthropological and comparative anatomy at the University of Adelaide (2024):

“As a biological anthropologist and forensic scientist, Henneberg knew this made koalas unique, the only non-primates with fingerprints. “It appears that no one has bothered to study them in detail,” he told *The Independent* in 1996, shortly before publishing a journal article announcing the find. Henneberg’s research indicated that not even careful analysis under a microscope could help distinguish the loopy, whirling ridges on koalas’ fingers from our own. The fingerprints were so similar to humans’ that he worried they could easily be mixed up by detectives. (Even so, he acknowledged to *The Independent*, “it is extremely unlikely that koala prints would be found at the scene of a crime.”)⁴⁵

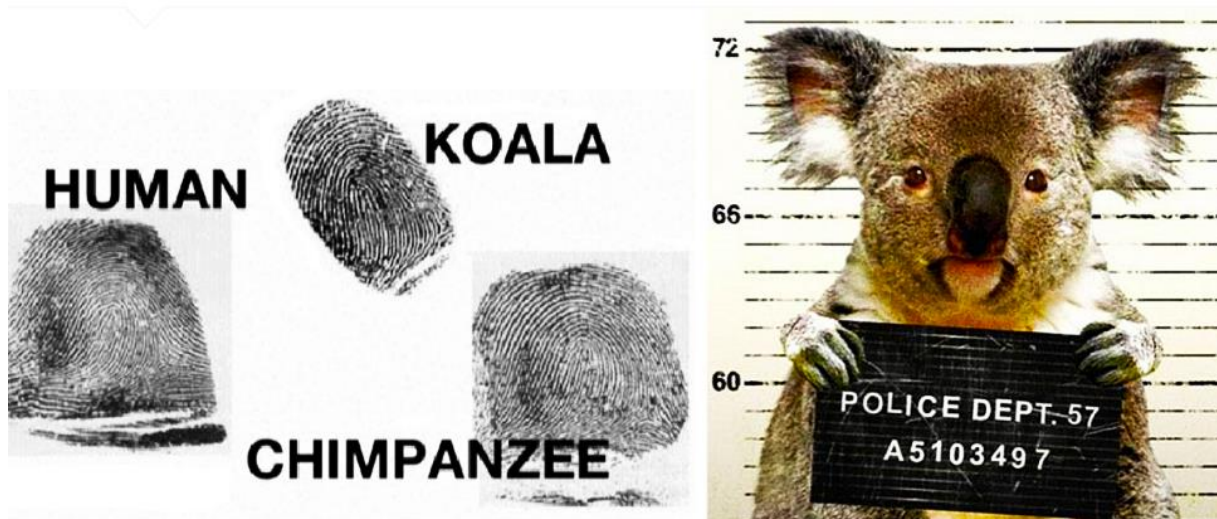


Figure from the article (2020): INCREDIBLE NATURE : SIMILARITIES AND DISSIMILARITIES OF KOALAS AND HUMAN FINGER⁴⁶

It does not seem to be uninteresting to study the contradictory evolutionary presuppositions and acrobatics which have been made to explain this phenomenon⁴⁷. In almost all cases accepting one the hypotheses implies rejecting all the others – and for me all appear to be insufficient and inadequate to convincingly expound this stunner evolutionarily.

Henning Kahle was right saying: “Now it is precisely the phenomenon of convergence that poses further major problems for neo-Darwinism. For if the one-time emergence of completely “adapted”

⁴⁴ <https://www.queensland.com/au/en/places-to-see/experiences/nature-and-wildlife/koala-facts> (retrieved 29 November 2024)

⁴⁵ <https://www.pbs.org/wgbh/nova/article/koala-fingerprints/>

⁴⁶ <https://forensicgenesis.wordpress.com/2020/06/21/incredible-nature-similarities-and-dissimilarities-of-koalas-and-human-finger/>

⁴⁷ See: Henneberg, M., Lambert, K.M. and Leigh, C.M. (1998). Fingerprinting a chimpanzee and a koala: animal dermatoglyphics can resemble human ones. In: Proceedings of the Conference of the Australian and New Zealand International Symposium on the Forensic Sciences 1996.

Karunya, S. (2023): Fingerprint Similarity: Human, Koala and Chimpanzee. Hawk Eye Forensic:

<https://hawkeyeforensic.com/2023/11/23/fingerprint-similarity-human-koala-and-chimpanzee/> (23 November 2023)

Warman, P. : <https://web.archive.org/web/20170810023450/http://jeb.biologists.org/content/jexbio/212/13/iii.full.pdf> Fingerprints Don’t Increase Friction. [On smooth surfaces.] Inside JEB. The Journal of Experimental Biology. Also: Warman, P. H. and Ennos, A. R. (2009). Fingerprints are unlikely to increase the friction of primate fingerpads. *J. Exp. Biol.* 212, 2016-2022.

<https://journals.biologists.com/jeb/article/212/13/2016/18342/Fingerprints-are-unlikely-to-increase-the-friction> (“...this initial study is enough to show that fingerpads might have quite a different function than just to increase friction.”) Malcolm, T. (2021) discusses 2 hypotheses:

<https://jps.library.utoronto.ca/index.php/ya/article/view/37816>

organs or characteristics through selection of random mutations can hardly be explained, the multiple formation of similar organs elutes the neo-Darwinian interpretation even further.” So were Meyer, Minnich, Moneymaker, Nelson, and Seelke stating: “Convergence is a deeply intriguing mystery, given how complex some of the structures are. Some scientists are skeptical that an undirected process like natural selection and mutation would have stumbled upon the same complex structure many different times.”⁴⁸

Change Laura Tan: “Convergent evolution is unlikely to happen because it requires the simultaneous generation of multiple new genes – hundreds in the case of the echolocation in bats and whales (Parker et al. 2013), but gene generation via mutation and natural selection is improbable (Tan 2015). In addition, some of the genes functioning in the processes that are mosaic are taxonomically restricted essential genes whose function is indispensable for the survival of its carrier organism (Tan 2015, and references therein).”⁴⁹

Lee Spetner: “The lack of uniqueness of the phylogenetic tree is usually explained away by what is called “convergent evolution.” Convergent evolution is the appearance of the same trait or character in independent lineages. It is, however, an invention. It was invented solely to avoid addressing the failure of phylogenetic trees to support Common Descent. There is no theoretical support for convergence, and whatever evidence has been given for it is the product of a circular argument. Richard Dawkins (2010) seems to revel in describing numerous examples of convergent evolution without realizing that any of those examples destroy his case for evolution.”⁵⁰

Casey Luskin: “Biological similarity implies common ancestry, *except when it doesn't*.”⁵¹

Stephen Dilley, Casey Luskin, Brian Miller and: “In Kojonen’s⁵² view, convergence ... “*refers to the independent evolution of the same biological outcome in two or more different lineages, beginning from different starting points* (Kojonen 2021, p. 125)”⁵³.

... Kojonen clearly regards convergence as important. Recall that he believes “[e]xamples of convergence are ubiquitous in biology”⁵⁴ (Kojonen 2021, p. 125). The reason that these examples are said to be ‘convergent’ is because, in general, multiple lines of evidence – typically from genetics, paleontology, biochemistry, systematics, and the like – indicate that *it is difficult to form a coherent phylogenetic account of their origin from a given common ancestor. These data count as anomalies under common ancestry. That is why evolutionary biologists regard them as the result of convergent evolution.*”⁵⁵

⁴⁸ For the references to Kahle and Meyer et al. see <https://www.weloennig.de/SauropodDinosaur.pdf>

⁴⁹ Change Laura Tan (was tenured professor: Division of Biological Sciences, 102 LeFevre Hall, University of Missouri, Columbia, MO 65211); Big Gaps and Short Bridges: A Model for Solving the Discontinuity Problem. *Answers Research Journal* 9 (2016):149–162. “Disclaimer: The opinions expressed in this article are the author’s own and not necessarily those of the University of Missouri.” <https://assets.answersresearchjournal.org/doc/v9/discontinuity-problem.pdf> She has also published in *BIO-Complexity* <https://bio-complexity.org/ojs/index.php/main/article/view/BIO-C.2016.2/BIO-C.2016.2>. See also together with Rob Stadler (2020): <https://www.amazon.com/Stairway-Life-Origin-Life-Reality/dp/1734183705> <https://evolutionnews.org/2020/08/the-stairway-to-life-is-really-a-cliff/>

⁵⁰ Lee Spetner (2014): *The Evolution Revolution: Why Thinking People Are Rethinking the Theory of Evolution*. <https://evolutionnews.org/2024/08/lee-spetners-nonrandom-evolutionary-hypothesis/> Judaica Press.

⁵¹ https://evolutionnews.org/2015/05/theory_of_conve/ See also: https://evolutionnews.org/2015/02/problem_7_conve/

⁵² “E. V. Rope Kojonen is a Postdoctoral Researcher at the Faculty of Theology, University of Helsinki: <https://www.faraday.cam.ac.uk/about/people/dr-rope-kojonen/>

⁵³ For 3 postulated main evolutionary pathways see George R. McGhee (2021) on “Convergence”: https://link.springer.com/referenceworkentry/10.1007/978-3-319-32979-6_124 Abstract: Convergence is the evolution of the same or very similar traits independently in different lineages of organisms. There exist three different pathways by which evolution may produce convergent forms: allo-convergence, iso-convergence, and retro-convergence. Allo-convergent evolution is the independent evolution of the same or very similar new trait from different precursor traits in different lineages; iso-convergent evolution is the independent evolution of the same or very similar new trait from the same precursor trait in different lineages; and retro-convergent evolution is the independent re-evolution of the same or very similar trait to an ancestral trait in different lineages. In addition to convergent phenotypic and molecular evolution, ecological niche convergence is the evolutionary occupation of the same ecological niche, the same ecological role in life, independently by different lineages of organisms. Ecological niche convergence may not result in morphological convergence at all, in that ecologically convergent organisms may vary widely in their morphologies but their ecological niches, their modes of life, are the same.

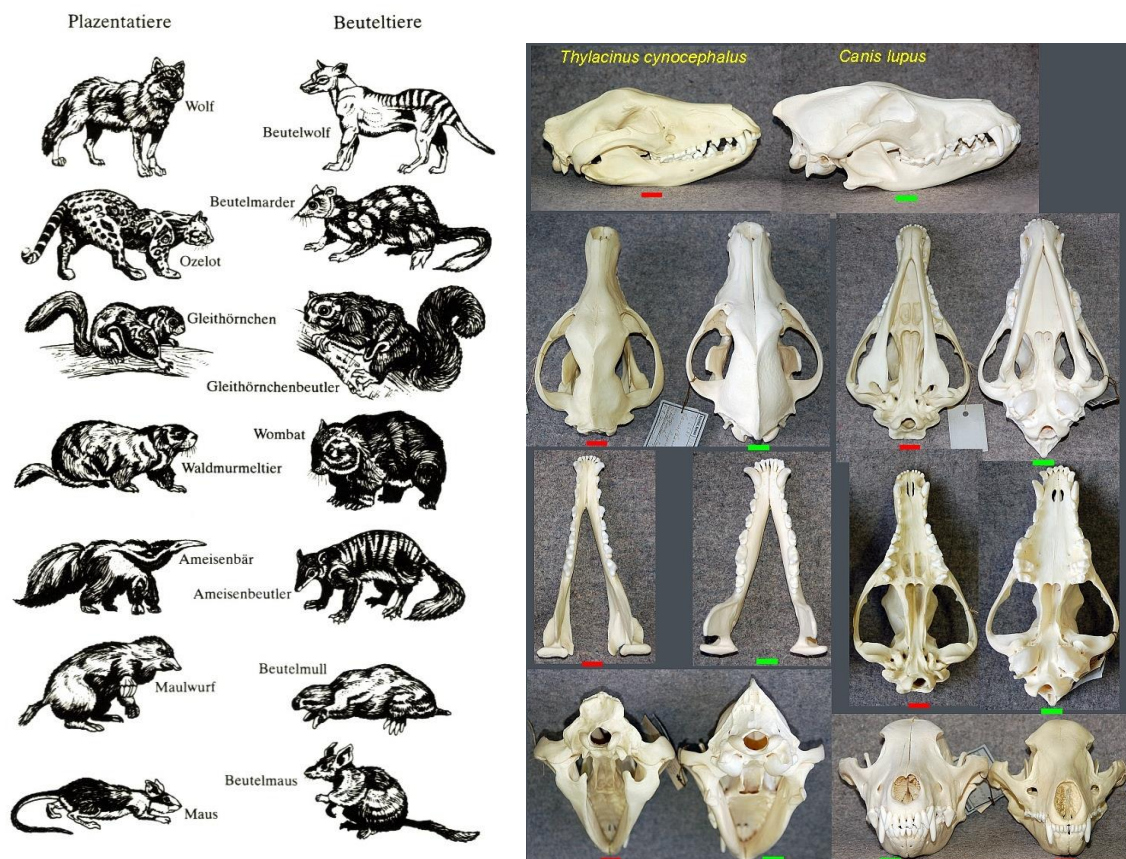
Analyzing the phenomenon of convergence in evolution is now becoming as active a field of evolutionary research as the analysis of the phenomenon of divergence. The results of future convergence research should provide definitive answers to current questions concerning the degree to which evolutionary processes are predictable or unpredictable, limited or unbounded, directed or directionless, and the degree to which those processes are extrinsically (selectively) limited, intrinsically (developmentally) limited, or unlimited (random).

⁵⁴ On this point he is entirely correct from an evolutionary point of view, see for examples <https://www.weloennig.de/SauropodDinosaur.pdf> and especially the SUPPLEMENT (pp. 35 – 50) in this article.

⁵⁵ Stephen Dilley, Casey Luskin, Brian Miller and Emily Reeves (2023): *On the Relationship between Design and Evolution*: <https://www.mdpi.com/2077-1444/14/7/850> (On Convergent Evolution especially S.D. and E.R.)

Emily Reeves: “The first problem is that convergence needs not only to evolve certain complex proteins, traits, and systems but also to evolve these things on their own more than once. *If proteins are rare and isolated (as our review establishes) and the chances of even a single short protein evolving once in the whole history of the earth are too low, then, all other things being equal, the chances of similar proteins evolving more than once are even lower. This is amplified when scaled up to protein complexes, cell types, tissues, and organs, again demonstrating why the strength of the scientific evidence is crucial.*”⁵⁶

In this connection, let’s have a brief look at the “convergences” between Marsupials and Placentals (see references and discussion <https://www.weloennig.de/Hunderassen.Bilder.Word97.pdf>, pp. 217 – 221):



Left: Placentals and marsupials: Augros and Stanciu according to Dobzhansky and others. Right: Skulls of Tasmanian wolf as compared to *Canis lupus*: <https://de.wikipedia.org/wiki/Beutelwolf> (retrieved 9 January 2025).

Paleontologist Günter Bechly: After presenting a brief overview on some evolutionarily extremely improbable convergences in birds and mammals and their postulated relatives, in his article *Fossil Friday: A Scientific Controversy About Warm-Blooded Animals* (subtitle *Ignoring the Evidence*) points out how many popularizers of Darwinism react (2025):

“How do popularizers of Darwinism such as Richard Dawkins react? Unsurprisingly, they just ignore the evidence and boldly tell their gullible fanboys (and girls) that evolution is a proven fact because all data unambiguously suggest a single true tree of life. Is this mere ignorance or deliberate deception? The materialist-naturalist world view critically depends of Darwinian evolution and must defend it at all cost, even if it means that the facts have to be tweaked, fudged, and denied to fit the theory. And all critics must be silenced as dangerous science-deniers and peddlers of pseudoscience and evil religious superstition. More and more people no longer fall for this crude propaganda and rather follow the evidence wherever it leads.”⁵⁷

⁵⁶ <https://evolutionnews.org/2024/01/convergent-evolution-an-argument-that-comes-at-a-price/> Yes: “Accept Convergence, Lose Common Ancestry” (Subtitle).

⁵⁷ <https://evolutionnews.org/2025/01/fossil-friday-a-scientific-controversy-about-warm-blooded-animals/>

P. S. After having almost ‘finished’ the second part of preliminary article on the Koalas quoting Günter Bechly 6 times at length on important points (see above) up to Wednesday 8 January 2025 – only the two figures on the previous page and the quotation Schmidt had to be added – later (23:20 on the same day here in Germany) I checked *Evolution News & Science Today* and was stunned to read David Klinghoffer’s “*Farewell to Günter Bechly*”:

“We are shocked and grieved to report the death of our friend and colleague Günter Bechly, on January 6 in an auto accident in Austria. He was 61. “There is no easy way to say this,” said Center for Science and Culture Managing Director John West yesterday morning when we all found out. I could feel my scalp tighten from the grim tone of his voice before I even knew what was coming. Now try in vain to imagine how Bechly’s wife, Luise, and his two young sons are feeling. It seems beyond inadequate to wish them comfort.”

This great loss for his family, friends and scientific co-workers (and science in general) has been further addressed by D. Klinghoffer here: <https://evolutionnews.org/2025/01/farewell-to-gunter-bechly/>

I have learned a lot from several of Bechly’s printed publications – not to mention his public talks and the more than 200 posts at *Evolution News*. It’s really a pity that there will be no new articles by him under the title *Fossil Friday* anymore.

Addendum 10 January 2025:

Ferdinand Schmidt:

“Was müssen das für merkwürdige Zufälle sein, die immer dann zur Stelle sind, wenn sie nützlich und sinnvoll erscheinen! Dafür als einziges richtendes Prinzip immer wieder nur den rein passiven Faktor einer Orthoselektion verantwortlich machen zu wollen...vermag unser Kausalitätsbedürfnis umso weniger zu befriedigen, je exakter man sie an konkreten Beispielen im Detail analysiert.“

“What strange coincidences they [these mutations] must be that are always there [or: always occur] when they seem useful and sensible! To want to make the purely passive factor of orthoselection responsible for this time and again as the only responsible principle...is all the less able to satisfy our need for causality the more precisely it is analyzed in detail using concrete examples.”⁵⁸

15 January 2025: An excellent summary has been presented by Tom Bethell in his book *Darwin’s House of Cards* (2017, Chapter 10. *The Conundrum of Convergence*, pp. 115 to 125), citing among others S. C. Morris (Cambridge) as follows:

“During my time in the libraries I have been particularly struck by the adjectives that accompany descriptions of evolutionary convergence. Words like, ‘remarkable’, ‘striking’, ‘extraordinary’, or even ‘astonishing’ and ‘uncanny’ are commonplace [...] the frequency of adjectival surprise associated with descriptions of convergence suggests to me there is almost a feeling of unease in these similarities. Indeed, I strongly suspect that some of these biologists sense the ghost of teleology looking over their shoulders.”⁵⁹

“The parallel development of identical structures and/or biochemical systems in widely diverse types tests the evolutionist to the utmost...”⁶⁰

⁵⁸ Ferdinand Schmidt (1985, p. 204) in: Grundlagen der Kybernetischen Evolution. Goecke und Evers. Krefeld. In part translated with DeepL – However, the German text/wording/grammar of these two sentences is really complicated – try to do it better! Google suggested the following: “To always want to blame [“blame” is not really correct – better perhaps: to hold responsible] the purely passive factor of orthoselection as the only guiding principle...is less able to satisfy our need for causality, the more precisely you analyze it in detail using concrete examples.”

⁵⁹ Tom Bethell (2017): *Darwin’s House of Cards*. Discovery Institute Press, Seattle.

⁶⁰ Michael Pitman (1984, p. 188): *Adam and Evolution*. Rider, London.

See perhaps also Lönnig and Becker: citation on convergences in carnivorous plants (2004, p. 3): <https://www.weloennig.de/Philcoxia.pdf>

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