

## From hunch to serious consideration

*Hugh G. Owen*

In the past, I have been asked verbally to describe the detail of how the map reconstructions for my *Atlas of Continental displacement from the late Triassic – Early Jurassic (200 Ma) to the Present* were made (Owen 1983). Attempting to do this, even with a globe, produced often a glazed look in the questioner and a realisation that he or she had little idea of spherical geometry or indeed that flat maps of the Earth are projected from an oblate spheroid of rotation according to differing projection formulae. It is not the intention here to discuss the growth of expanding Earth hypotheses and the various ideas of mode and timing. This has been done adequately by others elsewhere (e.g. Carey 1976, 1988, Chatterjee and Hotton 1992, Scalera and Jacob<sup>1</sup> 2003, Scalera, *et al.* 2012). In particular, Scalera and Jacob (2003) provide a full coverage of the various ideas together with tributes to the lives of both Ott Hilgenberg (Scalera and Braun 2003) and Sam Warren Carey (Elliston 2003), and a comprehensive bibliography. Flat maps and diagrams have to be the norm in papers on the subject, but globes (terellae) such as those of Hilgenberg (1933), Vogel (1983, 2003) and Maxlow<sup>2</sup> (2003) allow people better to visualise the issues surrounding the question of whether the Earth has expanded or not.

It is the intention here to describe the genesis of the Atlas only - a test of the ocean floor spreading evidence on a constant modern

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<sup>1</sup> See also the chapter by Karl-Heinz Jacob.

<sup>2</sup> See also the chapter by James Maxlow.

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dimension Earth and the expanding Earth in accordance with the spherical geometry of the spreading patterns (Owen 1983). It is a curious trait of human nature that novel ideas become a matter of controversy, rejection and to be ignored, even when they are based on good testable data. It applied as much to the original concept of continental displacement (drift) until the data became overwhelming, as it does to the spherical-geometric implications of the ocean-floor spreading patterns and Earth expansion. No previous attempt had been made to test the ocean-floor spreading data against the spherical geometry of a constant modern dimensions Earth. Smith *et al.* (1973) had attempted reconstructions, assuming a modern dimensions Earth and these showed problems with the fit-together of the continents as well as technical problems with the computer program used. With increased ocean-floor spreading data becoming available, Smith *et al.* (1980) published a new series of maps, again assuming a constant modern dimension Earth, in which they allege that the reconstructions are controlled by the spreading data – they are not. These spreading data are not shown on their Mesozoic to Recent reconstructions and therefore, they cannot be tested for accuracy.

### Early hunches

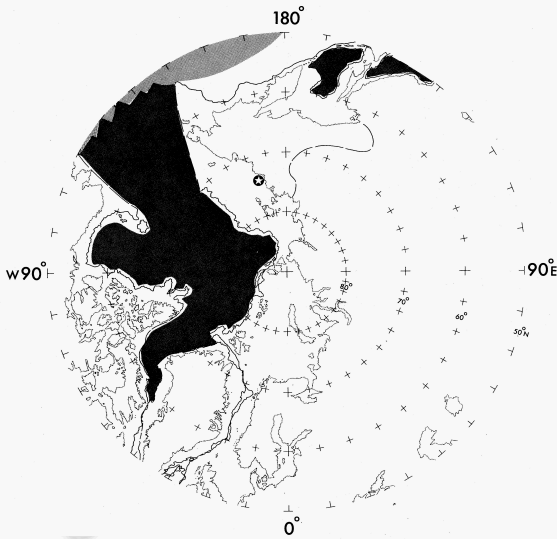
Scientific ideas can start as simple observations before the real Science begins. My interest in “continental drift” started as a mature student in the late 1950’s early 1960’s reading Arthur Holmes original version (1944) of his superbly written *Principles of Physical Geology*. In some respects I have always thought of him as the “father” of modern theory despite Wegener’s work (1912), particularly so after his expanded discussion of the subject in his 1965 edition. In those days, there were no adequate studies of continental marginal matches around the Atlantic Ocean and the concept of oceanic crustal spreading was hotly disputed. Not so in the southern hemisphere where Carey organised the Hobart Continental Drift Symposium with its thought provoking papers (1958). Their work prompted me to make accurate cut-outs from a high quality 15 inch diameter globe, of Africa, America, North America, Greenland, Europe and Asia, fitting them together on that globe in order to reconstruct Pangaea as envisaged without the North and South Atlantic. In this respect I was unwittingly following Ott Hilgenberg’s much earlier experiments with globes (Hilgenberg 1933, Vogel 1983, 2003, Scalera and Jacob 2003). But, I found that they did not fit together properly on the globe representing the Earth’s current size, there being the development of spherical triangular gaps (gores)

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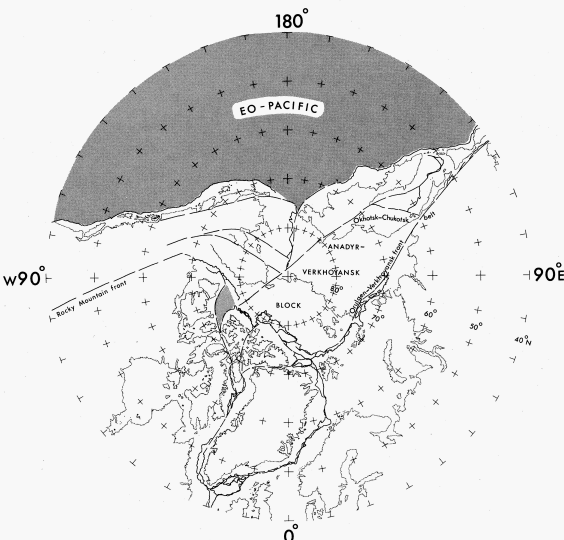
away from whatever fit one made. There the matter rested, except for a niggling doubt and the total disbelief that the Earth could have expanded during the time since the break-up of Pangaea – but of course a change of curvature on a smaller globe produced a more accurate fit-together of the continents in the Atlantic – Arctic Oceans region (Figs. 1 A, B).

I had an early interest as a geologist in Cretaceous ammonite biostratigraphy and palaeogeography. It puzzled me that in the Boreal region,<sup>1</sup> these gores that appeared on a constant modern dimensions

<sup>1</sup> *The Boreal region is a vast expanse of coniferous forests, mires and lakes*

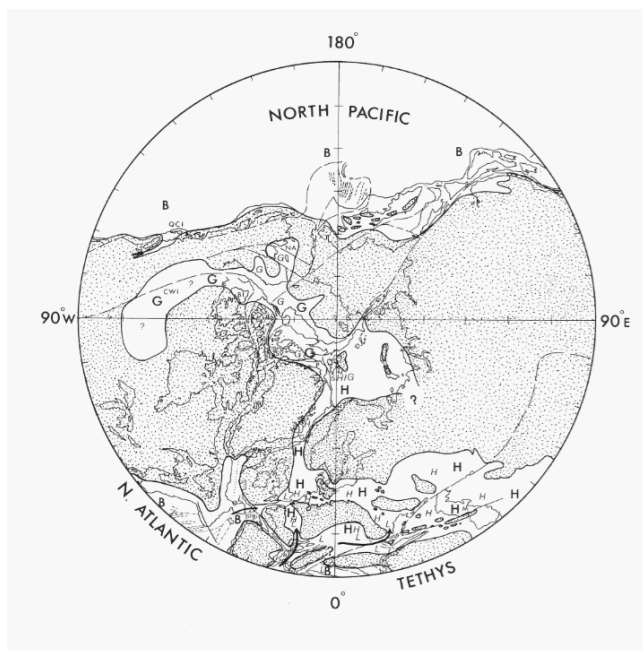


**Fig 1A.** *The gore (shown black) produced in the Arctic Ocean area by the curvature of a modern dimension Earth when Pangaea is reassembled before the development of the Atlantic Ocean. Out to 50° N. latitude from the projection pole.*



**Fig 1B.** *The fit of the continental crust in the Arctic region at the time of Pangaea with a curvature on an Earth 80% of modern diameter. Out to 40° N. latitude from the projection pole.*

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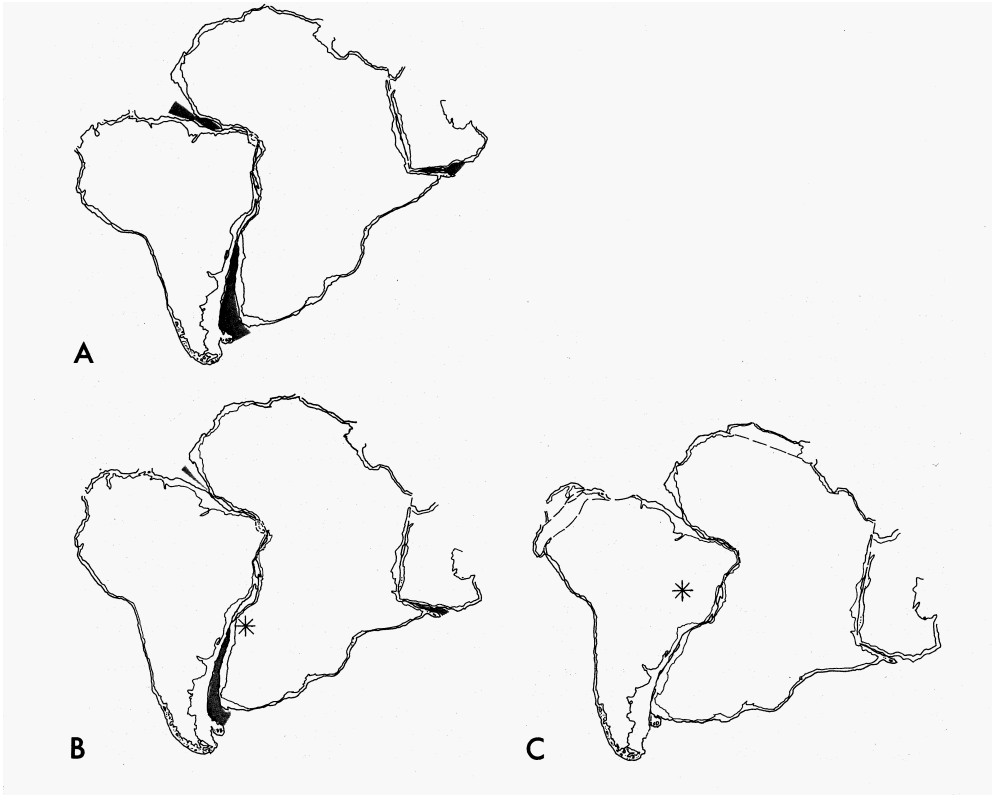


**Fig 1C.** *The palaeogeography of the Arctic region in the Albian (mid-Cretaceous ca.105 Ma) assuming an Earth of 89% of modern diameter with an opening North Atlantic after Owen (1996, Figure 2).*

Earth reconstruction, were at their widest in the Arctic region. Yet, mid-Cretaceous ammonites of this region were totally distinct from those of Europe, despite there being no obvious continental barrier – why? (Fig. 1C) In the early 1960's we had a talk by Bullard at the then Chelsea College (University of London, now part of Royal Holloway College), during which he demonstrated the least squares fit model of South America and Africa. It rang a bell of caution in my mind because, from the high quality globe, I had already produced accurate cut-outs of both Africa and South America and they did not fit together on an Earth of modern dimensions as was shown in the computer generated least squares fit (Fig. 2). This view was confirmed later in the paper by Bullard, Everett and Smith (1965) of the complete fit of the continents around the Atlantic Ocean including the Arctic. It was impossible on a modern dimensions Earth without the Earth developing a large “carbuncle” and thus losing its spheroid of rotation.

At Chelsea, one of our lecturers was Charles Tozer, a good friend of mine and a lecturer who instilled in us that we should always question why we accepted or believed a hypothesis without consideration of the data on which it was based. In subsequent discussions among us, Charles asked me why I was unsure about the Bullard fit. It started me to question not only continental displacement, but its spherical geometric implications - if indeed, Pangaea had once been the fit

*circling the northern hemisphere.*



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**Fig 2.** *The fit of South America and Africa before ocean-floor spreading (mid Cretaceous), again to show the effect of curvature. A. centre-projected flat maps put together on a flat surface. B. the fit assuming the curvature of the modern Earth. C. the fit assuming an Earth of 80% of modern value. Star in B and C are the poles of the azimuthal equidistant projection.*

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together of the sialic crust as envisaged. My first low-tech. experiments to see at what diameter the continents surrounding the Atlantic Ocean fitted together completely, involved the purchasing from a famous local Knightsbridge store of their remaining stock of exercise ball inner rubber bladders. When inflated, the bulk of these became reasonably spherical and without the confinement of the surrounding leather outer case, were capable of inflating to a greater diameter and thus pressure, than the manufacturers originally intended. Very accurate flexible cut-outs were made of the continental regions using the 1000 m isobaths (the mean of the continental margin) from a 15 inch diameter globe. The bladders were inflated to the point where all the continental “plates” around the Arctic, North and South Atlantic

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fitted together pretty precisely. This diameter was 12 inches on a globe representing an Earth 80% of a modern dimensions. The exercise proved instructive in an unexpected way as it suggested that in the southern Ocean region, Africa, India, Australia and Antarctica (Gondwanaland) also fitted together as Carey had predicted (1958). In the case of the Arctic, North and South Atlantic, a check was made of the available geology and tectonic structures which matched the reconstructions. This exercise led to one incident worth recalling. These rubber bladders were stressed far greater than the manufacturer ever intended and prolonged expansion led to their bursting. I arrived at the office one morning to find one of our lady cleaners almost in tears saying that the bladder concerned had exploded while she was cleaning – and it wasn't her fault. One of the bladders had burst quite spectacularly while she was in the room. I was able to re-assure her that exploding reconstructions were a natural hazard. The reconstructions on these bladders was drawn cartographically using the azimuthal equidistant projection with polar and oblique cases and thus the matter rested. Pangaea could only be reassembled on a globe representing 80% of the Earth mean diameter, no greater, no less.

### **It was serious scientific investigation**

In the early 1960's, palaeomagnetic measurements assuming a modern dimension Earth graticule were published (see the history in William Glenn 1982). But there were anomalies in the results and this led Creer (1965) to consider Earth expansion as a possibility. He reconstructed the continental crust into a single spherical shell, an early differentiate of the Earth and from this deduced an Earth diameter of approximately 65% of modern diameter. Such a reconstruction involved substantial dislocations within the modern continents. Checking Creer's hypothesis on the rubber "globes" showed that in terms of the current crustal area, a complete sialic shell would indicate an Earth of 65% - 70% of modern diameter. I know personally that, later, he discounted both expansion and the idea of a complete sialic shell. Unfortunately, it became apparent that there was no information regarding ocean-floor spreading in the Palaeozoic, lasting from about 541 to 252 million years ago, and Creer's suggestion (1965) of a complete sialic crust could not be tested. One thing that had become clear was that the concept of an Earth which had expanded only since the early Jurassic (the so-called fast expansion hypothesis) was not tenable. Just, as in the case of the

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famous Bullard fit together of Pangaea (Bullard, Everitt and Smith 1985) which would have produced a “carbuncle” on the spherical Earth, the concept that all ocean-floor spreading and expansion had occurred since the early Jurassic would have produced a spindle-shaped Earth. Workers advocating these extremes apparently could not picture a spheroid of rotation which the Earth is.

Dietz (1961) and Hess (1962) ideas concerning the role of mid-oceanic ridges in the crustal displacement of the continents paved the way for the spreading hypothesis of Morley on the one hand and Vine and Matthews on the other (Vine & Matthews 1963). They demonstrated that the symmetrical magnetic reversal anomalies (stripes) seen in the oceanic crust each side of the mid-oceanic ridges represented the generation of oceanic crust symmetrically from these ridges and reflected the changes in the Earth’s magnetic field through time. It should be noted that Morley had his papers turned down for publication by the blinkered referees of his day; an experience shared by Earth expansionists to this day.<sup>1</sup> Within the later ‘60s and ‘70s much dated ocean-floor spreading magnetic anomaly crustal data became available from around the globe. Initially this was from US Navy sources, but later from the embryonic DSDP programme. It became possible to plot more accurately the growth of the passive-margined oceans and their timing. The matter became more pressing following the meeting of geomagnetic and ocean-floor spreading workers at the University of Newcastle in April 1972 (Tarling and Runcorn 1973). In particular, the significance of the mismatch in the development of the Arctic Ocean in relation to the growth patterns in the North Atlantic and its solution by an increase in global diameter since Pangaea, was dismissed in the discussions.

The spherical geometric data from the Pangaea configuration around 200 million years ago to the modern configuration of the continents, suggested that Earth expansion was exponential and with the published spreading data during this interval, described the near-linear limb of an exponential curve (Owen 1976, 1983). If so, the complete sialic crust would indeed have been around 700 million years ago on an Earth 60% - 65% of modern diameter as Creer had suggested. My initial analysis was published in 1976 (Owen 1976) and immediately drew strong criticism, not helped by the fact that I had

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<sup>1</sup> *The rejection of Morley’s paper is infamous. After deducing that magnetic stripes on the sea floor confirmed sea floor spreading Morley submitted a paper to the science journal Nature in February 1963. It was rejected. Meanwhile Vine and Matthews independently came to the same conclusion. Their paper was published in Nature in September 1963. It has since been recognized as a major scientific discovery. The participants describe these events in Oreskes 2001. (editor)*

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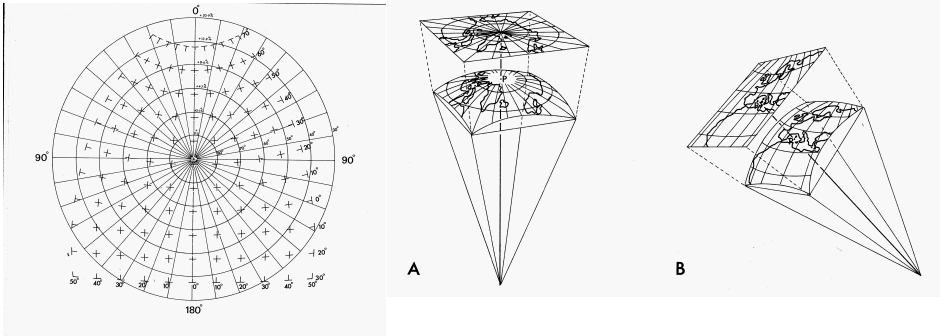
attempted to marry into one series of maps, two projections with unacceptable interface distortions. It was obvious that to make an acceptable test of the data on a constant modern dimension Earth model and on an expanding Earth model, maps had to be projected with the minimum amount of distortion and with complete spherical geometric integrity. This required a much more precise approach and one requiring far more detailed spherical geometric calculations. Thus was born the idea of producing the *Atlas of Continental Displacement 200 Ma to the Present* (Owen 1983). The Atlas would have to be a straight test of the data and not encumbered by an historical account of various hypotheses presented before.

People have asked me how this was done and I usually reply with great difficulty. No computer in the late 1970's and 1980's was capable of calculating the spherical geometric changes which were necessary with an expanding Earth model. Some workers failed to realise that if you move pieces of crust away from their modern positions on the globe, their position previously depicted on a flat map requires that the map be re-projected because their position relative to the projection pole has changed. Thus, simply fitting together bits of continents from a flat map of suitable projection, produces a chimaera of no spherical geometric validity. Classic examples of these cartoons are the paper by Jackson and Gunnarson (1990) on the fit of the Boreal region to eliminate the Arctic Ocean spreading crust and a similar reconstruction of the Indian Ocean (Johnson *et al.* 1980, Veevers *et al.* 1980, the latter two cited by Owen 1983 Appendix). We are dealing with a near spherical Earth and no flat map is without distortion and subject to the theory of the projection used together with the pole of projection selected. This fact is totally ignored by many constant dimensions Earth advocates.

By the early 80's there was sufficient good quality ocean floor magnetic reversal anomaly data to attempt a detailed test of that data on both a modern dimension Earth and an expanding Earth. The first exercise was to plot this actual data seen now on our Modern Earth onto maps with the least edge distortion sufficient to make reconstructions. I chose the Azimuthal equal distant projection because its radial distortion from the pole of projection was nil and distortion was circumferential and can be calculated accurately (Fig. 3). I chose segments of  $10^\circ$  by  $10^\circ$  (Fig. 3) using the modern Earth's graticule of longitude and latitude each with its continental crust and /or spreading data, Each  $10^\circ$  by  $10^\circ$  segment was projected from the centre of the segment. This produced a series of small "plates" which when put together formed a globe representing the modern dimensions Earth and from which circumferential distortion was easily



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**Fig 3A.** The superimposed co-ordinate graticules of the Azimuthal Equidistant projection in the polar case and its relation to the oblique case (projection pole at 22° N and S). Note that radial distances are true in all cases.

Polar case latitude°	Distortion factor %	Oblique case distance from origin°
90	0.0	0
80	+0.5	10
70	+2.1	20
60	+4.7	30
50	+8.6	40
40	+13.9	50
30	+20.9	60
20	+30.0	70
10	+41.7	80
0	+57.1	90

**Fig 3B.** Table of the circumferential distortion in the Azimuthal Equidistant projection away from the projection pole.

calculated and eliminated. I chose the 15 inch diameter globe to represent the modern Earth. This process was lengthy but straightforward.

The next problem was how to represent the movement of continents with the growth of the oceanic crust with reference to our modern graticule of latitude and longitude. Where was Greenwich at the time of Pangaea? The concept and construction of a fixed graticule in space allowed these movements with time to be calculated precisely, strictly in accordance with the spherical geometric fit for a chosen pair of magnetic anomalies (oceanic crustal stripes). On the constant modern dimension Earth this was relatively simple, albeit that the amount of ocean floor generation is much greater in the southern hemisphere and the break-up and displacement of the continents is not age

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constant. The constructed fixed graticule in space had its longitudinal origin in the modern  $0^{\circ}$  (Greenwich) meridian and the length of all meridians would be constant on a constant modern dimension Earth. This concept allowed an accurate representation of the displacement each side of the spreading axes from their origin in Pangaea to its modern graticule position. One simply brought back the continents together in accordance with the selected isochronous magnetic anomaly pairs of the spreading pattern to the modern geographic positions. Of course, on the map, each stage had to be re-projected in accordance with the new position of the continent/magnetic anomaly pair and the change in their position relative to the projection pole. Using the Azimuthal Equidistant projection with Polar and oblique cases made this relatively straightforward and the distortion could be checked for amount and accuracy (Owen 1983). This assumed of course that the selected Greenwich meridian was fixed in space and the symmetrical displacement of the continents from Pangaea to the modern position of the Greenwich meridian by ocean-floor spreading was a simple progression. I realised later (Owen 2012) that the Americas had drifted westward and that the Greenwich meridian had not moved significantly from its modern position, but that is a re-projection complication which I will leave to others.

With the Expanding Earth scenario, the mapped reconstructions were a very different matter and required a much more complicated series of calculations. I used the same concept of a graticule in space as with the modern constant dimensions Earth reconstructions, originating in the modern  $0^{\circ}$  position as with the constant modern dimension Earth reconstructions. The complication was two-fold because as one went back in time, the spherical curvature of the Earth changed, for which there is much tectonic evidence, but which affected the circumferential distortion of the Equidistant azimuthal map projection. Secondly, the spreading patterns of the oceanic crust of the Earth in the southern hemisphere regions show that this hemisphere has “bellied-out” since break-up of Pangaea at different times whilst the Earth has remained a near sphere of rotation. The Arctic on the other hand does not show a symmetrical increase in ocean-floor spreading to the extent of the Southern and Indian Oceans. Thus, the evidence indicates that the  $0^{\circ}$  meridian of our notional graticule in space and of course all other meridians were much shorter at the time of Pangaea and they have extended essentially relatively southward up to the lengths of the modern Earth. The added complication in the mapping of different times of continental break-up, evident in the constant modern dimensions reconstructions, is intensified in the Expanding Earth model in strict accordance with the spherical

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geometric fit of the magnetic anomaly patterns. So all of the projections needed calculating for both distortion on the maps of a smaller Earth and the changing positions of the continents relative to fixed reference graticule of latitude and longitude in space. This, together with the different times of continental break-up and the commencement of the spreading of the oceanic crust. That these calculations for the expanding Earth model were reasonably accurate, became apparent when I produced inscribed Perspex globes now archived in the Natural History Museum, London.

We next come to the question of the Pacific Ocean and subduction of crust at its surrounding “Ring of Fire”. The reconstruction of Pangaea on a constant modern dimensions Earth not only produces the gores already referred to, but also a very large area of Pacific Ocean – a product of the then non-existence of the passive-margined oceans such as the North and South Atlantic, Indian and Southern oceans. The constant modern Earth adherents simply dismiss this very large area of Pacific Oceanic crust until that which is present today, by the process of subduction of the older crust. There are two problems here:

(1) The remnants of the Jurassic and Early Cretaceous spreading patterns generated since the Pangaea stage that one sees in the Pacific, do not support the spherical geometric contraction style required by the modern dimension Earth re-construction.

(2) The amount of subduction which would be required at the Pacific margins from Pangaea onward would show a progressive decrease in the last 200Ma to that seen today, whereas the evidence indicates that subduction has increased significantly since Pangaea, due to the major increase in late Cretaceous and Cenozoic spreading patterns together with the response of the westward displacement of the Americas. The vectors of extension in the Pacific measured even in the minute second of time that we experience today, show overall expansion of area – not contraction.

In the western margin of the Pacific, the constant modern dimensions Earth reconstructions of Pangaea produce a very large gore issuing from the modern Mediterranean region widening eastward into the Pacific region; the so-called Tethys Ocean. The history of the closure of this gore would be a progressive northward displacement of Gondwanaland against the Asian margin. It is argued that the northward displacement of Australia shows this process of closure. BUT, there are two problems with this scenario.

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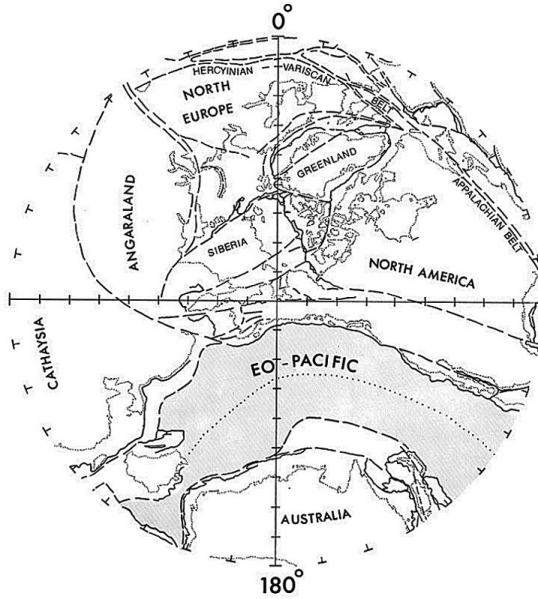
(1) The displacement of Australia northward did not commence until the latest Cretaceous inception of the Southern Ocean spreading pattern.

(2) Traces of late Jurassic – Early Cretaceous spreading is seen in the Wharton Basin of the Indian Ocean, and in the Philippine Sea and Phoenix Plate in the Pacific with E - W trending lineations, indicating N – S extension during this period, the reverse of the requirement of closure (Owen 1983).

The spreading evidence from the remnants of Jurassic-Early Cretaceous oceanic crust in the Wharton Basin, Philippine Sea and Phoenix plate indicates that the western margin of the Pacific was, initially, stretched southward during the late Jurassic – early Cretaceous in response to spreading in the eastern area of the Indian Ocean. From the end of the Cretaceous to the modern day, a major change occurred with the inception and crustal generation of the Southern Ocean and the resulting northward displacement of Australia against the western Pacific margin. The evidence indicates not a gore widening toward the Pacific as in constant modern dimensions Earth models contracting from Pangaea onward, but that Australia was displaced southward away from the Asian margin at least from the Jurassic onward, opening an oceanic crustal area until the development of the Cretaceous to modern spreading. The so-called Tethyan Ocean gore, like the Arctic gore, is a spherical geometric artefact.

The expanding Earth model produces also a Pacific area at the time of Pangaea – the Eo-Pacific (Owen 1983) which would have developed previously through the Palaeozoic if the Earth had retained its spheroid of rotation. All oceanic crust generated through this period of time has long since been subducted. I responded, eventually, to a request for reconstructions of Palaeozoic expansion (Owen 2012) which, in the absence of ocean-floor spreading evidence, can be considered only as speculative. However, the kinematic series deduced from major global tectonic structures together with certain features in the Devonian sedimentary and faunal record, suggests that the Eo-Pacific Ocean opened as a result of the displacement of Australia southward from a relative position in the northern hemisphere between the cratonic areas of Asia and North America (Fig. 4). The remnants of the Jurassic – Early Cretaceous spreading zones with West to East generating axes and southward displacement would be in accord with the late stage of that movement.

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**Fig 4.** Mid Carboniferous reconstruction 325 Ma on an Earth of approximately 70% of modern diameter. Azimuthal Equidistant projection assuming a northern geographic pole of the Earth. Postulated growing Eo-Pacific oceanic crust, shown shaded, is part of a kinematic series dependant on the increase in Earth diameter and major tectonic sutures (after Owen 2012).

## Final thoughts

The assumption that I made in the late 70's and early 80's that one could relate continental displacement and oceanic crustal growth simply by symmetrical displacement in relation to the fixed graticule in space that I had constructed originally, I now view to be wrong. The evidence of growth and displacement of the crust in the Pacific region is more in accord with a differential movement of the Americas (North America since the Middle Jurassic Bathonian, South America since the mid-Cretaceous) westward away from Europe – not unlike the concept of Drift of the early workers (Owen 2012). Recent work in China (Wenbin Shen and Sung-Ho Na 2017) appears to support this contention. This is a problem for others to solve.

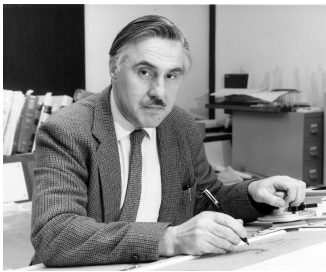
Production of all the maps for the Atlas was done by hand as there was no computer program available to permit this. So, the *Atlas of Continental Displacement* was completed and published by Cambridge University Press (Owen 1983). There was of course, the constant

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modern dimensions Earth adherents who ignored the test as was to be expected, but criticism was not as raucous as in previous years. It was already being realised that the Le Pichon concept of fixed rigid plates was demonstrably wrong, but the concept of subduction is in my opinion correct although I believe, as I said above, that in the eastern Pacific, subduction is due as much by the westward displacement of the Americas against a growing Pacific Ocean floor.

I was asked to update the Atlas some twenty years ago, but the amount of work for very little difference, made this unattractive. Thus we see an example of hunch turning to serious scientific investigation; of low tech experiment to complex calculation. There has been some personal criticism in that I had ignored the work of many others on both the historical aspect of global expansion and those advocating a constant modern dimensions Earth (e.g. Smith *et al.* 1980). I set out purely to provide a test of the ocean-floor spreading data against the two conflicting hypotheses with its implications for palaeogeography and faunal distributions without the burden of historical debate. This essay is concerned only with the development of that Atlas.

## About the Contributor



**Hugh Owen** has written various articles about Earth expansion for well-known science publications like *New Scientist*, produced chapters for various geological books, taken part in the renowned debate, *An expanding Earth?*, held at the Geological Society of London in 1979, presented his evidence for expansion at the *Expanding Earth Symposium* held at Sydney University in 1981, an event attended by about 130 Earth scientists, and later published a full Atlas. Owen's approach in the 1970's and early '80's to the problem of the mode and timing of the break-up of various parts of Pangaea was different to others who concentrated on physiographic fit and possible break-up patterns. He analysed the global ocean-floor spreading patterns and their dating; from them, the spherical geometric implications. He showed the need to correctly project map reconstructions as continents moved their positions in response to the growing oceanic crust, a failure in some reconstructions. Also, that latest Cretaceous to recent spreading was greater in the southern hemisphere than in the northern; the Earth retaining its rotational spheroid.

This essay was first published as a chapter in the 2020 book, *The Hidden History of Earth Expansion*, which is widely available from good bookshops in both Hardback and Paperback editions, as well as a Google eBook.

*The Hidden History of Earth Expansion* presents the personal histories of some of the most well-known researchers into Earth expansion in 14 original essays. In addition to furnishing us with their personal histories, as they strived to explore the seemingly overwhelming evidence for confirmation of Earth expansion, the authors' highlight areas where further research is required.

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## References

- Afshordi, N. Mann, Robert, B. and Pourhasan, R. (2014). The Black Hole at the Beginning of the Time. *Scientific American*.311 (2) 38-43.
- Ager, D.V. (1986). Migrating fossils, moving plates and an expanding Earth. *Modern Geology*, 10:377-390.
- Ahmad, F. (1960). Glaciations and Gondwanaland. *Geol. Surv. India. Rec.* 86, 637-674.
- Ahmad, F. (1990). The bearing of paleontological evidence on the origin of the Himalayas. In: A. Barto-Kyriakidis (Ed). *Critical aspects of the Plate Tectonics theory*. Theophrastus Publication, Greece. 1, 129-142.
- Aitchinson, J. C. and 4 others. (2007). Shoshonites in southern Tibet record Late Jurassic rifting of a Tethyan intra-oceanic island arc. *Jour. Geology*. 115, 197-213.
- Alfvén, H. (1942). On the cosmogony of the solar system. *Stockholms Observatoriums Annaler*, 14, 2–1.
- Alfvén, H. (1954). *On the origin of the solar system*. Oxford University Press, New York.
- Alfvén, Hannes (1984). *Cosmology: Myth or Science? For the Golden Jubilee of the Indian Academy of Sciences, representing a culture which has investigated cosmology for four millennia*, edited in *Jour. Astrophysics and Astronomy*, No. 5, 79-98.
- Alfvén, H. (1992) *Cosmology: myth or science? IEEE transactions on plasma science*, vol. 20, no. 6, pp. 590–600.
- Alfvén, H. Arrhenius, G. (1972). Origin and evolution of the earth-moon system. *The Moon*, 5(1-2), 210–230.
- Alfvén, H. Arrhenius, G. (1976). *Evolution of the solar system*. NASA. Document number NASA-SP-345.
- Ali, J.R. and Aitchinson, J.C. (2005). Greater India. *Earth Science Review*, 72, 169-188.
- Allaby, M. (2013). *A Dictionary of Geology and Earth Sciences*. ISBN-13: 978-0199653065.

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- Amirmardfar, R. (2012). Relationship Between Gravity and Bio-Evolution - The Increasing Gravity Theory. In Boschi, Cwojdzinski & Scalera - editors (2012). The Earth expansion evidence – A Challenge for Geology, Geophysics and Astronomy.
- Anderson, D.L. Yu-shen zhang, Tanimoto T. (1992). Plume heads, continental lithosphere, flood basalts and tomography. W: Storey B. Alabaster T. Pankhurst R.J. (eds.): Magmatism and the Causes of Continental Break-up. Geol. Soc. Special. Publ. 68: 99-124.
- Anderson, S.F. et al. (1999). Mapping low density galactic: third helium Lyman-alpha forest. *Astronomic* . 117, 56-62. DOI: 10.1086/300698; e-print: astro-ph/9808105 | PDF.
- Antoshkina, A. Königshof, P. (2008). Lower Devonian reef structures in Russia: An example from the Urals. *Facies*. Doi: 10.1007/s10347-008-0135-7.
- Aretz, M. Webb, G.E. (2003). Western European and eastern Australian Mississippian shallow-water reefs: A comparison. In: Proceedings of the XVth International Congress on Carboniferous and Permian Stratigraphy, Utrecht, The Netherlands, 10-16 August, 2003 (Ed. T.E. Wong), *Roy. Ned. Acad. Arts Sci.* 433-442.
- Armijo, R. (1984). Quaternary extension of the Tibet plateau: field observation and technical implication. *International Symposium Geology Himalayas*.2, 17 (abstract).
- Arrhenius, G. De, B. R. & Alfvén, H. (1974). Origin of the ocean. In *The Sea*, volume vol. 5 (pp. 839–861). Wiley New York, NY.
- Badham, J.P.N. (1982). Strike-slip orogens – an explanation for the Hercynides. *J. Geol. Soc. London*, 139, 493-504.
- Barcelo, C. Liberati, S. Sonogo, S. Visser, M. (2009). Black Stars, Not Holes. *Scientific American* 301 February 46-52.
- Barnett, C.H. (1962). A suggested reconstruction of the land masses of the Earth as a complete crust. *Nature*, 195 (4840), 447-448.
- Becker, G. (1910). *Age of the Earth*. The Smithsonian institution, Washington.
- Beaudette, C.G. (2002). *Excess Heat: Why Cold Fusion Research Prevailed*. Oak Grove Press South Bristol, ME.
- Belousov, V.V. (1979). Why don't I accept Plate Tectonics? *EOS*, 207-211.
- Berhe, S.M. (1999). Ophiolites in Northeast and East Africa: implications for Proterozoic crustal growth. (London: *Journal of the London Geological Society*; V. 147; No. 1, 51-57.

## References

- Bird, P. (2003). An updated digital model of plate boundaries. *Geochemistry. Geophysics. Geosystem.* 52, doi 10.1029/2001 GC 000252.
- Blackett, P.M.S., Bullard, E., Runcorn, S.K. (eds.) (1965). *A Symposium on Continental Drift.* The Royal Society, London, x +323 pp.
- Blinov, V.F. (1973). On the hypothesis of Earth's expansion. (In Russian). *FizikaZemli* 1, 27-35.
- Bogolepow (1930), *Die Dehnung de Lithoshare, Zeit, dt, geol. Ges.*, 82: 206-228.
- Boucot. J. and Gray, J. (1987). The Tethyan concept during the Paleozoic. In: K.G. McKenzie (Ed). *Shallow Tethys 2.* A. A. Balkema, Rotterdam, 31-50.
- Bouilhol, P. Jagoutz, O. Hanchar, J. M. and Dudas, F.O. (2013). Dating the India-Eurasia collision through arc magmatic records. *Earth Planet Science Letter.* 366, 163-175.
- Boschi, Cwojdzinski & Scalera - editors (2012). *The Earth Expansion Evidence: A Challenge for Geology, Geophysics and Astronomy. Selected Contributions to the Interdisciplinary Workshop held in Erice, Sicily, Italy, 4-9 October 2011 at the Ettore Majorana Foundation and Centre For Scientific Culture.*
- Brezinski, D.K. Cecil, C.B. Skema, V.W. Stamm, R. (2008). Late Devonian glacial deposits from the eastern United States signal an end of the mid-Paleozoic warm period. *Palaeogeogr. Palaeoclim. Palaeoecol.* 268, 143-151.
- Bridges, L.W. (2002). *Our expanding Earth. The ultimate cause.* Oran V. Siler Printing. Denver Colorado.
- Brownlee, R. & Cox, A. (1961). Early solar evolution. *Sky and Telescope*, (pp. 252–256).
- Brosske (1962). *Wachst die Erde mit Naturkatastrophen? Die 'Expansions-Theorie' (Does the Earth grow with natural catastrophes? The expansion theory.).* 'Sanus' L. Brosske, Abtlg. Verlag, Dusseldorf-Benroth 41.
- Brunschweiler, R.O. (1983). Evolution of Geotectonic Concepts in the Past Century. In: Carey, S.W. (ed.): *Expanding Earth Symposium.* Sydney 1981, University of Tasmania, 9-15.
- Buchan, K.L. Ernst, R.E. (2004). Diabase dyke swarms and related units in Canada and adjacent regions. *Geological Survey of Canada Map 2022A, scale 1:5,000,000, accompanying report 39 pp.*
- Bullard, E. (1975). The emergence of plate tectonics: a personal view. *Annual Review of Earth and Planetary Sciences*, 3(1), 1-31.

## The Hidden History of Earth Expansion

- Bullard, E.B. Everett, J.E. and Smith, A.G. (1965). The fit of the continents around the Atlantic. *Philosophical Transaction of the Royal Society of London*, A258, 41-51.
- Burrett, C., Berry, R. (2000). Proterozoic Australia—Western United States (AUSWUS) fit between Laurentia and Australia, *Geology* 28, 103-106.
- Carey, S.W. (1955). Wegener's South America–Africa Assembly, Fit or Misfit? *Geological Magazine*, 92(3), 196-200.  
doi:10.1017/S0016756800063548.
- Carey, S.W. (1958). The tectonic approach to continental drift. In: Carey S. Warren (Ed). *Continental Drift – A Symposium University of Tasmania*, Hobart 177-355. Reprinted 1959.
- Carey, S.W. (1961). Palaeomagnetic evidence relevant to a change in the Earth's radius (a reply to Cox & Doell). *Nature*, 190 (4770), 36-36.
- Carey, S.W. (1976). *The Expanding Earth*. *Developments in Geotectonics*, 10, Elsevier, Amsterdam.
- Carey, S.W. (1978). *A philosophy of the Earth and Universe*. *Papers and Proceedings of the Royal Society of Tasmania*, 112, 5-19.
- Carey, S.W. (Editor) (1983). *The Expanding Earth*. A Symposium (Ed. S.W. Carey), University of Tasmania.
- Carey, S.W. (1983). Tethys and her forebears. In: *The Expanding Earth*. A Symposium (Ed. S.W. Carey), University of Tasmania, 169-187.
- Carey, S.W. (1988). *Theories of the Earth and Universe: A History of Dogma in the Earth Sciences*. Stanford University Press, Stanford, California, xviii+413 pp. ISBN 08047 1364 2.
- Carey, S.W. (1996). *Earth, Universe, Cosmos*. University of Tasmania, Hobart, pp. 204.
- Carey, S.W. (2000). *Earth, Universe, Cosmos*. 2nd Edition. University of Tasmania, Hobart.
- Cataldi, G. & D., Straser, V. (2016). Solar activity correlated to the M7.0 Japan earthquake occurred. *At New Concepts in Global Tectonics Journal*, V. 4, No. 2, p. 79-85.
- CGMW & UNESCO (1990). *Geological Map of the World*. Commission for the Geological Map of the World, Paris.
- Chatterjee, S., Hotton III, N. ( Editors) (1992). *New Concepts in Global Tectonics*. Texas Tech University Press. ix+ 449 pp.
- Chatterjee, S., Scotese, C.R. (2010). The wandering Indian plate and its changing Biogeography during the Late Cretaceous-Early Tertiary period. In: S. Bandyopadhyay (Ed). *New Aspects of Mesozoic Biogeography*. Springer-Verlag, Germany, 105-126.

## References

- Chatterjee, S., Bajpai, S. (2016). India's northward drift from Gondwana to Asia during the Late Cretaceous-Eocene. *Proc. Indian National Science Academy*, 82, 479-487.
- Chatterjee, S., Goswami, A. Scotese, C.R. (2013). The longest voyage: Tectonic, magmatic and paleoclimatic evolution of the Indian plate during its northward flight from Gondwana to Asia. *Gondwana Research*, 23,238-267.
- Choi, D.R. (2010). The January 2010 Haiti Seismic Disaster Viewed from the Perspective of the Energy Transmigration Concept and Block Tectonics. *NCGT Newsletter*, 54,. 36-54.
- Choi, D.R. Maslov, L. (2010). Global seismic synchronicity. *NCGT Newsletter*, 55, 66-74.
- Choi, D.S. Showman, A.P. Brown, R.H. (2009). Cloud features and zonal wind measurements of Saturn's atmosphere as observed by Cassini/VIMS. *J. Geophys. Res.* 114, E04007. Doi: 10.1029/2008JE003254.
- Ciechanowicz, S., Koziar, J. (1994). Possible relation between Earth expansion and dark matter. In: F. Selli, M. Barone (eds.), *Proceedings of the International Conference "Frontiers of Fundamental Physics"* (Olympia, Greece, 27–30 September, 1993). Plenum Press, New York and London, pp. 321–326.
- Close, F. (2004). *Particle Physics, a very short introduction*. (Oxford: Oxford University Press. 160. ISBN 0-19 280434-0.
- Colbert, E.H. (1973). Continental drift and the distributions of fossil reptiles. In: D.H. Tarling and S.K. Runcorn (Eds). *Implications of continental drift to the Earth Sciences*. Academic Press, 393-412.
- Colbert, E.H. (1984). Mesozoic reptiles: India and Gondwanaland. *Indian Journal Science*, 11, 25-37.
- Colpron, M., Nelson, J.L. (2009). A Palaeozoic Northwest Passage: incursion of Caledonian, Baltican and Siberian terranes into eastern Panthalassa, and the early evolution of the North American Cordillera. *Geol. Soc. London, Spec. Publ.* 318/1, 273-307. Doi: 10.1144/SP318.10.
- Condie, K.C. (1997). *Plate tectonics and crustal evolution*. Fourth Edition, (Oxford: Butterworth-Heinemann, An Imprint of Elsevier Science Linacre House, Jordan Hill, Oxford OX2 BDP 200 and Wheeler Road, Burlington, MA, USA. 282.
- Copper, P. (2002). Reef development at the Frasnian/Famennian mass extinction boundary. *Palaeogeogr. Palaeoclimat. Palaeoecol.* 181, 27-65.

## The Hidden History of Earth Expansion

- Copper, P. Scotese, C.R. (2003). Megareefs in Middle Devonian supergreenhouse climates. *Geol. Soc. Am. Spec Paper* 370, 209-230.
- Cox, C.B. (1975). Distribution of Triassic tetrapods families. In: D.H.Tarling and S. K. Runcorn (Eds). *Implications of continental drift to the Earth Sciences*. Academic Press, 369-371.
- Crawford, A.R. (1979). Gondwanaland and the Pakistan Region. Pp. 103-110 in *Geodynamics of Pakistan*, Ed. A. Farah and K.A. De Jong. Geological Survey of Pakistan, Quetta.
- Creer, K.M. (1965). An expanding Earth? *Nature*, London 205, 539-544.
- Cwojdziański, S. (1995) - Recenzja: R.Dadlez, W.Jaroszewski. *Tektonika*. Wyd. Nauk. PWN. *Prz. Geol.* 43, 3: 255 - 258. /Review of the book R.Dadlez, W.Jaroszewski. *Tectonics*. Sci Publ.PWN/.
- Cwojdziański, S. (2001) Czy możliwa jest dyskusja naukowa w geotektonice. *Przeg. Geol.* 49, 10/1: 856 – 857 / Is the discussion in geotectonics possible ? *Geol. Rev.* 49. 10/1: 856-857.
- Cwojdziański, S. (2003). The Tectonic Structure of the Continental Lithosphere Considered in the Light of the Expanding Earth Theory - A Proposal of a New Interpretation of Deep Seismic Data. *Polish Geol. Inst. Spec. Papers*, 9, 1-80.
- Cwojdziański, S. (2004). Mantle plumes and dynamics of the Earth interior - towards a new model. *Prz. Geol. /Geol. Review* 52.8/2:817 - 826.
- Cwojdziański, S. (2012). Geological Evolution of the Sudety Mts. (Central Europe) on the Expanding Globe. In: *The Earth Expansion Evidence, A challenge for geology, geophysics and astronomy. Selected Contribution to the Workshop, held in Erice, Sicily, Italy (4-9 October 2011)*. 263-273. Post-conference publication edited by Giacarlo Scaleria (editor in chief), Enzo Boschi, and Stefan Cwojdziański. Rome, 492.
- Cwojdziański, S. (2016). History of a discussion: selected aspects of the Earth expansion v. plate tectonics theories. *Geological Society, London, Special Publications*, 442, SP442-24.
- Cwojdziański, S., Koziar, J. (1995) Konferencja międzynarodowa - Zagadnienia ekspandującej Ziemi. Wrocław-Sosnówka, 14-17.11.1994. *Prz.Geol.* 43, 4: 349 - 351.
- Czechowski, L. & Leliwa-Kopystynski, J. (2013). Remarks on the Iapetus' bulge and ridge. *Earth Planets Space*, 65, 929-934. Doi: 10.5047/eps.2012.12.008.
- Daly, R.A. (1917). Metamorphism and its phases. *Geol. Soc. Am. Bull.* 28, 375-418.



## References

- Davydov, V.I. (2016). Biotic paleothermometry constrains on Arctic plates reconstructions: Carboniferous and Permian (Zhokhov Island, De-Longa Group Islands, New Siberian Archipelago). *Tectonics*, 35, 2158-2170. Doi: 10.1002/2016TC004249.
- Dearnley, R. (1965). Orogenic fold-belts, convection and expansion of the Earth. *Nature*, 206 (4991), 1284-1290.
- De Celles, P.G. Kapp, P. Gehrels, G. Ding, L. 2014. Paleocene-Eocene foreland basin evolution in the Himalaya of southern Tibet and Nepal: Implications for the age of initial India-Asia collision. *Tectonics*, 33, 824-849.
- De Hilster, D. (2008). *The Growing Earth*. p. 24. At: <[www.dehister.com/docs/TheGrowingEarth.ppt](http://www.dehister.com/docs/TheGrowingEarth.ppt)>, 77.
- De Lury, J.S. (1931). The auto-traction hypothesis of crustal dynamics and mechanics. *Science* (No. 1900), 73, 590.
- De Lury, J.S. (1941). Correlation of schistosity and tectonic theory. *Am. J. Sci.* 239, 57-73.
- Dewey, J.F. (2015). A harbinger of plate tectonics: a commentary on Bullard, Everett and Smith (1965) 'The fit of the continents around the Atlantic'. *Phil. Trans. R. Soc. A*, 373(2039), 20140227.
- Dewey, F., Bird, J.M. (1970). Plate Tectonics and geosynclines: *Tectonophysics*, 10, 624-638.
- Dewey, J.F. Shackleton, R.M. Chang C. Sun Yin. (1988). The tectonic evolution of the Tibetan plateau: *Phil. Trans. Royal Soc. London*, 379-413.
- Dickins, J.M. (1994). The nature of the oceans or Gondwanaland, fact and fiction. In: *Gondwana Nine*. A. A. Balkema, Netherland, 387-396.
- Dietz, R.S. (1961). Continent and Ocean Basin Evolution by Spreading of the Sea-Floor. *Nature*, London 190, 854-857.
- Dietz, R.S. Holden, J.C. (1970). Reconstruction of Pangea: break-up and dispersion of continents. *Permian to Recent. J. Geophys. Res.* 75: 4,939-4,956.
- Dilek, Y. and Robinson, P.T. (2003). *Ophiolites in Earth History: Geological Society of London Special Publication 218* edited by Dilek, Y. & Robinson, P. T. 723 p.
- Dilek, Y. Shallo, M. and H. Furnes. (2005). Rift-drift, seafloor spreading and subduction tectonics of Albanian ophiolites. *International Geology Review* V. 47. (New York: Taylor & Francis Group. 147-176.
- Dimitriev, L.V. Vinogradov, A.P. and Udentsev, G.B. (1971). Petrology of ultrabasic rocks from rift zones of The Mid-Indian Ocean Ridge. *Philosophical Transactions of the Royal Society of London. Series A*

## The Hidden History of Earth Expansion

- Mathematical and Physical Sciences, V. 268, No. 1192. A discussion on Petrology of igneous and Metamorphic rocks from the Oceanic Flore. (London: The Royal Society,). 403-408.
- Ding, L., Maksatbek, S., Cai, F.L., Wang, H.Q., Song, P.P., Ji, W.Q., Zhang, L.Y., Mohammad, Q., Upendra, B. (2017). Processes of initial collision and suturing between India and Asia. *China Earth Sciences*, 60, 635-657.
- Doglioni, C., Green, D.H., Mongelli, F. (2005). On the shallow origin of hotspots and the westward drift of the lithosphere. *Geol. Soc. Am. Spec Paper 388*, 735-749. Doi: 10.1130/2005.2388(42).
- Doglioni, C., Carminati, E., Cuffaro, M., Scrocca, D. (2007). Subduction kinematics and dynamic constraints, *Earth-Science Reviews* 83, 125–175.
- Doglioni, C., Carminati, E., Crespi, M., Cuffaro, M., Penati, M., Riguzzi, F. (2015). Tectonically asymmetric Earth: From net rotation to polarized westward drift of the lithosphere. *Geosci. Frontiers*, 6, 401-418.
- Dorschner, J. (1986). *Planeten – Geschwister der Erde?* Urania Verlag, Leipzig, 128p.
- Dumoulin, J.A., Harris, A.G., Gagiev, M., Bradley, D.C., Repetski, J.E. (2002). Lithostratigraphic, conodont, and other faunal links between lower Paleozoic strata in northern and central Alaska and northeastern Russia. *Geol. Soc. Am. Spec. Paper 360*, 291-312.
- Drayson, A. (1859). *The Earth we inhabit, its past, present, and probable future.*
- du Toit, A.L. (1937) *Our Wandering Continents: An Hypothesis of Continental Drifting*, Oliver & Boyd, London, UK.
- Dziewoński, A.M., Anderson, D.I. (1984). Seismic tomography of the Earth's interior. *American Scientist*. 72: 483-494.
- Egyed, L., (1956). Determination of changes in the dimensions of the Earth from palaeogeographical data. *Nature*, 178, n.4532, 534-534.
- Egyed, L., (1957). A new dynamic conception of the internal constitution of the Earth. *Geol. Rundsch. B.* 46, p. 101–121.
- Eichler, J.B. (2011). A New Mechanism for Matter Increase Within the Earth. *Nexus*, April-May, 43-48; 82.
- Eichler, J.B. (2015). Rhetoric and paradigm change in science: Three case studies. Master's thesis, University of Arkansas at Little Rock.
- Eichler, J.B. (In press). *An Infinite Universe.*

## References

- Eisbacher, G.H. (1983). Devonian-Mississippian sinistral transcurrent faulting along the cratonic margin of western North America – A hypothesis. *Geology*, 11, 7-10.
- Eisenhower, D. (1961). President Dwight Eisenhower Farewell Address. <https://www.c-span.org/video/?15026-1/president-dwight-eisenhower-farewell-address>.
- Elbeze, A.C. (2013). On the existence of another source of heat production for the earth and planets, and its connection with gravitomagnetism. Published online: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3825064/> p.18
- Ellis, M. Watkinson, A.J. (1987). Orogen-parallel extension and oblique tectonics: the relation between stretching lieations and relative plate motions. *Geology*, 15, 1022-1026
- Elliston, J. (2003). Professor S.W. Carey's struggle with conservatism. In Scalera, G and Jacob, K-H. (Editors) 2003. *Why Expanding Earth? A book in honour of Ott. Christoph Hilgenberg. INGV publisher Roma* 97-114. (a reprint from Newsletters. *The Australian Geologist*, 125).
- England, P. Houseman, G. Sonder, L. (1985). Length scales for continental deformation in convergent, divergent, and strike-slip environments: analytical and approximate solutions for a thin viscous sheet model. *J. Geophys. Res.* 90 (No. B5), 3551-3557
- England, P. Jackson, J. (1989). Active deformation of the continents. *Earth Planet. Sci. Ann. Rev.* 17, 197-226.
- Erickson, F.P. (2008). Absolute space, absolute time and absolute motion. 2678. Publisher: Xlibris, ISBN: 978-1599261171.
- Erickson, W.C. (1980). *Orgonomic Geophysics: The Earth as an Orgonotic System*. Unpublished but posted online at Erickson (2001).
- Erickson, W.C. (1982). *Necessary Giants: Gravity and the Evolution of Dinosaurs*. Unpublished.
- Erickson, W.C. (1985). *Rogue Scientist from Down Under*. Unpublished but posted online at Erickson (2001).
- Erickson, W.C. (1988). *Ever Since Wegener: A Brief History of the Expanding Earth Hypothesis*. Unpublished but posted online at Erickson (2001).
- Erickson, W.C. (1989). *Bipedal Hopping and the Origin of Dinosaurs*. Unpublished but posted online at Erickson (2001).
- Erickson, W.C. (1990). *On the Origin of Dinosaurs and Mammals*. Unpublished but posted online at Erickson (2001).
- Erickson, W.C. (2001). *Bill Erickson's Earth Science Web Page*. <https://www.frontier-knowledge.com/earth>

## The Hidden History of Earth Expansion

- Ernst, W.G. (1971). Metamorphic zonation on presumably subducted lithospheric plates from Japan, California and the Alps. *Contrib. Min. Petr.* 34, 43-59.
- Ernst, W.G. (1973). Blueschist metamorphism and P-T regimes in active subduction zones. *Tectonophysics*. 17,255-272.
- Ernst, W.G. (1993). Metamorphism of Franciscan tectonostratigraphic assemblage, Pacheco Pass area, east-central Diablo Range., California Coast Ranges. *Geol. Soc. Am. Bull.* 105, 618-636.
- Eskola, P. (1939). Die metamorphen Gesteine. In: *Die Entstehung der Gesteine. Ein Lehrbuch der Petrogenese.* (Ed. C.W. Correns), Julius Springer, Berlin (Reprint 1970), 263-407.
- Evans, J.V. (1958). Insect distribution and continental drift. 134-141. In *Carey (1958)*.
- Ewing, M., Heezen, B.C. (1956). Some problems of Antarctic submarine geology. *Geophys. Monogr.* 1(462), 75-81.
- Fairbridge, R.W., (1964). Thoughts about an expanding globe. In: *Subramanian, A.P. and Balakrishna, S. (eds.): Advancing Frontiers in Geology and Geophysics.* Osmania University Press, Hyderabad, 59-88.
- Farley, K.A. Neroda, E. (1998). Noble Gases in the Earth's Mantle. *Annual Review of Earth and Planetary Sciences.* Vol. 26: 189-218  
From:  
<http://www.annualreviews.org/doi/abs/10.1146/annurev.earth.26.1.189>
- Felt, H. (2012). *Soundings: The story of the remarkable woman who mapped the ocean floor.* ISBN: 978-0-8050-9215-8.
- Fernandez, M.S. Khosla, A. (2015). Para taxonomic review of the Upper Cretaceous dinosaurs eggshell belonging to the family Megaloolithidae from India and Argentina. *Historical Biology*, 27, 158-180.
- Ferry, J. (1992). Regional metamorphism of the Waits River Formation, Eastern Vermont: delineation of a new type of giant metamorphic hydrothermal system. *J. Petr.* 33, 45-94.
- Fleck, L. (1981). *Genesis and development of a scientific fact.* University of Chicago Press.
- Forsyth D., Uyeda, S.. (1975). On the Relative Importance of the Driving Forces of Plate Motion, *Geophysical Journal of the Royal Astronomical Society* 43, 163-200.
- Fox, S.W., Dose, K. (1977). *Molecular Evolution and the Origin of Life* (Revised ed.). Marcel Dekker, New York, 370 pp.

## References

- Fox, S.W, Harada, K., Kendrick, J. (1959). Production of spherules from synthetic proteinoid and hot water: *Science* 129: 1221-1223.
- Frankel, H. (2012). *The Continental Drift Controversy. A Four Volume Set.* Cambridge University Press.
- Frisch, W. Meschede, M. (2005). *Plattentektonik. Kontinentverschiebung und Gebirgsbildung.* Wissenschaftliche Buchgesellschaft, Darmstadt, 196p.
- Galilei, G. (1638). *Two New Sciences.* Holland.
- Ganapathy, R. Keays, R. R. Laul, J. & Anders, E. (1970). Trace elements in Apollo 11 lunar rocks: Implications for meteorite influx and origin of moon. *Geochimica et Cosmochimica Acta Supplement*, vol. 1, p. 1117.
- Ganapathy, R. & Anders, E. (1974). Bulk compositions of the moon and earth, estimated from meteorites. In *Lunar and Planetary Science Conference Proceedings*, vol. 5, pp. 1181–1206.
- Gansser, A. (1973). Facts and theories on the Andes. *J. Geol. Soc. London*, 129, 93-131.
- Gansser, (1991). Facts and theories on the Himalayas. *Eclogie. Geol. Helv.* 84, 33-59.
- Gapais, D. Le Corre, C. (1980). Is the Hercynian belt of Brittany a major shear zone? *Nature*, 288 (No. 5791), 574-576.
- Garzanti, E. Hu, X. (2014). Latest Cretaceous Himalayan tectonics: Obduction, collision or Deccan related uplift? *Gondwana research*, doi: 10.1016/j.gr.2014.1003.1010.
- Gibbons, A. S. and 4 others. (2015). A tectonic model reconciling evidence for the collisions between India, Eurasia and intra-oceanic arcs of the central-eastern Tethys. *Gondwana research*, doi: 10.1016/j.gr.2015.1001.1001.
- Gilliland, W.N. (1964). Extension of the theory of zonal rotation to explain global fracturing. *Nature*, 202, 1276-1278
- Gold, T. (1987). *Power from the Earth.* Dent, London. Pp. 208.
- Gold, T. (1988). *Das Jahrtausend des Methans. Die Energie der Zukunft – unerschöpflich, umweltfreundlich.* Econ Verlag Düsseldorf, Wien, 256p
- Gold, T. (1989). New ideas in science. *J. Sci. Explor.* 3/2, 103-112
- Gong, E. Zhang, Y. Guan, C. Chen, X. (2012). The Carboniferous reefs in China. *J. Palaeogeogr.* 1, 27-42. Doi: 10.3724/SP.J.1261.2012.00004.

## The Hidden History of Earth Expansion

- Goswami, A. and 4 others. (2013). A troodontid dinosaur from the latest Cretaceous of India. *Nature Communications*, 4, 1-5.
- Glenn, W. (1982). *The road to Jaramillo. Critical years of the revolution in Earth Science.* Stanford University Press. 459 pp.
- Greenfield, J. (1974). *Wilhelm Reich vs. the U.S.A.* W.W. Norton & Company, New York, 380 pp.
- Gurnis, M. Hall, C. Lavier, L. (2004). Evolving force balance during incipient subduction. *Geochemistry Geophysics Geosystem*, 5, 1-31.
- Gutenberg, B. (1951). *Internal constitution of the Earth*, volume 7. Dover Publications Inc.
- Guy, R. (2005). *The Mysterious Receding Seas.* ISBN: 978-1413439922
- Gurnis, M. Yang, T. Cannon, J. Turner, M. Williams, S. Flament, N. Müller, R.D. (2018). Global tectonic reconstructions with continuously deforming and evolving rigid plates. *Computers & Geosciences*, 116, 32-41. Doi: 10.1016/j.cageo.2018.04.007
- Hall, C.E. and 6 others. (2003). Catastrophic initiation of subduction following forced convergence across fracture zones. *Earth and Planetary Science Letters*, 212, 15-30.
- Hall, R. (1996). Reconstructing Cenozoic SE Asia. In: *Tectonic Evolution of SE Asia* (Eds. R. Hall, D.J. Blundell), *Geol. Soc. London Spec. Publ.* 106, 153-184
- Hall, R. (2002). Cenozoic geological and plate tectonic evolution of SE Asia and the SW Pacific: computer-based reconstructions, model and animations. *J. Asian Earth Sci.* 20, 353-431.
- Hall, R. (2012). Late Jurassic-Cenozoic reconstructions of the Indonesian region and the Indian Ocean. *Tectonophysics*. 570-571, 1-41. Doi: 10.1016/j.tecto.2012.04.021.
- Hallam, A. (1983). *Great Geological Controversies.* Oxford University Press.
- Hambry, M. J. & Harland, W. B. eds. (1981). *Earth's Pre-Pleistocene glacial record.* Cambridge: Cambridge University Press, London.
- Hanmer, S. Vignerresse, J.L. (1981). Mis en place de diapirs syntectoniques dans la chaîne hercynienne: Exemple des massifs leucogranitiques de Locronan et de Pontivy (Bretagne Centrale). *Bull. Soc. Geol. France*, S7-XXII/2, 193-202. Doi: 10.2113/gssgfbull.S7-XXII.2.193
- Hamilton, W.B. (1979). *Tectonics of the Indonesian Region*, US Geological Survey Professional Paper 1078. United States Government Printing Office, Washington, DC, ix + 345 pp.

## References

- Hamilton, W.B. (2011). Plate Tectonics began in neoproterozoic time, and plumes from deep mantle have never operated. *Lithos*, vol. 123, no. 1-4, pp. 1–20.
- Hamilton, W.B. (2019). Toward a myth-free geodynamic history of Earth and its neighbors, *Earth-Science Reviews* 198, 102905.
- Harrison, C.G.A. (2016). The present day number of tectonic plates. *Earth, Planet and Space*, 68, doi: 10.1186/s40623-016-0400-x.
- Heezen, B.C., (1959a). Geologie sous-marine et déplacements des continents. *Colloques Internationaux du Centre National de la Recherche Scientifique*, N° LXXXIII, Paris, 295-302.
- Heezen, B.C., (1959b). Paleomagnetism, continental displacements, and the origin of submarine topography. *International Oceanographic Congress. Reprints of Abstracts: Am. Assoc. Advance. Sci.*
- Heezen, B.C. (1960). The rift in the ocean floor. *Scientific America*, 203, 98-110.
- Heezen, B.C., Ewing, M. (1961). The mid-oceanic ridge and its extension through the Arctic Basin: *Geology of the Arctic*.
- Heezen, B.C., Tharp, M. (1965). Tectonic fabric of the Atlantic and Indian Oceans and continental drift. *Philosophical transactions of the Royal Society of London. Series A, Mathematical and Physical Sciences*, 258(1088), 90-106.
- Heezen, B.C., Tharp, M. (1966). *Physiography of the Indian Ocean*.
- Heirtzler, J.R. (1977). A Minority View in Geophysics, *Science* 196, 778.
- Hess, H.H. (1962). History of Ocean Basins. In Engel, A.E.J. James, H. L. and Leonard, B.F. (Editors). *Petrologic Studies. A volume in honour of A.F.B. Boddington*. Geological Society of America 599-620.
- Herndon, J.M. (2005). Whole-Earth decompression dynamics. *Curr. Sci.* 89/11, 1937-1941.
- Herndon, J.M. (2011). Geodynamic basis of heat transport in the Earth. *Curr. Sci.* 101/11, 1440-1450.
- Hilgenberg, H. (2003). The life and work of Ott Christoph Hilgenberg: as seen by his daughter, Helge Hilgenberg. In Scalera, G., Jacob, K-H., (Editors) (2003). *Why Expanding Earth? A book in honour of Ott Christoph Hilgenberg*. INGV publisher Rome. 465 pp with extensive bibliography.
- Hilgenberg, O.C. (1933). *Vom Wachsenden Erdball. (On Growing Earth)* Berlin Giessmann und Bartsch 56 pp.
- Hilgenberg, O.C. (1933/2003). The Formation and development of Earth: contraction or expansion. In: *Why Expanding Earth?* (Eds)

## The Hidden History of Earth Expansion

- Scalera, G. Jacob, K. Proceedings of the Lautenthal Colloquium held on May 26, 2001 in honor of Ott Christoph Hilgenberg. Rome (2003).
- Hilgenberg, O.C. (1960?/2003). The formation and development of the Earth: contraction or expansion? (Fragments from the last unpublished manuscript). In Giancarlo Scalera, and Karl-Heinz Jacob (eds): Why Expanding Earth? A book in honour of O.C. Hilgenberg. Proceedings of the Lautenthal Colloquium, held on May 26, 2001. INGV publisher Rome, 53-64.
- Hilgenberg, O.C. (1962). Rock magnetism and the Earth's palaeopoles. *Geofisica pura e applicata*, 53(1), 52-54.
- Hilgenberg, O.C. (1966). Die Paläogeographie der expandierenden Erde vom Karbon bis zum Tertiär nach paläomagnetischen Messungen. *Geologische Rundschau*, 55(3), 878-924.
- Hilgenberg, O.C. (1967/2015). Why Earth expansion? Rheologic evidence of the Earth's expansion.  
<https://www.dinox.org/publications/Hilgenberg1967.pdf>
- Hilgenberg, O.C. (1974). Geotektonik, neuartig gesehen. *Geotektonische Forschungen (Geotectonic Research)*, 45, Schweizerbartsche Verlagsbuchhandlung, Stuttgart, 194p.
- Hodgin, R.C. (2008). NASA snaps photo of remote planet. Information by (November 13, 2008). At: [http://www.tgdaily.com/trendwatch-features/40192-nasa-snaps-photo-of-remote-planet-25-light-years-away-using-visible-light-](http://www.tgdaily.com/trendwatch-features/40192-nasa-snaps-photo-of-remote-planet-25-light-years-away-using-visible-light)
- Holland, H.D. (1984). *The Chemical Evolution of the Atmosphere and Oceans*. Princeton, N.J.: Princeton University Press.
- Hole, M. J. & Natland, J. H. (2019). Magmatism in the North Atlantic Igneous Province; mantle temperatures, rifting and geodynamics. *Earth Science Reviews*, [Earth\_2018\_391]. <https://doi.org/10.1016/j.earscirev.2019.02.011>
- Holmes, A. (1913). *The Age of the Earth*.
- Holmes, A. (1931). Radioactivity and Earth Movements. *Transactions of the Geological Society of Glasgow*, 18, 559-606, 1931, <https://doi.org/10.1144/transglas.18.3.559>.
- Holmes, A. (1944). *Principles of Physical Geology*. Thomas Nelson, xii+532, reprinted 1945, revised and expanded 1965.
- Holmes, A. (1965). *Principles of Physical Geology*. Second edition. Nelson, London, pp.1288.
- Holmes, D., Holmes, A. (1978). *Principles of Physical Geology*. Third edition.



## References

- Hooft, G. (2007). The conceptual basis of quantum field theory. In: *The Oxford Handbook of Philosophy and physics*. (Ed. Robert Batterman, p. 661-729).
- Hoshino M. (1998). *The Expanding Earth: Evidence, Causes and Effects*. Tokai University Press, 295 pp.
- Hu, X. and 5 others. (2016). The timing of India-Asia collision onset – Fact, theories, controversies. *Earth Science Review*, 160, 264-299.
- Huisman, R.S., Beaumont C. (2014) Rifted continental margins: The case for depth-dependent extension, *Earth and Planetary Science Letters* 407 148-162.
- Hurrell, S.W. (1994). *Dinosaurs and the Expanding Earth*. One-off Publishing, 222 pp. ISBN 0952260301
- Hurrell, S.W. (2011). *Dinosaurs and the expanding Earth: One explanation for the gigantic sizes of some pre-historic life*. U.K.: One off, 3rd edition. ISBN 9780952 26037 0
- Hurrell, S.W. (2011). Ancient life's gravity and its implications for the expanding Earth. (Extended abstract). In *Extended Abstracts of the 37th Interdisciplinary Workshop of International School Geophysics. Sicily. "The Earth Expansion Evidence: A challenge for Geology, Geophysics and Astronomy"* Volume: Pre-conference book - Extended abstracts. DOI: 10.13140/2.1.1522.4643.
- Hurrell, S.W. (2012). Ancient Life's Gravity and its Implications for the Expanding Earth. In *The Earth expansion evidence – A Challenge for Geology, Geophysics and Astronomy - Selected Contributions to the Interdisciplinary Workshop of the 37th International School of Geophysics*. Aracne Editrice, Roma.  
<https://www.earth-prints.org/handle/2122/8838>
- Hurrell, S.W. (2014). A New Method to Calculate Palaeogravity Using Fossil Feathers. *NCGT Journal*, v. 2, no. 3, September, 2014. p 29-34.
- Hurrell, S.W. (2017). Early speculations about Earth expansion by Alfred Wilks Drayson (1827-1901) and William Thorp (1804-1860).  
<https://dinox.org/hurrell2017>
- Hurrell, S.W. (2018). A palaeogravity calculation based on weight and mass estimates of Giraffatitan (=Brachiosaurus) brancai.  
<https://dinox.org/hurrell2018a>
- Hurrell, S.W. (2019a). Palaeogravity calculations based on weight and mass estimates of four Tyrannosaurus rex specimens.  
<https://dinox.org/hurrell2019a>

## The Hidden History of Earth Expansion

- Hurrell, S.W. (2019b). A palaeogravity calculation based on weight and mass estimates of *Acrocanthosaurus atokensis*.  
<http://dinox.org/hurrell2019b>
- Hurrell, S.W. (2019c). Palaeogravity calculations based on weight and mass estimates of two *Coelophysis bauri* specimens.  
<http://dinox.org/hurrell2019c>
- Hurrell, S.W. (2019d). A Palaeogravity calculation based on weight and mass estimates of *Gigantoraptor erlianensis*.  
<http://dinox.org/hurrell2019d>
- Hurrell, S.W. (2019e). A Palaeogravity calculation based on weight and mass estimates of *Ankylosaurus magniventris*.  
<http://dinox.org/hurrell2019e>
- Hurrell, S.W. (2019f). A Palaeogravity calculation based on weight and mass estimates of *Euoplocephalus tutus*.  
<http://dinox.org/hurrell2019f>
- Hurrell, S.W. (2019g). A Palaeogravity calculation based on weight and mass estimates of *Megalosaurus bucklandii*.  
<http://dinox.org/hurrell2019g>
- Hurrell, S.W. (2019h). Palaeogravity calculations based on weight and mass estimates of *Paraceratherium transouralicum*.  
<http://dinox.org/hurrell2019h>.
- Hutton, J. (1788). *Theory of the Earth: or an investigation of the laws observable in the composition, dissolution, and restoration of land upon the globe*. Royal Society of Edinburgh.
- Hutton, J. (1795). *Theory of the Earth*. Volume I.
- Hsü, K. (ed.), (1982). *Mountain Building Processes*. Academic Press, London, pp.263.
- Ingersoll, R.V. (1988). Tectonics of sedimentary basins. *Geol. Soc. Am. Bull.* 100, 1704-1719.
- Irving, E. (1977). Drift of major continental blocks since the Devonian. *Nature*, 270, 304-309.
- Ishikawa, A., Pearson, D.G., Dale, C.W. (2011). Ancient Os isotope signatures from the Ontong Java Plateau lithosphere: tracing lithospheric accretion history, *Earth and Planetary Science Letters* 301 159-170.
- Jackson, H.R. and Gunnarson K. (1990). Reconstructions of the Arctic: Mesozoic to Present. *Tectonophysics* 172, 303-322.
- Jacob, K.-H. (1974). Deutung der Genese von Fluoritlagerstätten anhand ihrer Spurenelemente, insbesondere an fraktionierten seltenen Erden (Interpretation of the genesis of fluorine deposits

## References

- based on trace elements, with emphasis on fractionated rare earths), TU Berlin, 99 pp.
- Jacob, K.-H. (2010). Über Selbstorganisation und ihre Bedeutung für die Geologie. (About self-organization and its importance in geology). *Zeitschrift für Geologische Wissenschaften (ZGW)*, Berlin, 38, 295-310, 6 plates.
- Jacob, K.-H., Dietrich, S., Krug, H.-J. (1994). Self-organization in mineral fabrics. In: *Fractals and Dynamic Systems in Geosciences* (Ed.: J.H. Kruhl), Springer, 259-268.
- Jacob, K.-H., Dietrich, S. (2012). Electric Field Forces and Self-Organization. From Common Concepts to New Insights. In: *The Earth Expansion Evidence – A Challenge for Geology, Geophysics and Astronomy. Selected Contributions to the Interdisciplinary Workshop of the 37th International School of Geophysics EMFCSC, Erice (4-9 October, 2011)* (Eds.: G. Scalera, E. Boschi, S. Cwojdzinski), 407-419.
- Jagoutz, O., Royden, L., Holt, A.F., Becker, T.W. (2015). Anomalously fast convergence of India and Eurasia by double subduction. *Nature Geosciences Letters*. 8, 475-478.
- Japsen, P. Bidstrup, T. Lidmar-Bergström, K. (2002). Neogene uplift and erosion of southern Scandinavia induced by the rise of the South Swedish Dome. In A.G. Doré, J.A. Cartwright, M.S. Stoker, J.P. Turner & N. White (eds.): *Exhumation of the North Atlantic margin: timing, mechanisms and implications for petroleum exploration*, 299–314. Geological Society, London, Special Publication 162.
- Jardetzky, W.S. (1929). La rotation zonale de la planète et les dérives continentales. *Acad. Roy. Serbe, Glas. Belgrade*, 134, 150-157
- Jardetzky, W. (1954). The principal characteristics of the formation of the Earth's crust. *Science*, 119 (No. 3090), 361-365
- Jiang, S. He, M. Yue, W. Qi, B. & Liu, J. (2007). Observation of  $^3\text{He}$  and  $^3\text{H}$  in the volcanic crater lakes: possible evidence for natural nuclear fusion in deep Earth. In *8th International Workshop on Anomalies in Hydrogen/Deuterium Loaded Metals, Sicily, Italy: Citeseer*.
- Ji'an S. Mingguo Z. Lüqiao Z. Daming L. (2004). Identification of Five Stages of Dike Swarms in the Shanxi-Hebei-Inner Mongolia Border Area and Its Tectonic Implications. *Acta Geologica Sinica – English Edition*, 78, 320-330.
- Johnson, A. (2019). *The Earth... but not as We Know It*.

## The Hidden History of Earth Expansion

- Johnson, B.D. Powell, C. McA. and Veevers. J.J. (1980). Early spreading history of the Indian Ocean between India and Australia. *Earth and Planetary Science Letters* . 47, 131-143.
- Johnson, M.R.W. (2002). Shortening budgets and the role of continental subduction during the India-Asia collision. *Earth Science Review*. 59, 101-123.
- Jones, S. & Ellsworth, J. (2003). Geo-fusion and cold nucleosynthesis in tenth international conference on cold fusion. Cambridge, MA: LENR-CANR. org.
- Jordan, P. (1966). *Die Expansion der Erde*. Vieweg, Braunschweig, 182p.
- Jordan, P. (1973). *The expanding earth. The Physicist's Conception of Nature*.
- Kahle, C.F. (1974). *Plate Tectonics—Assessments and Reassessments*. American Association of Petroleum Geologists. SBN-10: 0891812997. ISBN (electronic): 9781629812182.
- Karna Lidmar-Bergström, Mats Olvmo & Johan M. Bonow (2017). The South Swedish Dome: a key structure for identification of peneplains and conclusions on Phanerozoic tectonics of an ancient shield, *GFF*, DOI: 10.1080/11035897.2017.1364293.
- Kasting, J. F. & Howard, M. T. (2006). Atmospheric composition and climate on the early earth. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 361(1474), 1733–1742.
- Ketner, K.B. (2012). An alternative hypothesis for the mid- Paleozoic Antler orogeny in Nevada. *USGS, Prof. Paper 1790*, 11p.
- Khan, Z.A. and Tewari, R.C. (2016). The concept of Gondwanaland and Pangaea- A appraisal: *Journal of Applied Geology and Geophysics*, v.4, p.44-56. doi: 10.9790/0990-0403024456.
- Khan, Z.A. and Tewari, R.C. (2017). Problems in accepting Plate Tectonics and subduction as a mechanism of Himalayan evolution. *Jour. Applied Geology and Geophysics*. 5, 81-100.
- Khan, Z.A. and Tewari, R.C. (2018). Indus-Yarlung Tsangpo Suture zone concept- A second opinion. *Jour. Tethys*, 5, 218-239.
- Kiessling, W. Flügel, E. Golonka, J. (1999). Paleoreef maps: Evaluation of a comprehensive database on Phanerozoic reefs. *AAPG Bulletin*, 83/10, 1552-1587.
- King, L.C. (1983). *Wandering Continents and Spreading Sea Floors on an Expanding Earth*. Wiley, Chichester, pp. 232.

## References

- Keindl, J. (1940) Dehnt sich die Erde aus? Eine geologische Studie. (Is the Earth expanding? A geological study.), Herold-Verlag Dr. Franz Wetzel & Co., Munchen-Sollin, pp.50.
- Klootwijk, C.T. (1986). Greater India's margin: Paleomagnetic evidence for large-scale continental subduction, In: K.G. McKenzie (Ed).Shallow Tethys 2. A. A. Balkema, Rotterdam, 529.
- Kokus, M. (2004). Alternate theory of gravity and geology in seismic prediction. In New Concepts in Global Tectonics; Urbino Workshop 29-31 Aug. Italy.
- Kort, L. (1949). Das Wachen der Earth und die Wanderung der Kontinente. Buchdruckerei, Hannover, pp. 53.
- Koziar, J. (1980). Ekspansja den oceanicznych I jej zwiazek z hipotaza ekspansji Ziemi. Sprawozdania Wroclawskiego Towarzystwa Naukowego, 35, 13-19. [Expansion of the ocean floors and its connection with the hypothesis of the expanding Earth. Reports of the Wroclaw Scientific Society, vol. 35B. Ossolineum, Wroclaw, pp. 13–19.]
- Koziar, J. (1985). Rozwój oceanów jako przejaw ekspansji Ziemi. Geologia nr 8. Uniwersytet Slaski, Katowice, s. 109–114. [Development of the oceans as a manifestation of Earth's expansion. Geology no. 8. The Silesian University, Katowice, pp. 109–114.]
- Koziar, J. (1991). Prace nad problemami ekspansji Ziemi w ocerodku wroclawskim. Acta Universitatis Wratislaviensis, nr 1375, s. 110–156. [Research on the Expanding Earth in the Wrocław scientific community. Acta Universitatis Wratislaviensis, no. 1375, pp. 110–156.]
- Koziar, J. (1991). Nowa rekonstrukcja Gondwany na ekspanduj<sup>1</sup>cej Ziemi, na tle rekonstrukcji dotychczasowych. Acta Universitatis Wratislaviensis, nr 1375, s. 357–396. [A new reconstruction of Gondwana on the expanding Earth. Acta Universitatis Wratislaviensis, no. 1375, pp. 357–396.]
- Koziar, J. (1993). Rozwój Pacyfiku i jego znaczenie dla współczesnej geotektoniki. W: J. Skoczylas (red.), Streszczenia referatów, tom II. Polskie Towarzystwo Geologiczne – Oddział w Poznaniu i Instytut Geologii Uniwersytetu im. Adama Mickiewicza w Poznaniu, Poznań, s. 45–56. [Development of the Pacific and its significance to the contemporary geotectonics. (The expanding Pacific). In: J. Skoczylas (ed). Lecture summaries. vol. II. The Polish Geological Society – Poznań Branch and the Institute of Geology of the Adam Mickiewicz University in Poznań, Poznań, pp. 45–56.]

## The Hidden History of Earth Expansion

- Koziar, J. (1994). Principles of plate movements on the expanding Earth. In: *Frontiers of Fundamental Physics*. Eds. M. Barone & F. Selleri. Plenum Press. New York & London: 301 - 307.
- Koziar, J. (2003). Tensional development of active continental margins. In: K. H. Jacob (ed.), *Materials of the International Conference „Erdexpansion – eine Theorie auf dem Prüfstand“* (24–25 May, 2003, Ostbayern Schloss Theuern (Germany). Technische Universität, Berlin, pp. 27–35.
- Koziar, J. (2005). Tensyjny rozwój orogénów sródladowych. Czêsc I, Mechanizm. W: J. Skoczylas (red.), *Streszczenia referatów, tom XIV*. Polskie Towarzystwo Geologiczne – Oddział w Poznaniu i Instytut Geologii Uniwersytetu im. Adama Mickiewicza w Poznaniu, Poznań, s. 131–156. [Tensional development of intracontinental fold belts. Part I, Mechanism. In: J. Skoczylas (ed.), *Lecture summaries, vol. XIV*. The Polish Geological Society – Poznań Branch and the Institute of Geology of the Adam Mickiewicz University in Poznań, Poznań, pp. 131–156.]
- Koziar, J. (2005). Tensyjny rozwój orogénów óródrladowych. Czêsc II, Przykłady regionalne. W: J. Skoczylas (red.), *Streszczenia referatów, tom XIV*. Polskie Towarzystwo Geologiczne – Oddział w Poznaniu i Instytut Geologii Uniwersytetu im. Adama Mickiewicza w Poznaniu, Poznań, s. 157–196. [Tensional development of intracontinental fold belts. Part II, Global examples. In: J. Skoczylas (ed.), *Lecture summaries, vol. XIV*. The Polish Geological Society – Poznań Branch and the Institute of Geology of the Adam Mickiewicz University in Poznań, Poznań, pp. 157–196.]
- Koziar, J. (2006). Terrany, czyli geologia w krainie duchów. W: J. Skoczylas (red.), *Streszczenia referatów, tom XV*. Polskie Towarzystwo Geologiczne – Oddział w Poznaniu i Instytut Geologii Uniwersytetu im. Adama Mickiewicza w Poznaniu, Poznań, s. 47–98. [Terranes: or geology in a phantoms world. In: J. Skoczylas (ed.), *Lecture summaries, vol. XV*. The Polish Geological Society – Poznań Branch and the Institute of Geology of the Adam Mickiewicz University in Poznań, Poznań, pp. 47–98.]
- Koziar, J. (2007). Tensional origin of the inversion in the Polish Basin with reference to tensional development of the Bohemian Massif. Extended abstract. In: B. Kontny, V. Schenk (eds.), *Abstracts of the 8th Czech – Polish Workshop „On Recent Geodynamics of the Sudety Mts. and Adjacent Areas”* (Kłodzko, Poland, 29–31 March, 2007). Wrocław University of Environmental and Life Sciences, Wrocław, pp. 17–21.

## References

- Koziar, J. (2011). Shortening of the Length of Day (LOD) Caused by Big Tsunami Earthquakes on the Expanding Earth (extended abstract). In: S. Cwojdziniński, G. Scalera (eds.), Pre-Conference Extended Abstracts Book of the 37th Course of the International School of Geophysics. Interdisciplinary Workshop on "The Earth Expansion Evidence: A challenge for Geology, Geophysics and Astronomy." (Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Sicily, 4–9 October, 2011). Istituto Nazionale di Geofisica e Vulcanologia, Rome, pp. 55–58.
- Koziar, J. (2012). Expanding Earth and Space Geodesy. Society of Geologist Alumni of Wroclaw University. Wroclaw 2018.
- Koziar, J. (2018). Falsification of the Eulerian motions of lithospheric plates. Circularity of the plate tectonics theory. LAP LAMBERT Academic Publishing.
- Koziar, J. (2018). Geological proofs of significant expansion of the Earth and its broader scientific context. Association of Geologist Alumni of Wroclaw University, Wroclaw, PL. ISBN 978-83-950414-1-9.
- Koziar, J., Jamrozik, L. (1985). Application of the tension–gravitational model of the tectogenesis to the Carpathian orogen reconstruction. In: Proceeding reports of the XIIIth Congress of the Carpatho – Balkan Geological Association (Cracow, Poland, 5–10 September, 1985), part I. Polish Geological Institute, Cracow, pp. 200
- Koziar, J., Jamrozik, L. (1994). Tension–gravitational model of island arcs. In: F. Selli, M. Barone (eds.), Proceedings of the International Conference "Frontiers of Fundamental Physics" (Olympia, Greece, 27–30 September, 1993). Plenum Press, New York and London, pp. 335–337.
- Koziar, J., Muszyński, A. (1980). Spostavki mežu ekstenzjonnoto rozvitije na Srediziemno i Ėerno morje. Spisanje na Blgarskoto Geologiĉesko Družestvo, god. XLI, kn. 3, s. 247–259. [Correlations of extensional development of the Mediterranean and the Black Sea. Review of the Bulgarian Geological Society, vol. 41, no. 3, pp. 247–259.]
- Krause, D.W. and 4 others. (1997). Cosmopolitanism among Gondwanian Late Cretaceous mammals. *Nature*, 390, 178–208.
- Krouss, L. (2014). A Beacon from the Big Bang. *Scientific American* 4, 311.59–67.
- Krug, H.-J., Dietrich, S., Jacob, K.-H. (1994). The formation and fragmentation of periodic bands through precipitation and Ostwald ripening. In: *Fractals and Dynamic Systems in Geosciences* (Ed.: J.H. Kruhl), Springer, 269–289.

## The Hidden History of Earth Expansion

- Kuhn, T. (1970). *The structure of scientific revolutions*. University of Chicago press, 2nd ed edition.
- Kundt, W. (1998). *The Gold effect: Odyssey of scientific research*. arXiv:astro-ph/9810059v1, 54 S.
- Larson R.L. Pitman W.C. (III), Golovchenko X. Cande S.C. Dewey J.F. Haxby W.F. & LaBrecque (mapcompilers) (1985). *The Bedrock Geology of the World*. Freeman & Co. New York.
- Lay, T. Hernlund, J. Buffett, A.B. (2008). Core–mantle boundary heat flow. In *Nature Geoscience*, No. 1, p. 25-32.
- Laya-Pereira, J.C. (2012). *Permian carbonates in the Venezuelan Andes*. Doctoral Thesis, Durham Univ. 330p.
- Leclerc, G-L. (1751). *Theory of the Earth*.
- Le Grand, H.E. (1988). *Drifting Continents and Shifting Theories*. Cambridge University Press.
- Le Pichon, X. (1968). See-floor spreading and continental drift. *J.Geophys.Res.* 73, 12:3661 - 3697.
- Le Pichon, X. (2001). *My Conversion to Plate Tectonics*. In Oreskes, N. (editor), Le Grand, H.E. (2001). *Plate tectonics: An insider's history of the modern theory of the Earth*. Westview Press.
- Lerner, E. (1992). *The Big Bang never happened*. Vintage Books, New York.
- Lewis, C. (2000). *The Dating Game: One Man's Search for the Age of the Earth*, Cambridge University Press, ISBN 0-521-89312-7
- Leyton, M. Monroe, J. (2017). *The Source for Up to Half of Earth's Internal Heat Is Unknown*. Web: [https://www.realclearscience.com/articles/2017/08/05/the\\_source\\_for\\_up\\_to\\_half\\_of\\_earths\\_internal\\_heat\\_is\\_unknown.html](https://www.realclearscience.com/articles/2017/08/05/the_source_for_up_to_half_of_earths_internal_heat_is_unknown.html)
- Liang Rixuan, Bai Wanji. (1984). *Genesis of ultramafic rocks in Yarlu-Zhangbo ophiolite belt*. *International Symposium Geology Himalaya*, 1, 117-118 (Abstract).
- Lindemann, B. (1927). *Kettengebirge, Kontinentale Zerspaltung und Erdexpansion*. Gustav Fischer Publishers, Jena. 186p.
- Love, J.J. Thomas, J.N. (2013). *Insignificant solar-terrestrial triggering of earthquakes*. *Geophysical Research Letters*. Vol.40, is. 6:1165-1170.
- Lovelock, J.E. (1979). *Gaia: A new look at life on Earth*. Oxford University Press, Oxford, 176 pp.
- Low, F. S. Kristna, S. (1970). *Narrow bond infrared photometry of alfactory*. *Nature*: 3. 23. 13-22.



## References

- Lyell, C. (1830). *Principles of Geology: being an attempt to explain the former changes of the Earth's surface, by reference to causes now in operation. Part I.*
- Managadze, G.G., Cherepin, V.T., Shkuratovm Y.G., Kolesnik, V.N., Chumikov, A.E. (2011). Simulating OH/H<sub>2</sub>O formation by solar wind at the lunar surface, *Icarus* 215, 449–451.
- Mardfar - See Amirmardfar.
- Makarenko G.F. (1983). *Volcanic Seas on Earth and Moon.* (In Russian), (Moscow, Izdatel's tvo Nedra.
- Marvin, D. (2018). *The Expanding Earth and the Implications on the Geophysics of Earth.* 44p.
- Marvin, J.H. (2003). *The Nuclear Heart of the Earth.* Interview at: <http://www.spacedaily.com/news/earth-03k.html>.
- Marvin, J.H. (2014). *Herdon's Earth and the Dark Side of Science; Perface at:* [http://nuclearplanet.com/Herdon's\\_Earth%20.html](http://nuclearplanet.com/Herdon's_Earth%20.html).
- Molnar, P. Tapponnier, P. (1975). Cenozoic tectonics of Asia: effects of a continental collision: *Science*, 189, 419-426.
- Manuel K. Oliver (2009). *Earth's Heat Source, the Sun. At: Energy & Environment* 20131-144.  
<https://arxiv.org/ftp/arxiv/papers/0905/0905.0704.pdf>.
- Mareschal, J-C. et al. (2012). Geoneutrinos and the energy budget of the Earth. *Journal of Geodynamics*, Vol. 54, p. 43– 54.
- Maxlow, J. (1995). *Global Expansion Tectonics: The geological implications of an expanding Earth.* Unpublished Master of Science thesis, Curtin University of Technology, Perth, Western Australia.
- Maxlow, J. (2001). *Quantification of an Archaean to Recent Earth Expansion Process Using Global Geological and Geophysical Data Sets.* PhD thesis, Curtin University of Technology, Western Australia.
- Maxlow, J. (2002). *Quantification of an Archaean to recent Earth Expansion Process using Global Geological and Geophysical Data Sets.* Unpublished PhD thesis, Curtin University of Technology, Perth, Western Australia.
- Maxlow, J. (2003). *Quantification of an Archaean to Recent Earth expansion process.* In Scalera, G and Jacob, K-H. (Editors) 2003. *Why Expanding Earth? A book in honour of Ott. Christoph Hilgenberg.* INGV publisher Roma. 335-349.
- Maxlow, J. (2005). *Terra non firma Earth: Plate Tectonics is a myth.* Terrella Press.

## The Hidden History of Earth Expansion

- Maxlow, J. (2014). *On the Origin of Continents and Oceans: A Paradigm Shift in Understanding*. Perth, Western Australia: Terrella Press.
- Maxlow, J. (2015). *Expansion Tectonics: A Complimentary Download*. Terrella Press, 114p.
- Maxlow, J. (2018). *Beyond Plate Tectonics: Unsettling settled science*. Aracne Editrice, Roma. [www.aracneeditrice.it](http://www.aracneeditrice.it)
- McCarthy, D. (2003). The trans-pacific zipper effect: disjunct sister taxa and matching geological outlines that link the pacific margins. *Journal of Biogeography*, 30(10), 1545–1561. <https://doi.org/10.1046/j.1365-2699.2003.00929.x>
- McCarthy, D. (2011). *Here be dragons: how the study of animal and plant distributions revolutionized our views of life and Earth*. OUP Oxford.
- McElhinny M.W. Lock J. (1996). IAGA paleomagnetic databases with Access. *Surveys in Geophysics*, 17, 575-591.
- McKenzie, D.P. (1977). Plate Tectonics and Its Relationship to the Evolution of Ideas in the Geological Sciences, *Daedalus* Vol. 106 No. 3, 97-124.
- Menard, H.W. (1986). *The Ocean of Truth: A Personal History of Global Tectonics*. Princeton University Press.
- Meservey, R. (1969). Topological inconsistency of continental drift in the present-sized earth. *Science*.
- Meyerhoff, A.A., Tanner, I., Morris A.E.L., Martin, B.D., Agocs, W.B., Meyerhoff, H.A. (1992). Surge tectonics: a new hypothesis of Earth dynamics. In: Chatterjee, S. and Hotton, N. (eds.): *New Concepts in Global Tectonics*. Texas Tech. University Press, Lubbock, 309-409.
- Meyerhoff, A.A. (1995). Surge-tectonic evolution of southeastern Asia: A geohydro-dynamics approach. *Jour. Southeast Asian Earth Sciences*, 12, 143-247.
- Meyerhoff, A.A., Boucot, A.J., Meyerhoff, H.D., Dickins, J.M. (1996). Phanerozoic faunal and floral realms of the Earth: The intercalary relations of the Malvinokaffric and Gondwana faunal realm with the Tethyan faunal realm. *Mem Geological Society of America* No. 189.
- Miller, E.L. Kuznetsov, N. Soboleva, A. Udoratina, O. Grove, M.J. Gehrels, G. (2011). Baltica in the Cordillera? *Geology*, 39/8, 791-794. Doi: 10.1130/G31910.1.
- Mizuno, T. (1998). *Nuclear transmutation: the reality of cold fusion*. Infinite Energy Press Concord.

## References

- Molnar, P. (2007). An examination of evidence used to infer late Cenozoic “Uplift” of mountain belts and other high terrain: What scientific question does such evidence pose? *Journal of the Geological Society of India*, 70, 395-410.
- Moore, E.M. (1991). Southwest U.S.—East Antarctic (SWEAT) connection: A hypothesis. *Geology* 19, 425-428.
- Moore, E.M., Kellogg, L.H. and Dilek, Y. (2000). Tethyan Ophiolites, mantle convection and tectonic historical contingency: A resolution of the ophiolite conundrum. *GSA. Inc. Special Paper #349 in Ophiolites and Oceanic Crust: New Insight from the Field Studies and the Drilling Program*, 349, 3-12.
- Myers, L.S. (2004). Earth expanding rapidly by external accretion expansion. In *Urbino Workshop 29-31 August*.
- Myers, L.S. (2008). A growing and expanding Earth is no longer questionable. (Washington, D.C.: American Geophysical Union, Spring Meeting, . 26a. Myers).
- Myers, L.S. (2015). *Gravity: The Source of Earth’s Water*. Page Publishing Inc. ISBN-13: 978-1682137116.
- Najman, Y. and 9 others. (2010). Timing of India-Asia collision: geological, biostratigraphic and paleomagnetic constraints. *Jour. Geophys. Research*, 115, 1978-2012.
- Neuendorf, K.K.E., Mehl Jr, J.P., Jackson, J.A. (Editors) (2011). *Glossary of Geology (Fifth Edition), Revised*, American Geosciences Institute, Alexandria, Virginia.
- Neiman, V.B., 1962: *Razsirjajuscajsja Zemlja (The expanding Earth)*. Gosudarstvennoje Izdatelstwo Geograficeskoj Literatury, Moskwa.
- Nicolas, A., Bouchez, J.L., Blaise, J., Poirier, J.P. (1977). Geological aspects of deformation in continental shear zones. *Tectonophys.* 42, 55-73.
- Nicolas, A., Poirier, J. P. (1976): *Crystalline Plasticity and Solid State Flow in Metamorphic Rocks*. J. Wiley & Sons, London, 444p.
- Nicolis, G., Prigogine, I. (1987). *Die Erforschung des Komplexen*. Piper, München, Zürich, 384 pp.
- Noel, D. (1986). Nut tree distributions and the expansion of the Earth. [http:// wayback.archive-it.org/1941/20100524190351/http://www.wanatca.org.au/Q-Yearbook/Y11all.pdf](http://wayback.archive-it.org/1941/20100524190351/http://www.wanatca.org.au/Q-Yearbook/Y11all.pdf)
- Noel, D. (1989). *Nuteeriat: nut trees, the expanding Earth, Rottneest Island, and all that—*. Published for the Planetary Development Group, Tree Crops Centre by Cornucopia Press. Reprint available from

## The Hidden History of Earth Expansion

- Amazon, <https://www.amazon.com/Nuteeriat-Expanding-Rottneest-Island-P-Book/dp/1982976624/>
- Noel, D. (2012). Inside The Earth -- The Heartfire Model. <http://www.aoi.com.au/bcw/Heartfire/index.htm>
- Noel, D. (2013). Inside the Earth -- The Heartfire Model. <http://www.aoi.com.au/bcw/Heartfire/index.htm>
- Noel, D. (2017a). EP302: The Earth-Expansion Model Part A --The Death of Plate Tectonics. <http://www.aoi.com.au/EP/EP302.htm>. [A revision of “Fixed-Earth and Expanding-Earth Theories -- Time for a Paradigm Shift?”  
<<http://www.aoi.com.au/bcw/FixedorExpandingEarth.htm>> 2004.]
- Noel, D. (2017b). EP303: The Earth-Expansion Model Part B -- Answers to A Hundred Puzzles. <http://www.aoi.com.au/EP/EP303.htm> [A revision of “Fixed-Earth and Expanding-Earth Theories -- Time for a Paradigm Shift?”  
<<http://www.aoi.com.au/bcw/FixedorExpandingEarth.htm>> 2004.]
- Noel, D. (2017c). XT807: The Concore Model of planet and star interiors. <http://www.aoi.com.au/Extracts/XT807.htm> [An extract from Inside “The Earth -- The Heartfire Model”. ref. 9, 2012]
- Norin, E. (1946). Geological expedition in Western Tibet: Report Sino-Swedish Expedition, Stockholm, 1-229.
- Nutman, A.P. Clark R.L. Friend C.R.L. Bennett V.C. McGregor V.C. (2004). Dating of the Ameralik dyke swarms of the Nuuk district, southern West Greenland: mafic intrusion events starting from c. 3510 Ma. *Journal of the Geological Society*, 161, 421-430; DOI: 10.1144/0016-764903-043.
- Ogrisseg, J. (2009). Dogmas may blinker mainstream scientific thinking. <https://www.japantimes.co.jp/life/2009/11/22/life/dogmas-may-blinker-mainstream-scientific-thinking/>
- Ollier, C.D. (1969). ‘Weathering’, Oliver & Boyd, Edinburgh, 304.
- Ollier, C.D. (1981). *Tectonics and Landforms*, Longman, Harlow, 324.
- Ollier, C.D. (2002). The structure and origin of mountains: Pre-planation and post-planation gravity structures. in Dramis F. Farabollini P. Molin P. (Eds.) Large-scale vertical movements and related gravitational processes. In: Proc. International Workshop, Camerino-Roma 21-26 June 1999, Studi Geologici Camerti, Numero Speciale; pp.147- \155, Edimond,
- Ollier, C.D. (2003). The origin of mountains on an expanding Earth, and other hypotheses. In Scalera,G. & Jaob, H. (eds) *Why Expanding Earth*. 129 – 160 . INGV Publisher, Rome.

## References

- Ollier, C.D. (2004). The evolution of mountains on passive continental margins. 59 – 88 In: Slaymaker, O. and Owens, P. (eds.): Mountain Geomorphology. Edward Arnold, London, Città di Castello (Italy).
- Ollier, C.D. (2006). A plate tectonics failure: the geological cycle and conservation of continents and oceans. *Annals of Geophysics*, Supplement to Vol. 49, N. 1, Chapter 8, 427-436.
- Ollier, C.D. (2007). Exceptional planets and moons, and theories of the expanding Earth. *New Concepts in Global Tectonics*, 45, 52-54.
- Ollier, C.D. (2012a). Dykes, crustal extension and global tectonics. In Scalera, G. Boschi, E. and Cwojdzinski (eds.) *The Earth Expansion Evidence – a challenge for Geology, Geophysics and Astronomy. Selected Contributions to the Interdisciplinary Workshop of the 37th International School of Geophysics EMFCSC, Erice (4-9 October 2011)*, 207 – 304.
- Ollier, C.D. (2012b). Extension everywhere: rifts, continental margins and island arcs. In Scalera, G. Boschi, E. and Cwojdzinski (eds.) *In The Earth Expansion Evidence—a challenge for Geology, Geophysics and Astronomy. Selected Contributions to the Interdisciplinary Workshop of the 37th International School of Geophysics EMFCSC, Erice (4-9 October 2011)*, 61 – 76.
- Ollier, C.D., Koziar, J. (2007). Dlaczego cykle geologiczne tektoniki p<sup>3</sup>yt nie sprawdzaj<sup>1</sup> się? *Przegląd Geologiczny*, tom 55, nr 5, s. 375–382. [Why the plate tectonics rock cycles do not work? *Geological Review*, vol. 55, no. 5, pp. 375–382.]
- Ollier, C.D. Pain, C.F. (2000). *The Origin of Mountains*, Routledge, London.
- Ollier, C.D. Pain C.F. (2019). Neotectonic mountain uplift and geomorphology. *Geomorfologiya*. 2019;(4):3-26. <https://doi.org/10.31857/S0435-4281201943-26>.
- Öpik, E. (1971). Cratering and the moon's surface. In *Advances in Astronomy and Astrophysics*. Elsevier, vol. 8, pp. 107–337.
- Oreskes, N. (1989). *The Rejection of Continental Drift: Theory and Method in American Earth Science*.
- Oreskes, N. (editor), Le Grand, H.E. (2002). *Plate tectonics: An insider's history of the modern theory of the Earth*. Westview Press.
- Orlando, T.M., Jones, B.M., Aleksandrov, A.B., Hibbits, C.A., Dyar, M.D. (2018). A Solar Wind Source of Water in the Polar Regions of the Moon? *Lunar Polar Volatiles 2018 (LPI Contrib. No. 2087)*.
- Orlenok, V. (2010). *Global volcanism and oceanization of the Earth and planets*. Kaliningrad: I.Kant State University of Russia Press, 167.

## The Hidden History of Earth Expansion

- Ortoleva, P. (1984). *Geochemical Self-Organization*. Oxford Monogr. Geol. Geophys., 23, 411 pp.
- Owen, H.G. (1976). Continental displacement and expansion of the Earth during the Mesozoic and Cenozoic. *Philosophical Transactions of the Royal Society of London*. A 281, 223-291.
- Owen, H.G. (1983). *Atlas of continental displacement 200 million years to the Present*. Cambridge Earth Sciences Series. Cambridge University Press. i-x, 1-159, 76 maps.
- Owen, H.G. (1984). The Earth Is Expanding and We Don't Know Why. In *New Scientist*, No. 22, Nov. 22, 1984. 27-
- Owen, H.G. (1996). Boreal and Tethyan late Aptian to late Albian ammonite zonation and Palaeobiogeography. *Mitteilungen aus dem Geologisch-Paläontologischen Institut der Universität Hamburg*. 77, 461-481.
- Owen, H.G. (2012). Earth expansion - Some Mistakes, What Happened in the Palaeozoic and the Way Ahead. In Scalera G. Boschi, E. and Cwojdzinski, S Editors. *The Earth Expansion Evidence – A challenge for Geology, Geophysics and Astronomy Erice, Sicily, 4-9 October 2012*, 77-89.
- Owen, L.A. (2004). Cenozoic evolution of global mountain systems. 132 – 152 In: Slaymaker, O. and Owens, P. (eds.): *Mountain Geomorphology*. Edward Arnold, London.
- Patriat, F., Achache, J. (1984). The Indian-Eurasian collision. A synthesis of oceanic magnetic anomalies and the comparison with continental paleomagnetic studies. *International Symposium Geology Himalayas*, 2, 14 (abstract).
- Peale, J.S. (1999). Origin and Evolution of the Natural Satelits. *Annu. Rev. Astron. Astrophys.* 37:533–602.
- Peishong, Bao and Wang Xibin. (1984). The two suites of volcanic in the Yarlung-Zhangbo River ophiolite belt - a discussion on the emplacement mechanism of ophiolites. *International Symposium Geology Himalaya 1*, 103-105 (Abstract).
- Pfeuffer, J. (1981). *Die Gebirgsbildungsprozesse als Folge der Expansion der Erde*. Glückauf, Essen, 125 pp.
- Pisarevsky, S. (2005). *Global Paleomagnetic Database (GPMDB V 4.6)*. Tectonics Special Research Centre of the University of Western Australia Web site (<http://www.tsrc.uwa.edu.au/>).
- Pitcher, W.S. Atherton, M.P. Cobbing, E.J. Beckinsale, R.D. (1985). *Magmatism at a Plate Edge*. Blackie, Halstead Press, Glasgow, 328p.
- Playfair, J. (1802). *Illustrations of the Huttonian Theory of the Earth*.

## References

- Poirier, J.P. (1976). Crystalline Plasticity and Solid State Flow in Metamorphic Rocks. J. Wiley & Sons, London, 444p.
- Popper, K. (1963). Science as falsification. In *The Growth of Scientific Knowledge* (pp. 33–39). London: Routledge.
- Prasad, G. R. Verma, O. Flynn, J.J. and Goswami, A. (2013). A late Cretaceous vertebrate fauna from the Cauvery basin, South India: Implications for Gondwanian paleogeography. *Jour. Vertebrate Paleontology*, 33, 1260-1268.
- Pratt, D. (2000). Plate Tectonics: A paradigm under threat. *Jour. Scientific Exploration*. 14, 307-352.
- Priestley, J. (1767). *The History and Present State of Electricity*. London.
- Puchkov, V.N. (2009). The evolution of the Uralian orogen. (London: Geological Society, Special publication, V. 327, 2009), 161-195. DOI: 10.1144/SP327.9.
- Rage, J.C. (2003). Relationships of the Malagasy fauna during the Late Cretaceous: Northern of southern routes? *ActaPaleontologicaPolonica*, 48, 661-662.
- Rage, J.C. (2016). Gondwana, Tethys and terrestrial vertebrates during Mesozoic and Cenozoic. In: *Gondwana and Tethys*. M.G. Audrey-Charles and A. Hallam (Eds.). Geological Society of America Special publication 37, 255-273.
- Raiverman, V. (1992). Trans-Asiatic lineaments and Himalayan orogeny, In: A. K. Sinha (Ed). *Himalayan Orogen and global tectonics*: Oxford & IBH. Publication, New Delhi, 121-156.
- Raiverman, V. (2002). Foreland sedimentation in Himalayan tectonic regime: A relook at the Orogenic process: B.S. M. P.S. Publ, New Delhi, 1- 378.
- Rattliffe, H. (2017). A review of Anomalous Redshif Data. In: *The Galileo of Polmar*. Essay in memory of Alton Arp edited by Christofer C. Fulton and Martin Cocus.
- Reading, H.G. (1980). Characteristics and recognition of strike-slip fault systems. In: *Sedimentation in Oblique-Slip Mobile Zones* (Eds. P.F. Balance, H.G. Reading), Internat. Assoc. Sedimentol. Spec. Publ. 4, 7-26.
- Reich, W. (1945/1982). *The Bioelectrical Investigation of Sexuality and Anxiety*. Farrar, Straus and Giroux, New York, xi + 161 pp.
- Reich, W. (1949/1951/1973). *Ether, God and Devil/Cosmic Superimposition*. Farrar, Straus and Giroux, New York, 308 pp.

## The Hidden History of Earth Expansion

- Reston, T. (2007). Extension discrepancy at North Atlantic nonvolcanic rifted margins: Depth-dependent stretching or unrecognized faulting? *Geology* 35, 367-370.
- Rickard, M.J. (1969) Relief of curvature on expansion - a possible mechanism of geosynclinal formation and orogenesis. *Tectonophysics* 8(2): 129 - 144.
- Reitan, P.H. (1968a). Frictional heat during metamorphism: quantitative evaluation of concentration of heat generation in time. *Lithos*, 1, 151-163.
- Reitan, P.H. (1968b). Frictional heat during metamorphism: quantitative evaluation of concentration of heat generation in space. *Lithos*, 1, 268-274.
- Reitan, P.H. (1988). Global dynamics and the temperatures of metamorphism. *Bull. Geol. Inst. Univ. Uppsala, N.S.* 14, 21-24.
- Rogers, (1985). Quote given in Carey (1988).
- Romanowicz, B., Gung, Y. (2002). Superplumes from the Core-Mantle Boundary to the Lithosphere: Implications for Heat Flux." *Science* 96.5567. (Stanford, CA: Highwire Press, 2002).513-516. DOI: 10.1126/science.1069404.
- Romans, B. (2008). Subduction Denialism, Part 1: The Backstory. <https://clasticdetritus.com/2008/11/14/subduction-denialism-part-1-the-backstory/>
- Roques, M. (1941). Les schistes cristallins de la partie sud-ouest du Massif Central Français. *Mém. Serv. Carte géol. France*, 512p.
- Rubin, V.C. (1988). Dark matter in the universe. *Proceedings of the American Philosophical Society*, vol. 132, no. 3, pp. 258–267.
- Runcorn, S.K. (Ed.). (1962). *Continental drift*. Elsevier.
- Runcorn, S.K. (Ed.). (1969). *The Application of the Modern Physics to The Earth and Planetary Interiors*. (N.A.T.O. Advanced Study Institute)
- Rust, J. and 15 Others. (2010). Biogeographic and evolutionary implications of a diverse paleobiota in amber from the early Eocene of India. *Proc. National Academy Science*, 107, 18360-18365.
- Sarwar, G. and Khalil, Y.S. (2017). The saga of India's drift and supra-subduction origin of the ophiolites on its northwestern margin, Pakistan. *New Concepts in Global Tectonics Journal*. 5, 27-47.
- Scalera, G. (2003). Samuel Warren Carey. Commemorative memoir. In Scalera, G. and Jacob, K-H., (Editors) 2003. *Why Expanding Earth? A book in honour of Ott Christoph Hilgenberg*. *Proceedings of the 3rd Lautenthaler Montanistisches Colloquium*, Mining Industry Museum,



## References

- Lautenthal (Germany) May 26, 2001 (INGV Publication, Rome), 85-95.
- Scalera G. (2003). The expanding Earth: a sound idea for the new millennium. In: G. Scalera and K.-H. Jacob (eds.): *Why Expanding Earth? – A book in Honour of Ott Christoph Hilgenberg*. Proceedings of the 3rd Lautenthaler Montanistisches Colloquium, Mining Industry Museum, Lautenthal (Germany) May 26, 2001 (INGV Publication, Rome), 181-232.
- Scalera, G. (2003). Bibliographical sources for the expanding Earth. In: G. Scalera and K.-H. Jacob (eds.): *Why Expanding Earth? – A book in Honour of Ott Christoph Hilgenberg*. Proceedings of the 3rd Lautenthaler Montanistisches Colloquium, Mining Industry Museum, Lautenthal (Germany) May 26, 2001 (INGV Publication, Rome).
- Scalera, G. (2006). The Mediterranean as a slowly nascent ocean. *Annals of Geophysics, Supplement to V. 49, No. 1*, 451-482.
- Scalera, G. (2008). Great and old earthquakes against great and old paradigms – paradoxes, historical roots, alternative answers. *Advances in Geosciences*, 14, 41-57.
- Scalera, G. (2009). Mantovani and his ideas on the expanding Earth, as revealed by his correspondence and manuscripts. *Annals of Geophysics*, 52(6), 615-648.
- Scalera, G. (2011). South American volcanoes and great earthquakes. Article Cwojdzinski. Rome, (2012), 492.
- Scalera, G. (2011). The Earth Expansion Evidence, A challenge for geology, geophysics and astronomy. Contribution to the Interdisciplinary Workshop, held in Erice, Sicily, Italy (4-9 October 2011). Post-conference publication edited by Giancarlo Scalera (editor in chief), Enzo Boschi, and Stefan Cwojdzinski. Rome (2012), 492.
- Scalera, G. (2013). The vague volcano-seismic clock of the South American Pacific margin. *Advances in Geosciences*, 35, 89-103.
- Scalera G., Braun, T. (2003). Ott. Christoph Hilgenberg in twentieth century Geophysics. In Scalera, G and Jacob, K.-H., (Editors) 2003. *Why Expanding Earth? A book in honour of Ott Christoph Hilgenberg*. INGV publisher Roma. 25-41.
- Scalera, G., Jacob, K.-H., (Editors) (2003). *Why Expanding Earth? A book in honour of Ott Christoph Hilgenberg*. INGV publisher Rome. 465 pp with extensive bibliography.
- Scalera, G. (editor in chief): Hilgenberg, O. C. (2003/1933/1939) Formation and development of the: contraction or expansion. In Giancarlo Scalera, and Karl-Heinz Jacob (eds): *Why Expanding Earth?*

## The Hidden History of Earth Expansion

- Proceedings of the Lautenthal Colloquium, held on May 26, 2001  
Honour off OttChristoph Hilgenberg. INGV, Rome 2003.
- Scalera, G., Boschi, E. and Cwojdzinski (Editors) (2012). The Earth Expansion Evidence – A challenge for Geology, Geophysics and Astronomy. Selected Contributions to the Interdisciplinary Workshop of the 37th International School of Geophysics EMFCSC, Erice (4-9 October 2011), Aracne Editrice, Rome, 494pp.
- Schaer, J.P. and Rogers, J. (1987). The Anatomy of Mountain Ranges. Princeton University Press, Princeton, N.J. pp.298.
- Sharaf, M. (1983). Fury on Earth, A Biography of Wilhelm Reich. St. Martin's Press, New York, xiii + 550 pp.
- Schirber, M. (2005). Core of a Supernova Goes Missing. At: <http://www.space.com/1168-core-supernova-missing.html>.
- Scholz, C.H. (1980). Shear heating and the state of stress on faults. *J.Geophys. Res.* 85 (No. B11), 6174-6184
- Scholz, C.H. Beavan, J. Hanks, T.C. (1979). Frictional metamorphism, argon depletion, and tectonic stress on the Alpine Fault, New Zealand. *J. Geophys. Res.* 84 (No. B12), 6770-6782
- Schwinner, R.G. (1924). Scherung, der Zentralbegriff der Tektonik. *Cbl. Miner. Geol. Paläont.* 469-479
- Sciama, W. D. (2012/1959) The unity of the Universe. Courier Corporation ISBN 0486135896 p. 256.
- Scoppola, B. Boccaletti, D. Bevis, M. Carminati, E. Doglioni, C. (2006). The westward drift of the lithosphere: A rotational drag? *Geol. Soc. Am. Bull.* 118/1-2, 199-209. Doi: 10.1130/B25734.1.
- Scotese, C.R. (1994). Paleogeographic maps. In: Klein, G. D. ed. Pangea: paleoclimate, tectonics, and sedimentation during accretion, zenith, and breakup of a supercontinent. Geological Society of America Special Paper, 288.
- Scotese, C.R. (2014). Atlas of Permo-Carboniferous Paleogeographic Maps (Mollweide Projection), Maps 53-64, Vol. 4, The Late Paleozoic, PALEOMAP Atlas for ArcGIS, PALEOMAP Project, Evanston, IL.
- Seclaman, M. (1982). Semnificatia genetica a liniatiilor minerale in sisturile cristaline din Carpatii Meridionali. *St. Cerc. Geol. Geofiz. Geogr.Ser. Geol.* 27,8-17.
- Seebeck, T.J. (1826). Über die magnetische Polarisation der Metalle und Erze durch Temperaturdifferenz. *Ann. Phys.*, 82/3, 253-286.
- Shannon, M. C. & Agee, C. B. (1998). Percolation of core melts at lower mantle conditions. *Science* 280, 1059 – 1061.

## References

- Shehu, V. (1971). The age and origin of the porphyry granite of Fierza. (In Albanian).Bul.Of Sc. Tirana Univ.No 1 p 127 - 141.
- Shehu, V. (1988). Developing Earth. (In Albanian). Tirana, Albania. Sht. Bot. 8 Nëntori, 180.
- Shehu, V. (2004). The Earth, a sample of universe in our hands, according to the Earth expansion through growing and developing processes. New Concepts in Global Tectonics. Urbino Italy: Workshop, Aug. 29- 31.
- Shehu, V. (2005). The Growing and Developing Earth. No. Charleston, S.C.: BookSuege, LLC (2005), ISBN 1-4196-1963-3, USA, 218.
- Shehu, V. (2009). The Growing and Developing Earth. (In Albanian).Tiranë, Albania: Sht. Bot. Dudaj. 361.
- Shehu, V. (2012/2011). Earth Expansion through Activity of the Earth Core-Kernel as an active cosmic Object. In: The Earth Expansion Evidence, A challenge for geology, geophysics and astronomy. Selected Contributions to the Interdisciplinary Workshop, (held in Erice, Sicily, Italy 4-9 October. 2011). 243-262. Post-conference publication edited by GiacarloScalera (editor in chief), EnzoBoschi, and Stefan Cwojdzinski. 263-273. Rome.
- Shehu, V. (2016). The Earth's Core, an Energetic Cosmic Object. Printed by Create Space, An Amazom.com Company. USA 2016. 80p. <https://www.amazon.ca/Earths-Core-Energetic-Cosmic-Object/dp/1512290874>.
- Shen, W.B, et al. (2008). The expanding Earth: evidences from temporary gravity fields and space geodesic GEPH. Research Abstracts V. 10 EGU2008-A-0473.
- Shields, O. (1979). Evidence for initial opening of the Pacific Ocean in the Jurassic. Paleogeography, Paleoclimatology, Paleoecology 26, 181-220.
- Shields, O. (1997). Is plate tectonics withstanding the test of time? Annali di Geofisica, Vol XL, 1-8.
- Smiley, C.J. (1992). Plaeofloras, faunas, and continental drift: Some problem areas. In: S. Chatterjee and N. Hotton (Eds). New Concepts in Global Tectonics. Texas Tech. University Press, 241-257.
- Smith, A.G. (2006). Tethyan Ophiolite emplacement, Africa to Europe motion, and Atlantic spreading. In: The Tectonic Development of the Eastern Mediterranean Region. A.H.F. Robertson and D. Mountrakis, (Eds.). (London Geographical Society, Special Publication 260, 1-9.
- Smith, A.G. and Hallam, A. (1970). The fit of the southern continents: Nature, 225, 139-144.

## The Hidden History of Earth Expansion

- Smith, A.G. Briden, J.C. and Drewry, G.E. (1973). Phanerozoic World Maps. In Hughes, N.F. *Organisms and Continents through time. Special Papers in Palaeontology*. 12, 1-43.
- Smith, A.G. Hurley, A.M and Briden, J.C. (1980). *Phanerozoic Palaeocontinental World Maps*. Cambridge University Press Earth Science Series. 107 pp.
- Smith A. G. Smith D. G. & Funnell B. M. (1994). *Atlas of Mesozoic and Cenozoic coastlines*. Cambridge University Press.
- Soja, C.M. Antoshkina, A.I. (1997). Coeval development of Silurian stromatolite reefs in Alaska and the Ural Mountains: Implications for paleogeography of the Alexander terrane. *Geology*, 25/6, 539-542.
- Spencer, E.W. (1977). *Introduction to the Structure of the Earth*. McGraw-Hill, Paperback, 640p.
- Steiner, J., (1967). The sequence of geological events and the dynamics of the Milky Way galaxy. *Jour. Geol. Soc. Australia*, 14, 99-132.
- Steiner, L. (2014). Von der alpinen Schub- zur Gleitdecke. (From Alpine thrust nappe to downsiding thrust sheet). *Z. geol. Wiss.*, 41-42, 185-196.
- Steinhorsson S., Thoraninsson S. (1997). Iceland. In: Moores E.M. and Fairbridge R.W. (eds.) *Encyclopedia of European and Asian Geology*. Chapman & Hall, London, 341-352.
- Stern and Gerya (2018) Subduction initiation in nature and models: A review, *Tectonophysics* 746, 173-198.
- Stevens, G. (1988). John Bradley: a New Zealand pioneer in continental drift studies. *Geol. Soc. New Zealand Newsletter*, No 17: 30–38. Quoted in Frankel (2012) Volume II.
- Strick, J.E. (2015). *Wilhelm Reich, Biologist*. Harvard University Press, Cambridge, MA, 487 pp.
- Stille, H. (1936). The present tectonic state of the Earth. *Bull. Am. Assoc. Petrol. Geol.* 20, 849-80.
- Storetvedt, K.M. (1997). *Our evolving planet: Earth history in a new perspective*. Alma Mater, Bergen, pp. 456.
- Storetvedt, K.M. (2010). Falling plate tectonics–rising new paradigm: salient historical facts and current tuation. *NCGT Newletter*, 55, 4-34.
- Strong, D.F. Hanmer, S.K. (1981). The leucogranites of southern Brittany: origin by faulting, frictional heating, fluid flux and fractional melting. *Can. Mineralogist*, 19, 163-176.
- Strutinski, C. (1987). Strike-slip faults – what are they really standing for? General features with exemplifications from the Romanian

## References

- Carpathians. *Studia Univ. Babeş-Bolyai, Geologia-Geographia*, XXXII/2, 47-59.
- Strutinski, C. (1990). The importance of transcurrent phenomena in mountain building. In: *Critical Aspects of the Plate Tectonics Theory, Volume II* (Eds. V. Belousov et al.), Theophrastus Publ. S.A. Athens, 141-166.
- Strutinski, C. (1994). An orogenic model consistent with Earth expansion. In: *Frontiers of Fundamental Physics* (Eds. M. Barone, F. Selleri), Plenum Press, New York, 287-294.
- Strutinski, C. (1997). Causal Relations between Crustal Transcurrent Systems and Regional Metamorphism, with Reference to the Upper Proterozoic - Cambrian Formations of Central Dobrogea. Doctoral Thesis (Unpublished, in Romanian), Universitatea Bucuresti, 288p
- Strutinski, C. (2012). Contradictory aspects in the evolution of life hinting at gravitational acceleration through time. In: *The Earth Expansion Evidence. A Challenge for Geology, Geophysics and Astronomy*. (Eds.: G. Scalera, E. Boschi, S. Cwojdzinski). Selected contributions to the Interdisciplinary Workshop of the 37th International School of Geophysics EMFCSC, Erice (4-9 October 2011), Aracne Editrice, Rome, 343-364.
- Strutinski, C. (2013). Wachsende Schwerkraft – Triebfeder der Evolution? <http://www.wachsende-erde.de/web-content/bilder/strut/Strutinski-Wachsende%20Schwerkraft.pdf>
- Strutinski, C. (2015). Zwei Jahrhunderte Geologie. Von Abraham Gottlieb Werner zu Samuel Warren Carey. [http://www.wachsende-erde.de/web-content/2\\_material6strutinski1.html](http://www.wachsende-erde.de/web-content/2_material6strutinski1.html)
- Strutinski, C. (2016). Massenextinktionen aus Sicht der Hypothese eines wachsenden Erdballs. <http://www.wachsende-erde.de/web-content/bilder/strut/massenextinktionen5.pdf>
- Strutinski, C. (2017). An alternative view on subduction zones. Powerpoint presentation at the 2nd International Physics Conference, Brussels, 28-30 August 2017. *J. Phys. Chem. Biophys.* 7/3 (Abstract), 64. Doi: 10.4172/2161-0398-C1-023.
- Strutinski, C. (2018a). Fragmentation of the northeastern paleo-Indian oceanic domain by a creeping lithospheric current : Evidence from the Ontong Java Plateau. *J. Phys. Chem. Biophys.* 8 (Abstract), 74. Doi: 10.4172/2161-0398-C2-031.
- Strutinski, C. (2018b). Plattentektonik passé. Wie Mantelströme und Erdwachstum den indopazifischen Raum gestalten. Eigenverlag, Saarbrücken, 127p.

## The Hidden History of Earth Expansion

- Strutinski, C. (2019). Orogene auf einer wachsenden Erde („Vergiss dein Schulwissen – die Erde ist anders“). Powerpoint to the Presentation held in the Heiner Studt Studio, Hamburg, 18.10.2019.
- Strutinski, C. Paica, M. Bucur, I. (1983). The Supragetic Nappe in the Poiana Rusca Massif – an argumentation. *An. Inst. Geol. Geofiz*, LX, 221-229.
- Strutinski, C. Puste, A. (2001). Along-strike shearing instead of orthogonal compression: A different viewpoint on orogeny and regional metamorphism. *Himalayan Geol.* 22/1, 191-198.
- Strutinski, C. Stan, R. Puste, A. (2003). Geotectonic hypotheses at the beginning of the 21st century. In: *Why Expanding Earth? A Book in Honour of Ott Christoph Hilgenberg* (Eds. G. Scalera, K.H. Jacob), INGV, Rome, 259-273.
- Stuart, F.M. Lass-Evans, S. Fitton, J.G. and Ellam, R.M. (2003). High  $^3\text{He}/^4\text{He}$  ratios in picritic basalts from Baffin Island and the role of a mixed reservoir in mantle plumes. *Nature*, 424, 57-59.
- Sudiro, P. (2014). The Earth Expansion Theory and its transition from scientific hypothesis to pseudoscientific belief. *History of Geo-and Space Sciences*, No 135-148. Web: <https://www.hist-geo-space-sci.net/5/135/2014/hgss-5-135-2014.pdf>.
- Suess, E. (1889). *Dass Antilitz der Erde*, 2, Pt. 3, Die mere der Erdee, Vienna. 704p.
- Sullivan, W. (1974). *Continents in motion; the new Earth debate*. New York, NY: McGraw-Hill.
- Sylvester, A.G. (1988). Strike-slip faults. *Geol. Soc. Am. Bull.* 100, 1666-1703
- Szpak, S. Mosier-Boss, P. Gordon, F. Dea, J. Miles, M. Khim, J. Forsley, L. (2008). LENR research using co-deposition. In *Proc. the 14th Int. Conf. on Condensed Matter Nuclear Science*, Washington, DC (pp. 766–771).
- Tarling, D.H. Runcorn, S.K. (1973). *Implications of Continental Drift to the Earth Sciences*. (NATO Advanced Study Institutes) Symposium, University of Newcastle, England April 1974. Academic Press. Volume 2, 1184 pp.
- Tchalenko, J.S. (1970). Similarities between shear zones of different magnitudes. *Geol. Soc. Am. Bull.* 81, 1626-1640.
- Tchudinov, J.W. (1998) *Global Eduction Tectonics of the Expanding Earth*. VSP. Utrecht, the Netherlands.
- Tebbe, J. (1980). Print and American culture. *American Quarterly*, 32(3), 259–279.

## References

- Tharp, M., Frankel, H. (1986). Mappers of the deep. Natural history. New York NY, 95(010), 48-48.
- Thompson, D.W. (1917/1966). On Growth and Form. Cambridge University Press, xiv + 346 pp.
- Thomson, W. (1854). Thermo-electric currents. Trans. Roy. Soc. Edinburgh, 21, 123-171.
- Turcotte, D.L., Oxburgh, E.R. (1973). Mid-plate Tectonics, Nature 244, 337-339.
- Tuttle, R.J. (2012). The Fourth Source: Effects of Natural Nuclear Reactors. Universal Publishers, 580p.
- Van Andel, T.H. 1984. Plate Tectonics at the threshold of middle age. Geologie en Mijnbouw, 63, 337-341.
- Vanderhaeghe, O., Teyssier, C. (1997). Formation of the Shuswap metamorphic core complex during late orogenic collapse of the Canadian Cordillera: Role of ductile thinning and partial melting of the mid- to lower crust. Geodinam. Acta, 10/2, 41-58. Doi: 10.1080/09853111.1997.11105292
- Vanderhaeghe, O., Burg, J.P., Teyssier, C. (1999). Exhumation of migmatites in two collapsed orogens: Canadian Cordillera and French Variscides. In: Exhumation Processes: Normal Faulting, Ductile Flow and Erosion (Eds. U.Ring, M.T. Brandon, G.S. Lister, S.D. Willett), Geol. Soc. London, Spec. Publ. 154, 181-204.
- Van der Voo, French, A.R. (1974). Apparent polar wandering for the Atlantic-bordering continents: Late Cambrian to Eocene. Earth Science Review. 10, 99-119.
- Van Hinsbergen, D.J. Steinberger, B. Doubrovine, P. V. and Gassoller, R. (2011). Acceleration and deceleration of India-Asia convergence since Cretaceous: Roles of mantle plumes and continental collision. Jour. Geophysics Research, 116, doi: 10.1029/2010JB 008081.
- Van Steenis, C.G.G.J. (1963). Pacific Plant Areas, Vol. 1, Monograph 8, Manila: National Institute of Science and Technology.
- Vauchez, A. Nicolas, A. (1991). Mountain building: strike-parallel motion and mantle anisotropy. Tectonophys. 185, 183-201
- Veevers, J.J., Powell, C. McA. and Johnson, B.D. (1980). Sea-floor constraints on the reconstruction of Gondwanaland. Earth and Planetary Science Letters. 51, 435-444.
- Verhoogen, J. (1980). Energetics of the Earth. National Academy of Sciences, Washington, D.C. 139p.
- Verma, O. and 4 Others. (2016). Historical biogeography of the Late Cretaceous vertebrates of India: Comparison of Geophysical and

## The Hidden History of Earth Expansion

- Paleontological data. In: A. Khosla and S. G. Lucas (Eds). Cretaceous Period Biotic Diversity and Biogeography. Bull. New Mexico Museum Natural History and Sciences, 71, 317- 330.
- Vine, F.J., Matthews, D.H. (1963). Magnetic Anomalies over Oceanic Ridges. Nature London 199, 947-949.
- Vogel, K. (1983). Global Models and Earth expansion. In Carey, S.W. The Expanding Earth – A Symposium. Sidney, 1981. University of Tasmania 17-27.
- Vogel, K. (1984). Beiträge zur Frage der Expansion der Erde auf der Grundlage von Globenmodellen. Z. geol. Wiss. 12, 563-573.
- Vogel, K. (1990). The expansion of the Earth - an alternative model to the plate tectonics theory. In: Critical Aspects of the Plate Tectonics Theory; Volume II, Alternative Theories. Theophrastus Publishers, Athens, Greece, 14-34.
- Vogel, K. (2003). Global models of the expanding Earth. In Scalera, G and Jacob, K-H. (Editors) 2003. Why Expanding Earth? A book in honour of Ott Christoph Hilgenberg. INGV publisher Roma, 351-356.
- Vogel, K. (2012). Contribution to the Question of Earth Expansion Based on Global Models. In: The Earth Expansion Evidence, A challenge for geology, geophysics and astronomy. “Selected Contributions to the Interdisciplinary Workshop,” (held in Erice, Sicily, Italy 4-9 October. 2011). Post-conference publication edited by Giacarlo Scalera (editor in chief), Enzo Boschi, and Stefan Cwojdzinski. 161-172. Rome.
- Wallin, E.T. Noto, R.C. Gehrels, G.E. (2000). Provenance of the Antelope Mountain quartzite, Yreka Terrane, California: Evidence for large-scale late Paleozoic sinistral displacement along the North American Cordilleran margin and implications for the mid-Paleozoic fringing-arc model. Geol. Soc. Am. Bull. Spec. Paper 347, 119-131. Doi: 10.1130/0-8137-2347-7.119.
- Walther, H.J., von Gehlen, K., Haditsch, G., Maus, H.J. (1999). Lagerstättenkundliches Wörterbuch. GDMB, Clausthal, 688 pp.
- Wang C. Jin A. (2006). Mechanism of the Mafic Dyke Swarms Emplacement in the Eastern Block of the North China Craton. In: Hou G. and Li J. (eds.) Precambrian Geology of the North China Craton. Journal of the Virtual Explorer, Electronic Edition, ISSN 1441-8142, vol. 24, paper 3, doi:10.3809/jvirtex.2006.00161.
- Wegener, A. (1912). Die Entstehung der Kontinente und Ozeane. Geologische Rundschau 3, 276-292.



## References

- Wegener, A. (1912). *The Origins of continents and oceans*. (Dover Earth Science: 1915). Originally presented at A Yearly Meeting of the German Geological Society (6 January, 1912).
- Wegener, A. (1915). *Die Entstehung der Kontinente und Ozeane* (The Origin of Continents and Oceans). *Sammlung Vieweg Nr. 23*, Braunschweig, 94p.
- Wegener, A. (1924). *The Origin of Continents and Oceans*. (trans. 3rd ed.). Methuen, London; Dutton & Co. New York, pp.212.
- Wegener, A. (1966). *The origin of continents and oceans* (trans. 4rd ed.). Dover Publications, New York.
- Welsh, W.E. Doyle, L.R. (2013). World with two stars. *Scientific American* 309 (5): 4. (Nov. 2013). 40-47. DOI: 10.1038/scientificamerican.1113-40.
- Wenbin S, and Sung-Ho, N. (2017). Atmospheric acceleration and Earth expansion deceleration of the Earth rotation. *Geodesy and Geodynamics*. 8, 421-426.
- Wertenbaker, W. (1974). *The Floor Of The Sea: Maurice Ewing and the Search to Understand the Earth*. ISBN: 978-0316931212.
- Wilhelm Reich Infant Trust.  
<https://www.wilhelmreichtrust.org/biography.html>.
- Winchester, S. (2001). *The map that changed the world*. Viking, pp.338.
- Wingate, M.T.D., Pisarevsky, S.A., Evans, D.A.D. (2002). Rodinia connections between Australia and Laurentia: no SWEAT, no AUSWUS?, *Terra Nova* 14, No. 2, 121-128.
- Wood, J.A. (1968). *Meteorites and the origin of planets*. New York: The McGraw Hill Companies, 117.
- Wood, R.M. (1979). Is the Earth getting bigger! Some geologists believe that our world is expanding. *New Scientist* 8 February 1979. p 387-388.
- Wood, R.M. (1985). *Dark Side of the Earth*. Harper Collins Publishers.
- Wright, L.A. Troxel, B.W. (1969). Chaos structure and Basin and Range normal faults: Evidence for a genetic relationship. *Geol. Soc. Am. Abstracts with Programs*, 1/7, 242.
- Wright, L.A. Troxel, B.W. (1973). Shallow fault interpretation of Basin and Range structure, southwestern Great Basin. In: *Gravity and Tectonics* (Eds. K.A. de Jong, R. Scholten), Wiley, New York, 397-407.
- Xiao W., Songlian A O., Yang L, Chunming H Bo W, Zhang J E, Zhang, Z Y, Rui L, Zhan Yu C and Soong S H (2017) Anatomy of composition and nature of plate convergence: Insights for alternative thoughts for terminal India-Eurasia collision. *China Earth Sciences*, 60, 1015-1039.

## The Hidden History of Earth Expansion

- Yano, T. Vasiliev, B.I. Choi, D.R. et al. (2011). Continental rocks in Indian Ocean. NCGT Newsletter 58, (Australia NGCT.org, 2011). 09-28.
- Yuecheng, C. et al. (1998). A new interpretation of the Himalayan orogenic belt. Chinese Science Bulletin, 43.1, 83-84. DOI: 10.1007/BF02885523.
- Young, C. J. Lay, T. (1987). The core-mantle boundary. Earth Planet Science Annual Review, 15, (1987).25-46.
- Young, T.E. (2010). Cloudy with a chance of stars. Scientific American V. 302. 34-41.DOI:10.1038/scientific American 0210-34.
- Zagorevski, A. et al. (2008). Tectonic architecture of an arc-arc collision zone, Newfoundland Appalachians. Annals of Geophysics, Supplement to V.49, No. 1. Special Paper #436 in Draut A. Clift, P.D. and D.W. Scholl (Eds.). Formation and application of the sedimentary record in arc collision zones. (Boulder, CO: Geographical Society of America, Inc. Special Paper #346,). 309-334.
- Zheng, H. Powell, C.M. Zhou, Z.A.J. Dong, G. (2000). Pliocene uplift of the northern Tibet Plateau. Geology, 28, 715-718.
- Zolensky, M.E. et al. (2006). Mineralogy and petrology of Comet 81 P/Wild 2 Nucleus Samples. In Science, V. 314, No. 5806. (Stanford, CA: Highwire Press, 2006).1735-1739.