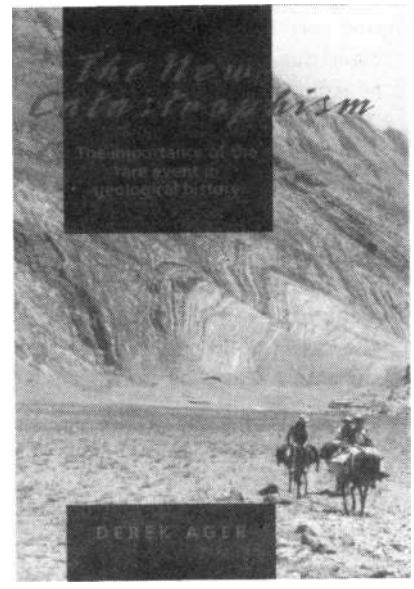
The New Catastrophism: The importance of the rare event in geological history

by the late
PROFESSOR DEREK AGER,
Cambridge University Press, 1993.

Reviewed by Dr Andrew Snelling



'Rare and violent events through geological time are the theme of this readable and thought-provoking view of the Earth's history. The evidence for episodic events and rare "catastrophic" happenings has been gleaned from the geological record during the author's travels all over the world. Such events are shown to dominate over the gradual and continuous processes that we see in the record of the history of the Earth. From hurricanes to episodic evolution, from colliding continents to asteroid impacts —the importance of these events is considered with many illustrations, both pictorial and anecdotal.

Jargon-free and entertaining, the ideas presented in this book will stimulate the student, provoke the professional and provide an enjoyable read for all.'

So says the flyleaf to this latest book to come from the pen of Derek Ager, already well known to creationists because of his previous book **The Nature of the Stratigraphical Record,** which has already gone through two editions and has just been released again in a third. Ager died peacefully in Swansea (Wales) during the final stages of the production of this book, which is to be regretted because we have now lost one who in some senses has been an ally. Not that he has seen it that way at all, for in the preface to this book Ager is at pains to dismiss any possibility as he sees it of his views being latched on to by creationists. Indeed, he calls us

'bible-oriented fanatics, obsessed with myths such as Noah's flood',

and his disclaimer reads:

'In view of the misuse that my words have been put to in the past, I wish to say that nothing in this book should be taken out of context and thought in any way to support the views of the "creationists" (who I refuse to call "scientific")'.

He repeats these sentiments in the main text also. Nevertheless, Ager has still unwittingly provided us with further 'ammunition'. Not that his book is always easy reading, although the anecdotal and travelogue style lightens the geological heaviness. But those without a detailed geological and geographical background will need to read this book with a detailed world map in one hand and a complete listing of all the periods, epochs and ages of the geological timetable in the other, if one is going to be able to keep track of all the examples that he has used.

At the outset Ager points out that whereas Charles Lyell was a great theorizer, Georges Cuvier was an unsung champion of science who is much misunderstood. Cuvier's multiple catastrophes which he deduced from the field evidence were, as Ager observes, swept aside by Lyell's steady state 'substantive' uniformitarianism — that geological processes have always operated in the same way and at the same rates as they do today. In other words, Lyell dismissed anything that hinted at catastrophism, yet this is where Ager shows in this book that Lyell was definitely wrong. Not that Ager has given up uniformitarianism and become a catastrophist in the sense that we creationists would use the term. No, his 'new catastrophism' is all about episodic catastrophes that produced geological deposits and features in as fleeting a moment of time as a hurricane or storm, separated by immense eons when virtually no geological deposits and contained fossils were being formed. Or, to put it another way,

'. . . it is obvious to me that the whole history of the Earth is one of short, sudden happenings with nothing much in particular in between. I have often been quoted for my comparison of Earth history with the traditional life of a soldier, that is "long periods of boredom separated by short periods of terror"' (pp. 197-198).

Indeed, Ager reinforces his views on catastrophism with copious examples of fossils and geological deposits that could not have formed by any other means than by sudden catastrophes or disasters. Much of the book consists of these examples, taken both from present happenings and by comparison with an-

cient deposits. But the astounding conclusion that he reaches is that there are *'more gaps than record'*, or to put it another way, the bulk of geological time occurred during the gaps in the record! As he rightly says,

> *'We do not study the history of the Earth, we only study what the rocks tell us.'* And, *'It may be said that Earth history is not a record of what actually happened'*, but *'is a record of what happens to have been preserved'* (p. 14).

Of course, this merely begs the question as to how he knows that the gaps in the record represent vast eons of time? To us *'bible-oriented fanatics'* the eons of time are not obvious in the supposed gaps, for we are not shackled by the time constraints demanded by evolution, both biological and geological, as Ager and his colleagues are. Indeed, it is my experience, and that of fellow creationist geologists, that most of the boundaries between the geological strata show themselves to instead represent a fleeting moment in which the pattern of sedimentation changed, as a walk into the Grand Canyon, for example, will readily illustrate. What is of course not 'obvious' to Ager, but should be to creationists, is that if the gaps are not there then neither are the eons of geological time, and all one is left with is a record of catastrophe!

It would be tempting to enumerate and comment upon his copious examples of catastrophic deposits and events, but not only does space preclude that, it would rob you of the experience of reading Ager's book for yourself. Nevertheless, I will highlight some of my 'favourites'. The evidence for catastrophic flooding in the *'channelled scablands'* of the north-western USA is now well known to all (pp. 19-22), but is worth repeating as a spectacular example of what catastrophic flooding can do. Similarly, Ager refers to the erosion of the basalt lava dams that temporarily blocked the Colorado River in the Grand Canyon, and notes that *'erosion of the Grand Canyon did not take place at an imperceptibly slow and constant rate'* (p. 23). While certainly not the view of Ager, could it be that the whole Grand Canyon was largely eroded due to catastrophic flooding when a natural dam was breached, as with the 'channelled scablands'? We creationists insist that the evidence for this is there for all 'who have eyes to see'.

It is refreshing to see that Ager accepts the significance of polystrate fossils as evidence of catastrophic sedimentation. He refers to the fossilised trees standing up to 10 metres high in the Lancashire coalfield of north-west England (pp. 48-49) and insists that *'obviously sedimentation had to be very rapid to bury a tree in a standing position before it rotted and fell down'.*

I found it ironic, however, that Ager should make an obvious blunder in relation to his interpretation of the Coconino Sandstone in the Grand Canyon (p. 42). Not only does he ignore the published evidence that the cross-beds represent underwater sand-waves and the footprints are those of vertebrates struggling to escape the waters engulfing them, but he ignores his own conclusions in the previous chapter. There he points to graphic examples to illustrate his point that nothing of any real geological significance happens in deserts today (pp. 24—28) — the story of a patrol in the North African campaign of the Second World War investigating some unusual vehicle tracks, only to find that they led to a camp-site of the First World War! In spite of this Ager writes that,

> *'desert sediments in the form of sand-dunes are continuously on the move and do not usually accumulate for geologists of the future',*

and

> *'what is more, desert animals and plants are unlikely to be preserved'* (p. 28).

So how can he then in the next chapter cite the 96 metre (average) thick Coconino Sandstone with its strong cross-bedding up to 20 metres high as representing an aeolian (desert) deposit containing *'abundant vertebrate and invertebrate trace fossils'?* At least he recognises that the footprints always indicate the animals that made them were walking up the cross-bed slopes.

Ager helpfully surveys all today's different sedimentary environments and chooses modern examples to compare with ancient deposits. I particularly enjoyed his treatment of turbidity currents and the deposits they produce — turbidites (pp. 103-108). There are most definitely thick sequences of turbidites in the rock record and they certainly point to catastrophism on a grand scale. His chapter 'Sudden storms are short' (chapter 9) highlights the work of hurricanes, typhoons and storms in producing tempestites or storm beds, and he rightly says that the importance of tsunamis or storm surges has probably been underestimated. The examples he gives are impressive (p. 120). Likewise landslips and earthquakes leave a devastating trail. I particularly found his example of the Sutton Stone conglomerate bed near Swansea in South Wales devastatingly impressive! Whereas his uniformitarian colleagues have suggested 'with very little fossil evidence' that this conglomerate spans three to five ammonite zones and therefore up to 5 million years in time, Ager believes it was deposited in a matter of hours or minutes by a hurricane, severe storm or even a tsunami! And he even comes to this conclusion by using the present as a key to the past, in that the matrix-supported conglomerate of the Sutton Stone is characteristic of mass flow deposits and *'not the sort of deposit that one sees on a modern pebble beach'.*

It is a shame that the text is spoiled by a few incorrect geographical details and misspellings of geographical locations, examples of which I was easily able to spot because they happen to be places in my part of the world that at least I have had the opportunity to visit. In fairness to Ager, it appears that he never had the opportunity to visit Australia, but even though he visited New Zealand he is wrong in stating that the famous pink and white terraces destroyed by the 1886 Tarawera eruption were in Lake Rotorua (p. 160) — they weren't.

These small blemishes aside, it is instructive to see yet again the pitfalls into which doctrinaire evolutionists such as Ager must fall when they come to

present the supposed evidence for evolution. One would have thought that the average lay person could be forgiven for thinking that slight changes in the shapes of brachiopods' shells in the fossil record is 'proof of evolution because 'look, changes have occurred with time!' Yet Ager the academic evolutionist sadly is blinded by these trivial examples of speciation or micro-evolution, such as the rare Hawaiian goose or Ne Ne that is supposed to have 'evolved' from Canada geese blown off the course of their normal routes by storms (pp. 136-137), as if these are somehow evidence of macro-evolution. Geese breeding geese and brachiopods breeding brachiopods is not frogs turning into princes, however wishful the thinking of evolutionists may be. It is sad that we creationists have to continually point these misconceptions out to lay people, but the tragedy is these academics actually believe in all of this!

And then there is the poor maligned panda who we are told, *a la* Stephen Gould, is *'essentially a herbivore "designed" as a carnivore' (p.* 138)! What nonsense to suggest, as Gould does too, that the panda is a very inefficient animal and *'really a dead loss'* — an example of *'one of Nature's accidents'* so that *'it is not surprising that this evolutionary accident is close to extinction '.* So what if *'it has poor eyesight, poor hearing and a poor sense of smell',* and *'is slow-moving';* the fact that its thumb *'or modified wrist bone' 'enables the animal to strip the leaves off its favourite bamboo food',* its flattened back teeth are good for grinding a vegetable diet, and its skeleton is suited for a herbivorous diet, all point to its being designed just for that — a herbivorous diet of bamboo with sharp teeth to shred it raw! After all, who cares about poor eyesight, hearing or smell if one is designed to eat raw bamboo. And evolutionists believe it has been doing this successfully for millions of years.

How misleading of Ager to suggest (p. 149) that the nasty hot, evil-looking pools teeming with life in the form of bacteria and blue-green algae around Mt St Helens within a remarkably short time of its eruption having devastated the surrounding countryside is somehow an example of how such organisms first evolved on the early earth. He doesn't say it outright, but the inference is there, yet bacterial **regrowth** after the Mt St Helens eruption can hardly be an example of how life came from non-life when there was always life existing in the area around Mt St Helens to 'seed' such a recovery. At least Ager redeems himself by perceptively pointing out that in fact 'the past can be a guide to the present, rather than the other way round' (p. 174). Indeed, *'a great deal depends on what we mean by the "present". When did our present "present" start?'* (p. 165). He makes a good point here when he says that *'it may be that it is a very odd and atypical present that we have to use to try to understand the past.'* How true! The post-Flood era in which we live is hardly typical of the Flood year! Yet as he illustrates with many examples, fossil graveyards can only have formed, even in the present, under catastrophic circumstances — disasters (pp. 169-170)!

As in his previous book and his papers, there are the usual Ager quotable quotes. On page 194 is a gem:

> *'Again I must express my own scepticism, since families and genera are only fictions, invented by man for his own convenience and are highly subjective. They can be related to human geography and the distribution of taxonomic "splitters". Species alone have some sort of validity in the taxonomic hierarchy, since they represent interbreeding or potentially interbreeding individuals, which may be judged statistically; but even this is impossible to prove in fossil assemblages.'*

Yet if species alone are valid, and they are impossible to prove in fossil assemblages because we can no longer see them interbreeding, then it is obvious that the supposed changes we see in the fossil record are in Ager's words, *'accidents of preservation'* and may not even represent micro-evolution or speciation. This emphasis on 'accidents' leads inevitably to Ager's closing pessimism — *'though the physical world will end with a bang, the organic world will probably end with a whimper'* (p. 198). After all, what meaning do we have in the present, let alone in the future, if we are just a result of accidents and that is all!

By all means read this book as it is a mine of interesting tid-bits, but get your local library to order it first before you borrow it. You can thereby save yourself paying the exorbitant pricetag, and instead spend it on more pages of excellent creationist materials!

A. A. S.