

Figure 3. Position of the pareiasaur in the sediments.

This new find of fossil tetrapods from the Russian platform, buried in standing position with head erect, indicates catastrophic sedimentation conditions. This fossil graveyard is consistent with the Biblical Flood and a contradiction to the slow-and-gradual uniformitarian doctrine.

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## The Permian extinction: *National Geographic* comes close to the truth

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In a recent article,<sup>1</sup> *National Geographic* deals with what is believed to be the greatest extinction ever—the Permian extinction. The author, Hoffman, travels around the world from the Czech Republic to the famous Karoo region in South Africa. Each time he reveals yet another face of the great extinction and consequently as many possible killers: an asteroid impact in Australia and Antarctica, worldwide ocean anoxia (oxygen depletion), and massive volcanism in Siberia.

Whichever the culprit (or culprits) the result was the same:

'About 250 million years ago, at the end of the Permian period, **something** killed some 90 percent of the planet's species. Less than 5 percent of the animal species in the seas survived. On land, less than a third of the large animal species made it. Nearly all trees died [emphasis added].'<sup>1</sup>

Standard geology recognizes nine major extinctions, of which the one that wiped out dinosaurs at the Cretaceous/Tertiary (K/T) boundary is the best known. Many geologists now believe an asteroid striking the Yucatan Peninsula was the cause. One of the most-invoked proofs for this is the shocked quartz crystals<sup>2</sup> (only recognized recently from nuclear test sites) which seem to be globally distributed at the K/T boundary, always associated with an anomalous, high iridium content. Also, some of the largest basalt lava flows known (e.g. the Deccan Traps in India) are associated with this boundary.

The setting is almost the same at the Permian/Triassic (P/T) boundary. Again we find shocked quartz crystals (in Australia and Antarctica), and the largest basalt lava flows ever (the Siberian Traps—covering an area of 1.3

million km<sup>2</sup> to a depth of more than three kilometres, enough to drown the whole planet in six metres of lava). In trying to explain the facts revealed in the geological record, geologists have dreamed up an array of catastrophic explanations.

### Asteroid impact

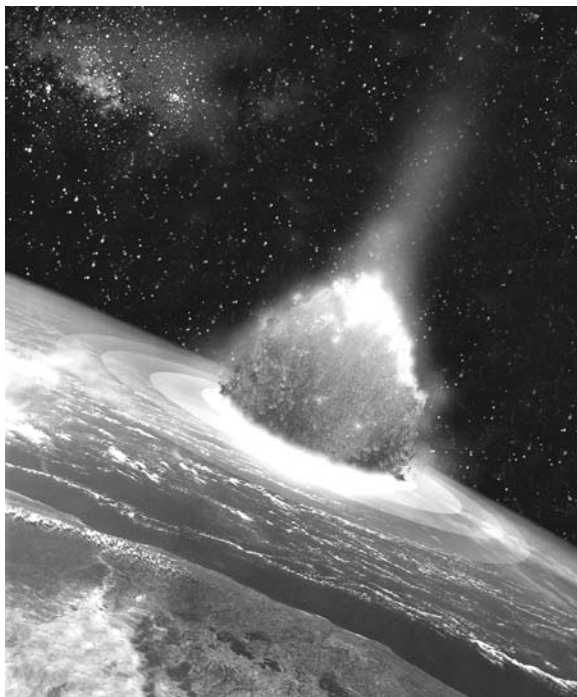
Rather than a series of local catastrophes, some geologists invoke the mother of all catastrophes—a global disaster that started with an asteroid impact in Australia, where a 120-km-wide crater was recently identified and attributed to a Late Permian impact.<sup>1</sup> The 'clouds of noxious gases' and dust thrown into the atmosphere blocked out the sun for months, triggering global cooling and acid snow and rain. Thus, almost all the plants and photosynthetic plankton were killed, disrupting the food chain so drastically that the plant eaters and their predators vanished. Fires and rotting trees then raised CO<sub>2</sub> levels and induced acute global warming which allegedly lasted for millions of years.

### Ocean anoxia

According to other geologists, the extinction happened when the circulation of the oceans stalled (for some unknown reason—some speculate that it was a lack of polar ice caps).<sup>1</sup> Without any ocean currents, the oxygen content of the water dropped drastically, and CO<sub>2</sub> levels grew as the by-products of bacterial digestion (mainly bicarbonate) accumulated in the deep ocean. Then, something—no one knows what—disturbed the seas and the dissolved CO<sub>2</sub> bubbled-up like soda as the bicarbonate depressurized. When the CO<sub>2</sub> entered the shallows, most sea-dwellers fell into a sort of deadly slumber. 'Perhaps the Permian ended with a whimper and not a bang', one of the proponents of this theory speculated.

### Volcanic eruptions

Not all geologists are keen on a



Some geologists invoke an asteroid impact to explain mass extinction.

catastrophe induced by an external cause. Interestingly, there was an energetic debate about whether the K/T extinction was externally or internally caused, after the asteroid impact idea was first seriously proposed.<sup>3</sup> Because of their well-known ‘catastrophobia’, most geologists look for more naturalistic and uniformitarian explanations for the shocked quartz, tektites and iridium at the K/T boundary. The battle of the K/T boundary was fought between asteroid impact and comet shower theories on one side,<sup>3-5</sup> and volcanic eruptions on the other.<sup>6,7</sup>

The *National Geographic* article reveals a similar division of opinion for the P/T extinction. The less catastrophically inclined compare the Siberian Traps and the Deccan Traps and blame both the P/T and K/T extinctions on paroxysmal volcanism. In this scenario, volcanic gases filled the atmosphere generating sulfuric acid and acid rain. Sulfate molecules blocked the sunlight inducing such intense global cooling that glaciation immediately started building caps and sheets of ice. The ocean level dropped dramatically, killing marine life in the shallows, and severely reducing biodiversity. They propose that methane escaped from the

ocean while the level was low and, combined with CO<sub>2</sub> from the volcanic eruptions and decaying organic matter, brought on severe greenhouse warming.

### One BIG catastrophe

The article in *National Geographic* reveals the serious problem facing uniformitarian geologists today. More and more the evidence has forced them to acknowledge that each of the nine major extinctions was caused by a real catastrophe. The first catastrophe was very difficult to accept—indeed it took them over one hundred years. But now they are talking about nine catastrophes, although they place them many millions of years apart! Is there a metaphysical fear welling up from the abyss? Are their uniformitarian views, which appeared to be unshakable since Lyell, bubbling away like volatiles in a degassing magma?

Creationists have addressed practically all these catastrophes within a Biblical framework and suggested they all took place during the Flood. The issue of impacts and the Genesis Flood is rather special however, and creationists are still working toward a coherent hypothesis.<sup>8,9</sup>

In 1988, I suggested (then in an evolutionary framework I’m afraid) that the volcanism of mantle origin associated with the K/T events was triggered by an asteroid impact.<sup>10</sup> I have also pointed out that plate motion over the hotspots was periodically disturbed, as shown by clearly marked bends in the sea mount ranges, the Hawaii-Emperor chain being probably the best example. As evidence started to accumulate, the idea of impact-triggered volcanism became more and more common in the literature in the early 1990s.<sup>11,12</sup> I find it reasonable now to attribute these disturbances to impacts during

the Flood.<sup>9</sup> Indeed, Baumgardner suggests ‘an extraterrestrial impact of modest size’<sup>13</sup> to explain a sudden conversion of metastable material in the upper mantle to a denser phase—a prerequisite for the Catastrophic Plate Tectonics.<sup>14</sup>

### Putting the pieces together

Some geologists wonder why the global ocean currents were so badly perturbed.<sup>15</sup> Yet they pay little attention to the continents drifting together into what is known as Pangea, just before the P/K extinction. It is a matter of elementary logic to connect the disruption of ocean circulation to the moving continents, especially when they assemble into virtually one landmass.

Now that I have an appreciation of the geological effects of the Biblical Flood, it is not difficult to imagine a reasonable scenario that explains the ‘puzzling’ evidence. Asteroid impacts at the beginning of the Flood<sup>13,14,16</sup> triggered catastrophic plate tectonics and the rapid movement of the continents. This severely disrupted oceanic circulation and lead to the ocean anoxia that poisoned much marine life.

The first impacts on land may have caused a classical, dust-induced global cooling, but later asteroids would have struck water, with opposite results—a greenhouse effect because of water vapour. It is logical to suppose that, before reaching a balance between subducted (consumed) ocean crust and accreted (newly generated) continental crust, the ocean bottom inflated,<sup>17</sup> pushing waters and sediments over the continents (which were already covered by the floodwaters). The poisoning of the shallows, as mentioned in the *National Geographic* article, may have occurred at this time.

The movement of such an enormous volume of dense, basaltic rocks to the surface of the earth—the Siberian Traps—would probably have affected the rotation of the planet. Also the mass movement of floodwaters covering the land would have amplified such changes.

There is need for a clear distinction at this point. Unlike evolutionary geologists, creationists do not need sophisticated scenarios to explain P/T or K/T, or any other extinction. The Flood can wrap the whole nine extinctions in one 400-day event. Climate change, no matter how drastic, would not produce serious extinctions in such a short time. Whatever climate changes may have occurred during the Flood, they were much less important than the changes, that occurred at the end of the Flood and which shaped the new world. The Ice Age was by far the most important aftermath (climate-wise) of the Flood, as Oard has so clearly demonstrated.<sup>18</sup>

Though not initially my purpose, this speculative sketch of a Flood scenario came naturally, like the pieces in a puzzle, while reading Hoffmann's article. Is there a time coming when, faced with the overwhelming evidence, the uniformitarian geologists will admit that those nine catastrophes were not separated by millions of years, but are part of one **BIG** catastrophe? It seems like these evolutionary geologists have spelled out the answer, letter by letter: Fire (on) Land, Overall Ocean Destruction. They have not noticed that the initials read 'FLOOD'.

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## Recent Cosmic Microwave Background data supports creationist cosmologies

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In 1965 Arno Penzias and Robert Wilson discovered the cosmic microwave background (CMB) and found the intensity in different directions to vary by less than 10%. The CMB describes the electromagnetic energy at microwave frequencies (1 to 100 GHz) pouring in from the cosmos in all directions. This energy can be uniquely described in terms of the temperature of an ideal radiator, called a 'black body', that produces radiation at the same frequencies and intensity. In 1977, Smoot and others detected a system of 'hot' and 'cold' patches across the sky in the microwave spectrum.<sup>1</sup> A two-dimensional map, as shown in Figure 1, was the result. If one points one's radiometer (a device to measure 'black body' radiation temperature) away from the hub of our Milky Way galaxy, a signal with a 'black body' radiation temperature of about 2.7 K is observed. Smoot detected a sinusoidal variation in the temperature of the CMB at the 1 part in 10<sup>3</sup> level.<sup>1</sup> This was attributed to the motion of the Earth. In order to resolve intrinsic fluctuations, statistical analyses were needed and fluctuations of the order of 10 μK were extracted.<sup>2,3</sup> Later, higher resolution measurements were made by the Boomerang (balloon observations of millimetric extragalactic radiation and geomagnetics) experiment, which involved a microwave telescope lofted 38 km over Antarctica.<sup>4</sup>

The CMB itself seems to indicate a preferred frame of reference, which is not inconsistent with the *principle of relativity*.<sup>5</sup> Inertial observers would not be able to distinguish anything about their motion except by comparison with this preferred frame. The largest observed differences in