

## Fossil reptiles on the Russian platform

Alexander V. Lalomov

Not long ago, Russian television reported an exciting find of large fossil tetrapods (pareiasaurs) in the Upper Permian strata of the western Russian platform.<sup>1</sup> In that telecast, the director of the local paleontological museum described how the reptiles were buried in a standing position with their heads erect. This seemed so interesting and unusual that I visited the excavation site.

The site is situated in the basin of the Vyatka River near Kotelnich (800 km north-east of Moscow). More than 300 tetrapod skeletons have been found in a steep bank, along a 3 km stretch of the river (Figure 1).

The Kotelnich paleontological museum tries to explain the unusual burial position in terms of the pareiasaurs being 'bogged in soft sediment after heavy rainfall, when the water level was higher and boggy substratum became silty swamp'.<sup>2</sup> The sedimentary conditions of the region are also interpreted in terms of uniformitarian geology. Coffa, from Monash University, Australia, described the strata in detail.<sup>3,4</sup> He determined five horizons when deposition ceased and erosion surfaces developed in the sedimentary



Photo by Kotelnich Paleontological Museum

**Figure 2.** This fossil pareiasaur skeleton is about 1.2 m long.

sequence (up to 50 m thick). According to their timescale, uniformitarians say the strata are 260 million years old.

To me these conclusions are very questionable:<sup>5</sup>

1. Pareiasaurs were herbivorous reptiles that lived in similar conditions to the modern giant aquatic turtle (Figure 2). I am not a reptile expert, but I have never heard of turtles being drowned in a swamp. It is more likely that the environmental conditions changed catastrophically and caught them unaware.
2. Uniformitarians estimate the average rate of deposition for the area is millimeters or centimeters per thousand years. For these pareia-

saur to be buried in this way in the sediment (Figure 3), they would have to remain standing with head erect for at least ten thousand years. This would have been difficult, even for such patient animals as pareiasaurs! It is clear that these strata were deposited much quicker than uniformitarians believe, and that the rate of sedimentation was much greater.

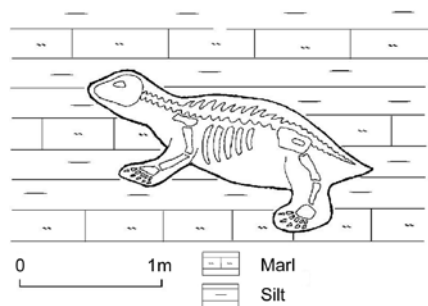
3. The silts and marls in which the pareiasaurs were buried contain virtually no plant fossils. It is difficult to imagine how 300 large reptiles, each more than 1 m long, could live without food on a piece of land just 3 km long. It is more likely that the reptiles migrated into the area to flee some catastrophic change in the environment, or that water currents carried them there.
4. The Upper Permian strata were deposited during the final marine transgression for the region. Since that time (allegedly 260 million years in the uniformitarian timescale) not more than 10–20 m of the land surface has been eroded. Based on average erosion rates for some of the major rivers of the world (0.2–1.4 mm per year<sup>6</sup>), the timing of the transgression fits better with the date of the Biblical Flood, about 4,500 years ago.



Photo by Kotelnich Paleontological Museum

**Figure 1.** The Kotelnich tetrapod locality. The steep western bank of the Vyatka River is primarily composed of continental redbeds consisting of clays, marls and sandstones. The annual spring floods wash out the bony remains.

### Conclusion



**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.

### References

1. <www.kirov.ru/~kpm>, 8 December 2000. See 'Kotelnich district of the Kirov Region' and 'Kotelnich locality' pages.
2. Ref. 1, see 'Fossils' page.
3. Coffa, A.A., Stratigraphy and correlation of the continental redbed sequence at the Kotelnich Upper Permian fossil tetrapod locality, Russia, *Geological Society of Australia, Abstracts 46*, pp. 15–17, 1997.
4. Coffa A.A., Sedimentology and stratigraphy of the continental redbed sequence at the Kotelnich Late Permian fossil tetrapod locality, Russia, *M.S. Thesis*, Monash University, 1998.
5. These are only the preliminary results of the investigations made during my short trip to the site, which looks very promising for reconstruction of the sedimentation conditions. Investigators from Monash University, Australia, have made several visits to the area. I would be happy to talk to anyone interested in collaborative research in the area.
6. Walker, T., Eroding ages: if our continents were old, they would no longer be here, *Creation 22(2)*:18–21, 2000.

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

Emil Silvestru

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 catastrophe induced by an external