

Water inside fire

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The Beijing anomaly

Recent research has strongly suggested that a massive body of water exists deep underneath Asia between about 700 and 1,400 km below the surface (roughly in the middle of the mantle).¹ This massive ‘seismic anomaly’, a segment of the mantle that attenuates seismic waves from earthquakes, was revealed by analyzing some 600,000 seismograms (graphic recordings of shock waves traveling through the interior of the planet). According to the discoverers (M.E. Wyssession and J. Lawrence) the volume of water in this anomaly is at least that of the Arctic Ocean.

‘Seeing’ inside the earth

Very little of the inner parts of the earth can be *directly* investigated. The deepest mine in the world (a gold mine in the Witwatersrand area in South Africa) descends 3.5 km into the lithosphere.² The deepest that humans have ever drilled into the earth is on the Kola Peninsula in Russia, where drill core was retrieved from 12.26 km below the surface.³ From that point on to the centre of the planet, some

6,365 km, is all ‘unknown territory’. All we can do is to infer what could be down there from the limited data we have.

In making such inferences, the first thing we know quite well is the mass of our planet, which was calculated by Henry Cavendish in 1789 using Newton’s laws. We can also estimate the average density of the uppermost ‘layer’ known as ‘crust’ (from boreholes and from the rocks that outcrop on the surface). But how thick is the crust and what lies beneath it? This is where seismic investigation comes into play: shock waves (be they from earthquakes or explosions) have the ability to travel through the entire earth, and their speed changes according to the material they travel through. These waves undergo reflections and refractions at rock boundaries. Based on these and many other derived characteristics, an image of the interior of the earth has emerged, suggesting a series of concentric spheres: the inner core, the outer core, the mantle and the crust.

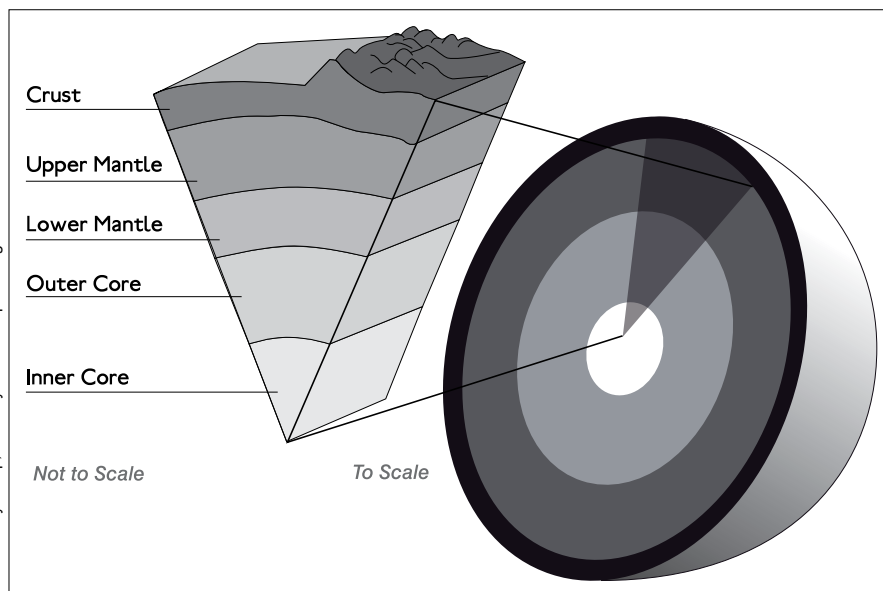
The main characteristic distinguishing these regions is density, which, as a rule, increases with depth. Starting at slightly above 2 g/cm³ (the density of water is 1) at the surface, it is estimated to reach 11 in the core (which is believed to be made of nickel and iron). Each concentric sphere is separated from the previous one by a thin boundary at

which the speed changes significantly; such a region is called a *discontinuity*. The Kola Peninsula superdeep borehole was designed to reach the *Mohorovičić* (*‘Moho’*) *discontinuity* (named after the Croatian seismologist Andrija Mohorovičić who discovered it), which at that point is situated at a depth of about 15 km. This is the closest that the ‘Moho’ comes to the surface anywhere on land; under the oceans, which lack the uppermost layer of the lithosphere, the *Moho* rises in places to only 6 km below the seafloor. Other major discontinuities are the Wiechert–Gutenberg (at 2,900 km) and Lehmann (at 5,100 to 5,200 km).

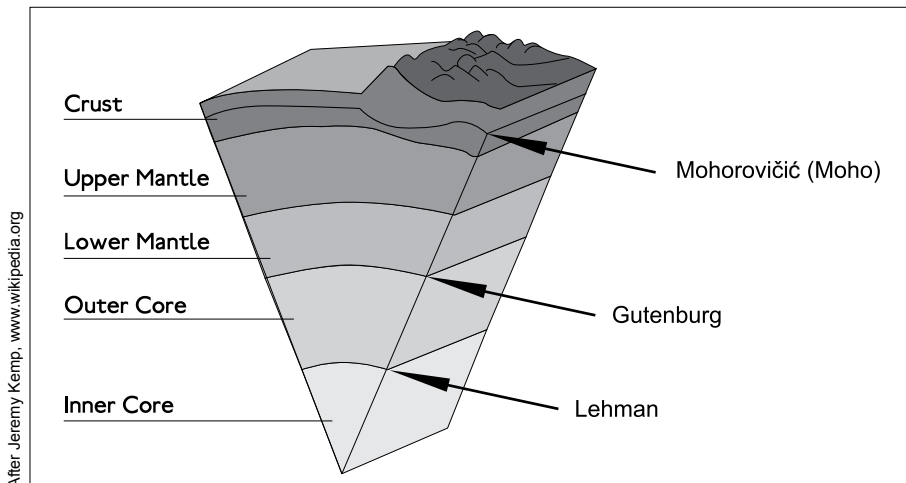
What’s down there?

The concentric-sphere structure has been defined from seismic data and the properties of rocks and minerals. It is believed that the material comprising each of the inner spheres also has different chemical compositions. The basic conditions of pressure, temperature and viscosity at various depths have thus been estimated, which has permitted certain predictions regarding behaviour and dynamics. But none of those predictions made any references to anything like the Beijing Anomaly (BA). This much water at such a depth is unimaginable! There is one exception though, namely a prediction coming from a creationist model of the internal dynamics of the earth and the way it explains how plate tectonics started. The model was created by Dr John Baumgardner, then of the Los Alamos National Laboratory.⁴

The Catastrophic Plate Tectonics (CPT) model also provides a good creationist model for Noah’s Flood. According to this model, when the first segments of the crust (seafloor) started sinking into the earth’s interior, they were moving at metres per second rather than millimetres per year, which is the pace at which plates move today. At that speed, the sinking plates could have reached the bottom of the mantle some 2,900 km below surface in 15 days. Indeed, seismic tomography (a sort of CAT scan of the innards of the planet) provides evidence that there are ‘cold’ slabs of rock the size of continents at the bottom



The internal structure of the earth.



Some major seismic discontinuities within the earth.

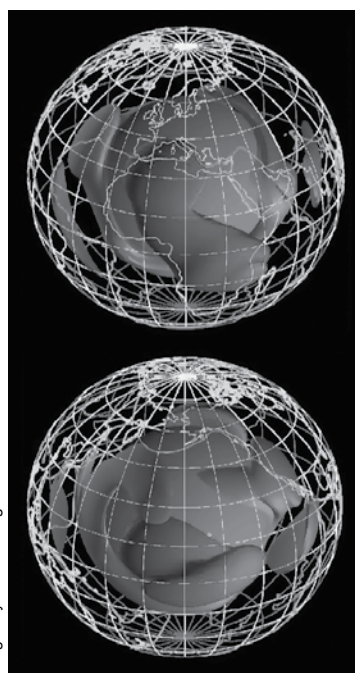
of the mantle. They could not have been there for too long otherwise they would have melted and been incorporated in other mantle material.

Consequences

If the tectonic plates were subducted at ‘high’ speed (termed ‘runaway subduction’), the sediments on the seafloor along with massive amounts of water would have been dragged down with them. Once they reached the areas of high pressure and temperature inside the mantle, the water and the waterlogged sediments would have changed into very active chemical solutions and gases, sometimes referred to as *volatiles* which, being significantly lighter, would tend to rise towards the surface. It is interesting that recent experiments have revealed that, when submitted to pressures and temperatures similar to those in the mantle, calcite (CaCO₃), in the presence of iron, turns into methane gas.⁵ In light of this, a large and spectacular array of other similar chemical changes would be possible when vast volumes of seafloor rapidly sank into the mantle. At the slow pace subduction unfolds today, the seafloor melts as it descends and the volatiles separate early on, much closer to the surface. Consequently they will have different chemical characteristics and most of them reach the surface instead of remaining inside the mantle.

Runaway subduction may well be responsible for the water in the Beijing anomaly. But even larger

volumes of mineral-laden fluids, termed hydrothermal fluids, could have reached the upper mantle and the crust. Wherever they would have filtered through unbound sediments, and Noah’s Flood surely produced large volumes of them, the dissolved minerals would precipitate, cementing the unbound sediments into hard rock. About 90% of all sedimentary rocks are considered to be ‘terrigenous’ i.e. made of fragments of previous rocks eroded from the continents and



Mantle density structure of the eastern (top) and western (bottom) hemispheres derived from seismic topography.

bound together by chemical cements. The source of these chemical cements, whose volume is immense, has long been a conundrum. Not anymore.

The sediments deposited during Noah’s Flood contained massive vegetal debris and innumerable carcasses. The same hydrothermal fluids could have rapidly fossilized them, replacing the organic matter with mineral matter to varying degrees. Thus the whole of the known fossil record could have been formed in a short time. Such deep hydrothermal solutions are not known to be present on the surface now. All such solutions today originated by the infiltration of water from the surface to a depth no greater than a few kilometres, which would explain why widespread fossilization is not currently being witnessed. The vast majority of the known fossils are the result of a unique geological process—Noah’s Flood—which the newly discovered Beijing anomaly seems to confirm.

References

1. Fitzpatrick, T., 3-D seismic model of vast water reservoir revealed Earth mantle ‘ocean’, 7 February 2007, <news-info.wustl.edu/news/page/normal/8222.html>.
2. Johnson, R.A., Geotechnical classification of deep and ultra-deep Witwatersrand mining areas, South Africa, *Mineralium Deposita* 32:335–348, 1997; <www.csir.co.za/publications/schweitzer_1997.pdf>, March 2007.
3. Analysis of log and seismic data from the world’s deepest Kola Borehole, <asuwlk.uwo.edu/~seismic/kola/>, March 2007.
4. Baumgardner, J., Catastrophic plate tectonics: the geophysical context of the Genesis Flood, *Journal of Creation* 16:58–63, 2002; <www.creationontheweb.com/content/view/1596>.
5. Rennie, G., The search for methane in Earth’s mantle, S&TR, Lawrence Livermore National Laboratory, pp. 21–23, July/August 2005; <www.llnl.gov/str/JulAug05/pdfs/07_05.3.pdf>.