No sedimentation over a broad area of South Pacific for 85 Ma?

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Marine geologists were surprised to find a broad region of the central South Pacific Ocean that is essentially devoid of sediment on top of the basalt.[1,2] The area is about the size of Western Europe or the Mediterranean Sea and is centred about 4,000 km east of New Zealand, covering about 2,000,000 km^2 (figure 1). The southern boundary is approximately east-west along 42.5°S, which is the northern limit of the mostly siliceous biogenic sediment deposition. The northern boundary of the bare zone is about 28°S.

The region had been poorly surveyed until recently. The researchers assumed, before observations, that the sediments would be thin in this area, but they still expected to find at least a dozen metres of sediments.[3]

The researchers collected bottom cores in combination with seismic-reflection profiles from depths of 4,000 to 5,300 m. Especially relevant is the fact that no sediment could be found either on the flat areas of the seafloor or in the small basins between the ubiquitous abyssal hills. If current winnowing had eroded the sediments, the sediments would have been swept into the troughs between the abyssal hills, which is not the case. Hence, the area, called the South Pacific Bare Zone, has *not* received sediment for up to 85 Ma within the uniformitarian timescale!

The dates are based on magnetic anomaly dating, correlated to the uniformitarian timescale. These anomalies are *not* magnetic reversals as commonly believed, but are about 1% changes in *magnetic intensity* of the underlying crust and/or upper mantle (there are still uncertainties as to the location of the magnetic signal).[4] The intensity changes have been assumed to be related to reversed and normal polarities of the earth's magnetic field. The paleomagnetic timescale of normal and reversed periods has been defined for most of the fossil-bearing Phanerozoic by potassium-argon dating rocks younger than 4 Ma with later extension to 'older' dates:

> 'Potassium-argon dating of young rocks was the key to the development of the polarity-reversal time scale, just as the scale was the key to the confirmation of seafloor spreading.'[5]

This lack of sedimentation for up to 85 Ma is claimed to be the result of a unique combination of five possible factors.[3] First, the nutrient-poor surface waters, home to few organisms, produced little biogenic sediments on the bottom. Second, the deepest water contained less carbonate and silica than at other locations. So, skeletons of plankton that reach the seafloor dissolved. Third, the distance of the bare zone from large landmasses resulted in little dust blown over the area. Fourth, there must have been very little hydrothermal activity that would spew chemicals up into the water column to precipitate on the ocean bottom. Fifth, the area must have remained out of the path of major ocean currents that could transport Antarctic icebergs carrying debris into the area.

Could all five of these factors operate for up to 85 Ma? What about the effects of volcanic ash spreading over large distances, or the effects of large meteorite impacts that should have spread debris worldwide? Could this area remain deep enough for dissolution of plankton skeletons for 85 Ma? One site drilled at 28°S was actually slightly *above* the level where all calcium in skeletons dissolves.[6] Significant biogenic sediment should have formed at this location over such a long time, especially if the level of complete calcium dissolution deepened anytime in uniformitarian history.

But, there is one big fly in the ointment to the uniformitarian scenario. According to the plate tectonic paradigm this region has supposedly been moving for 85 Ma. If you 'backtrack' in time, the region was roughly between 50 and 65°S at 65 Ma.[7] This is an area of high biogenic production and sedimentation of mostly silica on the ocean bottom

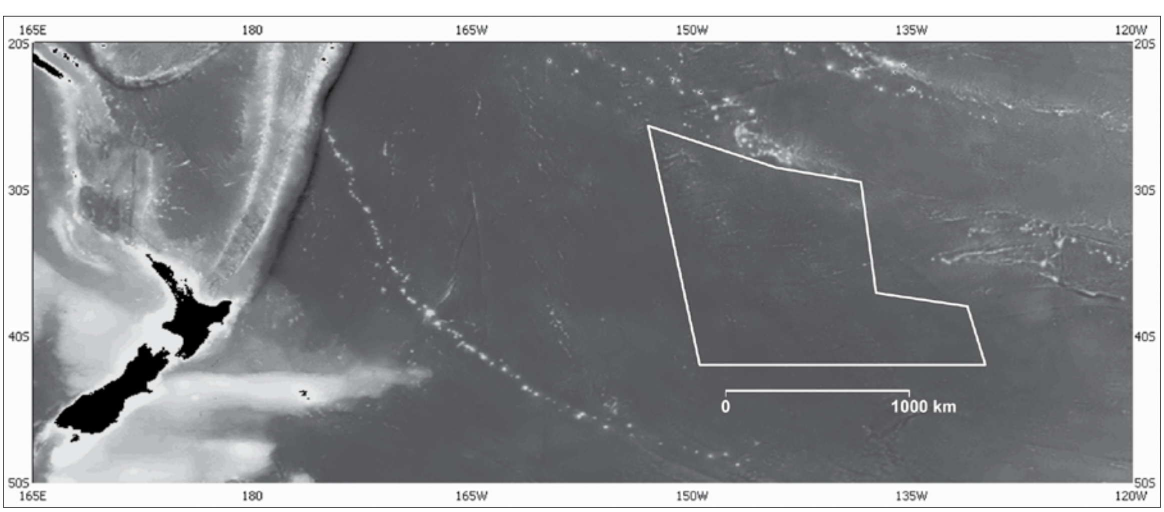


Figure 1. The no-sedimentation zone in the South Pacific east of New Zealand covers an area about 2 million km^2. (After NOAA/Rea *et al.*[1]).

today.[8] Of course with Antarctica remaining stationary for all that 'time', the paleogeography and ocean currents would have been much different within the uniformitarian paradigm. Such a change in paleogeography may have retarded sedimentation, but again it may have enhanced it. Regardless, the researchers grab on to this different paleogeography to claim that the area remained in a low sedimentation area clear back to the Cretaceous.

It seems like the uniformitarian marine geologists require a lot of special conditions lasting for up to 85 Ma to account for the South Pacific Bare Zone. A more straightforward explanation within the Flood/post-Flood paradigm is that the area did not receive Flood sediments because of its long distance from landmasses. Very low sedimentation continued in the post-Flood periods due to all five factors above, and especially the fact that this part of the ocean has only existed for only about 4,500 years!

References

1. Rea, C.K., Lyle, M.W., Liberty, L.M., Hovan, S.A., Bolyn, M.P., Gleason, J.D., Hendy, I.L., Latimer, J.C., Murphy, B.M., Owen, R.M., Paul, C.F., Rea, T.H.C., Stancin, A.M. and Thomas, D.J., Broad region of no sediment in the southwest Pacific Basin, *Geology* **10**:873–876, 2006.
2. Anonymous, Laid bare, *Nature* **443**:608, 2006.
3. Perkins, S., Nearly naked: large swath of pacific lacks seafloor sediment, *Science News* **170**:246, 2006.
4. Fowler, C.M.R., *The Solid Earth: An Introduction to Global Geophysics*, Cambridge University Press, New York, p. 43, 1990.
5. Glen, W., *The Road to Jaramillo: Critical Years of the Revolution in Earth Science*, Stanford University Press, Stanford, CA, p. 93, 1982.
6. Rea *et al.*, ref. 1, p. 875.
7. Rea *et al.*, ref. 1, p. 874.
8. Kennett, J., *Marine Geology*, Prentice-Hall, Englewood Cliffs, NJ, pp. 455–503, 1982.

WMAP 'proof' of big bang fails normal radiological standards

John Hartnett

Satellite maps of the big bang?

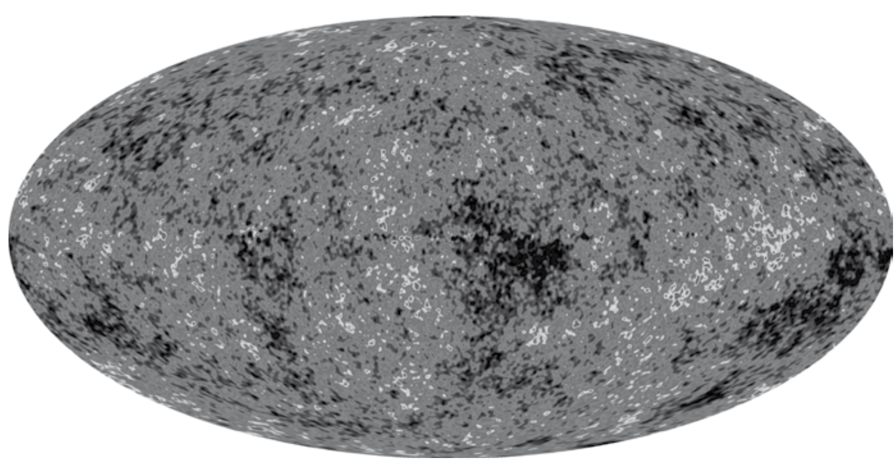
The WMAP (Wilkinson Microwave Anisotropy Probe) satellite[1] was launched with the intention of mapping the very small anisotropies (temperature fluctuations) in the cosmic microwave radiation (CMB) (figure 1). After the successful mission of the COBE (COsmic Background Explorer) satellite[2] George Smoot as team leader built WMAP for NASA and the data obtained resulted in him being awarded the Nobel prize in Physics last year.[3,4]

The anisotropies in the 2.7 K CMB temperature maps contain information regarding the radiation from the fireball 380,000 years after the alleged big bang, it is claimed. These very small (40 μK to 70 μK) anisotropies represent the monopole term of a spherical multipole expansion of the cleaned data. These were interpreted as the seeds for early galaxy formation. The dipole term was extracted, also giving a very smooth 2.7 K temperature but slightly different to the temperature determined from the monopole term. Nevertheless it was close to 2.7 K also. On the basis of the WMAP analysis, many papers have claimed evidence for details of the big bang theory, such as the amounts of alleged 'dark matter' and 'dark energy'.[5]

How well do the claims stack up?

However, this year, an expert in radiology published two papers[6,7] which prompted another[8] in the journal *Progress in Physics*[9] claiming that the analysis was flawed under standard radiological (analysis of radio waves) methodology. He argued that the maps contain no information of cosmological significance, certainly no information about the creation and history of the early universe.

WMAP was not equipped with an instrument that could measure the absolute intensity of any microwave signal it might encounter. Whereas COBE not only took a differential radiometer, it also took an absolute spectrometer—FIRAS. WMAP was only equipped with a differential radiometer, which could only measure the *differences* in the signals coming from any two parts of the sky. So the data can *never* specify the equivalent temperature of any particular region of the cosmos.



credit: NASA/WMAP Science Team

Figure 1. WMAP anisotropy map extracted from monopole component of the data. The dark and light spots represent small temperature variations.