in the geological column; nevertheless, if our present thoughts and models of their origin are basically correct, then it seems reasonable to suggest that pockmarks may have been common as early as Precambrian time."

Within the uniformitarian paradigm, there could be several reasons that may explain the missing pre-Pleistocene pockmarks. Pockmarks could have been eroded before final burial, or they could have been filled in with the same material as the surrounding sediment. These do not seem likely to explain the total absence, so far, of pre-Pleistocene pockmarks. Some smoothing of the Vshaped pits would be expected after the seepage stopped, but since the bedding has already been disrupted, the pockmarks should still show up in the sedimentary record. Pockmarks are actively being buried and protected from erosion on the ocean bottom, since they can sometimes be seen in the subsurface by seismic reflection profiling.<sup>10</sup> Disrupted sediment can also be seen to extend tens of metres downward from the pockmark,11

making it more likely that the feature would be preserved. Pockmarks likely form rapidly, so we would expect pre-Pleistocene sedimentary rocks to be filled with them:

'Pockmarks occurring at horizons representing relatively short periods of non-deposition are just as large as those at the seabed. Consequently, it must be concluded that pockmarks attain their full size within a relatively short time. 12

Thus, pockmarks should be a common feature of marine sedimentary rocks.

Pockmarks on the modern ocean bottom are another one of the many features not found in pre-Pleistocene sedimentary rocks, thus violating the uniformitarian principle. This tells us pre-Pleistocene marine sedimentary rocks were deposited rapidly, the Genesis Flood being the only viable candidate for such worldwide rapid sedimentation. The lack of pockmarks in pre-Pleistocene sedimentary rocks may also be of interest to those creationists who are concerned about where the pre-Flood/ Flood and the Flood/post-Flood boundaries are located in the sedimentary rocks.

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## The Origin of Life (again)

Newspapers hailed the latest work of Stanley Miller and his colleagues<sup>1</sup> as a big step towards discovering how life came to be by natural processes, if not as the very discovery itself.

In this work, pantetheine, a precursor to coenzyme A, was synthesised under laboratory conditions. The procedure involved evaporating a solution of equal parts of beta-alanine, cysteamine, and pantoic acid in a vial under vacuum (reason: a vacuum excludes oxygen which would prevent pantetheine forming). The result was a thin film on the wall of the sealed vial. The amount of pantetheine produced under these conditions was 0.018% after 1 month at 40°C. What was the other 99.82%?

The obvious problem is that in the

assumed prebiotic soup there would be a multitude of other compounds that would enter into reactions and greatly reduce the yield, if not prevent pantetheine's formation entirely. Another problem is with the 'atmosphere' in the sealed vial. A vacuum has no gases to react with the compounds, whereas the assumed early earth's atmosphere contained such reactive gases as hydrogen and ammonia. These would also react with the starting materials to further reduce the minuscule yield.

In spite of the insurmountable hurdles, let's assume that the naturalistic origin of the building blocks of life had been demonstrated. This would still not address the question of the origin of life. It's like trying to explain the origin of the information on this page by explaining the origin of the ink and the paper. The real issue in the origin of life is the origin of the coded genetic information which prescribes the form and instincts of a myriad of plants and animals in a mutually beneficial relationship. Until we begin to address the origin of the colossal amount of information required for even the simplest conceivable living thing, along with the mechanisms for reading and expressing that information, we have not even begun to address the issue.

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