

Letters

MOON DUST AND THE AGE OF THE SOLAR SYSTEM

Dear Editor,

We appreciate the efforts by Dr Andrew A. Snelling and David E. Rush¹ in assembling a much more thorough listing of the technical literature on the topic of meteoritic dust on the moon than the representative sample of that literature that we cited in chapter 4, 'Footprints on the dusty moon', in **Science Held Hostage** (InterVarsity Press, Downers Grove, Illinois, 1988). They have come to the same conclusion that we reached, namely, that the accumulation of meteoritic dust on the moon does not provide valid evidence in support of the claim that the solar system is young.²

Snelling and Rush raise the interesting question of whether the relative areas of Earth and moon should be taken into account in arriving at estimates of the total accumulation of meteoritic dust on the moon based on satellite detector results. They claim that area should not be a factor,³ while we did take area into account. Please note that the units in which the near-Earth flux of micrometeorites is most commonly reported from satellite data are 'number of particles with mass equal to or greater than the specified mass per square centimeter per second'. These data are integrated over small segments of the mass range in order to arrive at 'mass per square centimeter per second', which may be multiplied by the number of seconds per year to arrive at 'mass per square centimeter per year'. Those are the units in which the estimates by Dohnanyi^{4,5} and by Gault⁶ are reported. Dohnanyi claims that his estimate is 'surprisingly close' to that arrived at by Keays *et al.*⁷ and by Ganapathy *et al.*⁸ on the basis of geochemical studies of the concentration of meteoritic material in the lunar regolith (lunar soil). Gault, whose estimate of influx on the moon is identical to that of Dohnanyi, claims that his estimate is 'remarkably similar' to

that of Laul *et al.*,⁹ also based on trace element content of the lunar regolith. The estimates based on those geochemical studies clearly apply to the moon alone, and calculation of the total accumulation on the moon using those estimates must take the area of the moon into account. Since the influx rates reported by Dohnanyi and by Gault are expressed in the same units as those reported by Keays and Ganapathy and Laul, it is obvious that the area of the moon must also be taken into account when using Dohnanyi's or Gault's estimate to calculate the total accumulation of meteoritic dust on the moon; otherwise Dohnanyi and Gault would not be justified in claiming that their results are 'surprisingly close' to the geochemical results. So we think that we did the calculations correctly.

Considering the uncertainties involved in the measurements on which the estimated accumulation of meteoritic dust on the moon is based, both our estimate of 500 tons per year and Snelling and Rush's estimate of 10,000 tons per year are within the range of reasonable conclusions; both are consistent with the conclusion that the moon is billions of years old.

Please allow us a comment about the rhetoric used in the article by Snelling and Rush, rhetoric which was repeated in the report on that article which was submitted by Dr Wieland and published in **Creation Research Society Quarterly**, 30:192-193 (March 1994). In **Science Held Hostage** we used the expressions 'failure to take into account the published data' and 'failure to live up to the codes of thoroughness and integrity' and 'intolerable violation of the standards of professional integrity' in our evaluation of the claims that the meteoritic dust accumulation on the moon supports the idea that the moon is young; Snelling and Rush characterize such language as 'scathing' comments.¹⁰ In their own evaluation of those same claims, Snelling and Rush use expressions like 'claim which cannot be substantiated by a careful reading of the

papers' and 'Such an argument cannot be sustained' and 'irrelevant' and 'simply not the case' and 'no reference is cited nor can one be found' and 'baffling calculations' and 'inexcusable',¹¹ language which is hardly less scathing than ours.

Drs Clarence Menninga,
Howard J. Van Till, and
Davis A. Young,
Calvin College,
Grand Rapids, Michigan,
UNITED STATES OF AMERICA.

REFERENCES

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2. Snelling and Rush, Ref. 1, p. 36.
3. Snelling and Rush, Ref. 1, p. 27.
4. Dohnanyi, J. S., 1971. Flux of micrometeoroids: lunar sample analyses compared with flux model. **Science**, 173:558.
5. Dohnanyi, J. S., 1972. Interplanetary objects in review: statistics of their masses and dynamics. **Icarus**, 17:1-48.
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7. Keays, R. R., Ganapathy, R., Laul, J. C., Anders, E., Herzog, G. F. and Jeffrey, P. M., 1970. Trace elements and radioactivity in lunar rocks: implications for meteorite infall, solar-wind flux, and formation conditions of moon. **Science**, 167:490-493.
8. Ganapathy, R., Keays, R. R., Laul, J. C. and Anders, E., 1970. Trace elements in Apollo 11 lunar rocks: implications for meteorite influx and origin of moon. **Proceedings of the Apollo 11 Lunar Science Conference**, Vol. 2, pp. 1117-1142.
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10. Snelling and Rush, Ref. 1, p. 27.
11. Snelling and Rush, Ref. 1, pp. 37-39.

The Authors Reply . . .

On the question of whether the relative areas of the Earth and moon should be taken into account in calculating meteoritic dust accumulation on the moon from satellite detector results, we

found that researchers like Dohnanyi merely took their estimates from satellite detectors of dust falling to the Earth and divided them by 2 to obtain estimates for the moon influx. This factor of 2 reflects the difference in gravity between the Earth's surface and the moon's surface, only. Therefore, since those researchers obviously considered the relative surface areas of the Earth and moon as not relevant, we also concluded that it must not be a significant factor.

As for whose rhetoric is 'scathing', we certainly did not accuse our fellow Christians of lacking moral integrity. We were baffled by their calculations and found some of their claims could not be substantiated nor their arguments sustained from careful reading of the papers they cited. On the other hand, Drs Menninga, Van Till and Young admit they **did** accuse creationists of 'failure to live up to the codes of thoroughness and integrity' and 'intolerable violation of the standards of professional integrity', that is, lack of moral rectitude.

Dr Andrew Snelling,
Brisbane, Queensland,
AUSTRALIA.

Drs Menninga, Van Till and Young have, understandably, felt the need to respond to a creationist response/critique of their moon dust comments in their book Science Held Hostage. On the other hand, Dr Davis Young has declined in writing my invitation to defend in this journal his case study on the geology of the Colorado Plateau/Grand Canyon in the book Portraits of Creation: Biblical and Scientific Perspectives of the World's Formation by Van Till, H. J., Snow, R. E., Stek, J. H. and Young, D. A. (William B. Eerdmans, Grand Rapids, Michigan, 1990, pp. 62-81) in response to Dr Steve Austin's book Grand Canyon: Monument to Catastrophe (Institute for Creation Research, San Diego, California, 1994). Dr Young suggested we contact other Christian geologists!

— Editor.

EARLY HISTORY OF MAN

Dear Editor,

Further to Bill Cooper and his series on the early history of man, in my opinion this work represents a milestone in our history of creation.

It is important we recognise in this information that, at last is again being released a history with its valid links with valid characters in our history books and the history given us in Genesis. Already I have power in my own study to refute Calvert Watkins in his **Indo-European Origin of English** and in part his quoted Sir William Jones, Orientalist, together with the purported 'chart' of 'Proto-Indo-European' language distribution: all of this contained in the **1970 Heritage Illustrated Dictionary**, my principle authoritative dictionary.

Those eruditions prove the lie evolution teachings has forced upon us. The writers and chart preparers might not have known the facts, for they had already been served up with the well-prepared statements of the evolutionists in their desire to exclude Scripture and God, the Creator.

You see, the evolution camp 'has the wood on us' for in their understanding we have no more ground for a created universe than they, that all things just created themselves. With the world in general they have not the spirit that comes of God, because when they had the opportunity they preferred not to know God and therefore pride was substituted, and due to that their foolish hearts darkened their minds (Romans 1:21).

Now, with the origin of the nations revealed to us once again, thanks to Bill Cooper we have not only the Bible but we can meet evolution on its ground. We have not only the Spirit but the sort of bread evolution wants but cannot find. Even evolution, its 'saner' members cannot believe things just made themselves. They seek everywhere for what they cannot find — some sort of viable hypothesis that mechanically can explain origins without having to bring God whom they abhor into the frame.

If they admit God they have to go on to what God has said of Jesus' responsibility in saving man, for He created man — and prophecy too — the end of God's ploy for man.

This is taking the long way round to what I want to suggest. On page 11 of part 2, Baron Waldstein states he saw in London's Lambeth Palace in 1600 '*a splendid genealogy of all the kings of England from the beginning of the world*', and later at Richmond Palace '*on parchment a genealogy of the kings of England which goes back to Adam*.' Cooper throughout traces genealogies back to Noah; no problem. Flood the evolutionary world with pamphlets to show how our present day people trace back to merge in with characters in Genesis, 'The table of nations'. The profound reality is there in the secular world. Get it to them. We have facts against their foolishnesses Paul confirmed in Romans.

Robert de Louth,
Bowral, New South Wales,
AUSTRALIA.

DISEASES ON THE ARK

Dear Editor,

Concerning my article on diseases surviving through the Flood,¹ it has since come to my attention that a prominent anti-creationist in this country has appeared on national television, indicating that the creationists have an impossible conundrum explaining how kuru survived the Flood.

Kuru is a rare brain generative disease which, he alleged, is spread only through the eating of infected human brain tissue. Hence the mocking suggestion that Noah's family included cannibals.

However, in *New Scientist*, May 28, 1994, we read, '*Kuru was transmitted through handling and possibly eating tissue from infected corpses during funeral rites in Papua New Guinea*' (emphasis added).²

Kuru is one of the so-called 'prion