

6 *No Meteorites!*

Meteor Showers Used To Measure Age of Earth

Ackerman in chapter two of *It's A Young Earth After All* (1993) — still popular and available freely one — says that another way to measure the time of the earth's origin is the rain gauge of meteor showers.¹ Like a rain gauge, we can know that if it rains continuously at a known rate, then we know the time the container has been outside exposed to the steady shower of rain. He says that “if these millions of years were a reality there would have been countless numbers of meteorites encountering the earth's atmosphere.” He agrees most would burn up, but a “small percentage would reach the earth's surface each year as meteorites.” (*Id.* at 27.) With the passage of time, these accumulating meteorites would be incorporated into the geologic column, and there should be many of them contained in the rock layers today. Paleontologists and other scientists “doing research in the geologic rock should frequently encounter meteorites.”

By contrast, he says that most “creation scientists” would not believe in the gradual building up of the geologic column, and there would “be very few meteorites in the geologic column and finding one would be a rare occurrence.” (*Id.* at 28.) Then Ackerman goes to his final paragraph and conclusion.

What does the data show? He says we find a clear result in favor of a recent creation. One survey of the literature a few years ago failed to turn up a single case of a mete-

1. You can read this chapter online at <http://www.creationism.org/ackerman/AckermanYoungWorldChap02.htm>.

orite being found in the geologic column. Ackerman then concludes the meteorite clock reads clearly to the effect that the earth is not very old. (*Id.* at 28.)

The footnote cites as proof P. Stevenson, "Meteoric Evidence for a Young Earth," *Creation Research Society Quarterly* 12 (June 1975), a young earth journal.

This claim is wrong. How can Ackerman say not a single case of a meteorite has ever been found in the geologic column? There are literally hundreds of meteorites that have struck earth and been absorbed deeply into various strata.

Let's clear this up with two points of background. First of all, space bodies include asteroids and much smaller meteorites. Because the earth is 3/4 covered with water, the trace of 75% of these impacts cannot ever be seen. There are 116 asteroid impacts on earth from the Phanerozoic age.² In fact, the same source details the find of asteroid post-impact dust in the Cretaceous/Tertiary period that coincides with the extinction of dinosaurs, and postulates that was the cause of such mass extinctions.

Second, due to sedimentary erosion, most meteor impacts would be erased. As Davis Young in *Science Held Hostage* (1988) at 127 says: "The chances of finding a fossil meteorite in sedimentary rocks are remote. It is not to be expected." Also, the chemical composition of meteorites are prone to dissolution. As G. J. McCall, in *Meteorites and Their Origins* (1973) at 270 says: "The lack of fossil record of true meteorites is puzzling, but can be explained by the lack of very diagnostic shapes and the chemical nature of meteorites, which allows rapid decay...."

2. R.A.F. Grieve, "The record of impact on Earth: Implications for a major Cretaceous/Tertiary Impact event," in L.T. Silver & P.H. Schultz, ed., *Geological Implications of Impacts with Large Asteroids and Comets on the Earth* (Geological Society of American Special Paper 190, 1982) at 25-37, cited in G. Brent Dalrymple, *The Age of the Earth* (Stanford: Stanford University Press, 1991) at 278.

Lastly, asteroids colliding in space are the cause of cosmic dust. Meteorites are apparently larger “fragments” from the same collisions. That collisions originate the dust can be deduced because, but for resupply somehow nearby, all cosmic dust would fall to the sun or be blown out of the Solar System by solar radiation within a few million years.³

Ackerman is, however, saying that meteorite impacts with earth can be the rain gauge of earth, not cosmic dust. Is this possible?

First of all, *no one knows a “rate” by which meteorites must fall to earth.*

Second, meteorites, Dalrymple explains, of the iron variety are “rather youthful by cosmic ray exposure [CRE] dating methods.” The CRE ages “of iron meteorites range from less than 100 MA to 2.3 GA but show a pronounced mode near 650 MA [million years ago], an age that perhaps represents the breakup of a major iron meteorite parent body.” In fact, chondrite meteorites that have impacted on earth “invariably [are] less than 60 MA, and a large majority are less than 30 MA.”⁴ Thus, one would not expect a constant rate of such meteorites going back past 650 mya.

Perhaps Ackerman misinterpreted statements that some meteorites do not appear in the oldest rock layers, like is true for iron meteorites, and extrapolated that the “meteor rain” is missing for 4.1 billion years when it “should be there.” Such an interpretation would show a lack of knowledge about the meaning of this fact about iron meteorites, and ignore all the other meteorites on earth. Yet, Ackerman actually says there are *no meteorites in the geologic column.* Thus, it is difficult to reconcile that statement with him knowing even about iron meteorites. Either he then misconstrued evidence about iron meteorites or he simply did not know anything about such meteorites.

3. Dalrymple, *The Age of Earth* (1991) at 282. For the origin of meteorites as fragments from the same collisions, see *id.* at 283.

4. Dalrymple, *The Age of Earth, idem*, at 282.

Second, numerous other older meteorites have been recovered from the geologic column, directly contrary to Ackerman's statement. Of these, 100 of the non-iron meteorites have been analyzed to determine their original date of origin their age. "It is apparent from [a chart of all the articles and the dates discovered] that a majority of ages fall between 4.4 and 4.6" Bya.⁵ A few show ages of 1 billion years ago, but invariably these show "severe shock heating and metamorphism" which redates their radiation clocks. Others date from 1.22 to 1.34 Bya, but this is because they were ejected by an impact with Mars and landed on earth.⁶ Several methods of dating all converge on these dates.⁷

Upon impact, these meteorites devour numerous layers of the geologic column. It is wrong to claim that there is no record of meteorites in the geologic column. It is also wrong to use this claim to refute an "old earth" when the dating by several independent methods of isotope testing yield the same old ages for the meteorites that were discovered.

And, of course, there are numerous fossilized craters, such as Meteor Crater in Arizona. While no meteor material survived, the impact date can be derived from the surrounding life forms and rock. Several of these fossilized craters date to Precambrian times: Vredefort, South Africa est. 1.9 bya; Sudbury, Ontario, Canada est. 1.8 bya; and Janisjarvi, Russia est. 700 mya.⁸

5. Dalrymple, *The Age of Earth* (1991) at 286.

6. *Id.*, at 289.

7. *Id.*, at 290.

8. R. A. F. Grieve and P. B. Robertson. Diatremes and shock features in Precambrian rocks of the Slate Islands, northeastern Lake Superior: *Discussion. Geological Society of America Bulletin*, v. 90, at 1087-1088. (1979). For detailed discussion and photos of such craters, see the *Earth Impact Database* online at <http://www.unb.ca/passc/Impact-Database/images/slate-islands.htm>.

Most ironic of all, Pattersson (who ICR cites to prove their Moon-Dust theory) was the first to utilize the lead-isotope method to prove the earth was formed about 4.55 bya. He did so by examining five meteorites that struck earth (contrary to Ackerman's claim there are no meteorites in the geologic column). Pattersson in 1956 used the lead-isotope from three stone meteorites and the troilite phase of two iron meteorites. From this he demonstrated that all values fell on an isochron whose slope "indicated an age of 4.55" bya for earth. [The updated decay rates redate this to 4.48.] Patterson then proved a genetic relationship between earth and meteorites by showing modern Earth lead "falls on the meteoritic isochron," and they formed at the same time in a closed system. Patterson did this by taking an uncontaminated lead sample from the deep ocean. The lead isotopes of the ocean sediment fit exactly where predicted if the earth formed at the same time as the meteorites. Patterson concluded that "independently measured values for all three ratios adequately satisfy [two isotope predictions], and therefore the time since the earth attained its present mass is 4.55" billion years.

Thus, ironically, the same person (Patters son) whom Morris quotes in 1985 from a 1960 article to support the moon dust claim had four years earlier scientifically dated the earth's origin to 4.55 bya.

In sum, we have a baffling situation: Ackerman denies any meteorites exist in the geologic column, and there are literally hundreds. And, ironically, ICR's favorite scientist on the moon-dust claim proved the earth's age as 4.55 bya with the help of meteorites which Ackerman apparently never knew were present. Again, Christians should be appalled at Christians making contra-factual claims for a young earth.

*How Meteorite Evidence Points to Creation
But Ignored by ICR*

Yet, had ICR been looking to vindicate our earth was created, it would have realized there is evidence for design and a Creator's hand with this meteor evidence.

It turns out that we can estimate the earth was hit by numerous meteor impacts similar to what happened to Venus, Mars, and the Moon. Earth's plate tectonics and erosion eliminated the evidence for most of them. ICR does not want to discuss this evidence from Mars, Venus and the Moon. To do so would prove nearby planetary objects are old, and the evidence for this is better preserved on other nearby spheres.

In fact, due to earth's larger size, its gravity would have collected impacts with even larger meteorites than the Moon, Mars or Venus ever did.

However, importantly, this means that earth's oceans were vaporized several times. Scientists agree that life must have originated in water. Yet, meteorites vaporized water numerous times, leaving life forms behind in the geologic column each time. ***Then life had to restart somehow again with no foothold.*** Thus, when one compares this fact with the life sciences concede the origin of life *once* exceeds chance in this universe even happening one time, the evidence of meteorite impacts on earth (which Ackerman dismisses as insignificant) proves life originated numerous times on earth. If it is hard to imagine the spontaneous origin of life once happening, how much more so if life had to restart numerous times.

Here are the raw facts for this coming from the mouth of an evolutionary scientist trying to refute young earth. We find this at the *infidels* website:

Scientists can use the bombardment record on the Moon to estimate just how often this level of destruction took place. Statistically, because of Earth's larger gravity, something like 17 or so objects larger than the largest object that hit the Moon should have collided with Earth. If the

largest object that impacted the Moon was the one responsible for the 2,500 km diameter South Pole-Aitken basin on the lunar farside (whose controversial existence was finally confirmed two years ago by the Galileo spacecraft), Earth was probably hit about five times by asteroids or comets big enough to have **completely vaporized its oceans**. [A number of scientists now believe that life originated several times on the primeval earth, only to be wiped out in its first few attempts by the above impacts! — Dave Matson.]⁹

Matson cites as proof of scientists who claim life was wiped out numerous times the following: C. Chyba, “The heavy bombardment and the origins of life,” *Astronomy* 20(11) (1992) 28-35 at 32-33.

This is what led Chyba and Sagan to insist that life originated on meteorites. It could not have come about *naturally on earth*. See, Chyba, C. F., and C. Sagan, *Comets as a Source of Prebiotic Organic Molecules for the Early Earth*, in Thomas, P. J., C. F. Chyba, and C. P. McKay (eds.), *Comets and the origin and evolution of life* (Springer, New York, 1997).¹⁰

Based on this evidence of multiple planetary evaporations of life on earth, NASA cooperates in this venture to find life on comets and meteors.¹¹

However, the meteor-panspermia theory has even more problems than believing life originated spontaneously on earth several times. There are virtually insurmountable

9. Dave Matson at http://www.infidels.org/library/modern/dave_matson/young-earth/specific_arguments/meteor.html (last accessed 12/05).

10. See also Chyba, C. and C. Sagan, “Endogenous production, exogenous delivery and impact-shock synthesis of organic molecules: an inventory for the origins of life,” *Nature* (1992) 355: 125-132.

11. The ASUR project is described at http://www.iup.physik.uni-bremen.de/asur/campaigns/leonid_e.html (last accessed 12/05).

problems of life existing in the vacuum of space, exposed to all forms of radiation, x-rays, gamma rays, etc., besides extremes of heat and cold. This adds even more levels of difficulty to explain how life could naturalistically originate.¹²

In other words, the reason some dream of an ideal world elsewhere where life originated is due to the fact science must concede that for life to originate on earth *one time* is truly impossible — it would be a miracle of coincidences. Then because of meteorite impacts having wiped out all life on earth several times, one has to believe life just naturalistically originated virtually miraculously several times, not just once. This fact is what forced scientists to look at meteorites as the origin of life. Yet, when this avenue was studied, it was not easier to imagine life originated elsewhere, and travelled here by meteorites. The difficulties to argue for life originating on earth without a brilliant beaker-handling designer are just as difficult on any kind of planet we might imagine. For

12. There are die-hards in the evolutionary camp on this who insist radiation in space is not an insurmountable hurdle. Svante Arrhenius in 1908 said that spores in space would be subject to radiation damage, especially in the vicinity of a star. However, in 1978, Hoyle and Wickramasinghe suggested that if a cloud of bacterial matter were dense enough, the inner contents would be protected from radiation by the outer layers. (Fred Hoyle and Chandra Wickramasinghe, *Lifecloud: The Origin of Life in the Universe*. (Harper and Row 1978).) Other scientists recently have claimed that a coating of dust only half a micrometer thick would adequately protect a bacterium from ultraviolet radiation in space. (However, UV radiation is only one spectrum of deadly light in space.) See J. Secker, P. S. Wesson and J. R. Lepock, "Damage Due to Ultraviolet and Ionizing Radiation during the Ejection of Shielded Microorganisms from the Vicinity of 1 Solar Mass Main Sequence and Red Giant Stars" *Astrophysics and Space Science* p 1-28 v 329 (1994); Jeff Secker, Paul S. Wesson and James R. Lepock, "Astrophysical and Biological Constraints on Radiopanspermia" *Journal of the Royal Astronomical Society of Canada* (August 1996) v 90 n 4 at 184-192; .Paul Parsons, "Dusting off panspermia" *Nature*. 19 September 1996 at 221-222 v 383. For more information, see <http://www.panspermia.org/comets.htm> (2005).

on any planet where the raw material could likewise have originated must present the same systematic necessity of such ‘coincidences.’

Hence, Sagan, Chyba and others merely have put the issue further off in location, but it has not increased the possibility, even under the most ideal conditions, for life to naturally originate from matter. The chance is still *nil*. Thus, Chyba has done the creationists a favor by pointing out that life was wiped out numerous times on earth by meteorites and comets, only to reappear numerous times. Only a Designer can explain this pattern. However, the creationist of the ICR mold will not discuss this evidence. Such discussion would have to concede that meteorites did shower earth for millions of years, as is proven from the visible surfaces of our nearby Moon, Mars and Venus. Because this offends young earth science, one of the greatest proofs for a designer is never discussed.

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