Examples of TLP

Over one thousand lunar transient events have been reported since the 1600s when telescopes were first developed. Astronomer William Herschel during 1783–1787 reported several apparent lunar volcanic emissions: 'I perceived in the dark part of the Moon a luminous spot. It had the appearance of a red star.' Four years later Herschel wrote, 'I perceive three volcanoes … The third shows signs of an actual eruption of fire, or luminous matter.'[5]

More recently, in 1971, the Apollo 15 lunar mission detected a high concentration of the isotope radon-222 in the vicinity of Aristarchus Crater. This radioactive gas has a half-life of only 3.8 days. It is obvious that the radon, a byproduct or radioactive decay, was a recent gaseous discharge from within the Moon.[6]

Lunar heat flow measurements made during the Apollo missions also were surprisingly high.[7] The values conflict with the idea of a billion-year-old Moon with an inert, cold crust.

In 1992, French astronomer Audouin Dollfus observed an unusual 'diffuse brightening' near the center of the lunar crater Langrenus. The haze resembled a gas cloud which was emitted from the crater's central peak.[8]

A 1968 summary from NASA tabulates 579 TLP reports covering four centuries.[9] Many of the lunar surface changes are concentrated at certain locations such as the craters Aristarchus and Alphonsus. Figure 1 indicates 11 lunar sites where TLP reports have been frequent.[10]

Conclusion

Why is it often assumed that the Moon is geologically inactive? Because, if the Moon is truly ancient, it should no longer contain significant heat. This follows from the Moon's small size, one-fourth the Earth's diameter and only 1.2% of the Earth's mass. There is indirect evidence for a small molten lunar core, only 2–3% of the lunar mass. In contrast, the Earth's molten interior accounts for 32% of our planet's mass. Since the Moon's magma core is hundreds of km underground, surface volcanic activity therefore is thought to be impossible. Actually, there are major uncertainties about the interiors of both the Earth and Moon. The lunar molten core may or may not be 1,500 km deep, as assumed. Regardless, TLPs indicate local pockets of magma close to the lunar surface.

Because of this long-age belief, TLPs are typically dismissed as resulting from poor observing techniques, Earth atmospheric effects, or perhaps the solar illumination of lunar features.[10] And perhaps many TLP sightings can be explained in these ways. However, this still leaves hundreds of observations of apparent short-term geologic activity. At minimum, the assumption of an ancient unchanging Moon is seriously challenged. Indeed, the source of the transient lunar events, near-surface heat, is consistent with a recently created Moon as the Bible records.

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The 'cool-tropics paradox' in palaeoclimatology

Michael J. Oard

In 1947, Harold Urey developed a method for estimating past ocean temperatures by measuring the oxygen isotope composition of seashells. Oxygen comes in three stable isotopes, two of which are used as a palaeothermometer. It is assumed that the ratio of these two oxygen isotopes is correlated to temperature, although other variables also affect the ratio. The more ^{18}O compared to ^{16}O incorporated into a shell, the cooler the water in which the shell formed. For decades the $^{18}O/^{16}O$ ratio has been measured in shells from deep-sea cores. The ratio has been used to infer cooling of the oceans during the Tertiary of the evolutionary/uniformitarian time scale. In the Creation/Flood model, the Tertiary cooling trend has been placed in a post-Flood context.[1,2] The ratio has also been used to deduce up to about 30 or more successive ice ages during the past several million years of geological time, which has been related to the Milankovitch mechanism.[3,4] Recent findings call into question some of the uniformitarian palaeoclimatic interpretations of oxygen isotopes from deep sea cores.

The paradox

According to oxygen isotope measurements, a paradox arose for the Cretaceous to Eocene tropical sea surface temperatures within the uniformitarian paradigm. The oxygen isotope ratios measured in the planktonic animal, foraminifera, from deep sea cores showed that the tropical surface temperatures were significantly cooler than today. Very special upwelling of cool bottom water to the surface was one hypothesis used to explain such an anomaly. The cooler tropical temperatures occurred at the same time the mid and high latitude oceans and continents were *warm*. This latter conclusion is based not only on oxygen isotopes but also on postulated high carbon dioxide values and warm-climate flora and fauna that are abundant across the mid and high latitudes.[5–7] These results were supposedly verified by other environmental indicators, such as carbon isotopes. Researchers concluded that there was very little difference in temperature between the tropics and the polar regions—both in the ocean and the atmosphere.

Such a small temperature difference in the Cretaceous to Eocene would cause weak westerly winds aloft and weak mid and high latitude storms.[8] Weak storms pump less warm air to higher latitudes, and weaker winds cause a more sluggish ocean circulation that transport less warm water to polar locations than in today's climate. The net result would be much colder polar regions and overheated tropics. So the question would be how can weak north-south temperature differences be maintained? This is the paradox. Climate modelers are not even close to simulating such a unique palaeoclimate. One of the main problems with the climate simulations is that if they find a mechanism that heats the higher latitudes, the tropics become *overheated*. Schwarzschild describes the 'cool-tropics paradox':

> 'In stark defiance of the global climate models, the planktonic ^{18}O data seemed to suggest that 50 million years ago, a time when the CO_2 level was almost certainly much higher than it is today and the Arctic was balmy enough for crocodiles and giant monitor lizards, tropical ocean surfaces were about 10^0C *cooler* than they are now [emphasis his].'[9]

Adding to the paradox, scientists find abundant warm climate fossils in the mid and high latitudes during the Cretaceous and Eocene.[10] Not only was this climate warm, but also there was little seasonal contrast between its summer and winter temperatures. This is why the 'cool-tropics paradox' has caused such consternation over the years. Unfortunately for them they cannot solve the paradox by ignoring it since it is based on numerous measurements over many years from deep-sea cores.[11]

Modelers are bending over backwards to come up with a climate model that explains the palaeoclimatic implications of all the fossils they do find. I fully expect that if they tweak these models often enough, they will 'solve' the problem. In fact, a recent effort has partly 'solved' the 'equable-climate paradox' of the Eocene by incorporating what are believed to be more accurate Eocene sea surface temperatures that are constantly warm.[10,12] Warm sea surface temperatures will of course lead to a warmer climate in the simulation.

Proposed 'solution' to the paradox

Evolutionary/uniformitarian scientists now think they have found the solution to the 'cool-tropics paradox'. But if their solution is correct, it opens up a can of worms for other palaeoclimatic research using oxygen isotopes from deep sea cores.

Daniel Schrag suggested that the foraminifera shells had recrystallized on the ocean bottom giving a false reading of temperature. In the process of recrystallization, calcite with a more positive oxygen isotope ratio due to cooler bottom water was added to the shell.[13] However, researchers have always routinely checked for recrystallization in an attempt to eliminate altered foraminifera. So, their samples have always been assumed free of recrystallization.[14]

Schrag states that palaeoceanographic studies that use foraminifera isotopic data have entailed selection of 'unaltered' samples by examining them only under a binocular microscope.[15] This microscope only show shells that have been physically altered. Unfortunately, the electron microscope revealed that secondary calcite can be added to the *inside* of the shells or, even worse, simply replace the primary shell structure. This type of recrystallization would not be detected by the standard binocular microscope.

By analyzing shells from coastal Tanzania that have been dated as Cretaceous to Eocene, Pearson *et al*.[16] were able to choose truly unaltered foraminifera shells by examining them by an electron microscope. These shells produced oxygen isotope ratios much warmer than the vast majority of shells of this 'age'. They also discovered that many other shells that appeared unaltered by a binocular microscope were actually much recrystallized, a form of diagenesis:

> 'High-resolution scanning electron microscope (SEM) images show that planktonic foraminifer microgranules have irregular shapes and consequently high surface areas, making them prone to diagenetic recrystallization. In this way, a shell may become thoroughly recrystallized on a micrometre scale without obliterating structures such as wall pores, internal shell layering features and surface ornaments. Our observations of many Cretaceous and Palaeogene [Paleocene to Oligocene] samples suggests that this kind of diagenesis is *ubiquitous* in the pelagic oozes and chalks that are commonly used in palaeoceanographic studies, even when preservation has been described as good or excellent [parentheses and emphasis mine].'[11]

So, recrystallization in past foraminifera samples has been common.

What about previous research?

Previously, researchers had estimated that recrystallization would produce an error of 1 to 2ºC with a maximum of 5ºC in the temperature-oxygen isotope equation.[12] The temperature difference that Pearson *et al*. discovered after using the electron microscope amounted to a whopping 15ºC warmer with the non-recrystallized samples. The new results are not only a major difference based just on this one variable, but exceed their previous maximum estimate of recrystallization by *three* times. Pearson *et al*. state the significance of their results to previous studies:

> 'We infer from this that *most* planktonic foraminifer stable isotope data from carbonate oozes and chalks are "suspect", and may represent a roughly equal combination of surface- and bottom-water signals.
> We contend that *most* previous workers, including ourselves, have been misled to some extent by fine-scale recrystallization of planktonic foraminifer shells, which occurs at shallow burial depths in open ocean pelagic oozes and chalks. This process introduces a *much larger* component of diagenetic calcite than has generally been recognized, making such shells *unsuitable* for sea surface palaeotemperature analysis [emphasis mine].'[17]

The main effect of recrystallization pertains to planktonic foraminifera, those that float near the surface of the ocean. In this case, recrystallization in the sediments, where the circulating water is much cooler than the surface, would cause a much different oxygen isotope ratio in the new calcite versus the calcite added in the surface layer. Thus many palaeotemperature estimates based on planktonic foraminifera from low and mid latitudes are suspect.

It is hard to know the ramifications of such ubiquitous recrystallization, since some uniformitarian palaeoclimatic inferences are based more on benthonic (bottom dwelling) foraminifera. The above recrystallization effect would affect benthonic foraminifera the least, since the temperature remains cold near the bottom.

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>98% Chimp/human DNA similarity? Not any more.

David A. DeWitt

A new report in the Proceedings of the National Academy of Sciences suggests that the common value of >98% similarity of DNA between chimp and humans is incorrect.[1] Roy Britten, author of the study, puts the figure at about 95% when insertions and deletions are included. Importantly, there is much more to these studies than people realize.

The >98.5% similarity has been misleading because it depends on what is being compared. There are a number of significant differences that are difficult to quantify. A review by Gagneux and Varki described a list of genetic differences between humans and the great apes.[2] The differences include 'cytogenetic differences, differences in the type and number of repetitive genomic DNA and transposable elements, abundance and distribution of endogenous retroviruses, the presence and extent of allelic polymorphisms, specific gene inactivation events, gene sequence differences, gene duplications, single nucleotide polymorphisms, gene expression differences, and messenger RNA splicing variations.'[2]

Specific examples of these differences include:

1. Humans have 23 pairs of chromosomes while chimpanzees have 24. Evolutionary scientists believe that one of the human chromosomes has been formed through the fusion of two small chromosomes in the chimp instead of an intrinsic difference resulting from a separate creation.
2. At the end of each chromosome is a string of repeating DNA sequences called a telomere. Chimpanzees and other apes have about 23 kilobases (a kilobase is 1,000 base pairs of DNA) of repeats. Humans are unique among primates with much shorter telomeres only 10