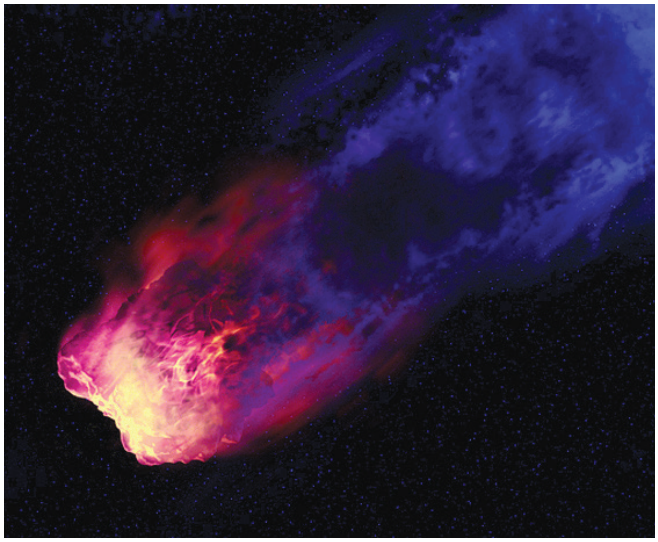
LIFE & DISEASE FROM SPACE

Did COVID-19 arrive from a cometary fragment that hit China last year?



By PROF. CHANDRA WICKRAMASINGHE

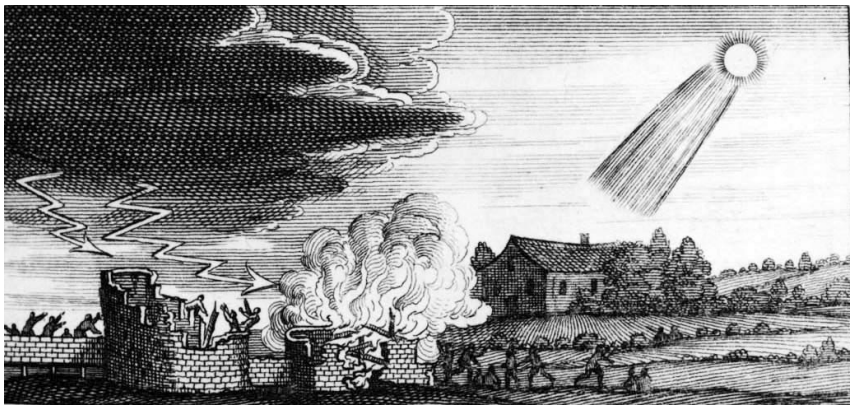
Many ancient civilisations regarded comets as bringers of pestilence and death. They were also held in awe and often revered. Living in the 21st century amid amazing technologies including space exploration, artificial intelligence, and genetic engineering of various types, we dismiss these ancient beliefs as idle superstition. Is this justified? Civilisations that held these views included those in Egypt, India and China, which in the main respected facts above all else. Could not some of these seemingly wild assertions have been based on painstaking observations and correlations discovered over many centuries?

An overarching paradigm that has held sway throughout the history of Western civilisation is the belief that life on our planet necessarily originated on the Earth *in situ*, evolved independently of the vast external cosmos, and that its future trajectory is entirely under the control of purely Earth-based processes. This paradigm known as the theory of spontaneous generation can be traced back to Aristotle in the 3rd century BCE whose iconic statement "fireflies emerging from a mixture of warm Earth and morning dew" epitomises the theory. Over the centuries, natural philosophers and scientists have continued to cling to this paradigm, modifying and refining the concept in many ways, in the hope that it might one day be experimentally proved. With the passage of time, all such hopes have turned out to be illusory.

Every experiment that has been carried out to replicate the process of spontaneous generation under the widest possible range of conditions in the laboratory has ended in dismal failure. This is not at all unexpected because Fred Hoyle and I have argued that although the simple organic building blocks of life (e.g. amino acids) can be easily made under laboratory conditions, the probability of their assembly into the set of crucial enzymes (chains of amino acids) essential for the functioning of simplest bacterium is less than 1 in 10^{1000}. This can hardly be supposed to happen even once in the entire 13.9-billion-year history of the universe. If we are to overcome improbabilities on a scale such as this, it stands to reason that we can do so only by going to the biggest system available – manifestly, the universe as a whole. The supportive data for this point of view comes from many disciplines: astronomy, geology, evolutionary biology, microbiology as well as space exploration. A sample of this data and evidence were recently discussed in an earlier issue of this magazine (*New Dawn* 165, Nov-Dec 2017).

A recent discovery in geology that is inconsistent with the standard theory that life emerged in a primordial soup on the Earth is the discovery of the *very first evidence of microbial life* on Earth locked away within crystals of zirconium in rocks that formed 4.1-4.2 billion years ago – now exposed in the *Jack Hills* outcrop in Western Australia. This discovery, in my view, puts paid to any possibility of any primordial soup brewing on Earth at a time when the planet was being relentlessly bombarded by comets and meteorites. The evidence is stunningly clear that the first life on Earth in the form of bacteria came with impacting comets.

The delivery of microbiota from comets to the Earth would, of course, have continued from this early moment 4.2 billion years ago to the present time, bringing the set of microbial genes from a vast cosmic ensemble that directed the evolution of life on our planet. The existence of virus-related DNA in enormous quantities in our genomes testifies to the operation of such a process taking place over billions of years of evolutionary history. DNA sequence studies have clearly shown that the evolution from early primates leading up to *Homo sapiens* was marked by a long series of viral pandemics, each of which was probably a close call to extinction, but the evolving line survived to eventually reach us today.



ABOVE: Woodcut showing link between comet and destruction on Earth, dated to the fourth century CE, from Stanilaus Lubienietski's *Theatrum Cometicum* (Amsterdam, 1668).

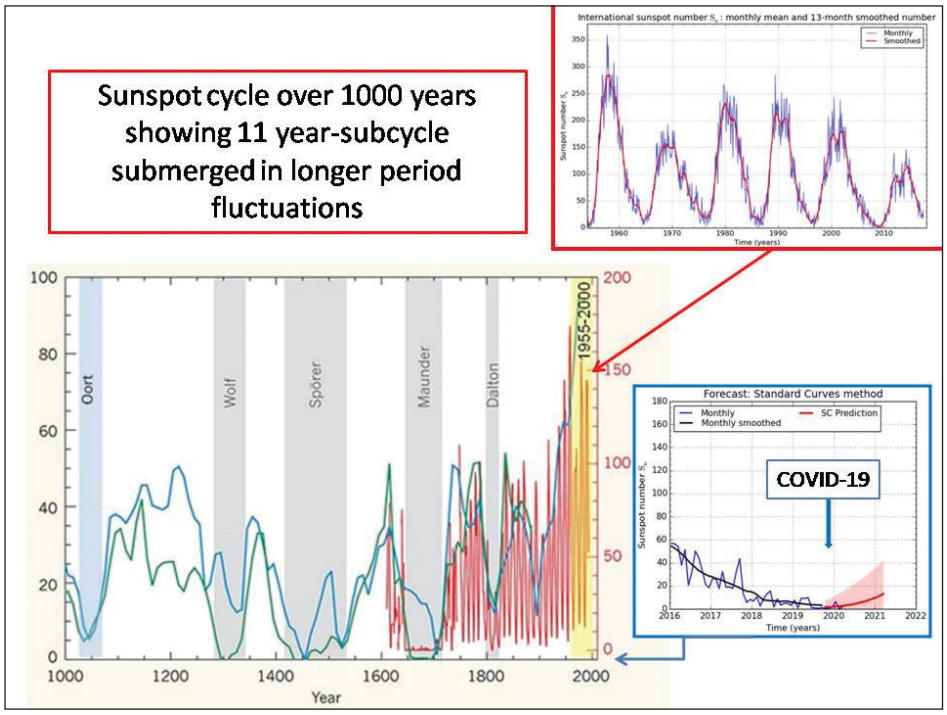


FIGURE 1: The Maunder minimum from 1645–1715 was marked by an almost total absence of sunspots for many days, and the Dalton minimum from 1790–1830 witnessed a significant reduction of sunspot numbers over several cycles.

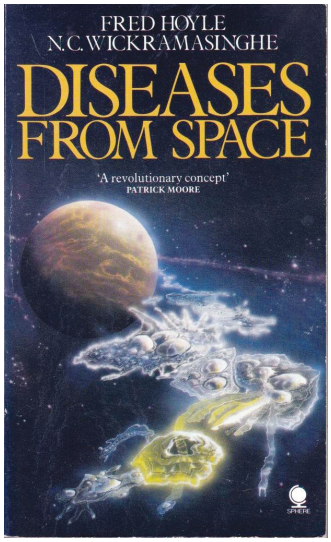
HISTORICAL PANDEMICS

Reports of the sudden spread of plagues and pestilences punctuate human history throughout the millennia. Various epidemics, scattered through history and the world, often bear little or no resemblance to one another. However, they do share a common property of afflicting entire cities, countries or even widely separated parts of the Earth in a matter of days or weeks. The Greek historian Thucydides describes the plague of Athens of 429 BCE:

> It is said to have begun in that part of Ethiopia above Egypt…. On the city of Athens it fell suddenly, and first attacked the men in Piraeus; so that it was even reported by them that the Peloponnesians had thrown poison into the cisterns….

Thucydides writes that many families were simultaneously struck by a disease with a combination of symptoms hitherto unknown.

The general belief, by no means well-proven, is that major pandemics such as influenza start by random mutation or genetic recombination of an Earth-bound virus or bacterium which then spreads throughout a susceptible population solely by person-to-person contact. That this is not necessarily so is borne out in many records of ancient and modern epidemics discussed by Fred Hoyle and the present writer in the book *Diseases from Space* published in 1979.



An important piece of historical evidence that emerged 101 years ago relates to the great Influenza Pandemic of 1918-1919 which caused some 20-30 million deaths worldwide. Reviewing all the available data, Dr L. Weinstein noted:

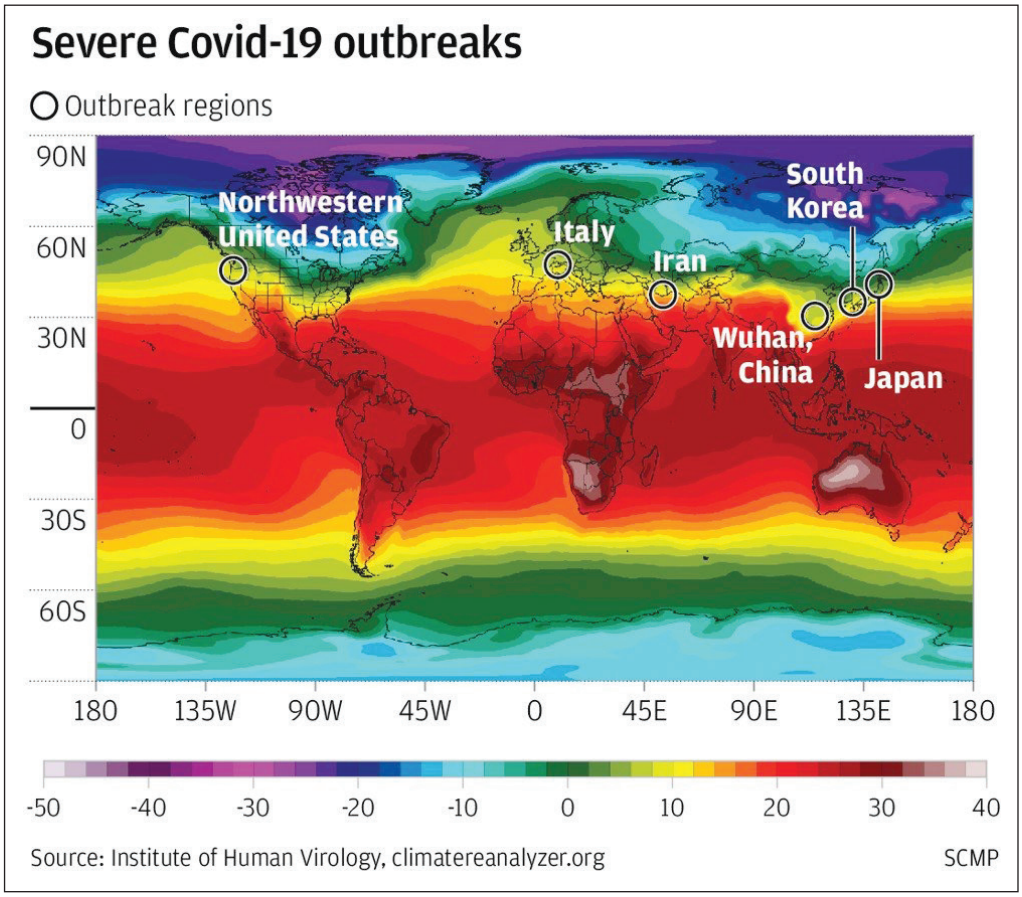
> Although person-to-person spread occurred in local areas, the disease appeared on the same day in widely separated parts of the world on the one hand, but on the other, took days to weeks to spread relatively short distances. It was detected in Boston and Bombay on the same day but took three weeks before it reached New York City, despite the fact that there was considerable travel between the two cities. It was present for the first time at Joliet in the State of Illinois four weeks after it was first detected in Chicago, the distance between those areas being only 38 miles…… (L. Weinstein, *New Eng.J.Med,* May 1976)

The lethal second wave of the influenza pandemic showing up on the same day in Boston and Bombay defies the realities of human travel in 1918. Before the advent of air travel, it was clearly impossible for people to transfer the virus from Boston to Bombay or vice versa. As Sherlock Holmes would have said: "The case is clear as daylight, my dear Watson: a new virus clearly fell through the skies simultaneously in locations that were separated by tens of thousands of kilometres."

ET VIRAL INVASIONS

The factors governing the onset and the pattern of global incidence for any particular extraterrestrial viral invasion could be complex. The first requirement is that a fragment of a comet carrying a particular pathogenic virus comes within a capture distance of the Earth and is then disintegrated into viral-sized particles. If the disintegration took place at a great distance from the Earth, the viral particles would be positively charged by the action of sunlight, and magnetic fields in the Earth's vicinity (magnetopause) could play a role in inhibiting their entry to the Earth. Solar activity and the sunspot cycle could play a decisive role. Strong magnetic fields in the Earth's vicinity could impede the flow of charged viruses onto the Earth.

Solar activity, including the streaming out of highspeed electrons from the surface in flares, controls the magnetic field configurations enveloping Earth, and generally determines what is now called "space weather." The sun's surface agitation and activity is marked by variations in the numbers of dark spots visible on the surface, and these sunspot numbers have



RIGHT: In March 2020, a team of US and Iranian researchers realised that, in the early days of COVID-19, the "transmission has occurred in a consistent east-and-west pattern. The new [regional] epicentres of the virus were all roughly along the 30-50 degree [lines of latitude] north zone."

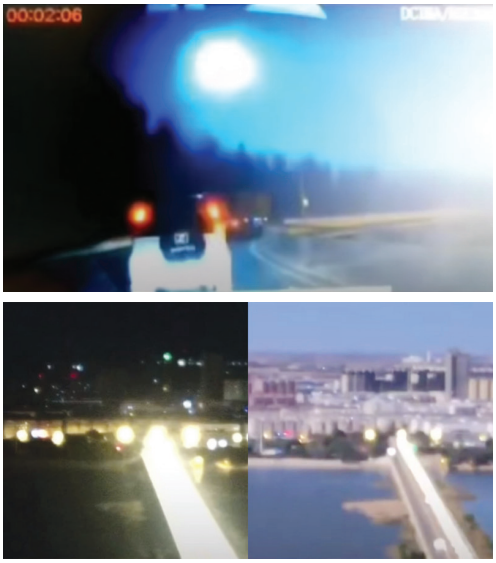
While their focus was on how temperature and humidity could be used to predict the spread of the contagion, their study findings on contagion patterns corroborates Prof. Wickramasinghe's linkage of the cometary bolide explosion over China in mid-October. (Source: www.scmp.com/news/china/science/article/3074970/coronavirus-becomes-pandemic-scientists-ask-if-lines-map-hold)

been recorded over many centuries, the earliest records going back to ancient China around 800 BCE. Low sunspot numbers are associated with a weaker electron flow out from the sun, and thus weaker protective magnetic fields surround the Earth.

Observations of the sun over many centuries have revealed a cyclic behaviour in the daily numbers of sunspots, the causes of which are still not fully understood. The most striking of these cycles is the periodicity in which sunspots rise and fall over a 11-year period. There are also longer cycles in the record where over more extended periods the sun's activity seems to have been greatly depressed. Minima in these longer cycles include those identified in Figure 1 (see page 22) as the Sporer, Maunder and Dalton minima, and it is for these that we have the most reliable pandemic data.

All three major sunspot minima in Figure 1 – Sporer, Maunder and Dalton – are known to have been associated with devastating pandemics caused by viral or bacterial agents. These include smallpox, cholera and the bubonic plague.

Moving to more recent times, the sunspot minimum between sunspot cycle 24 and cycle 25 (which occurred toward the end of 2019, marked by the blue arrow in Figure 1) was the deepest in over a century. Data released by the European Space Agency (ESA) earlier in 2019 further revealed that the strength of the geomagnetic field is systematically weakening by around 5% every ten years, which is nearly ten times faster than had been predicted. For this reason, a group of us alerted the health authorities in mid-2019 of this danger – the danger of a viral pandemic – which perhaps should have been heeded, but it was not. Although we do not claim the COVID-19 crisis to be specifically part of our prediction, keeping a vigil on microbiota in the stratosphere should, in my view, be a priority.



ABOVE: A cometary bolide entered Earth's atmosphere and exploded on 11 October 2019. The fireball was seen in the night skies over North-East China, and captured by a dash cam on the top photo. The above photo from CCTV shows how the explosion turned night into day for one moment in time. Question is: did something else also arrive into our world at this moment?

DID COVID-19 ARRIVE FROM SPACE?

The COVID-19 pandemic is fully consistent with the thesis of "Diseases from Space." The widespread belief that the virus originated in bats and reached us through intermediate animals, pangolins, remains a contested hypothesis for which the supportive data is still very tenuous. In my view, the space origin idea seems far more probable, and apart from a deep-rooted cultural reluctance to face the consequences of our inalienable cosmic ancestry, all the data is consistent with the view that the COVID-19 causative virus came from space.

On 11 October 2019, a small cometary bolide exploded in North-East China resulting in a fireball seen over the city of Jilin at midnight. Together with a team of scientists, I suggest

this bolide was part of a larger cometary object that fragmented in the troposphere, and incorporated within it was a monoculture of infective COVID-19 causing virions. This material (trillions upon trillions of virus particles) was dispersed into the jet stream and began to circulate around the world. It is from this circulating reservoir that infalls of virus occurred. The first outbreak was over Wuhan in Hubei province of China where the infection exploded from late November 2019 onward claiming many victims. Subsequent infall events happened at other locations mostly confined within a narrow 30-50 degree N latitude belt, including major initial foci of disease, such as Italy, Iran, Spain, New York. The spread of the virus outside major infall centres was caused by the virus either being transferred by wind and air currents in the lower atmosphere or by person to person infection.

What can we do increase our preparedness for pandemic events that are bound to happen in the future? In my view, we need to have a system in place that continually monitors the Earth's stratosphere for potentially harmful viruses and bacteria. To get space agencies to engage in such a project was not easy when, together with Sir Fred Hoyle, I attempted this over 25 years ago. The first dedicated effort to test the idea of bacterial/viral in-fall from comets was carried out in collaboration with scientists at ISRO (Indian Space Research Organisation) in 2001. Positive detections of in-falling microbiota were made, and from the sampling of bacterial cells collected in a measured volume of the stratosphere at 41km, it was possible to estimate an in-fall rate over the whole Earth in the range of one third to three tonnes of microbes per day. This converts to a staggering 20-200 million bacteria, and a hundred times this number, of viruses per square metre arriving from space every single day. Modern techniques of gene sequencing make possible an *in situ* read-out of all the genomes of all the bacteria in a sample of the stratosphere at any time. The fact that this has not even been attempted till now is a severe indictment of our collective wisdom.

We have already pointed out that COVID-19, as indeed all other pandemics present and past, most probably had a cometary source. The concordance of such a viewpoint with the beliefs of our most ancient ancestors cannot be overlooked. Could it be that these ancient beliefs were derived from observing, recording and studying correlations of natural events over the generations – epidemics on the ground after spectacular occurrences in the sky? They certainly lived in a far more sustainable and ecologically harmonious environment than we do. The brilliant starry skies that greeted them every night would have served as a reminder of an inescapable cosmic connection. Panspermia was indelibly written into their lifestyle and their culture with space-driven pandemics an inevitable part of the deal.

Similar pristinely brilliant night skies are greeting us today (March-June 2020) during this time of worldwide lockdown. Perhaps the bizarre events facing humanity today will restore our long-lost instinctive connection with the cosmos as we experience the same world that was seen by our most ancient ancestors.

▶ The author's book *Cosmic Womb: The Seeding of Planet Earth* is available from *New Dawn* for $36.00. To order, use the form on page 72.

FURTHER READING

C. Wickramasinghe, 'Cosmic Life – Dawn of a New Paradigm', *New Dawn* 165, Nov-Dec 2017

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