



## The Skeptics SA guide to Immanuel Velikovsky

**Dr Immanuel Velikovsky** (b Vitebsk, Russia 1895 – d Princeton NJ, 1979), was an outstanding student in languages and mathematics. Graduating from Moscow University in 1913, he continued studies in France, Edinburgh and Moscow, obtaining a medical degree in 1921. He practiced psychiatry in Palestine from 1924 – 1939. In 1940 after researching a book on Freud's dreams he commenced a study on Oedipus, Akhenaton and Moses.

It was at this time that he formed his theories which were to attract such interest when later published in *Worlds in Collision* (1950), *Ages in Chaos*, (1952) and *Earth in Upheaval* (1955). He came to believe that most of the events recorded in Exodus could be satisfactorily explained by a single natural catastrophic event, and he theorized that some 3500 years ago the planet Jupiter expelled a huge comet like mass, the proto-planet Venus, which as it orbited the sun, crossed the orbits of both the Earth and Mars precipitating cataclysmic events, especially on Earth.

Velikovsky claimed the ancients had recorded these events, and that many of the stories mentioned in Exodus, concerning the plagues

of Egypt, the parting of the Red Sea, and the Exodus of the Israelites, were based upon these events. Despite the fact that most reputable scholars consider these stories as nothing more than myths, Velikovsky claimed they were actual accounts of this cataclysm. He appears to be totally convinced that the Bible stories and other ancient texts are completely reliable eyewitness reports. So reliable that where these myths conflict with modern scientific theories, he insists we should ignore the scientific theory.

He claimed that around 1450 BCE as the Earth approached the tail of this comet it was enveloped by clouds of red ferrous dust, which choked the rivers, poisoned the fish and brought death and disease to many, (the events described in Exodus 7:20-21). Closer to the tail the dust gave way to larger particles and soon a terrible hail of meteoric stones mixed with fire bombarded the Earth, (Exodus 9:24). Entering the tail, the Earth encountered masses of hydrocarbon gasses, which exploded in vast bursts of flame, while naphtha spilled from the sky to cover the land and seas, burning for years. But worse was to come, for the Earth was heading straight into the head of

this comet. Facing final destruction, at the last instant, the Earth tilted on its axis and was knocked out of its orbit.

This orbital change precipitated major cataclysms all over the world, huge tsunamis, kilometres high swept over whole continents, volcanoes erupted worldwide, producing lava flows 1.5 kilometres thick, which engulfed large areas of the earth.

After its encounter with Earth proto-Venus continued in its irregular orbit, until during the 8th and 7th centuries BCE it had several close encounters with Mars, and finally the proto-Venus settled into its present orbit as the planet Venus.

Now while science generally accepts that some cataclysmic events probably have occurred throughout Earth's history, the claims that they occurred in relatively recent geological times, and that there were people left to record these events, is somewhat dubious.

Although scientists protested at Velikovsky's claims they had no way of actually proving him wrong. The early 1950s was before the era of space research and little or no research had been done in many of the areas that Velikovsky

raised. Ideas such as meteor impacts, nuclear winters, etc. were still in the distant future. Proof had to await the arrival of satellites and sophisticated new instruments to provide sophisticated data about the Earth and Venus.

There are numerous valid criticism of Velikovsky's claims, unfortunately because of limited space we must restrict our comments to a few of his claims. The most obvious criticism is the fact that the very existence of these stories proves the events never happened, for, if they had there would have been no one alive to record the events. Given that recent research has shown the enormous devastation and extinction of species caused in the past by asteroids, (rather small objects when compared with Velikovsky's Venus sized object claims hit Earth), it is quite surprising that humankind survived this particular cataclysm so well.

For if, as the Bible claims, in Joshua 10:12 – 13, that, "the sun stood still" that would have meant the Earth actually stopped spinning. If that happened, everything on the surface of the Earth, including humans, trees and the mountains would have been ripped up and thrown into the air, and when the dust settled there would have been no human or animal life left alive.

Furthermore, the various myths never actually mention any huge object colliding with Earth; the references are rather indirect, vague references to periods of darkness, storms, upheavals of the earth.

In his book *Broca's Brain*, Carl Sagan exam-

ines many of Velikovsky's claims suggesting that his theories contravene many of the fundamental rules of modern physics. For instance, if Jupiter had ejected a planet-sized mass of matter, the amount of energy required for this mass to escape from Jupiter would have heated the body to a temperature of several thousands of degrees, so hot in fact that it would have simply "melted" and, had it reached space it would have been nothing more than a collection of atoms and very small dust particles, not a large solid mass such as Velikovsky claims. Although some of Sagan's observation have been questioned there is other factual evidence to show Velikovsky was wrong:

- What enormous force could have torn such an enormous mass free of Jupiter? Only the presence of another planetsized body could have done it. Yet where did it come from, and where did it go? Such a body has left no sign that it ever existed!
- If this ejection of material from Jupiter was not caused by another planet, according to Sagan the amount of energy needed to fling this amount of matter into space would have been about the same as all of the energy expended by our sun in a single year, that is 100,000,000 times more energy than is contained in the largest observed solar flare. One must ask where did such energy come from, since Jupiter is primarily a gas-planet, not given to huge amounts of energy such as is expended by the sun.

- The current orbits of the moons of both Earth and Mars reveal no sign of recent disturbance such as that suggested by Velikovsky
- Since close planetary encounters tend to drastically increase inclination, the small inclinations of the orbits of Venus and Mars tend to refute Velikovsky
- There is no evidence either in the ice caps or the ocean floor of the vast amount of planetary debris Velikovsky claims rained upon the earth for 40 years
- Very old trees, such as the bristlecone pine, seem to have survived Velikovsky's worldwide cataclysm, which he claimed killed all trees
- Flora and fauna on islands such as Hawaii reveals no evidence that they have ever been overwhelmed by massive tsunamis
- Satellite images of the surface of Venus reveal a crust too thick to have been molten 3500 years ago

The problem with Velikovsky is that all his theories are based upon ancient myths which have been carefully selected, edited and often twisted to support his own theories, providing a convenient timetable of cataclysms, scored to the theme of known mythologies, particularly those of the Old Testament.

Even though some of Velikovsky's claims have turned out to be correct, the underlying assumptions are essentially false. In order for them to be true we would have to abandon most of our modern scientific knowledge.

Acknowledgment is made to the use of material from Carroll, RT, *The Skeptic's Dictionary* <<http://skepdic.com/>>

Ellenberger, Leroy, *Top Ten Reasons Why Velikovsky Is Wrong About Worlds In Collision*

Sagan, Carl, 'Venus and Dr Velikovsky', in *Broca's Brain*, New York, Random House, 1979

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