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THE RED PLANET – Part 1

Ken Tapping, 12th December, 2017

Mars is an interesting planet. It is part of our culture, currently of extreme scientific interest, and sufficiently like Earth for us to seriously consider going there, maybe even living there. All these things are interesting but there is no way we can do justice to them in one article, so this is the first of a series of three, dedicated to Mars, the “Red Planet”, the fourth planet out from the Sun.

Ancient astronomers noticed that although most stars remained firmly arranged in the sky, five starlike objects wandered to and fro along a strip of sky we call the ecliptic. The Greeks called them “wandering stars” or “planetes”, from which we get the word “planet”. Those starlike objects were named Mercury, Venus, Mars, Jupiter and Saturn. Mars was named after the Roman God of War, because it is conspicuously red.

In 1726 Jonathan Swift, in his book “Gulliver’s Travels” wrote that Mars has two small moons. Swift’s imagination was right. In 1877 Asaph Hall discovered them. They have been named Phobos and Deimos – “Fear” and “Dread”, appropriate companions for the God of War.

Our obsession with Mars was born that same year, in Italy. Giovanni Schiaparelli made careful observations of Mars and saw linear, channel-like features. Being Italian he used the Italian word for channels – “canali”. This got into the English-speaking world mistranslated as “canals”. Whereas “channels” may be natural phenomena, canals are made by engineers. Mars had to be inhabited by intelligent beings!

One of the people really excited by this idea was Percival Lowell. In 1894 he had built an observatory on top of a mountain near Flagstaff, Arizona, primarily to observe Mars. Over following years he produced drawings showing a complex system of canals, which he concluded were built by the Martians to manage the declining water supply on a dying planet. Other observers noted that during the Martian summer, the polar icecap in that hemisphere got smaller, and a wave of

darkening moved down towards the equator. They suggested this was a wave of vegetation growth caused by meltwater. There was life on Mars!

In 1911 Edgar Rice Burroughs started writing stories about beautiful Martian princesses and swashbuckling heroes fighting over the resources of a dying planet, although there was a rather unhealthy obsession by the villains for kidnapping the hero’s wife, with predictable consequences. However, the real troublemaker was H.G. Wells. In 1897 he wrote “War of the Worlds”, in which he told of the Martians, on their cold, dry world casting envious eyes on our warm, wet planet, and deciding to come here. This book has become at least two movies and the cause of many other movies and books about Martian invasions. In 1938 a radio broadcast by Orson Welles based on “War of the Worlds”, caused widespread panic.

Until over halfway through the 20th Century most book illustrations of Mars showed canals and stated that there was at least plant life on the Red Planet. We more or less took this idea for granted. Then doubts started to appear. Astronomers noted that canals appeared when the observing conditions were “fair”, but not when conditions were “good”. In addition, there was no sign of the signature of chlorophyll in the light from the surface of the planet: therefore, no green plants of the type we have here on Earth; maybe some other sort of plant? However, the wishful thinking finally ended in 1965 when the American spacecraft Mariner 4 passed close to Mars. It showed a cratered, dry, cold desert: no canals, no plants, no swashbuckling and no princesses. Even so Mars continues to deliver surprises and to attract more space missions to investigate them. The Red Planet itself is being invaded, by us!

Mars and Jupiter lie low in the dawn glow. The Moon will be New on the 18th.

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