

IS THE EARTH DRYING UP?

UNDOUBTEDLY IT IS SLOWLY LOSING ITS WATER LIKE MARS

What Will Be the Outcome?—Vivid Picture of the Gradual but Inevitable Effect Upon Human Life and Institutions

Is the earth drying up? It is a startling question; and what is yet more startling the answer given by science is undoubtedly affirmative.

Not that there is any occasion for alarm. The terrestrial water supply is adequate for a long time to come. It is not in our day that the fountains of the deep will fail; neither we, nor our children, nor our children's children, are likely to suffer from a general water famine.

The question is a real one, none the less and most serious: for upon the answer depends the ultimate fate of the human race. And this answer, based upon strict scientific reasoning and the most just analogies accessible to us, is, as has been stated, affirmative. Our earth, in very truth, is slowly drying up.

Of all the planets of the solar system Mars bears the closest resemblance to the world on which we dwell; this is conceded. Further, it is in every way probable that Mars is, or has been, covered with vegetation; there is much reason to believe that it is even now like our own orb, a theatre of life.

But it is older—in effect, much older—than the earth. Listen to what Percival Lowell, one of the highest authorities on this subject, says of its present condition. After a careful survey of all the evidence, he summarizes the matter thus:—

"It follows that Mars is very badly off for water. . . . Such scarcity of water on Mars is just what theory would lead us to expect. Mars is a smaller planet than the earth, and therefore is relatively more advanced in his evolutionary career. He is older in age if not in years; for whether his birth as a separate world ante-dated ours or not, his smaller size, by causing him to cool more quickly, would necessarily age him faster. But as a planet grows older, its oceans, in all probability, dry up, the water retreating through cracks and caverns into its interior. Water thus disappears from its surface, to say nothing of what is continually imprisoned by chemical combination. Signs of having thus parted with its oceans we see in the case of the moon, whose so-called seas were probably seas in their days, but have now become old sea bottoms. On Mars the same process is going on, but would seem not yet to have progressed so far, the seas there being midway in their career from real seas to arid and depressed deserts; no longer water surfaces, they are still the lowest portions of the planet, and, therefore, stand to receive what scant water may yet travel over the surface." (Mars: pp. 122-123.)

Here, then, are not one, but two impressive object lessons; and any careful reader will readily perceive that Mr Lowell assumes as unquestioned that this analogy is strictly applicable to the earth. Mars has gradually dried away until its surface is like a desert, through parts of which the streams from the melting ice-caps still descend in floods at certain seasons, making a system of irrigation possible; and it is a well-known fact that the telescope reveals what appears to be a network of canals all over the planet's disc. The moon, being much smaller, has reached a still more advanced stage.

Water is essential to the life of a world as blood to the life of man; and the moon is like a dry and shrivelled mummy, dead for ages. Its almost airless sky—if sky it can be called—is without cloud or rain; the basins of its lakes and the beds of its ancient seas are empty; its parched rocks are unclothed with verdure, and appear like a ragged mass of hardened slag. Such is a perished world in its last estate, the result of the complete disappearance of water from its surface; and if scientific reasoning is of any value, there is little room for doubt that the earth is on its way to a condition equally deplorable.

For the teachings of geology and chemistry lead to the same conclusion. There is no doubt that there was once far more water on the earth than now—far too much, in fact. Vast oceans of hot and turbid brine raged over almost its entire surface. The murky air was torn with storms of which we can form but the faintest conception. Over what little land there was, the acid-laden rains poured with incredible violence, eating and wearing the hard rock until finally a soil was formed capable of sustaining vegetable life. Then the waters slowly cooled and cleared and subsided.

They are still subsiding, though the process is so gradual as to be imperceptible to man. Just as of old, some portion of moisture is constantly sinking deep into the bowels of the earth, never to re-appear; while another portion is every moment entering into chemical combinations which convert it into solid substance—and little of this is ever released.

The world now is in a transition state, and probably is near that stage of evolution most favourable to the existence and development of intelligent beings. In the remote past the conditions were incompatible with life; in the remote future life

will again become impossible, and the lack of water will presumably be the prime cause of its final disappearance.

Let us now endeavour to trace the series of changes by which this will be brought about, and their progressive influence upon man and human institutions.

Only the drained fields of what is now the bed of the ocean will be suitable for occupation by the human race. Even there little water will remain, though in the lowest depths a few intensely saline lakes will linger, their desolate banks crusted with salt, their waters more intolerable than those of the Dead Sea.

Just as the waters will have become so scant, so the air will have become thin. Such apparently is the case on Mars to-day; and the moon has no air at all, or an atmosphere so slight that we cannot detect it. And owing to this thinness of air there will be few clouds, and little if any rain; even the winds will subside into insignificance. At the poles, however, and on the heights, snow will still fall, or at any rate frost will be deposited in large quantities; and the melting of the ice-caps thus formed will furnish the whole available supply of water. The streams from this source, which will be fairly abundant in the season of flood, will be carefully guided through an intricate system of canals and stingily hoarded in huge reservoirs, whence it will be drawn for irrigation and other necessary uses. Gold and silver will not be half so precious as this beautiful, transparent liquid of which we are so lavish; wealth will be measured in cubic feet of water, and a spring or fountain will be more valuable than any mine. Nor can this be called a mere fancy picture. To all appearance it is exactly the state of affairs which obtains on Mars at the present time.

The whole ocean bed, therefore, will be like a vast valley of the Nile—fertile, indeed, but rendered so only by incessant care and the highest engineering skill; while above and around it will lie a chill Sahara, a desolate and deadly waste, unwet with showers, unprotected by any veil of cloud, its impotent atmosphere scarcely sufficient to drift its abounding dust. All over it will be scattered the unvisited remains of the cities that we know, and its plains will be furrowed with the half obliterated channels of our great rivers. It will have but one remaining use: it will have become the cemetery of the world, both the old and the new.

The great valley below, which is to us the bottom of the sea, will be densely crowded with a population which will admit of no increase. How the people of that late and declining age will solve the difficult problems that will confront them it is hardly possible even to conjecture but meet them they must, or perish. A highly paternal form of government would seem to be inevitable; for the water must be parcelled out with the utmost wisdom and impartiality, and no waste can be tolerated. Navigation, of course, will be a thing of the past; even the fishes will become almost or quite extinct.

More than this, man will doubtless have suffered actual physical modifications, gradually brought about by the changes in his environment. Some of these will be due to atmospheric changes; for the air, besides being much diminished, will almost surely be impoverished in its most vital element. It is a very suggestive fact that to-day the proportion of oxygen is only about one part in five; we are pretty safe in assuming that the proportion was once considerably greater. Oxygen is an extremely active element, eagerly entering into combinations of various kinds which lock it up in solid or fluid form. Nitrogen on the contrary, is remarkably inert, entering into combination with reluctance, and freeing itself with extraordinary facility; its compounds are notable unstable, often to the extent of being violently explosive; and it is as useless for the maintenance of life as ashes to feed a fire. We conclude, therefore, that the atmosphere, while it becomes less in volume and density, will at the same time deteriorate in quality, and the lungs of man must needs accommodate themselves to the change by gradually enlarging their capacity. Thus the very constitution and aspect of the human race will in the course of ages suffer marked alteration.

And what will be the final outcome? It is a disheartening picture. Even the scanty supply of water which we have thus far assumed, must at length begin to fail; it will no longer be sufficient for the entire population. Unavoidably some must perish. There is no imaginable alternative; and how shall it be? It is impossible to conceive of any other solution than a struggle for bare existence fiercer than anything which history records—a conflict in which the strongest and most unscrupulous will constantly prevail. Such a condition of things means, of course a rapid reversion to savagery; and that, in turn, will but hasten the end, for the elaborate system of works necessary to make this decadent world habitable can be maintained only by a strong and wise government, under a high civilization. If this fails, the last degenerate remnants of the race will soon be extinguished—the sooner the better, when that sad stage is reached.

And what next? At last poor mother earth, dry and shrunken with age, the bloom of flower and leaf quite faded from her cheeks, her face scarred and pitted

with the tombs of all her offspring, will lie as dead and silent as the ghostly moon. CHARLES KELSEY GAINES.

IN NOVA SCOTIA ANOTHER TRIUMPH

The Case of John S. Morgan, of Bridgewater.

PROMINENT BUSINESS MAN

His Testimony Right to the Point—Cured by Dodd's Kidney Pills.

BRIDGEWATER, N. S., Nov. 16.—(Special.) No business man is better or more favorably known in this part of Nova Scotia than Mr. John S. Morgan, tinsmith of this town. For eighteen years he suffered from one stage to another in the progress of kidney disease, but without help until he got hold of Dodd's Kidney Pills. He tells the story in his own words, and says:—

"I commenced with backache about eighteen years ago, with lameness and pain in my limbs.

"I was under the doctors care several times, and took several remedies aside from doctors medicine, but gradually came to be badly crippled up.

"In the autumn of ninety-four, I began to run down in flesh and strength rapidly until I was about forty pounds under my usual weight.

"I was then in constant misery from rheumatic pain and the dread of passing urine which was of a very dark color and caused me the most intense misery.

"I realized my danger, but from something I read about Dodd's Kidney Pills I made up my mind to use them, and commenced at once.

"I have used twenty boxes, have regained my weight and I am now as strong and well as ever before in my life.

"When I commenced using Dodd's Kidney Pills I was entirely unfit for the duties or enjoyments of life and they have saved and prolonged it. I trust my testimony may be the means of doing good to others."

Canadians in Brazil.

LONDON, November 12.—Rio Janeiro news just received from British sources there, deplores the French-Canadian emigration to Brazil and says that residence in Canada must yield disappointing results to induce such people to go to Brazil, especially as contract laborers on coffee plantations. It is a capital mistake these advisers say for Canadians to embark on such an undertaking. Those who oppose emigration to Canada from these islands are using the incident for all it is worth. However, the maturer and better founded view expressed is that the Canadians were deceived when they left their country.

Traveled half the Globe to Find Health, Without Success.

Took the Advice of a Friend and now Proclaims it from the House-top—"South American Nerve" Saved My Life.

Mrs. H. Stapleton, of Wingham, writes: "I have been very much troubled for years—since 1878—with nervous debility and dyspepsia. Had been treated in Canada and England by some of the best physicians without permanent relief. I was advised about three months ago to take South American Nerve, and I firmly believe I owe my life to it to-day. I can truthfully say that I have derived more benefit from it than any treatment I ever had. I can strongly recommend it, and will never be without it myself." Sold by W. W. Short.

Warren D. Mason, president of the Chicago Acetylene Gas and Carbide Company, was killed by a folding bed. He arose to see what time it was, and in getting back into the bed jarred it so that the top fell, breaking his back.

The treasury at Washington for the first time in several years is receiving gold in considerable quantities for custom duties. For this reason and because gold is being withdrawn from hoarding places and deposited in various sub-treasuries, the gold balance at the close of business Tuesday had increased to \$122,234,315.

Li Hung Chang's celebrated coffin which he carried with him on his recent tour of the world, was burned recently in a fire on board the steamship Glencartney in Asiatic waters, the steamship Rio de Janeiro reports.

Alexis Berk, a young Methodist minister of Chicago, lost his life in Montana in an encounter with some wild animal. He was out hunting. Only a portion of his remains were found.

"I HAD NO FAITH."

But My Wife Persuaded me to try the Great South American Rheumatic Cure and My Aching Pain Was Gone in 15 Hours, and Gone for Good.

J. D. McLeod, of Leith, Ont., says: "I have been a victim of rheumatism for seven years—confined to my bed for months at a time; unable to turn myself. Have been treated by many physicians without any benefit. I had no faith in rheumatic cures I saw advertised, but my wife induced me to get a bottle of South American Rheumatic Cure from Mr. Taylor, druggist in Owen Sound. At that time I was in agony with pain. Inside of 12 hours after I had taken the first dose the pain had all left me. I continued until I had used three bottles, and I now consider myself completely cured." Sold by W. W. Short.

K D C imparts strength to the whole system.

Weak

Worn out, nervous women, receive criticism where they should have sympathy. They cannot help being nervous, if their blood is impure.

When the blood fails to feed the nerves upon proper nourishment what can you expect but nervous prostration, debility and nervous headaches?

If the cause is found in impure blood, the cure must be in making the blood pure. This is just what Hood's Sarsaparilla does, and it has proved the true nerve tonic because it is the true blood purifier, and the solace, comfort and defender of thousands of housewives,

Nervous

teachers, clerks and other sufferers of both sexes. Just read this letter:

"I think it is my duty to tell what Hood's Sarsaparilla has done for me and my family. Two years ago I was in a weak, nervous condition and had dreadful palpitations or jumping of my heart, followed by sinking spells, which would last for several minutes. Sometimes it would seem as though I would never come out of them. I was treated by the best physicians, but only for a little time did they help me. I seemed to be growing worse instead of better. I would often seem hungry, but when I ate, no matter how little, it would cause me such misery that I was often wicked enough to wish myself dead. I had that

Tired

languid, all-gone feeling and suffered awful distress in my stomach. I had given up all hopes of ever being well, when my mother wished me to try Hood's Sarsaparilla. I consented, to please her, and before I had taken the whole of one bottle I could see I was improving, and soon was indeed very much better. Its effects have been truly wonderful and I hope this letter may be the means of helping other suffering men and

Women

to try Hood's Sarsaparilla and be benefited by it. We have used Hood's Pills in our family and find them very excellent, especially for constipation. We give Hood's medicines great praise, and if anyone complains of feeling badly, I say "You should take Hood's and only Hood's." Mrs. KITTIE SMITH, 328 Dane Street, Waterloo, Iowa. Remember that

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WANTED.

WANTED.

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Mr. Geo. Reid, G.T.R. Operator, New Hamburg, Ont., under date of March 3rd, 1896, writes as follows: "I was troubled for two years with Bile and Dyspepsia of the worst kind. Tried several medicines, but none gave much relief. Until I tried Manley's Celery-Nerve Compound my blood was in a dreadful state, but I am happy to say your medicine cured me."

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