## A Voyage to the Moon--1862

By M. Schele de Vere, of the University of Virginia

What a curious almanac the people in the moon must have! There, days are as long as years, and day and year are equal to our months: Twenty-nine days and forty-five minutes. The seasons differ but very little from each other. On the equator there reigns eternal summer, for the sun is ever in the zenith; the poles are buried in eternal winter. The days are of equal length throughout the year; all days equally light, all nights equally dark. The absence of an atmosphere deprives the moon of the sweet charms of a twilight, and glaring day would follow gloomy night with the rapidity of lightning, if the slow rising and setting of the sun did not slightly break the suddenness of the transition.

Human eyes, however could not bear the fierce contrasts of the light and shadow; they would long in vain for the soft intervals between the two extremes, the other colors, which beautify our world with their joyous variety and soft harmony. The sky is there not blue, but even in day time black, and by the side of the dazzling sun, the stars claim their place and shed their light in the heavens. Near the poles the mountain tops shine in unbroken splendor year after year, but the valleys know neither day nor night, for they are ever but scantily lighted by the faint glimmer reflected from the walls that surround them.

That side of the moon which is turned away from us, has a night of nearly fifteen days; the stars only, and planets, shine on its ever dark sky. The side we see, on

the contrary, knows no night; the earth lights it up with never ceasing earth-shine, a light fourteen times stronger than that which we receive from the moon. We recognize our own light, lent to our friend, in the faint, grayish glimmer of that portion of the moon which before and after the new moon receives no light from the sun, but only from the earth, and it reflects it back again upon us. Mornings in fall show it more brilliant than evenings in spring, because in autumn the continents of the earth with their stronger light illuminate the moon, while in spring she only receives a fainter light from our oceans.

Our orb appears to the man in the moon as changeable as his home to us, and he may quite as correctly speak of the first or last quarter of the earth, of new earth and full earth. The whole heaven moves before him once in twentynine days around its axis; the sun and stars rise and set regularly once in the long day; but the vast orb of our earth is nearly immovable. All around is in slow, unceasing motion; the mild face of the earth alone, a gorgeous moon of immense magnitude, never sets nor rises, but remains ever fixed in his zenith. It there appears sixteen times larger than the moon to us, and daily exhibits its vast panorama of oceans, continents and islands. Bright lights and dark shadows are seen in ever varied change, as land or water, clearings or forests appear, new with every cloud, and different at different seasons.

The man in the moon has thus not only his watch and his almanac daily before him in the ever-changing face of the earth, but he may, for all we know, have maps of our globe which many a geographer would envy on account of their fullness and accuracy. Long before Columbus discovered America, and Cook New Holland, our lunar neighbor knew most correctly the form and the outlines of the new continents. There was no New World for him, and there is none left. He could tell us the secrets of the

interior of Africa, and reveal to us the fearful mysteries of the polar seas.

But how he on his side must marvel at our vast fields of snow, our volcanoes and tropical storms and tempests—he who knows neither fire, nor snow, nor clouds! What strange fables he may have invented to explain the shadows of our clouds as they chase each other over sea and land, and hide from him in an instant the sunlit landscape!

And stranger still, on the side of the moon which is turned from the earth, he knows nothing at all about us, unless news reach him from the happier side. Or he may undertake—the great event in his life—a long and painful journey to the bright half of his globe, to stare at the wondrously brilliant earth-star, with its unread mysteries and marvellous changes of flitting lights and shadows. Who knows what earnest prayers may rise from the moon also, full of thanks for the floods of light and heat we pour upon them, or of ardent wishes that their souls might hereafter be allowed to dwell in the bright home of the beauteous earth-star?

Only in one point has the dark side of the moon a rare advantage. With its dark, unbroken night, a true and literal "fortnight," it is the observatory of the moon, and the best in the whole planetary system. There no light from the earth, no twilight, hinders the most delicate observations, and neither clouds nor fogs ever step between the telescope and the heavenly bodies.

It is a cold world, however, all over that pale, lifeless globe. The rays of the sun can hardly warm that thin, imperceptible atmosphere, and on the plains near the equator, a fortnight of burning sun and scorching heat, which parches and withers all life, is instantaneously followed by another fortnight of fearful cold. Human eyes could not bear this ever cloudless, colorless horizon. Over the mournful scene that looks like one vast ruin of nature,

broods eternal silence. The thin air cannot carry the waves of sound. Not a word, not a song is ever heard amid those desolate mountains; no voice ever passes over the sunken plains. Pain and joy are equally silent. A rock may glide from its ancient resting place, a mountain may fall from its eternal foundation—no thunder is heard, no echo awakened. Grim silence reigns supreme. No rainbow is set in the clouds as a token from on high; storm and tempest give not way to the merry song of birds and the gentle, balmy winds. There we look in vain for green forests with their cool shade, for playful fountains to cheer and to refresh us. Far as eye can reach we see nothing but bare mountains, desolate masses of rock, countless stones amidst huge boulders of glassy fabric. Human bodies could not endure these long days and endless nights; human souls could not bear that silent, lifeless world of desolation.

Even this universal devastation, however, does not absolutely preclude the existence of created beings on the moon. We can think as little of a noble tree without leaves, flowers and fruits, as of an orb, rolling in silent, serene majesty through the midnight firmament, without organic life and intelligence. The earth teaches us the same lesson by simple logic. The earth also, once incandescent and scarcely cooled, has been the theatre of fearful convulsions; gigantic forces have torn her interior, and deeply furrowed her surface. But hardly was apparent peace restored upon the still unshapen globe, when it produced, at the word of the Almighty, a creation full of fresh life, at first rude, raw and imperfect, like nature itself, but daily growing nobler, more varied, more spiritual. We know this, for each varied organization of such life, as it perished, has left its epitaph written upon imperishable monuments.

May we then not believe, that, like the earth, the moon

also has had her first period of storm and strife? Of this, her vast plains, her rugged craters and mysterious furrows, give proof in abundance. The present seems to be her period of rest, during which nature gains strength to produce a life-endowed creation. This we conclude from her unchanging face, and her clear, imperceptible atmosphere. If this be so, then there must come a time for the moon as for the earth, though perhaps after thousands of years, when thinking, intelligent beings will rise from her dust. The whole universe has some elements in common. The great cosmic powers, light and heat, are the same first conditions of organic life throughout the vast creation; they send their waves through the wide ocean of the world, and play against the shores of all of its gigantic islands. There is, no doubt, vital power in them, and at the proper time, at His bidding, life will spring forth and order will reign, where now destruction and chaos seem to rule supreme.

The moon is one of the great heavenly bodies, all of which work together in beautiful harmony to the glory of God. They all move, like loving sisters, hand in hand through the great universe. As they live with each other, so they evidently live for each other. Superstition, ignorance, and even wilful exaggeration have much obscured the effects of this mutual influence. The moon especially has been treated as if she existed for the benefit of the earth only. From the times of antiquity the world has been filled with fanciful stories of her influence on our weather, our vegetation, our health, and even the state of our mind. Many have believed in a daily direct communication between the two great bodies; they looked upon meteoric stones as coming to us directly from the craters of the moon's volcanoes, and the fertile imagination of happy dreamers reduced a crude mass of half-true, half-fabulous

details into a regular system, long before the moon itself was even but tolerably well known to us.

It is notorious that men of such rank as Piazza and Sir William Herschel considered certain light appearances in the moon as volcanic eruptions, whilst a German astronomer of great merit, Schroeter, saw in them enormous fires raging in some of the capitals of our satellite! Meteoric stones are, in our day, fortunately better explained. Unless volcanoes on the moon had a force thirty times greater than our own, they could not project masses far enough to come within reach of our atmosphere. Such gigantic and continued eruptions could, moreover, not fail to cause some permanent change in the surface of the moon, of which no trace has as yet been perceived.

Great heavenly bodies commune not, like men, by throwing bombshells at each other; their influence is felt through the agency of light, heat and attraction. The light of the moon, it is true, is ninety thousand times weaker than sunlight, and that its rays warm not, is a popular assertion. But people are not always right, with due deference be it said, even in matters of science. They used to say that moonlight nights were colder than others. So they are; but the moon is not to be blamed for it. She shines brighter when the sky is not obscured; but when that is the case, the earth also grows colder, because radiation is increased. Thus the two facts are perfectly true, only there is no connection of cause and effect between them. Melloni's experiments, made in 1846, prove even that the rays of the moon have a certain amount of heat, though so little, that the most powerful lenses fail to make it perceptible on the thermometer.