VARIOUS

THE ATLANTIC MONTHLY, VOLUME 06, NO. 33, JULY, 1860

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The Atlantic Monthly, Volume 06, No. 33, July, 1860

http://www.litres.ru/pages/biblio_book/?art=35501715
The Atlantic Monthly, Volume 06, No. 33, July, 1860 / A Magazine Of Literature, Art, And Politics:

Содержание

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METEOROLOGY

A GLANCE AT THE SCIENCE

The purpose of this article is to present, in a brief and simple manner, the leading principles on which the science of Meteorology is founded,–rather, however, in the spirit of an inquirer than of a teacher. For, notwithstanding the rapid progress it has made within the last thirty years, it is far from having the authority of an exact science; many of its phenomena are as yet inexplicable, and many differences of opinion among the learned remain unreconciled on points at first sight apparently easy to be settled.

Meteorology has advanced very far beyond its original

limits. Spherical vapor and atmospheric space give but a faint idea of its range. We find it a leading science in Physics, and having intimate relations with heat, light, electricity, magnetism, winds, water, vegetation, geological changes, optical effects, pneumatics, geography,–and with climate, controlling the pursuits and affecting the character of the human race. It is so intimately blended, indeed, with the other matters here named, as scarcely to have any positive boundary of its own; and its vista seems ever lengthening, as we proceed.

Without dwelling upon the numerous consequences which flow from meteorological influences, let us see what is properly included under the subject of Meteorology. And first, of the Atmosphere.

This is a gaseous, vapor-bearing, elastic fluid, surrounding the earth. Its volume is estimated at 1/29th, and its weight at about 43/1000ths, that of the globe. It is composed of 21 parts in weight of Oxygen and 77 of Nitrogen, with a little Carbonic Acid, Aqueous Vapor, and a trace of Carburetted Hydrogen. There are numerous well-known calculations of the proportions of the various constituents of the atmosphere, which we owe to Priestley, Dalton, Black, Cavendish, Liebig, and others; but that given by Professor Ansted is sufficiently simple and intelligible. In 10 volumes or parts of it, he gives to

Oxygen, the great supporter of life	2.100
Nitrogen, (not condensible under 50 atmospheres, and not respirable or combustible,)	7.750
Aqueous Vapor	.142
Carbonic Acid	.004
Carburetted Hydrogen	.004
	10.000

and he adds a trace of Ammoniacal Vapor. It is *usual* to state the proportions of air as being 1 Oxygen to 4 Nitrogen.

It is a curious fact, that, while there are six varieties of compounds of nitrogen and oxygen, but one of these is fitted to sustain life, and that is our atmosphere.

It is well enough to note, that, when we use the word volume or measure, in speaking of the atmosphere or any gaseous body, we adopt the theory of Gay- Lussac, who discovered that gases unite with each other in definite proportions whenever they enter into combination. This theory led to important results; for by knowing the elements of a compound gas, we easily determine its specific gravity.

It has been attempted to apply the principle to organic bodies; but it has not yet been carried to a full and satisfactory conclusion. It may be noticed, too, that Dalton affirmed that simple substances unite with each other in definite weights to

form compound substances, thus supporting the idea of Lussac. These discoveries were made about the same time, Dalton having the credit of originating them. Various modifications of the principle have been from time to time presented to public attention.

Whether the constituents of the atmosphere are chemically or mechanically combined,–one of the things about which the learned are not fully agreed,–it is found to be chemically the same in its constituents, all over the world, whether collected on mountains or on plains, on the sea or on the land, whether obtained by aëronauts miles above the earth or by miners in their deepest excavations. On the theory of its mechanical combination, however, as by volume, and that each constituent acts freely for itself and according to its own laws, important speculations (conclusions, indeed) have arisen, both as regards temperature and climatic differences. It should be observed, that volume, as we have used the word, is the apparent space occupied, and differs from mass, which is the *effective* space occupied, or the real bulk of matter, while density is the relation of mass to volume, or the quotient resulting from the division of the one by the other. Those empty spaces which render the volume larger than the mass are technically called its pores.

Has the composition of the atmosphere changed in the lapse of years? On this point both French and German philosophers have largely speculated. It is computed that it contains about two millions of cubic geographical miles of oxygen, and that 12,500

cubic geographical miles of carbonic acid have been breathed out into the air or otherwise given out in the course of five thousand years. The inference, then, should be, that the latter exists in the air in the proportion of 1 to 160, whereas we find but 4 parts in 10,000. Dumas and Bossingault decided that no change had taken place, verifying their conclusion by experiments founded on observations for more than thirty-five years. No *chemical* combination of oxygen and nitrogen has ever been detected in the atmosphere, and it is presumed none will be.

The atmosphere possesses, as may be readily imagined, many important characteristics. One of these is Weight.

This is demonstrated by simple, yet decisive experiments. The discovery of the *fact* is attributed to the illustrious Galileo, but to modern science we owe all the certainty, variety, and elegance of the demonstration. A vessel containing a quantity of air is weighed; the air is exhausted from it and it is weighed again. An accurate scale will then detect the difference of weight. A cubic foot of air weighs 1.2 oz. Hence a column of air of one inch in diameter and a mile in height weighs 44 oz.

The atmosphere is supposed to have an elevation of from 45 to 50 miles, but its weight diminishes in proportion to its height. The whole pressure at the surface of the earth is estimated to be 15 lbs. to the square inch; a person of ordinary size is consequently pressed upon by a weight of from 13 to 14 tons. Happily for us, the pressure from without is counteracted by the pressure from within.

The weight of the air is of great importance in the economy of Nature, since it prevents the excessive evaporation of the waters upon the earth's surface, and limits its extent by unalterable laws. Water boils at a certain temperature when at the earth's surface, where the weight of the atmosphere is greatest, but at different temperatures at different elevations from the surface. At the level of the sea it boils at 212°. On the high plains of Quito, 8,724 feet above the sea, it boils at 194°, and an egg cannot be cooked there in an open vessel. At Potosí the boiling-point is still lower, being 188°, and the barometrical column stands at 18°. Indeed, the experiment is often exhibited at our chemical lectures, of a flask containing a small quantity of water, which, exhausted of air, is made to boil by the ordinary heat of the hand.

Fahrenheit proposed to ascertain the height of mountains by this principle, and a simple apparatus was contrived for the purpose, which is now in successful use. The late Professor Forbes of Edinburgh, whose untimely death the friends of science have had so much reason to deplore, ascertained that the temperature of boiling water varied arithmetically with the height, and at the rate of one degree of the thermometric scale for every 549.05 feet. Multiplying the difference of the boiling-point by this number of feet, we have the elevation. The weight of the atmosphere, as indicated by the barometer, is also a means for ascertaining the height of mountains or of plains; but correction must be made for the effects of expansion or contraction, and for capillarity, or the attraction between the mercury and the

glass tube, at least whenever great exactness is required. Tables for the convenience of calculation are given in several scientific works, and particularly in a paper of Professor Forbes, Ed. Trans. Vol. 15. Briefly, however, we may state, that between 0° and 32°, 34 thousandths of an inch must be allowed for depression or contraction, and between 32° and 52° 33 thousandths. The weight of the atmosphere is not only affected by rarefaction, but by currents of air, which give it a sudden density or rarity. Those who have ascended mountains have experienced both these changes.

A common experiment to prove the weight of air is that of the Magdeburg Hemispheres, a simple contrivance of Otto Guericke, a merchant of that city. It is a part of every complete philosophical apparatus. It consists of brass caps, which, when joined together, fit tightly and become a globe. The air within being exhausted, it will be found difficult to separate them. If the superficies be 100 square inches and the height of the mercury be 30 inches, the atmosphere will press on these hemispheres with a weight of 1,475 lbs, requiring the efforts of seven or eight powerful men to tear them asunder. One of these instruments, of the diameter of a German ell, required the strength of 24 horses to separate it. The experiment was publicly made in 1650 at the Imperial Diet at Rendsborg, in the presence of the Emperor Ferdinand III. and a large number of princes and nobles, much to their astonishment.

As compared with water, the air (the barometer indicating

30°, and the thermometer 55°) is 833 times lighter.

It is this weight of the atmosphere which counterbalances that of a column of mercury 29 inches in height, and a column of water 32 to 34 feet in height.

The old quaint notion of Nature's abhorring a vacuum was found to be practically only an assertion that the air had weight. The ordinary pump, commonly called the suction-pump, is constructed on this principle. The weight of the atmosphere at the level of the sea is found to be the same all over the world.

We find the atmosphere with another characteristic,– Elasticity.

However it may be compressed, air returns, on liberation, to its original volume, and while thus perfectly elastic it is also the most compressible of bodies. This elasticity arises from the repulsive force of its particles, and is always equal to the compressive force which it balances. A glass vessel full of air, placed under a receiver and then exhausted by the air-pump, will burst into atoms. Water, on the other hand, is almost the reverse. Twenty cubic inches, introduced into a cannon whose sides are three inches thick, cannot be compressed into nineteen inches without bursting it. This non-elastic property of water, with another, that of communicating, when under the action of any force, an equal pressure in all directions, led to the invention of the hydraulic press.

The elasticity of the air enables fishes to rise and sink in water, through the action of the air-bladder.

The sudden compression of air liberates its latent heat, and produces fire. On this principle the pneumatic tinder-box is constructed.

Brockhaus says that air has as yet been compressed only into one-eighth of its original bulk.

For every degree of heat between the freezing-point and the boiling-point, 32° and 212°, the expansion of air is about 1/490th part, so that any invention which seeks to use rarefied air as a motive power must employ a very intense degree of heat, enough to fuse many kinds of metals.

To the celebrated Mr. Boyle and to Henry Cavendish, both of Great Britain, we are indebted for most of what we know of this particular property of the air.

Density, or closeness, is another quality of the atmosphere. It has been found to be 770 times less than that of water, and 770 cubic inches of air weigh as much as a cubic inch of water. It is in direct ratio with its elasticity, and there are tables by which it may be determined at different altitudes. At the surface of the earth, this density is indicated as 1; at 2-1/2 miles, as 1/2; at 5 miles, as 1/4; and so on, the difference being in a geometrical progression.

As we proceed in the consideration of our general subject, we shall find, under the appropriate heads, that density is not without material influence on reflection and refraction, on transparency and the transmission of light, the presence or absence of moisture, and the amount of heat at the earth's surface,– -and we might add, on health, and the increase or diminution of the

vital energies.

Temperature is another branch of our subject, and one involving a series of subordinate topics on which volumes have been written, and to which are still devoted the labors of the most learned men of our day. In this place, merely an out-line can be attempted.

Temperature is the degree of heat or cold in the particles of all bodies, which is perceptible by sensation, and is measurable by their expansion or contraction. It is the key to the theory of the winds, of rain, of aerial and oceanic currents, of vegetation and climate with all their multifarious and important differences. While the inclined position of the earth on its axis and its movement in its elliptical orbit influence the general amount of heat, it is rather to the consequences of these in detail that we are called when we speak of temperature. If the sun shone on a uniformly level surface, everywhere of the same conducting and radiating power, there would be but little difficulty in tracing the monotonous effects of temperature.

The reformer Luther, as eccentric as he was learned and sincere, is reported to have said, that, if he had been consulted at the Creation, he would have placed the sun directly over the centre of the world and kept it there, to give unchanging and uniform light and heat! It is certainly much better that he was not consulted. In that case, every parallel of latitude would have been isothermal, or of equal mean annual temperature. The seasons would have been invariable in character. Some portions of the

earth would have been scorched to crispness, others locked up in never-changing ice.

Vegetation, instead of being universal, would have been confined to a narrow zone; and the whole human race would have been driven together into one limited habitable space, to interfere with, incommode, and destroy each other. The arrangement is best as it is.

We find very important modifications of temperature, occasioned not only by astronomical influences, but by local causes and geographical characteristics. For while, as a general rule, the nearer we approach the equator, the warmer we shall be, yet temperature is greatly affected by mountains, seas, currents of air or water, by radiation, by forests, and by vegetation. It is found, in fact, that the lines of temperature, (the happy conception of Humboldt,) when they are traced upon the map, are anything but true zones or circles.

The line of the greatest mean warmth is not coincident with the equator, but falls to the north of it. This line at 160° W. Long, from Greenwich is 4° below the geographical equator; at 80° it is about 6° north, sweeping along the coast of New Granada; at 20° it comes down and touches the equator; at 40° E. Long., it crosses the Red Sea about 16° north of the equator, and at 120° it falls at Borneo, several degrees below it;–and the points of the greatest heat, in this line, are in Abyssinia, nearer the tropic of Cancer than to the equator. On the other hand, the greatest mean cold points, according to the opinions of Humboldt, Sir David

Brewster, and others, do not coincide, as would seem natural, with the geographical poles, but they are both to be found in the northern hemisphere, in Latitude 80°, 95°E. Long. and 100° W. Long. from Greenwich. The western is ascertained to be 4-1/2° colder than the eastern or Siberian. If this be the fact,–but it is not positively admitted,–an open sea at the pole may be considered as probable, on the ground of its having a higher mean temperature than is found at 80°. Kaemptz places one of these cold points at the north of Barrow's Straits,–the other near Cape Taimur, in Siberia. Burghaus, in his Atlas, transfers the American cold pole to 78° N. Lat. It is perhaps too early to determine rigorously the true temperature of these points.

A noticeable fact also is this,–that places in the same latitude rarely receive the same amount of heat. Quebec, in British America, and Drontheim, in Norway, enjoy about the same quantity, while the former is in 47° and the latter in 68° N. Lat. The mean winter temperature of Pekin, 39° 45' N. Lat., is 5° below the freezing-point; while at Naples, which is north of Pekin, it seldom, if ever, goes below it, and Paris, 500 miles farther north, has a mean winter temperature of 6° above the freezing-point. The city of New York, about 11° south of London, has a winter temperature of much greater severity. The mean temperature of the State of New York, as determined by a long series of observations, is 44° 31'.

The mean temperature of countries is found to be very stable, and but very small variations have been detected in modern

times. But that there have been important climatic changes, since the Christian era, cannot be doubted, unless we doubt history. Not many centuries ago, it was a common thing for all the British rivers to freeze up during the winter, and to remain so for several months. If space permitted, an interesting statement could he made of the changes which have taken place in vegetation in Greenland, and throughout certain northern parts of Europe,–also in Palestine, Greece, and other southern countries,–while we know that the earth's inclination upon its axis has been unchanged.

Mrs. Somerville remarks, that, though the temperature of any one place may be subject to very great variations, yet it never differs from the mean state more than a few degrees.

Without this atmospheric covering of ours, it is considered that the temperature of the earth at its surface would be the same as that of the celestial spaces, supposed to be at least 76° below zero, or *possibly*, says Humboldt, 1400° below! Human life, without our atmosphere, could not exist for a single moment.

It is computed, that, if the annual heat received by the earth on its surface could be equally distributed over it, it would melt, in the course of a year, a stratum of ice 46 feet thick, though it covered the whole globe, and as a consequence the amount of unradiated heat would render it uninhabitable.

The relative position of the sun affects temperature, rather than its distance. In winter the earth is three millions of miles nearer the sun than in summer, but the oblique rays of the

former season reach us in less quantity than the more direct The distribution of land and water, the nature of the soil, the indentation of bays, the elevation of land above the sea-level, insularity, etc., all, as we have already suggested, have a modifying influence on temperature.

The atmosphere possesses also a reflecting and refracting power, arising from its varying density, and, perhaps, in the latter case, somewhat from its lenticular outline.

But for this property we should have no twilight. The sun, instead of sending up his beams while 18° below the visible horizon, would come upon us out of an intense darkness, pass over our sky a brazen inglorious orb, and set in an instant amid unwelcome night.

Reflection is the rebound of the rays of light or heat from an opposing surface at the same angle as that at which they fall upon it. These are called angles of incidence and reflection, and are equal.

Refraction is the bending of a ray passing obliquely from a rarer into a denser medium. This may be observed when a rod is placed slantingly in a vessel of clear water; the part immersed will appear bent or broken. This is ordinary refraction. Terrestrial refraction is the same thing, occurring whenever there is a difference of density in the aerial strata.

The atmosphere absorbs some portion of the light which it receives. It is not all reflected or refracted or even penetrative.

Objects seen under various degrees of light, either convected

or retarded by different media, appear near or distant, distinct or confused. Thus, we are often surprised at the apparent nearness and brightness of an opposite shore or neighboring island, in some conditions of the air, while at other times they seem distant and lie in shadowy obscurity.

The looming up of a vessel on the water is another common instance of the principle of refraction.

It has been noticed by almost every one, that, during the warm and moist nights of summer, the moon, as she rises above the horizon, appears much larger than when at the zenith. So the setting sun is seen of apparently increased size. Sir John Herschel asserts that the appearance is an illusion, and so do some others. Professor Carey says, that, if we look through a paper tube at the moon when on the horizon, the paper being folded so as to make the aperture of its exact size, and then look again at it when it reaches the zenith, we shall find there is no difference.

On the other hand, an experiment is offered by a German Professor, of the name of Milo, of this kind: If we look through a tube so constructed as to have one side filled with spirits of wine and the other with common air, the half of the object seen through the former will be found to appear much larger to the eye than the other half seen through the latter.

It is laid down, that, where extraordinary refraction takes place laterally or vertically, the visual angle of the spectator is singularly enlarged, and objects are magnified, as if seen through a telescope. Dr. Scoresby, a celebrated meteorologist

and navigator, mentions some curious instances of the effects of refraction seen by him in the Arctic Ocean.

Many remarkable phenomena attend this state of the atmosphere, known as the Fata Morgana of Sicily, the Mirage of the Desert, the Spectre of the Brocken, and the more common exhibitions of halos, coronæ, and mock suns. The Mountain House at Catskill has repeatedly been seen brightly pictured on the clouds below. Rainbows are also due to this condition of the atmosphere.

We might occupy the remainder of the space allowed us by enlarging on various topics which belong to this part of our subject. The twilight gray, the hues of the evening and morning sky, the peculiarity of the red rays of light, the scintillation of stars, their flashing changes of colors, are all meteorological in their character, as well as strikingly beautiful and interesting.

Polarity of light is another of the wonders of which Meteorology takes cognizance. The celebrated Malus, in 1808, while looking at the light of the setting sun shining upon the windows of the Luxembourg, was led to the discovery that a beam of light which was reflected at a certain angle from transparent and opaque bodies, or by transmission through several plates of uncrystallized bodies, or of bodies crystallized and possessing the property of double refraction, changed its character, so as to have sides, to revolve around poles peculiar to itself, and to be incapable of a second reflection. The angle of polarity was found to be 54°.

The beam of polarized light was also found to have the peculiar property of penetrating into the molecules of bodies, illuminating them and, enabling the eye to determine as to their structure. The production of beautiful spectres, prismatic colors of gorgeous hues, and the most remarkable system of rings, has followed the discovery, and important results are expected from the continuation of the researches. It has already enabled the astronomer to determine what heavenly bodies do or do not shine with their own light. The subject is still under investigation.

Color from light comes also under the notice of the meteorologist. The received opinion is, that there is no inherent color in any object we look at, but that it is in the light itself which falls upon and is reflected from the object. Each object, having a particular reflecting surface of its own, throws back light at its own angle, absorbing some rays and dispersing others, while it preserves its own. In this sense it may be said that the rose has no color,–its hues are only borrowed. If the idea should be carried out, it would certainly destroy much of the poetry of color. Thus, in praising the modest blush which crimsons the cheek of beauty, we should destroy all its charm, if we attributed it to a sudden change in the reflecting surface of the epidermis,–a mere mechanical rushing of blood to the skin, and a corresponding change in its angle of reflection!

Without light, however, there is no color. Agriculturists and chemists understand this. Plants without light retain their oxygen, which bleaches them.

The theory of color has never been fully agreed upon. Some writers maintain that the character of its hues depends on the number of undulations of a ray. Goethe's theory is substantially, that colors are produced by the thinning or thickening and obstructing of light. Brewster contends that there are but three primary colors,–red, yellow, and blue. Wollaston finds four,–red, yellowish green, blue, and violet. But this, as well as the consideration of the solar spectrum of Newton, is more the specialty of Optics. The atmospheric relations of color are more apposite to our purpose.

The color of the clouds, which may be occasionally affected by electricity, is owing to the state of the atmosphere and its reflecting and refracting properties.

The color of snow is white because it is composed of an infinite variety of crystals, which reflect all the colors of light, absorbing none, and these, uniting before they reach the eye, appear white, which is the combination of all the colors.

Wind, the atmosphere in action, though not picturesque, is always wonderful, often terrible and sublime. The origin of wind, its direction and its force, its influence on the health of man, his business, his dwelling-place, and the climate where he perpetuates his race, have attracted the profound attention of the greatest philosophers.

To the rarefaction of the air at the equator, and the daily revolution of the earth, is attributed the origin of the Trade-Winds, which blow from the east or a little to the north of east,

north of the equator, and east or south of east after we are south of the equator. The hot current of ascending air is replaced by cold winds from the poles.

But why are we not constantly subject to the action of north winds, which we rarely are? Because of the diurnal motion of the earth, which at the equator equals one thousand miles an hour, the polar winds in coming down to the equator do not have any such velocity, because there is a less comparative diurnal speed in the higher latitudes. The air at the poles revolves upon itself without moving forward;–at the equator, the velocity, as we have mentioned, is enormous. If, then, says Professor Schleiden, we imagine the air from the pole to be carried to the equator, some time must elapse before it will acquire the same velocity of motion from west to east which is always found there. Therefore it would remain behind, the earth gliding, as it were, from beneath it; or, in other words, it would have the appearance of an east wind. Lieutenant Maury adopts the same explanation. It is, indeed, that of Halley, slightly modified.

The warm air, ascending from the equatorial regions, rushes to the poles to be cooled in turn, sliding over the heavy strata of cold air below.

The northern trade-wind prevails in the Pacific between 2° and 25° of N. Latitude; the southern trade, between 10° and 21° of S. Latitude. In the Atlantic the trades are generally limited by the 8th and 28th degrees of N. Latitude. The region of calms lies between these trades, and beyond them are what are styled the

Variables. In the former the seaman finds baffling winds, rain, and storms. Occasionally, from causes not yet fully explained, north and south periodical winds break in upon them, such as the Northers which rage in the Gulf of Mexico.

There are many curious facts connected with the Trades, and with the Monsoons, or trade-winds turned back by continental heat in the East Indies, the Typhoons, the Siroccos, the Harmattans, land and sea breezes and hurricanes, the Samiel or Poison Wind, and the Etesian. The Cyclones, or rotary hurricanes, offer a most inviting field for observation and study, and are an important branch of our subject. But we are obliged to omit the consideration of these topics, to be taken up, possibly, at some other opportunity. The theory of the Cyclones may be justly considered as original with our countryman, Mr. Redfield. Colonel Reid, Mr. Piddington, and other learned Englishmen have adopted it; and so much has been settled through the labors of these eminent men, that intelligent seamen need fear these storms no longer. By the aid of maps and sailing-directions they may either escape them altogether, or boldly take advantage of their outward sweep, and shorten their passages.

We have yet to ascertain the causes of the many local winds prevailing both on the ocean and the land, and which do not appear to be influenced by any such general principle as the Trades or the Monsoons.

The force of air in motion gives us the gentle breeze, the gale, or the whirlwind. At one hundred miles an hour it prostrates

forests. In the West Indies, thirty-two pound cannon have been torn by it from their beds, and carried some distance through the air. Tables of the velocity of winds are familiar to our readers.

Let us next advert to the connection of the atmosphere with Vapor and Evaporation. The vapor rising from the earth and the sea by evaporation, promoted by dry air, by wind, by diminished pressure, or by heat, is borne along in vesicles so rare as to float on the bosom of the winds, sometimes a grateful shade of clouds, at other times condensed and gravitating in showers of rain. Thus it enriches the soil, or cools the air, or reflects back to the earth its radiated heat. At times the clouds, freighted with moisture, present the most gorgeous hues, and we have over us a pavilion more magnificent than any ever constructed by the hand of man. These clouds are not merely the distilleries of rain, but the reservoirs of snow and hail, and they are the agents of electric and magnetic storms.

Notwithstanding their variety, clouds are easily classified, and are now by universal consent distinguished as follows.

In the higher regions of the air we look for the Cirri, the Curl Clouds. They are light, lie in long ranges, apparently in the direction of the magnetic pole, and are generally curled up at one extremity. They are sometimes called Mackerel Clouds. They are composed of thin white filaments, disposed like woolly hair, feather crests, or slender net-work. They generally indicate a change of weather, and a disturbance of the electric condition of the atmosphere. When they descend into the lower regions of the

air, they arrange themselves in horizontal sheets and lose much of their original type. The Germans call them Windsbäume, or wind-trees.

The Cumulus is another form of cloud, which floats along in fleecy masses, in the days of summer, but dissolves at night. Sometimes it resembles a great stack or pile of snow, sometimes it has a silvery or a golden edge, as if we saw a little of the lining. Sometimes they lie motionless in the distance, and are mistaken by mariners for land. They rest upon a large base, and are borne along by surface-winds. Their greatest height is not more than two miles. They carry large quantities of moisture with them, and, when preceding rain, fall rapidly into other shapes.

The Stratus, or Fall Cloud, is horizontal in its figure, lies near the earth, and its length is usually greater than its breadth. It floats in long bands with rounded or sharpened points, and is seen rising from rivers or lakes, at first as a fog. In the morning it indicates fine weather. The Fall Cloud never discharges rain.

This comes only from the Nimbus, which is quite unlike the others. It puts on a dark gray color, has irregular transparent edges, and increases rapidly so as to obscure the sky. It appears to absorb the other clouds, to be a union of their differently electrified particles, which are attracted to each other, form drops of water, and descend as rain.

Of the first three forms we have three modifications or varieties. The Cirro- Cumulus is a congeries of roundish little clouds in close horizontal position, varying in size and roundness,

and often, to use the words of the poet Bloomfield, appearing as

"The beauteous semblance of a flock at rest."

The Cirro-Stratus is more compact than the Cirrus,–the strata being inclined or horizontal. It is sometimes seen cutting the moon's disc with a sharp line. The Cumulo-Stratus, or Twain Cloud, is denser than the Cumulus, and more ragged in its outlines. It overhangs its base in folds, and often bears perched on its summit some other form of cloud, which inosculates itself with it. Sometimes a Cirro-Stratus cloud comes along and fastens itself to it parasitically. It is one of our most picturesque forms of clouds.

Within the last two years we have twice observed in the city of New York, during the summer afternoons, large masses of clouds coming over from the southwest, and hanging rather low, which could not be well placed in any of the classes already described, or recognized as such by meteorologists. They consisted of a great number of hemispherical forms of large diameter, hanging vertically from a Stratus cloud or plane above them, and to which they appeared attached. They were regular in shape, and very distinct; they barely touched each other, and were of a gray color. They might be compared to a hay-field turned upside down, with innumerable hay-cocks hanging below it. Unfortunately, the circumstances under which the spectacle was observed did not; admit of any resort to the barometer, thermometer, or anemometer. Should further observations verify these remarks, it might perhaps be proper to style this variety the Hemispherical.

Dew is another atmospheric product. It is the condensation of the warmer vapor of the atmosphere, in calm and serene nights, and in the absence of clouds, by the cold surface of bodies on which it rests. In some countries it is copious enough to supply the want of rain. The earth radiates its own acquired heat, grows colder than the atmosphere, and so condenses it.

What is thermometrically called the dew-point is that degree at which the moisture present in the atmosphere, on being subjected to a decrease of temperature, begins to be precipitated or condensed. It is the same as the point of saturation. Daniell calls it "the constituent temperature of atmospheric vapor." It is our criterion for ascertaining how much moisture there is in the air, and at what degree of heat or cold it would be precipitated. When the air is saturated, a dry bulb and a wet bulb will read alike.

The dew-point has been a puzzle to most persons. Very few treatises explain it satisfactorily. The definition just given, though explicit, is not quite enough. For it will be perceived that an ordinary subtraction of the degrees of temperature on a wet thermometer, which had cooled down by evaporation, from the actual temperature indicated by a dry thermometer, will not give us the dew- point.

For example,–if a free or dry thermometer indicates 63°, and the one with the wet bulb has by evaporation cooled down to 54°, the difference would be 9°. The dew-point would not be 54°, but that degree to which the mercury would fall in the free

thermometer, for the atmosphere to become saturated with the quantity of moisture then actually existing in it. It would be 46.8°.

This dew-point, which figures so largely in all well-kept meteorological reports, is the key to many important conditions of the atmosphere, affecting health, vegetation, and climate.

It is found that the air at different degrees of heat has different degrees of elasticity, different degrees of tension, and different degrees of capacity to hold vapor. Dalton, by a series of experiments with barometer-tubes, into which he introduced air and vapor at certain temperatures, found what its force was upon the mercurial column from degree to degree. He also experimentally determined the ratio of the weight of moisture and of air, the former being five-eights of the latter,–in other words, how many grains of moisture additional could be held by the air, advancing from degree to degree of temperature. This being ascertained, a table of factors was constructed, in other words, a set of figures contrived, which should, by a multiplication of the subtracted difference between the range of the dry bulb and the wet bulb of the thermometers, furnish the amount of deduction from the former which would indicate the dew-point, or the point to which the mercury in the dry thermometer must fall to show how much more moisture the air could hold without its condensation. These tables of factors have been constructed at the Greenwich Observatory, and are generally used.

The Hygrometer, invented by Mr. Daniell, gives the dew-point

by inspection.

It is an error to suppose that dew falls like rain from the air; it forms on the body which is cooled down below the temperature of the air. It differs in quantity with the radiating or cooling surface; that which has absorbed and retained the most heat during the day radiates the most at night and furnishes the most cold in return.

Hoar-frost, such as we find on our window-panes, or on the grass, is the moisture of the warm air cooled down and frozen, and is produced when the cold at the surface is below the freezing-point. What we in common parlance call the action of frost, and which in this climate is well known to be very powerful, is not particularly injurious to organized bodies.

Mists are the vapor near the ground rendered visible by the temperature of the air falling below that of the vapor. When we see our breath in a cold morning, we see a mist. Where the surface is comparatively warm and damp, and the air is cooler, we have mists, which, if dense, are called fogs. These are found plentifully on the banks of Newfoundland; and with icebergs on the one hand and the Gulf Stream on the other, we must always expect to have them.

The distribution of rain, which is one of the offices of the clouds, is another of the more important features of Meteorology. The amount of water taken up by evaporation into the atmosphere is almost incredible. It is calculated by Lieutenant Maury that there is annually taken up in the torrid zone a belt of

water three thousand miles in breadth and sixteen feet deep. Rain occurs regularly and irregularly in different parts of the earth. In some places it may be calculated upon to a day; in others it is quite unknown. Latitude and longitude may indicate the points of distribution, but the causes are dependent on temperature, winds, locality, and, what may seem a strange assertion, upon the conduct of man himself. The greatest quantity falls near the equator, diminishing towards the poles. Much more falls on islands and coasts than in the interior of continents,–more in the region of the variables and less in that of the trades. There are, however, tropical countries of great extent where rain is scarcely ever seen.

The influence of man upon rain is seen in the progress of civilization, the destruction of forests, and the drying-up of meres, swamps, and water- courses.

Forests undoubtedly affect the distribution of rain, and the supplies of streams and springs. Their cooling influence precipitates the vapor passing over them, and the ground beneath them not getting heated does not readily evaporate moisture. Lands, on the contrary, which are cleared of forests become sooner heated, give off larger quantities of rarefied air, and the passing clouds are borne away to localities of greater atmospheric density.

The Canary Islands, when first discovered, were thickly clothed with forests. Since these have been destroyed, the climate has been dry. In Fuerteventura the inhabitants are sometimes

obliged to flee to other islands to avoid perishing from thirst. Similar instances occur in the Cape Verdes. Parts of Egypt, Syria, and Persia, that once were wooded, are now arid and sterile deserts.

In the temperate zones these results are not so immediately apparent. It is now much in doubt whether the climate of our country has changed its character within the last two hundred years. Jefferson and Dr. Rush both contended that it had. Our oldest inhabitants assert that in their day our winters began nearly two months earlier than they do now.

The general laws laid down in relation to rain are these:–

1. It decreases in quantity as we approach the poles.

2. It decreases as we pass from maritime to inland countries.

3. It decreases in the temperate zones on eastern coasts as compared with western coasts, but within the tropics it is the reverse.

4. More rain falls in mountainous than in level countries.

5. Most rain falls within the tropics.

The rainless regions, not deserts, are parts of Guatemala, the table-land of Mexico, the Peruvian coast, parts of Morocco, Egypt, Arabia, Persia, etc.

The electric character of the air is another subject of interest, and a leading one in Meteorology. What can be more magnificent, what more awful, than those storms of lightning and thunder which are witnessed sometimes even in our own latitudes?

Faraday, who as a chemist and philosophical writer is of the highest authority, professes to have demonstrated that one single gram of water contains as much electricity as can be accumulated in eight hundred thousand Leyden jars, each requiring to charge it thirty turns of the large machine at the Royal Institution.

It is not intended that this astounding statement should be received without some grains of allowance; but a very elegant and scientific writer, who adopts it without hesitation, adds, "We can from this crystal sphere [of water] evoke heat, light, electricity in enormous quantities, and beyond these we can see powers or forces for which, in the poverty of our ideas and our words, we have not names."

Flashes of electricity have been detected, during warm, close weather, issuing from some species of plants. The Tuberose and African Marigold have been seen to emit these mimic lightnings. (Goethe is the authority for this.) To atmospheric electricity we doubtless owe the coruscations of the Aurora, one of the most beautiful of our meteors.

The usual forms of lightning are the zigzag or forked sharply defined,–the sheet-lightning, illuminating a whole cloud, which it seems to open,–heat- lightning, not emanating from any cloud, but apparently diffused through the air and without report. There are also fireballs which shoot across the sky, leaving a train often visible for seconds and minutes. These last, when they project any masses to the earth, are termed aërolites.

Atmospheric electricity has much to do with the distribution

of rain, the precipitation of vapor, the condition of our nervous system, and, according to Humboldt, with the circulation of the organic juices. Atmospheric electricity has heretofore been a great obstacle to the success of the Magnetic Telegraph, and curiously disturbs its operation; but there has recently been invented an instrument called a Mutator, which is connected with the wires, and carries off all the disturbing influences of the atmosphere without interfering with the working current. On the other hand, artificially created electricity has led to important advances in many of the arts and sciences.

Ice is water frozen under a very curious and peculiar law. Hail is the congelation of drops of rain in irregular forms, always sudden,–by some attributed to electricity and currents of air violently rarefied by it, and by others to rain-drops falling through a cold stratum of air and suddenly congealed. Snow, the ermine of the earth, is the crystallized moisture of the air, and is in subjection to unchanging laws.

Water contracts as it grows colder, until it falls in temperature to 42°. It then expands till it reaches 32°, when it becomes solid, though its density is actually diminished, and its specific gravity is reduced to .929, while that of unfrozen water is 1.000. Of course it is much lighter, and it floats. This admirable arrangement prevents our rivers being frozen up and our lakes becoming solid. Ice thickens because it is porous, and allows the heat of the water to pass up and the cold to descend; but this is happily a slow process, as ice is a bad conductor. Salt water

freezes at the temperature of 7°, 25° below freezing- point. There are many things to be said about ice, whether as glaciers, or Arctic bergs, or, as it is found sometimes, contrary to its general law, at the bottom of rivers and ponds, its geological movements in the transportation of boulders, and as an article of luxury;–but we are compelled to leave them for the present.

Snow, which, in its crystallization, surpasses the most perfect gems, is invariably found arranged in determinate angles, to wit, 60°, and its double, 120°, and formed of six-sided prisms. More than one hundred kinds have been described by Dr. Scoresby and others, and all these are combinations of the six- sided prism. The uses of snow, from its non-conducting qualities, whether as appreciated by the Esquimaux as a material for huts, or by the agriculturists of our own climate as sheltering the seed, are too well known to require any particular remarks. Strange as it may appear, the proximate cause of the formation of snow is not yet fully agreed upon by the learned.

The connection between Sound and the atmosphere is an important one. The air is a conductor of sound, and in some conditions one of the best. A bell rung in an exhausted receiver gives no sound. In the Arctic regions ordinary conversations have been distinctly heard for the distance of a mile and a half.

All that we have thus far said in this article bears directly, in some form or other, on another of the great features of Meteorology, one of its great objects, and an unceasing topic,–namely, Climate.

The term Climate, in its general sense, indicates the changes and condition of the atmosphere, such as we have been considering. It has something to do with all of them; it is not entirely controlled by any. Thus, places having the same mean annual temperature often differ materially in climate. In some (we quote Mrs. Somerville) the winters are mild and the summers cool, whereas in others the extremes of heat and cold prevail.

Climates are not found coincident with lines of latitude; they are quite as often found parallel to lines of longitude. If you connect the extreme points of the mean annual temperatures by a line passing round the earth, you have a zone, but never a true circle. The curves are longitudinal.

Climate is dependent on temperature, winds, the elevation of land, soil, ranges of mountains, and proximity of bodies of water; and it is also the expression, if we may so term it, of the changes in the atmosphere sensibly affecting our organs. Humboldt refers it to humidity, temperature, changes in barometric pressure, calmness or agitation of the air, amount of electric force, and transparency of the sky.

When mountains range themselves in lines of latitude across a continent, they are barriers to civilization, to the mingling of races, and the union of states. Thus, the Pyrenees have always kept France and Spain apart, the Alps and the Apennines have secluded Switzerland from its neighbors. In our own country, Providence has placed our great mountains on a northern and

southern axis; the slopes, the direction, the prevailing winds, the facilities for transportation and travel favor no one of our northern, southern, and western States more than another.

Climate affects vegetation and the distribution of animal life, and thus greatly modifies commerce.

Whatever of importance is accomplished in those countries where climate has overpowered a race is best and principally done by the men of the temperate zones, who carry with them perseverance, courage, and ability, and maintain their ascendency, true to their type, while they have their life to live.

But with our own eyes we may perceive how much climate affects agriculture. The humidity or dryness of soils, their natural or acquired heat or cold, the prevailing winds, the quantity of rain, the snows, the dews, all affect the planter of the seed and the tiller of the ground; they increase or diminish the aggregate of the products of countries, the value of their imports and exports,--in short, their material power, their resources, their influence, their very existence.

The climate of our own country is exceedingly variable. The transitions from heat to cold are very sudden, the range of the mercury is very great. In the North, we have almost the Arctic winters; in the South, almost the peculiarities of the tropics. Of the State of Pennsylvania it has been said, that in this respect it is a compound of all the countries in the world. Mr. Jefferson and Dr. Rush, as before observed, insisted that our climate has changed; and Williams, the historian of Vermont, contends

that New England has deteriorated in its seasons, temperature, harvests, and health, since its early settlement. Our winds blow from every point of the compass, but a due north wind is very rare. Our great western lakes have a large influence on our climate. Some learned men have asserted, that, if they were land, their area being about ninety-four thousand square miles, the region would be so cold as to be scarcely inhabitable.

Such is an outline of our subject. The science itself is by no means systematized. Many things are taken for granted which may yet be disproved. If, says Humboldt, we perceive a want of connection in the phenomena of certain sciences, we may anticipate the revelation of new facts, whose importance will probably be commensurate with the attention directed to other branches of study. What we want is a larger class of observers, and not only those who are professional persons, but those who would commune with Nature, and seek to invigorate their minds by the acquisition of new ideas, and a recourse to rich and pure sources of enjoyment.

But more than this. It is a requirement of the present age, says the same authority, that there should be an equal appreciation of all branches of mathematical and physical science; for the material wealth and the growing prosperity of nations are principally based upon a more enlightened employment of the products and forces of Nature.

Much attention has of late years been paid to this subject. Many distinguished men in Europe have connected their great

reputations indissolubly with it, and it is absolutely true that more persons are engaged in a common effort to promote this science than any other of our time. In Paris there is a large and flourishing society where the most brilliant of its savans combine their efforts. In London, that which was established in 1850 has met with remarkable success, and a most unexpected crowd of supporters. The finest instruments, the most accurate observations, and entire uniformity of purpose have been the result. In Germany, equal zeal prevails among its naturalists. There are more than eight hundred stations throughout the world where regular observations are made, and upwards of three hundred and sixty of them are in the United States. The Smithsonian Institution has been also a wise patron of this science, by its numerous publications, its lucid directions for observing meteorological changes, and the bestowal of standard instruments in large numbers to efficient and well-placed observers. By a recent arrangement, a portion of this work is to be performed by the Patent Office.

Observation, and accuracy in observation, are the foundation of this science. The results are compared to the leaves of a book, which will some day be arranged and bound together in one volume. The instruments in use are delicate, ingenious, and indispensable. Their history, uses, and importance would be topic enough for a separate article.

While at the first view Meteorology may appear to occupy but a limited sphere, upon a closer examination it will be found to

embrace almost all the sciences, and to be commensurate with Nature itself. It is continually influencing us, by its agencies appealing to our senses, ministering to our wants, and governing our conduct.

Its influence upon its votaries is equally remarkable; for, as a rule, they are distinguished among the learned, their characters are in harmony with their pursuits, and they are recognized everywhere for disinterestedness, philanthropy, and public and private virtue. While Mental Philosophy, has made but little progress since the times of Plato, and the world is but little better for scholastic disputations, Natural Science has civilized man, elevated his condition, increased the circle of his exertions, and, by the development of some of its simplest principles, united the intelligent, the learned, the enterprising, and the virtuous of all nations into a recognized and a noble brotherhood.

TREASURE-TROVE

Once, the Castle of Chalus, crowned
With sullen battlements, stood and frowned
On the sullen plain around it;
But Richard of England came one day,
And the Castle of Chalus passed away
In such a rapid and sure decay
No modern yet has found it.

Who has not heard of the Lion King
Who made the harps of the minstrels ring?
Oh, well they might imagine it
Hard for chivalry's ranks to show
A knight more gallant to face a foe,
With a firmer lance or a heavier blow,
Than Richard I. Plantagenet;

Or gayer withal: for he loved his joke,
As well as he loved, with slashing stroke,
The haughtiest helm to hack at:
Wine or blood he laughingly poured;
'Twas a lightsome word or a heavy sword,
As he found a foe or a festive board,
With a skull or a joke to crack at.

Yet some their candid belief avow,
That, if Richard lived in England now,
And his lot were only a common one,
He ne'er had meddled with kings or states,
But might have been a bruiser of pates
And champion now of the "heavy weights,"–
A first-rate "Fighting Phenomenon."

A vassal bound in peace and war
To Richard I. was Vidomar,–
A noble as proud and needy
As ever before that monarch bowed,
But not so needy and not so proud
As the monarch himself was greedy.

Vicomte was he of the Limousin,
Where stones were thick and crops were thin,
And profits small and slow to come in.
But slow and sure, the father's plan, did
Not suit the son. Sire lived close-handed;
Became, not rich, but very landed.
The only debt that ever he made
Was Nature's debt, and that he paid
About the time of the Third Crusade,–
A time when the fashion was fully set
By Richard of running in tilts and debt,
When plumes were high and prudence low,
And every knight felt bound to "go
The pace," and just like Richard do,

By running his purse and a Paynim through.
Yet do not suppose that Vidomar
Was ever a knight in the Holy War:
For Richard many a Saracen's head
Had lopped before the old Count was dead;
And Richard was home from Palestine,
Home from the dungeon of Tiernstein,
And many a Christian corpse had made,
Ere the time in which the story is laid.
But the fashion he set became so strong,
That Vidomar was hurried along,
And did as many a peer has done
On reaching a title and twenty-one,
And met the fate that will meet a peer
Who lives in state on nothing a year.
Deserted by all, except some Jews,
Holding old post-obits and IOUs,
Who hunted him up and hunted him down,
He left Limoges, the capital town,
For his country castle Chalus,
(As spendthrift lords to Boulogne repair,
To give their estates a chance to air,)
And went to turning fallows;
At least, he ordered it, (much the same,)
And went himself in pursuit of game
Or any rural pleasure,
Till one fine day, as he rode away,
A serf came running behind to say
They'd found a crock of treasure.

No more he thought of hawk or hound,
But spurred to the spot, and there he found,
Beyond his boldest thoughts,
A sum to set him afloat again,–
The leading figure, 'twas very plain,
Was followed by several 0s.

Oh, who can tell of the schemes that flew
Through his head, as the treasure met his view,
And he knew that again his note was good?
He may have felt as a debtor would
Who has dodged a dogging dun,
Or a bank-cashier in his hour of dread
With brokers behind and breakers ahead,
Or a blood with his last "upon the red,"–
And each expecting a run.
What should he do? 'Twas very true
That all of his debts were overdue;
But the "real- whole-souled" must use their gold
To run new scores,–not to pay off old.
That night he lay till the break of day,
The doubtful question solving:
Himself in his bed, and that in his head,
He kept by turns revolving.

That selfsame day, not very far
From the country castle of Vidomar,
The king had been progressing:
A courtly phrase, when the king was out

On a chivalrous bender; any route
As good as another: what about
Were little good in guessing.

That night, as he sat and drank, he frowned,
While courtiers moodily stood around,
All wondering what the journey meant,
Till a scout reported, "Treasure found!"–
With a rap that made the glasses bound,
He swore, "By Arthur's table round,
I'll have another tournament!"

No more, as he sat and drank, he frowned,
Or courtiers moodily stood around,
But all were singing, drinking;
And louder than all the songs he led,
And louder he said, "Ho! pass the red!"
Till he went to bed with a ring in his head
That seemed like gold a- chinking.

'Twere wrong to infer from what you're read
That Richard awoke with an aching head;
For nerves like his resisted
With wonderful ease what we might deem
Enough to stagger a Polypheme,
And his spirits would never more than seem
A trifle too much "assisted."

And yet in the morn no fumes were there,

And his eyes were bright,–almost as a pair
Of eyes that you and I know;
For his head, the best authorities write,
(See the Story of Tuck,) was always right
And sound as ever after a night
Of *"Pellite curas vino!"*

As soon as the light broke into his tent,
Without delay for a herald he sent,
And bade him don his tabard,
And away to the Count to say, "By law
That gold was the king's: unless he saw
The same ere noon, his sword he would draw
And throw away the scabbard."

An hour, for his morning exercise,
He swayed that sword of wondrous size,–
'Twas called his great "persuader";
Then a mace of steel he smote in two,–
A feat which the king would often do,
Since Saladin wondered at that *coup*
When he met our stout crusader.

A trifle for him: he "trained to light,"–
Grown lazy now: but his appetite,
On the whole, was satisfactory,–
As the vanishing viands, warm and cold,
Most amply proved, ere, minus the gold,
The herald returned and trembling told

How the Count had proved refractory:

Had owned it true that his serfs had found
A treasure buried somewhere in the ground,–
Perhaps not strictly a nugget:
Though none but Norman lawyers chose
To count it tort, if the finders "froze"
To treasure-trove,–especially those
Who held the land where they dug it,–

For quits he'd give up half,–down,–cash;
And that, for one who had gone to smash,
Was a liberal restitution:
His neighbor Shent-per-Shent did sue
On a better claim, and put it through,–
Recovered his suit, but not a *sou*
At the tail of an execution.

Coeur gazed around with the ominous glare
Of the lion deprived of the lion's share,–
A look there was no mistaking,–
A look which the courtiers never saw
Without a sudden desire to draw
Away from the sweep of the lion's paw
Before their bones were aching.

He caught the herald,–'twas by the slack
Of garments below and behind his back,–
Then twirled him round for a minute;

And when at last he let him free,
He shied him at a neighboring tree,
A distance of thirty yards and three,
And lodged him handsomely in it:

Then seized his ponderous battle-axe,
And bade his followers mount their hacks,
With a look on his countenance *so* stern,
So little of fun, so full of fight,
That, when he came in the Count's full sight,
In something of haste and more of fright,
The Count rode out of the postern;

And crowding leagues from his angry liege,
He left his castle to storm or siege,–
His poor beef-eaters to hold out,
Or save themselves as well as they could,
Or be food for crows: what noble should
Waste thought on such? As a noble would,
He prudently smuggled the gold out.

In the feudal days, in the good old times
Of feudal virtues and feudal crimes,
A point of honor they'd make in it,
Though sure in the end their flag must fall,
To show stout fight and never to call
A truce till they saw a hole in the wall
Or a larder without any steak in it.

The fight began. Shouts filled the air,–
"St. George!" "St. Denis!"–as here and there
The shock of the battle shifted;
There were catapult-shots and shots by hand,
Ladders with desperate climbers manned,
Rams and rocks, hot lead, and sand
On the heads of the climbers sifted.

But the sturdy churls would not give way,
Though Richard in person rushed to the fray
With all of his rash proclivity
For knocks; till, despairing of knightly fame
In doughty deeds for a doubtful claim,
The hero of Jaffa changed his game
To a masterly inactivity.

He stretched his lines in a circle round,
And pitched his tent on a rising ground
For general supervision
Of both the hostile camps, while he
Could join with Blondel in minstrel glee,
Or drink, or dice with Marcadee,
And *they*-– consume provision.

To starve a garrison day by day
You may not think a chivalrous way
To take a fortification.
The story is dull: by way of relief,
I make a digression, very brief,

And leave the "ins" to swallow their beef,
The "outs" their mortification.

Many there were in Richard's train
More known to fame and of higher degree,
But none that suited his fickle vein
So well as Blondel and Marcadee.
Blondel had grown from a minstrel-boy
To a very romantic troubadour
Whose soul was music, whose song was joy,
Whose only motto was *Vive l'amour!*
In lady's bower, in lordly hall,
From the king himself to the poorest clown,
A joyous welcome he had from all,
And Care in his presence forgot to frown.
Sadly romantic, fantastic and vain,
His heart for his head still made amends;
For he never sang a malicious strain.
And never was known to fail his friends.
Who but he, when the captive king,
By a brother betrayed, was left to rot,
Would have gone disguised to seek and sing,
Till he heard his tale and the tidings brought?
Little the listening sentries dreamed,
As they watched the king and a minstrel play,
That what but an idle rhyming seemed
Would rouse all England another day!
'Twas the timely aid of a friend in need,
And, seldom as Richard felt the power

Of a service past, he remembered the deed
And cherished him ever from that hour:
He made him his bard, with nought to do
But court the ladies and court the Nine,
And every day bring something new
To sing for the revellers over their wine;
With once a year a pipe of Sherry,
A suit of clothes, and a haunch of venison,
To make himself and his fellows merry,–
The salary now of Alfred Tennyson.

Marcadee was a stout Brabançon,
With conscience weak and muscles strong,
Who roamed about from clime to clime,
The side of virtue or yet of crime
Ready to take in a regular way
For any leader and regular pay;
Who trusted steel, and thought it odd
To fear the Devil or honor God.
His *forte* was not in the field alone,
He was no common fighter,
For in all accomplishments he shone,–
At least, in all the lighter.
To lance or lute alike *au fait*,
With grasp now firm, now light,
He flourished this to knightly lay,
And that to lay a knight.
Ready in fashion to lead the *ton*,
In the battle-field his men,

He danced like a Zephyr, and, harness on,
Could walk his mile in ten.
And Nature gave him such a frame,
His tailor such a fit,
That, whether a head or a heart his aim,
He always made a hit.
Wherever he went, the ladies dear
Would very soon adore him,
And, quite of course, the lords would sneer,–
But never sneer before him!
Perhaps it fared with the ladies worse
Than it fared with their gallants;
For he broke a vow with as slight remorse
As he ever broke a lance.
Thus, tilting here and jilting there,
He fought a foe or he fooled a fair,
But little recking how;
So deadly smooth, so cruel and vain,
He might have made a capital Cain,
Or a splendid dandy now.
In short, if you looked o'er land and sea,
From London to the Niger,
You certainly must have said with me,–
If Richard was lion, Marcadee
Might well have been the tiger.

A month went by. They lay there still,
And chafed with nothing but time to kill,–
A tough old foe. Observe the way

They laid him out, as thus:–One day,–
'Twas after dinner and afternoon,
When the noise was over of knife and fork,
And only was heard an occasional cork
And Blondel idly thrumming a tune,–
King Richard pushed the wine along,
And rapped the table, and cried, "A song!
Dulness I hold a shame, a sin
Against good wine. Come, Blondel, begin!"
Blondel coughed,–was "half afraid,"–
Was "out last night on a serenade,
And caught a cold,"–his "voice was gone,–
And really, just now, his head"–"Go on!"
He bowed, and swept the chords– "Brrrrang"–
With a handful of notes, and thus he sang:–

BLONDEL.

Life is fleeting,–make it pleasant;
Care for nothing but the present;
For the past we leave behind us,
And the future may not find us.
Though we cannot shun its troubles,
Care and sorrow we may banish;
Though its pleasures are but bubbles,
Catch the bubbles ere they vanish.

There is joy we cannot measure,–
Joy we may not win with treasure.

When the glance of Beauty thrills us',
When her love with rapture fills us,
Let us seize it ere it passes;
Be our motto, "Love is mighty."
Fill, then, fill your brimming glasses!
Fill, and drink to Aphrodite!

Of course they drank with a right good will,
For they never missed a chance "to fill."
And yet a few, I'm sorry to own,
Made side-remarks in an undertone,
Like those we hear, when, nowadays,
Good-natured friends, with seeming praise,
Contrive to damn. In the midst of the hum
They heard a loud and slashing thrum:
'Twas the king: and each his breath drew in
Till you might have heard a falling pin.
Some little excuse, at first, he made,
While over the lute his fingers strayed:–
"You know my way,–as the fancies come,
I improvise."–There was ink on his thumb.
That morning, alone, good hours he spent
In writing despatches never sent.

RICHARD.

There is pleasure when bright eyes are glancing
And Beauty is willing; but more
When the war-horse is gallantly prancing

And snuffing the battle afar,–
When the foe, with his banner advancing,
Is sounding the clarion of war.

Where the battle is deadly and gory,
Where foeman 'gainst foeman is pressed,
Where the path is before me to glory,
Is pleasure for me, and the best.
Let me live in proud chivalry's story,
Or die with my lance in its rest!

The plaudits followed him loud and free
As he tossed the lute to Marcadee,
Who caught it featly, bowing low,
And said, "My liege, I may not know
To improvise; but I'll give a song,
The song of our camp,–we've known it long.
It suits not well this tinkle and thrum,
But needs to be heard with a rattling drum.
Ho, there! Tambour!–He knows it well,–
'The Brabançon!'–Now make it tell;
Let your elbows now with a spirit wag
In the outside roll and the double drag."

MARCADEE.

I'm but a soldier of fortune, you see:
Huzza!
Glory and love,–they are nothing to me:

Ha, ha!
Glory's soon faded, and love is soon cold:
Give me the solid, reliable gold:
Hurrah for the gold!
Country or king I have none, I am free:
Huzza!
Patriot's quarrel,– 'tis harvest for me:
Ha, ha!
A soldier of fortune, my creed is soon told,–
I'd fight for the Devil, to pocket his gold:
Hurrah for the gold!

He turned to the king, as he finished the verse,
And threw on the table a heavy purse
With a pair of dice; another, I trow,
Still lurked *incog.* for a lucky throw:–
"'Tis mine; 'twas thine. If the king would play,
Perchance he'd find his revenge to-day.
Gambling, I own, is a fault, a sin;
I always repent–unless I win."
Le jeu est fait. –"Well thrown! eleven!
My purse is gone.–Double-six, by heaven!"

At this unlucky point in the game
A herald was ushered in. He came
With a flag of truce, commissioned to say
The garrison now were willing to lay
The keys of the castle at his feet,
If he'd let them go and let them eat:

They'd done their best; could do no more
Than humbly wait the fortune of war
And Richard's word. It came in tones
That grated harshly:–"D–n the bones
And double-six! Marcadee, you've won.–
Take back my word to each mother's son,
And tell them Richard swore it:
Be the smoke of their den their funeral pall!
By the Holy Tomb, I'll hang them all!
They've hung out so well behind their wall,
They'll hang out well before it."
Then Richard laughed in his hearty way,
Enjoying his joke, as a monarch may;
He laughed till he ached for want of breath:
If it lacked in life, it was full of death:
Like many, believing the next best thing
To a joke with a point is a joke with a sting.
Loud he laughed; but he laughed not long
Ere he leaped to the back of his charger strong,
And bounded forward, axe on high,
Circling the tents with his battle-cry,–
"Away! away! we shall win the day:
In the front of the fight you'll find me:
The first to get in my spurs shall win,–
My boots to the wight behind me!"

* * * They have reached the moat;
The draw is up, but a wooden float
Is thrust across, and onward they run;

The bank is gained and the barbican won;
The outer gate goes down with a crash;
Through the portcullis they madly dash,
And with shouts of triumph they now assail
The innermost gate. The crushing hail
Of rocks and beams goes through the mass,
Like the summer-hail on the summer-grass;–
They falter, they waver. A stalwart form
Breaks through the ranks, like a bolt in the storm:
'Tis the Lion King!–"How, now, ye knaves!
Do ye look for safety? Find your graves!"–
One blow to the left, one blow to the right,–
Two recreants fall;–no more of flight.
One stride to the front, and, stroke on stroke,
His curtle-axe rends the double oak.
Down shower the missiles;–they fall in vain;
They scatter like drops from the lion's mane.
He is down,–he is up;–that right arm! how
'Tis nerved with the strength of twenty, now!
The barrier yields,–it shivers,–it falls.
"Huzza! Saint George! to the walls! to the walls!
Throw the rate to the moat! cut down! spare not!
No quarter! remember–*Je–su!* I'm shot!"

On a silken pallet lying, under hangings stiff with gold,
Now is Coeur-de-Lion sighing, weakly sighing, he the bold!
For with riches, power, and glory now forever he must part.
They have told him he is dying. Keen remorse is at his heart
Life is grateful, life is glorious, with the pulses bounding high

In a warrior frame victorious: it were easy so to die.
Yet to die is fearful ever; oh, how fearful, when the sum
Of the past is lengthened murder,–and a fearful world to come!
Where are now the wretched victims of his wrath? The deed is done.
He has conquered. They have suffered. Yonder, blackening in the sun,
From the battlements they're hanging. Little joy it gives to him
Now to see the work of vengeance, when his eye is growing dim!
One was saved,–the daring bowman who the fatal arrow sped;
He was saved, but not for mercy; better numbered with the dead!
Now, relenting, late repenting, Richard turns to Marcadee,
Saying, "Haste, before I waver, bring the captive youth to me."
He is brought, his feet in fetters, heavy shackles on his hands,
And, with eye unflinching, gazing on the king, erect he stands.
He is gazing not in anger, not for insult, not for show;
But his soul, before its leaving, Richard's very soul would know.
Death is certain,– death by torture: death for him can have no sting,
If that arrow did its duty,–if he share it with the king.
Were he trembling or defiant, were he less or more than bold,
Once again to vengeful fury would he rouse the fiend of old

That in Richard's breast is lurking, ready once again to spring.
Dreading now that vengeful spirit, with a wavering voice, the king
Questions impotently, wildly: "Prisoner, tell me, what of ill
Ever I have done to thee or thine, that me thou wouldest kill?"
Higher, prouder still he bears him; o'er his countenance appear,
Flitting quickly, looks of wonder and of scorn: what does he hear?

"And dost thou ask me, man of blood, what evil thou hast done?
Hast thou so soon forgot thy vow to hang each mother's son?
No! oft as thou hast broken vows, I know them to be strong,
Whene'er thy pride or lust or hate has sworn to do a wrong.
But churls should bow to right divine of kings, for good or ill,
And bare their necks to axe or rope, if 'twere thy royal will?
Ah, hadst thou, Richard, yet to learn the very meanest thing
That crawls the earth in self-defence would turn upon a king?
Yet deem not 'twas the hope of life which led me to the deed:
I'd freely lose a thousand lives to make thee, tyrant, bleed!–
Ay! mark me well, canst thou not see somewhat of old Bertrand?
My father good! my brothers dear!–all murdered by thy hand!
Yes, one escaped; he saw thee strike, he saw his kindred die,
And breathed a vow, a burning vow of vengeance;–it was I!
I've lived; but all my life has been a memory of the slain;
I've lived but to revenge them,–and I have not lived in vain!

I read it in thy haggard face, the hour is drawing nigh
When power and wealth can aid thee not,–when, Richard, thou must DIE!
What mean those pale, convulsive lips? What means that shrinking brow?
Ha! Richard of the lion- heart, thou art a coward now!
Now call thy hireling ruffians; bid them bring the cord and rack,
And bid them strain these limbs of mine until the sinews crack;
And bid them tear the quivering flesh, break one by one each bone;–
Thou canst not break my spirit, though thou mayst compel a groan.
I die, as I would live and die, the ever bold and free;
And I shall die with joy, to think I've rid the world of thee."

Swords are starting from their scabbards, grim and hardened warriors wait
Richard's slightest word or gesture that may seal the bowman's fate.
But his memory has been busy with the deeds of other times.
In the eyes of wakened conscience all his glories turn to crimes,
And his crimes to something monstrous; worlds were little now to give
In atonement for the least. He cries, in anguish, "Let him live.
He has reason; never treason more became a traitor bold.
Youth, forgive as I forgive thee! Give him freedom,–give him

gold.
Marcadee, be sure, obey me; 'tis the last, the dying hest
Of a monarch who is sinking, sinking fast,–oh, not to rest!
Haply, He above, remembering, may relieve my dark despair
With a ray of hope to light the gloom when I am suffering–
there!"

The captain neared the royal bed
And humbly bowed his helmèd head,
And laid his hand upon the plate
That sheathed his breast, and said, "Though late
Thy mercy comes, I hold it still
My duty to do thy royal will.
If I should fail to serve thee fair,
May I be doomed to suffer–there!"

I've often met with a fast young friend
More ready to borrow than I to lend;
I've heard smooth men in election-time
Prove every creed, but their own, a crime:
Perhaps, if the fast one wished to borrow,
I've taken his word to pay "to-morrow";
Perhaps, while Smooth explained his creed,
I've thought him the man for the country's need;
Perhaps I'm more of a trusting mood
Than you suppose; but I think I would
Have trusted that man of mail,
If I had been the dying king,
About as far as you could sling

An elephant by the tail!

Good subjects then, as now, no doubt,
When a king was dead, were eager to shout
In time, "God save" the new one!
One trouble was always whom to choose
Amongst the heirs; for it raised the deuse
And ran the subject's neck in a noose,
Unless he chose the true one.

Another difficult task,–to judge
If the coming king would bear a grudge
For some old breach of concord,
And take the earliest chance to send
A trusty line by a trusty friend
To give his compliments at the end
Of a disagreeable strong cord.

And whoever would have must seize his own.
Thus a dying king was left alone,
With a sad neglect of manners;
Ere his breath was out, the courtiers ran,
With fear or zeal for "the coming man,"
In time to escape from under his ban,
Or hurry under his banners.

So Richard was left in a shabby way
To Marcadee, with an abbot to pray
And pother with "consolation,"

Reminding 'twas never too late to search
For mercy, and hinting that Mother Church
Was never known to leave in the lurch
A king with a fat donation.
But the abbot was known to Richard well,
As one who would smoothen the road to hell,
And quite as willing to revel
As preach; and he always preached to "soothe,"
With a mild regard for "the follies of youth,"–
Himself, in epitome, proving the truth
Of the world, the flesh, and the Devil.

This was the will that Richard made:–
"My body at father's feet be laid;
And to Rouen (it loved me most)
My heart I give; and I give my ins-
Ides to the rascally Poitevins;
To the abbot I give my darling–sins;
And I give "–He gave up the ghost.

The abbot looked grave, but never spoke.
The captain laughed, gave the abbot a poke,
And, without ado or lingering,
"Conveyed" the personals, jewels, and gold,
Omitting the formal To Have and to Hold
From the royal finger, before it was cold,
He slipped the royal finger-ring.

There might have been in the eye of the law

A something which lawyers would call a flaw
Of title in such a conversion:
But if weak in the law, he was strong in the hand,
And had the "nine points."–He summoned his band,
And ordered before him the archer Bertrand,
Intending a little diversion.

He called the cutter,–no cutter of clothes,
But such as royalty kept for those
Who happened to need correcting,–
And told him that Richard, before he died,
Desired to have a scalpel applied
To the traitor there. With professional pride,
The cutter began dissecting.

Now Bones was born with a genius to flay:
He might have ranked, had he lived to-day,
As a capital taxidermist:
And yet, as he tugged, they heard him say,
Of all the backs that ever lay
Before him in a professional way,
That was of all backs the firmest.

Kind reader, allow me to drop a veil
In pity; I cannot pursue the tale
In the heartless tone of the last strophe.
'Tis done, and again I'll be the same.
They triumphed not, if they felt no shame:
No muscle quivered, no murmur came,

Until the final catastrophe.

The captain jested a moment, then
He waved his hand and bowed to his men
With a single word, "Disbanded,"
And galloped away with three or four
Stout men-at-arms to the nearest shore,
Where a gallant array not long before
With the king in pride had landed.

He coasted around, went up the Rhine,
So famous then for robbers and wine,
So famous now as a ramble.
The wine and the robbers still are there;
But they rob you now with a bill of fare,
And gentlemen bankers "on the square"
Will clean you out, if you gamble.

He built him a Schloss on–something-Stein,
And became the first of as proud a line
As e'er took toll on the river,
When barons, perched in their castles high,
On the valley would keep a watchful eye,
And pounce on travellers with their cry,
"The Rhine-dues! down! deliver!"

And crack their crowns for any delay
In paying down. And that, by the way,
About as correctly as I know,

Is the origin true of an ancient phrase
So frequently heard in modern days,
When a gentleman quite reluctantly pays,–
I mean, "To come down with the rhino."

A LEGEND OF MARYLAND

"AN OWRE TRUE TALE."

The framework of modern history is, for the most part, constructed out of the material supplied by national transactions described in official documents and contemporaneous records. Forms of government and their organic changes, the succession of those who have administered them, their legislation, wars, treaties, and the statistics demonstrating their growth or decline,– these are the elements that furnish the outlines of history. They are the dry timbers of a vast old edifice; they impose a dry study upon the antiquary, and are still more dry to his reader.

But that which makes history the richest of philosophies and the most genial pursuit of humanity is the spirit that is breathed into it by the thoughts and feelings of former generations, interpreted in actions and incidents that disclose the passions, motives, and ambition of men, and open to us a view of the actual life of our forefathers. When we can contemplate the people of a past age employed in their own occupations, observe their habits and manners, comprehend their policy and their methods of pursuing it, our imagination is quick to clothe them with the flesh and blood of human brotherhood and to bring them into full sympathy with our individual nature.

History then becomes a world of living figures,–a theatre that presents to us a majestic drama, varied by alternate scenes of the grandest achievements and the most touching episodes of human existence.

In the composing of this drama the author has need to seek his material in many a tangled thicket as well as in many an open field. Facts accidentally encountered, which singly have but little perceptible significance, are sometimes strangely discovered to illustrate incidents long obscured and incapable of explanation. They are like the lost links of a chain, which, being found, supply the means of giving cohesion and completeness to the heretofore useless fragments. The scholar's experience is full of these reunions of illustrative incidents gathered from regions far apart in space, and often in time. The historian's skill is challenged to its highest task in the effort to draw together those tissues of personal and local adventure which, at first without seeming or suspected dependence, prove, when brought into their proper relationship with each other, to be unerring exponents of events of highest concern.

It is pleasant to fall upon the course of one of these currents of adventure,– to follow a solitary rivulet of tradition, such as by chance we now and then find modestly flowing along through the obscure coverts of time, and to be able to trace its progress to the confluence of other streams,–and finally to see it grow, by the aid of these tributaries, to the proportions of an ample river, which waters the domain of authentic history and bears upon its

bosom a clear testimony to the life and character of a people.

The following legend furnishes a striking and attractive exemplification of such a growth, in the unfolding of a romantic passage of Maryland history, of which no annalist has ever given more than an ambiguous and meagre hint. It refers to a deed of bloodshed, of which the only trace that was not obliterated from living rumor so long as a century ago was to be found in a vague and misty relic of an old memory of the provincial period of the State. The facts by which I have been enabled to bring it to the full light of an historical incident, it will be seen in the perusal of this narrative, have successively, and by most curious process of development, risen into view through a series of accidental discoveries, which have all combined, with singular coincidence and adaptation, to furnish an unquestionable chapter of Maryland history, altogether worthy of recital for its intrinsic interest, and still more worthy of preservation for the elements it supplies towards a correct estimate of the troubles which beset the career and formed the character and manners of the forefathers of the State.

CHAPTER I.
TALBOT'S CAVE

It is now many years ago,–long before I had reached manhood,–that, through my intimacy with a friend, then venerable for his years and most attractive to me by his store

of historical knowledge, I became acquainted with a tradition touching a strange incident that had reference to a mysterious person connected with a locality on the Susquehanna River near Havre de Grace. In that day the tradition was repeated by a few of the oldest inhabitants who dwelt in the region. I dare say it has now entirely run out of all remembrance amongst their descendants, and that I am, perhaps, the only individual in the State who has preserved any traces of the facts to which I allude.

There was, until not long ago, a notable cavern at the foot of a rocky cliff about a mile below the town of Port Deposit. It was of small compass, yet sufficiently spacious to furnish some rude shelter against the weather to one who might seek refuge within its solitary chamber. It opened upon the river just where a small brook comes brattling down the bank, along the base of a hill of some magnitude that yet retains the stately name of Mount Ararat. The visitor of this cavern might approach it by a boat from the river, or by a rugged path along the margin of the brook and across the ledges of the rock. This rough shelter went by the name of Talbot's Cave down to a very recent period, and would still go by that name, if it were yet in existence. But it happened, not many years since, that Port Deposit was awakened to a sudden notion of the value of the granite of the cliff, and, as commerce is a most ruthless contemner of all romance, and never hesitates between a speculation of profit and a speculation of history, Talbot's Cave soon began to figure conspicuously in the Price Current, and in a very little while

disappeared, like a witch from the stage, in blasts of sulphur fire and rumbling thunder, under the management of those effective scene-shifters, the quarrymen. A government contract, more potent than the necromancy of the famed wizard Michael Scott, lifted this massive rock from its base, and, flying with it full two hundred miles, buried it fathoms below the surface of the Atlantic, at the Rip Raps, near Hampton Roads; and thus it happens that I cannot vouch the ocular proof of the Cave to certify the legend I am about to relate.

The tradition attached to this spot had nothing but a misty and spectral outline. It was indefinite in the date, uncertain as to persons, mysterious as to the event,–just such a tradition as to whet the edge of one's curiosity and to leave it hopeless of gratification. I may relate it in a few words.

Once upon a time, somewhere between one and two hundred years ago, there was a man by the name of Talbot, a kinsman of Lord Baltimore, who had committed some crime, for which he fled and became an outlaw and was pursued by the authorities of the Province. To escape these, he took refuge in the wilderness on the Susquehanna, where he found this cave, and used it for concealment and defence for some time,–how long, the tradition does not say. This region was then inhabited by a fierce tribe of Indians, who are described on Captain John Smith's map as the "Sasquesahannocks," and who were friendly to the outlaw and supplied him with provisions. To these details was added another, which threw an additional interest over the story,–that Talbot had

a pair of beautiful English hawks, such as were most prized in the sport of falconry, and that these were the companions of his exile, and were trained by him to pursue and strike the wild duck that abounded, then as now, on this part of the river; and he thus found amusement to beguile his solitude, as well as sustenance in a luxurious article of food, which is yet the pride of gastronomic science, and the envy of *bons vivants* throughout this continent.

These hawks my aged friend had often himself seen, in his own boyish days, sweeping round the cliffs and over the broad expanse of the Susquehanna. They were easily distinguished, he said, by the residents of that district, by their peculiar size and plumage, being of a breed not known to our native ornithology, and both being males. For many years, it was affirmed,–long after the outlaw had vanished from the scene,–these gallant old rovers of the river still pursued their accustomed game, a solitary pair, without kindred or acquaintance in our woods. They had survived their master,–no one could tell how long,–but had not abandoned the haunts of his exile. They still for many a year saw the wilderness beneath their daily flight giving place to arable fields, and learned to exchange their wary guard against the Indian's arrow for a sharper watch of the Anglo-Saxon rifle. Up to the last of their appearance the country-people spoke of them as Talbot's hawks.

This is a summary of the story, as it was told to me. No inquiry brought me any addition to these morsels of narrative. Who this Talbot was,–what was his crime,–how long he lived in this cave,

and at what era,–were questions upon which the oracle of my tradition was dumb.

Such a story would naturally take hold of the fancy of a lover of romance, and kindle his zeal for an enterprise to learn something more about it; and I may reasonably suppose that this short sketch has already stirred the bosoms of the novel-reading portion, at least, of my readers with a desire that I should tell them what, in my later researches, I have found to explain this legend of the Cave. Even the outline I have given is suggestive of inferences to furnish quite a plausible chapter of history.

First, it is clear, from the narrative, that Talbot was a gentleman of rank in the old Province,–for he was kinsman to the Lord Proprietary; and there is one of the oldest counties of Maryland that bears the name of his family,– perhaps called so in honor of himself. Then he kept his hawks, which showed him to be a man of condition, and fond of the noble sport which figures so gracefully in the annals of Chivalry.

Secondly, this hawking carries the period of the story back to the time of one of the early Lords Baltimore; for falconry was not common in the eighteenth century: and yet the date could not have been much earlier than that century, because the hawks had been seen by old persons of the last generation somewhere about the period of our Revolution; and this bird does not live much over a hundred years. So we fix a date not far from sixteen hundred and eighty for Talbot's sojourn on the river.

Thirdly, the crime for which he was outlawed could scarcely

have been a mean felony, perpetrated for gain, but more likely some act of passion,–a homicide, probably, provoked by a quarrel, and enacted in hot blood. This Talbot was too well conditioned for a sordid crime; and his flight to the wilderness and his abode there would seem to infer a man of strong purpose and self-reliance.

And, lastly, as he must have had friends and confederates on the frontier, to aid him in his concealment, and to screen him from the pursuit of the government officers, and, moreover, had made himself acceptable to the Indians, to whose power he had committed himself, we may conclude that he possessed some winning points of character; and I therefore assume him to have been of a brave, frank, and generous nature, capable of attracting partisans and enlisting the sympathies and service of bold men for his personal defence.

So, with the help of a little obvious speculation, founded upon the circumstantial evidence, we weave the network of quite a natural story of Talbot; and our meagre tradition takes on the form, and something of the substance, of an intelligible incident.

CHAPTER II.
STRANGE REVELATIONS

At this point I leave the hero of my narrative for a while, in order that I may open another chapter.

Many years elapsed, during which the tradition remained in

this unsatisfactory state, and I had given up all hope of further elucidation of it, when an accidental discovery brought me once more upon the track of inquiry.

There was published in the city of Baltimore, in the year 1808, a book whose title was certainly as little adapted to awaken the attention of one in quest of a picturesque legend as a treatise on Algebra. It was called "The Landholder's Assistant," and was intended, as its name imported, to assist that lucky portion of mankind who possessed the soil of Maryland in their pursuit of knowledge touching the mysteries of patents, warrants, surveys, and such like learning, necessary to getting land or keeping what they had. The character and style of this book, in its exterior aspect, were as unpromising as it's title. It was printed by Messrs. Dobbin & Murphy, on rather dark paper, in a muddy type,–such as no Mr. Dobbin nor Mr. Murphy of this day would allow to bear his imprimatur,–though in 1808, I doubt not, it was considered a very creditable piece of Baltimore typography. This unpretending volume was compiled by Chancellor Kilty. It is a very instructive book, containing much curious matter, is worthy of better adornment in the form of its presentation to the world, and ought to have a title more suggestive of its antiquarian lore. I should call it "Fossil Remains of Old Maryland Law, with Notes by an Antiquary."

It fell into my hands by a purchase at auction, some twenty years after I had abandoned the Legend of the Cave and the Hawks as a hopeless quest. In running over its contents, I found

that a Colonel George Talbot was once the Surveyor- General of Maryland; and in two short marginal notes (the substance of which I afterwards found in Chalmers's "Annals") it was said that "he was noted in the Province for the murder committed by him on Christopher Rousby, Collector of the Customs,"–the second note adding that this was done on board a vessel in Patuxent River, and that Talbot "was conveyed for trial to Virginia, from whence he made his escape; and after being retaken, and" (as the author expresses his belief) "tried and convicted, was finally pardoned by King James the Second."

These marginal notes, though bringing no clear support to the story of the Cave, were embers, however, of some old fire not entirely extinct,–which emitted a feeble gleam upon the path of inquiry. The name of the chief actor coincided with that of the tradition; the time, that of James the Second, conformed pretty nearly to my conjecture derived from the age of the hawks; and the nature of the crime was what I had imagined. There was just enough in this brief revelation to revive the desire for further investigation. But where was the search to be made? No history that I was aware of, no sketch of our early time that I had ever seen, nothing in print was known to be in existence that could furnish a clue to the story of the Outlaw's Cave.

And here the matter rested again for some years. But after this lapse, chance brought me upon the highway of further development, which led me in due time to a strange realization of the old proverb that "Murder will out,"–though, in this case,

its discovery could bring no other retribution than the settlement of an historical doubt, and give some posthumous fame to the subject of the disclosure.

In the month of May, 1836, I had a motive and an opportunity to make a visit to the County of St. Mary's. I had been looking into the histories of our early Maryland settlement, as they are recounted in the pages of Bozman, Chalmers, and Grahame, and found there some inducements to persuade me to make an exploration of the whereabouts of the old city which was planted near the Potomac by our first pilgrims. Through the kindness of a much valued friend, whose acquirements and taste–both highly cultivated–rendered him a most effective auxiliary in my enterprise, I was supplied with an opportunity to spend a week under the hospitable roof of Mr. Carberry, the worthy Superior of the Jesuit House of St. Inigoes on the St. Mary's River, within a short distance of the plain of the ancient city.

Mr. Campbell and myself were invited by our host to meet him, on an appointed day, at the Church of St. Nicholas on the Patuxent, near the landing at Town Creek, and we were to travel from there across to St. Inigoes in his carriage,– a distance of about fifteen miles.

Upon our arrival at St. Nicholas, we found a full day at our disposal to look around the neighborhood, which, being the scene of much historical interest in our older annals, presented a pleasant temptation to our excursion. Our friendly guide, Mr. Carberry, took us to Drum Point, the southern headland

of the Patuxent at its entrance into Chesapeake Bay. Here was, at that time, and perhaps still is, the residence of the Carroll family, whose ancestors occupied the estate for many generations. The dwelling-house was a comfortable wooden building of the style and character of the present day, with all the appurtenances proper to a convenient and pleasant country homestead. Immediately in its neighborhood–so near that it might be said to be almost within the curtilage of the dwelling–stood an old brick ruin of what had apparently been a substantial mansion-house. Such a monument of the past as this, of course, could not escape our special attention, and, upon inquiry, we were told that it was once, a long time ago, the family home of the Rousbys, the ancestors of the present occupants of the estate; that several generations of this family, dating back to the early days of the Province, had resided in it; and that when it had fallen into decay, the modern building was erected, and the old one suffered to crumble into the condition in which we saw it. I could easily understand and appreciate the sentiment that preserved it untouched as part and parcel in the family associations of the place, and as a relic of the olden time which no one was willing to disturb.

The mention of the name of the Rousbys, here on the Patuxent River, was a sudden and vivid remembrancer to me of the old story of Talbot, and gave new encouragement to an almost abandoned hope of solving this mystery.

CHAPTER III.
A GRAVEYARD AND AN EPITAPH

Within a short distance of this spot, perhaps not a mile from Drum Point, there is a small creek which opens into the river and bears the name of Mattapony. In early times there was a notable fort here, and connected with it a stately mansion, built by Charles Calvert, Lord Baltimore, for his own occasional residence. The fort and mansion are often mentioned in the Provincial records as the place where the Council sometimes met to transact business; and accordingly many public acts are dated from Mattapony.

Calvert was doubtless attracted to this spot by the pleasant scenery of the headland which here looks out upon the noble water-view of the Chesapeake, and by its breezy position as an agreeable refuge from the heats of summer.

Our party, therefore, determined to set out upon a search for some relics of the mansion and fort; and as a guide in this enterprise, we engaged an old negro who seemed to have a fair claim in his own conceit to be regarded both as the Solomon and the Methuselah of the plantation. He was a wrinkled, wise-looking old fellow, with a watery eye and a grizzled head, and might, perhaps, have been about eighty; but, from his own account, he left us to infer that he was not much behind that great patriarch of Scripture whose years are described as one hundred

and threescore and fifteen.

Finding that he was native to the estate, and had lived here all his life, we interrogated him with some confidence in his ability to contribute something useful to the issue of our pursuit. Amongst all the Solomons of this world, there is not one so consciously impressed with the unquestionable verity of his wisdom and the intensity of his knowledge as one of these veterans of an old family-estate upon which he has spent his life. He is always an aristocrat of the most uncompromising stamp, and has a contemptuous disdain and intolerance for every form of democracy. Poor white people have not the slightest chance of his good opinion. The pedigree and history of his master's family possess an epic dignity in his imagination; and the liberty he takes with facts concerning them amounts to a grand poetical hyperbole. He represents their wealth in past times to have amounted to something of a fabulous superfluity, and their magnificence so unbounded, that he stares at you in describing it, as if its excess astonished himself.

When we now questioned our venerable conductor, to learn what he could tell us of the old Proprietary Mansion, he said, in his way, he "membered it, as if it was built only yesterday: he was fotch up so near it, that he could see it now as if it was standing before him: if *he* couldn't pint out where it stood, it was time for him to give up: it was a mighty grand brick house,"– laying an emphasis on *brick*, as a special point in his notion of its grandeur; and then he added, with all the gravity of which his very solemn

visage was a copious index, that "Old Master Baltimore, who built it, was a real fine gentleman. He knowed him so well! He never gave anything but gold to the servants for tending on him. Bless you! he wouldn't even think of silver! Many a time has he given me a guinea for waiting on him."

This account of Old Master Baltimore, and his magnificent contempt of silver, and the intimacy of our patriarch with him, rather startled us, and I began to fear that the story of the house might turn out to be as big a lie as the acquaintance with the Lord Proprietary,–for Master Baltimore had then been dead just one hundred and twenty-one years. But we went on with him, and were pleasantly disappointed when he brought us upon a hill that sloped down to the Mattapony, and there traced out for us, by the depression of the earth, the visible lines of an old foundation of a large building, the former existence of which was further demonstrated by some scattered remains of the old imported brick of the edifice which were imbedded in the soil.

This spot had a fine outlook upon the Bay, and every advantage of locality to recommend its choice for a domestic establishment. We could find nothing to indicate the old fort except the commanding character of the hill with reference to the river, which might warrant a conjecture as to its position. I believe that the house was included within the ramparts of the fortification, as I perceive in some of the old records that the fortification itself was called the Mattapony House, which was once beleaguered and taken by Captain John Coode and Colonel

Jowles.

After we had examined all that was to be seen here, our next point of interest was a graveyard, which, we had been informed by some of the household at Mrs. Carroll's, had been preserved upon the estate from a very early period. Our old gossip professed to know all about this, from its very first establishment. It was in another direction from the mansion-house, about a mile distant, on the margin of an inlet from the Bay, called Harper's Creek; and thither we accordingly went. Before we reached the spot, the old negro stopped at a cabin that lay in our route and provided himself with a hoe, which, borne upon his shoulder, gave a somewhat mysterious significance to the office he had assumed. He did not explain the purpose of this equipment to us, and we forbore to question him. After descending to the level of the tide and passing through some thickets of wild shrubbery, we arrived upon a grassy plain immediately upon the border of the creek; and there, in a quiet, sequestered nook of rural landscape, the smooth and sluggish little inlet begirt with waterlilies and reflecting wood and sky and the green hill-side upon its surface, was the chosen resting-place of the departed generations of the family. A few simple tombstones–some of them darkened by the touch of Time–lay clustered within an old inclosure. The brief memorials engraved upon them told us how inveterately Death had pursued his ancient vocation and gathered in his relentless tribute from young and old in times past as he does to-day.

Here was a theme for a sermon from the patriarch, who now

leaned upon his hoe and shook his head with a slow ruminative motion, as if he hoped by this action to disengage from it some profound moral reflections, and then began to enumerate how many of these good people he had helped to bury; but before he had well begun this discourse we had turned away and were about leaving the place, when he recalled us by saying, "I have got one tombstone yet to show you, as soon as I can clear it off with the hoe: it belongs to old Master Rousby, who was stobbed aboard ship, and is, besides that, the grandest tombstone here."

Here was another of those flashes of light by which my story seemed to be preordained to a prosperous end. We eagerly encouraged the old man to this task, and he went to work in removing the green sod from a large slab which had been entirely hidden under the soil, and in a brief space revealed to us a tombstone fully six feet long, upon which we were able to read, in plainly chiselled letters, an inscription surmounted by a carved heraldic shield with its proper quarterings and devices.

Our group at this moment would have made a fine artistic study. There was this quiet landscape around us garnished with the beauty of May; there were the rustic tombs,–the old negro, with a countenance surcharged with the expression of solemn satisfaction at his employment, bending his aged figure over the broad, carved stone, and scraping from it the grass which had not been disturbed perhaps for a quarter of a century; and there was our own party looking on with eager interest, as the inscription every moment became more legible. That

interest may be imagined, on reading the inscription, which, when brought to the full light of day, revealed these words:–

"Here lyeth the body of Xph'r Rousbie Esquire, who was taken out of this world by a violent death received on board his Majesty's ship The Quaker Ketch, Capt. Tho's. Allen Commander, the last day of October 1684. And also of Mr. John Rousbie, his brother, who departed this naturall life on board the Ship Baltimore, being arrived in Patuxen the first day of February 1685."

This was a picturesque incident in its scenic character, but a still more engaging one as an occurrence in the path of discovery. Here was most unexpectedly brought to view a new link in the chain of our story. It was a pleasant surprise to have such a fact as this breaking upon us from an ambuscade, to help out a half-formed narrative which I had feared was hopeless of completion. The inscription is a necessary supplement to the marginal notes. As an insulated monument, it is meagre in its detail, and stands in need of explanation. It does not describe Christopher Rousby as the Collector of the Customs; it does not affirm that he was murdered; it makes no allusion to Talbot: but it gives the name of the ship and its commander, along with the date of the death. "The Landholder's Assistant" supplies all the facts that are wanting in this brief statement. These two memorials help each other and enlarge the common current of testimony, like two confluent streams coming from opposite sources. From the two together we learn, that Colonel Talbot, the Surveyor- General

in 1684, killed Mr. Christopher Rousby on board of a ship of war; and we are apprised that Rousby was a gentleman of rank and authority in the Province, holding an important commission from the King. The place at which the tomb is found shows also that he was the owner of a considerable landed estate and a near neighbor of the Lord Proprietary.

The story, however, requires much more circumstance to give it the interest which we hope yet to find in it.

CHAPTER IV.
DRYASDUST

I have now to change my scene, and to pursue in another quarter more important investigations. I break off with some regret from my visit to St. Mary's, because it had many attractions of its own, which would form a pleasant theme for description. Some of the results of that visit I embodied, several years ago, in a fiction which I fear the world will hardly credit me in saying has as much history in it as invention.[1] But my journey had no further connection with the particular subject before us, after the discovery of the tomb. I therefore take my leave, at this juncture, of good Father Carberry and St. Inigoes, and also of my companion in this adventure,– pausing but a moment to say, that the Superior of St. Inigoes has, some time since, gone to his account, and that I am not willing to part with him in my

[1] *Rob of the Bowl.*

narrative without a grateful recognition of the esteem I have for his memory, in which I share with all who were acquainted with him,–an esteem won by the simple, unostentatious merit of his character, his liberal religious sentiment, and his frank and cordial hospitality, which had the best flavor of the good old housekeeping of St. Mary's,–a commendation which every one conversant with that section of Maryland will understand to imply what the Irish schoolmaster, in one of Carleton's tales, calls "the hoighth of good living."

After my return from this excursion, I resolved to make a search amongst the records at Annapolis, to ascertain whether any memorials existed which might furnish further information in regard to the events to which I had now got a clue. And here comes in a morsel of official history which will excuse a short digression.

The Legislature had, about this time, directed the Executive to cause a search through the government buildings, with a view to the discovery of old state papers and manuscripts, which, having been consigned, time out of mind, to neglect and oblivion, were known only as heaps of promiscuous lumber, strewed over the floors of damp cellars and unfrequented garrets. The careless and unappreciative spirit of the proper guardians of our archives in past years had suffered many precious folios and separate papers to be disposed of as mere rubbish; and the not less culpable and incurious indolence of their successors, in our own times, had treated them with equal indifference. The attention of the

Legislature was awakened to the importance of this investigation by Mr. David Ridgely, the State Librarian, and he was appointed by the Executive to undertake the labor. Never did beagle pursue the chase with more steady foot than did this eager and laudable champion of the ancient fame of the State his chosen duty. He rummaged old cuddies, closets, vaults, and cocklofts, and pried into every recess of the Chancery, the Land Office, the Committee-Rooms, and the Council- Chamber, searching up-stairs and down-stairs, wherever a truant paper was supposed to lurk. Groping with lantern in hand and body bent, he made his way through narrow passages, startling the rats from their fastnesses, where they had been intrenched for half a century, and breaking down the thick drapery–the Gobelin tapestry I might call it–woven by successive families of spiders from the days of the last Lord Proprietary. The very dust which was kicked up in Annapolis, as the old newspapers tell us, at the passage of the Stamp Act, was once more set in motion by the foot of this resolute and unwearied invader, and everywhere something was found to reward the toil of the search. But the most valuable discoveries were made in the old Treasury,–made, alas! too late for the full fruition of the Librarian's labor. The Treasury, one of the most venerable structures in the State, is that lowly and quaint little edifice of brick which the visitor never fails to notice within the inclosure of the State- House grounds. It was originally designed for the accommodation of the Governor and his Council, and for the sessions of the Upper House of the

Provincial Legislature; the Burgesses, at that time, holding their meetings in the old State House, which occupied the site of the present more imposing and capacious building: this latter having been erected about the year 1772.

In some dark recess of the Treasury Office Mr. Ridgely struck upon a mine of wealth, in a mouldy wooden box, which was found to contain many missing Journals of the Provincial Council, some of which bore date as far back as 1666. It was a sad disappointment to him, when his eye was greeted with the sight of these folios, to see them crumble, like the famed Dead-Sea Apples, into powder, upon every attempt, to handle them. The form of the books was preserved and the character of the writing distinctly legible, but, from the effect of moisture, the paper had lost its cohesion, and fell to pieces at every effort to turn a leaf. I was myself a witness to this tantalizing deception, and, with the Librarian, read enough to show the date and character of the perishing record.

Through this accident, the Council Journals of a most interesting period, embracing several years between 1666 and 1692, were irretrievably lost. Others sustained less damage, and were partially preserved. Some few survived in good condition.

Our Maryland historians have had frequent occasion to complain of the deficiency of material for the illustration of several epochs in the Provincial existence, owing to the loss of official records. No research has supplied the means of describing the public events of these intervals, beyond some

few inferences, which are only sufficient to show that these silent periods were marked by incidents of important interest. The most striking of these privations occurs towards the end of the seventeenth century,–precisely that period to which the crumbling folios had reference.

Конец ознакомительного фрагмента.