

THE GLEANER.

And Northumberland, Kent, Gloucester, and Restigouche Schediasma.

Volume XII.]

Nec araneorum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes.

Number 16.

Hiramichi, Tuesday Morning, December 29, 1840.

THE NEW WORLD, QUARTO EDITION.

On Saturday, the 2nd day of January, will be issued the first number of the Second Vol. of the **QUARTO NEW WORLD**. This form, being convenient for binding and preservation, has been, and is much preferred by great numbers of our readers in city and country. Each number of the Quarto Edition contains the same articles as the Folio, with the exceptions only of the advertisements and a few unimportant news-items of no permanent interest. The second volume of the Quarto is commenced with the new year for the accommodation and convenience of new subscribers, who, at that period, generally determine on the character and kind of periodicals best recommended to their attention, and best worthy of their patronage.

The **New World** was begun in the large, or folio size, in October, 1833. It immediately acquired a circulation unprecedentedly great. It was ordered to be sent to all parts of the country; it was sold in great numbers in the principal cities of the Union. The plan upon which it was conducted, was novel and striking. Its distinguishing feature was, that it republished, with unparalleled dispatch, the most attractive portions of new English literature. On its broad and ample pages were displayed, in rapid and brilliant succession, the latest productions of the most popular authors of the day. Their names formed a galaxy, which shed a fascinating lustre around the new and copious journal. Our star differed from another star in glory, but they were all stars. Not many of the minor lights were admitted into their splendid company. Dickens, Bulwer, Talfourd, Mitford, Ainsworth, Dawey, Sedgwick, Longfellow, have few companions in their line, and few are worthy of being ranked with them.

It was not to be wondered at that the **New World** became a great favourite with the intelligent and reading public. There was only one objection made to it—and that was to its size. The Folio form was the most popular, but not most convenient for those who consider the works which it contained too valuable to be thrown aside. For such readers, the **Quarto** was commenced in June last, and for such it will be continued.

For the new volume, commencing in January, we ask the subscriptions of all lovers of pure and elegant literature throughout the country. We ask them too to favor us with their names immediately, that we may not fall short of the number that will be required in this form. The reasonableness of this request will be understood when we state that orders are every day received for back numbers which cannot be supplied. Ten times the subscription price would now be cheerfully paid by those, who delayed to send early orders. The scarcity of old numbers is an admirable proof of their value; in them are contained works sold for sixpence and one shilling, which cost in the original editions one dollar and sometimes five dollars.

The **New World** will be conducted as it has been, with those improvements and additions, which time and experience have not failed to suggest. It will be complete in all the departments of a first-rate literary journal. From the extensive acquaintance enjoyed by the Editors with all the best writers and critics of the country, this will be no difficult task. It will continue to be edited by Park Benjamin and Epes Sargent.

This form of the **New World** will be rendered more elegant in its external appearance. It will be embellished with engravings and music, chosen by a distinguished professor.

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Valuable and Extensive FARM,
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This Farm might advantageously be divided into two, there being a capital Dwelling House and Offices on the one side, and a new Dwelling House on the other.
A good Tenant—and none but such, need apply—might have the Stock and Crop on the terms. Apply to Mr. James Cato, Postmaster, or to the Subscriber on the Farm.
ROBERT CAIE,
Chatham, 7th September, 1840.

THE GLEANER.

From the Yarmouth Herald.

A LECTURE

Delivered before the Pupils attending the Yarmouth Academy, Oct. 1840.
ON THE HISTORY OF ASTRONOMY.
ITS RISE, PROGRESS, AND REVOLUTIONS.

I have thus endeavored to show you that astronomical observations of a certain description began in the very earliest ages; but here there could be but one instrument, the horizon, and one theory, the actual motion of the heavenly body round the earth. Astronomical observations has always been one of the accompaniments of civilization, both in modern and ancient times, and however much we may conceive ourselves entitled to look down upon the notions of our predecessors, we must not forget that in speaking of any country which possessed an astronomical theory worth so much as laughing at in modern times, we place that country in the list of exceptions to the rule which prevailed through the greater number. If the Chaldean system appear insufficient, or the Ptolemaic complicated, these are yet real results of thought and to a certain extent, actual representations of facts. Mungo Park, in the account of his travels in Africa mentions a tribe, whose opinion it was that the inhabitants of the west fired the sun when he got down to them, and after heating him sufficiently for his next day's service, took him round by a private passage to the east. If we could collect the astronomy of the whole ancient world, there can be little doubt that the comparatively humble efforts that I have stated would appear miracles of sense and reflection among theories not much superior to Park's Africans.

We came next to Greece. The Grecians never rose to any eminence in astronomy. But they were too ingenious to conceal their knowledge under a cloak of mystery. The principal traits in the character of the ancient Greeks were simplicity and grandeur. The Greek was his own instructor, and if he learned anything from others, he did it with freedom and independence. The mildness of their climate, the luxuriance of their soil, the picturesque beauty and bewitching scenery of their country gave birth to an equal mixture of feelings of gentleness and sublimity. Composed of a variety of small separate states, united by a confederate tie, they felt a generous rivalry to surpass each other in whatever could contribute to enlarge or adorn the human understanding. Thus we find a noble simplicity pervading everything that comes from them; when they were unable to account for the motion of the heavenly bodies they confessed their ignorance. The principal reason why the Greeks did not arrive a higher eminence in astronomy was their want of mathematical sciences. The first of their astronomers was Thales the Milesian, who flourished about 580 B. C. He was the first who divided the year into 365 days. The story that he foretold an eclipse of the sun, although he may have only indicated the year of its occurrence, implies a more distinct knowledge of the solar system than he and his disciples appeared to have possessed; that is, supposing his prediction to have been founded on his observations and calculations. It is, however, probable that he may have been acquainted with the approach of an eclipse during his residence in Egypt or through the Phenicians. At any rate it is certain he foretold the year, but only the year in which the eclipse was to take place. It is worthy of note, that the school which was called the Ionian, first taught that the stars were merely material bodies, and not according to the popular notion, divine beings. Pythagoras, who flourished thirty years after Thales, was well acquainted with the motion of the heavenly bodies. He is celebrated as being the first who laid the foundation of what is called the Copernican system at an antedate of 2200 years from the age of Copernicus; having taught his disciples that the earth revolves about both on her own axis and around the sun; that the latter motion is conducted in an oblique path; and that the moon is an earth of the same kind as our own, and replete with animals whose nature he does not pretend to describe. Copernicus himself admits that he derived the first hint of the earth's motion around the sun from Nicetas a follower of Pythagoras.—This system was so extremely opposite to all the prejudices of sense and hereditary notions of mankind, that it did not make great progress, nor was it ever widely diffused in the ancient world. After Pythagoras the Athenian Meton, introduced the famous lunar cycle of 19 years, at the end of which time the new moon appears on the same day of the year as at the beginning of it, since 19 solar years constitute very nearly 235 lunations

—a discovery which was then regarded as so important that the calculation was engraved in letters of gold, when the number that mark the year of the cycle is still called golden. The philosophers of antiquity despairing of being able to overcome ignorance by reason, set themselves to adapt the one to the other, and form a reconciliation between them. The most celebrated of those who undertook to establish an hypothesis of this kind, and to defend it by a show of reason, was Ptolemy, an Egyptian Philosopher. His hypothesis was, that the earth was the immovable centre of the earth, round which all the heavenly bodies moved as crystalline orbs, then the planets in the following order, Moon, Mercury, Venus, the Sun, Mars, Jupiter, Saturn. Above those planets he placed the firmament of the fixed stars, then crystalline spheres, then the primum mobile, and last of all coelestem empirium, or heaven of heavens. All these vast orbs were imagined to move round the earth once in 24 hours, and also in certain stated or periodical times, agreeable to their annual changes and appearances. Every star was supposed to be fixed in a solid transparent sphere like crystal; and to account for their different motions he was obliged to conceive a number of circles called eccentric or epicycles, which crossed and intersected each other in various directions, and yet, strange to say, they never happened to break one another. If any new motion was discovered, a new heaven of crystal was formed to account for it, so that, as Fontenelle observes, heavens of crystal cost him nothing, and he multiplied them without end to answer every purpose. The grand mistake of all the old astronomers was in referring every motion to a circular motion, and it was because Ptolemy saw that the motion of the sun and some of the planets was irregular, that he was led to invent the theory of deferents or epicycles. Ptolemy and Hipparchus did not believe in the existence of these circles, they only stated them as hypothesis to aid in making calculations, and this first attempt of the human understanding towards the investigation of an object so very complicated, does great honor to the sagacity of its author. The astronomical edifice which Ptolemy raised subsisted nearly 14 centuries, and new that it is destroyed, his *Almagest* considered as a depository of ancient observations, is one of the most precious monuments of antiquity. The number of crystalline orbs was increased afterwards to an enormous amount. Purbach had about 120 of them. The best and most splendid description of this theory that I have ever met with is contained in the *Lusid* of Camens, translated by Mr. Mickel: the whole is, too long for quotation, but the following lines delineate the different heavenly spheres that were supposed to be enclosed one within another:—

These spheres behold: the first in wide embrace,
Surrounds the lesser orbs of various face;
The imperean this, the holiest heaven
To the pure spirits of the blest is given;
No mortal eye its splendid rays may bear,
No mortal bosom feel the raptures there.
The earth in all her summer pride arrayed
To this might seem a dark sepulchral shade.
Unmoved it stands—within its shining frame,
In motion swifter than the lightnings flame,
Swifter than sight the moving parts may spy,
Another sphere whirls round its rapid sky:
Hence motion darts its force, impulsive draws,
And on the other orbs impresses laws.

With Ptolemy the originality of the Greek school ends. Among the Romans astronomy was never much esteemed. Elegance and accomplishments seem rather to have been the chief objects of attainment in the Augustan age than deep physical and analytical science. From that period to the 16th century, one long, dark night hung over science in general. This era has usually been described by the name of the dark or middle ages; and extends from the fall of Rome before the barbarous arms of the Goths, to the fall of Constantinople before the equally barbarous arms of the Turks, in the 15th century. Thus comprising a long afflictive night of over a thousand years. However, in the midst of this gloomy period, a few bright and splendid stars shot occasionally athwart the horizon; and in one or two corners of a radiance at times poured forth like the dawn of the morning. Several of the Arabian Caliphs, as soon as the first paroxysm of their violence was exhausted, returned to that general love of literature which had immemorially been characteristic of their country. And hence when Europe was plunged in its thickest midnight, the eastern and western Caliphate, or Courts of Bagdad and Cor-

dova, evinced a lustre and liberality that were no where else to be met with and opened asylums to the learned of every country. But we must not overrate the merits of the Arabian Astronomers, since they confined themselves entirely to the system of Ptolemy, and confounded the science with the dreams of Astrology. But the tie between science and Mahomedanism was unnatural, and could not continue long. The religion of Mohammed is of itself a cloak damp to every generous purpose of the soul; and the few instances that it can boast of to the contrary, are only exceptions to the general rule, scarce and scattered oases or plots of verdure, that unexpectedly peep forth in the vast ocean of its sandy desert. All Mahomedan patronage of learning, therefore, has long since died away; and Arabia, which once shed so splendid a light on the rest of the world, is now sunk in darkness, while all the rest of the world is beaming with light around it.

‘Those vast regions,’ observes M. Lissomondi, in his history of the middle ages, ‘where Islamism rules, or has ruled, are dead to all the sciences. Those rich fields of Fez and Morocco, illustrious through five centuries by so many libraries, are now nothing more than deserts of burning sands, where tyrants dispute with tigers. All the laughing and beautiful coast of Mauritania, where commerce, arts and agriculture were raised to the highest prosperity, are at present mere retreats for pirates, who spread terror, and resign their toils for abominable indulgences, as soon as the plague returns every year to make victims of them, and to avenge offended humanity. Bagdad, formerly the seat of power, of luxury, and of learning, is in ruins. The far-famed universities of Lenfa and of Bassora are closed forever. We are no longer to seek there for the fame of their great men or for their writings. Whatever has been preserved is entirely in the hands of their enemies, in the convents of monks, or the libraries of European princes. Yet these extensive countries have never been conquered, it is no stranger that has plundered them of their riches, that has annihilated their population; that has destroyed their laws, their manners, and their national spirit. The poison has sprung from themselves, it has risen indigenously, and destroyed everything.’

We have thus rapidly travelled over a wide and dreary desert, that like the sandy waste of Africa, to which I have just referred, has seldom been found refreshed by spots of verdure, or embellished by plants that should naturally belong to the country. Of the dark ages it may correctly be said:—

No light, but only darkness visible.
Served only to discover scenes of woe,
Regions of horror, doleful shades.

It was my intention at first to have compressed into this one lecture a sketch of the History of Astronomy down to its present state, but the subject has spun out farther than I anticipated, and as I think it necessary to make you well acquainted with the different steps by which astronomers were scaling the heavens—if I may use the expression—until the Sun of Science shone forth in its meridian splendor, in the person of the immortal Newton. I shall take another opportunity of calling on you to visit with me the bold Copernicus whirling the unwieldy earth around the sun; the poor, persecuted Galileo on his knees being obliged to renounce opinions of whose truth he entertained no doubt; the Danish Tycho Brahe, in his observatory at Huenra, where he reigned monarch of all he surveyed, and chief of all the far-famed University of Cambridge, around which Newton shed a halo of glory, that will last long as the triumphs of human genius are appreciated.

United States.

PRESIDENT'S MESSAGE.

From the above named document, we take the following extracts:

Our devout gratitude is due to the Supreme Being for having graciously continued to our beloved country, through the vicissitudes of another year, the invaluable blessings of health, plenty and peace. Seldom has this favoured land been so generally exempted from the ravages of disease, or the labor of the husbandman more amply rewarded; and never before have our relations with other countries been placed on a more favorable basis than that which they so happily occupy at this critical juncture in the affairs of the world. A rigid and persevering abstinence from all interference with the domestic and political relations of other States, alike due to the genius and distinctive character of our Government and to the principles by which it is directed; a faithful observance, in the management of our foreign