



Sharp  
Ink

# W. H. DAVENPORT ADAMS



PICTURESQUE ASPECTS OF NATURAL HISTORY

# EVERYDAY OBJECTS

**W. H. Davenport Adams**

# **Everyday Objects**

**Picturesque Aspects of Natural History**

Sharp Ink Publishing  
2022  
Contact: [info@sharpinkbooks.com](mailto:info@sharpinkbooks.com)

ISBN 978-80-282-3860-5

# TABLE OF CONTENTS

PREFACE.

BOOK I. —♦— WINTER.

CHAPTER I. WHAT MAY BE SEEN IN THE HEAVENS.

CHAPTER II. WHAT MAY BE SEEN UPON THE EARTH.

BOOK II. —♦— SPRING-TIME.

CHAPTER I. WHAT MAY BE SEEN IN THE HEAVENS.

CHAPTER II. WHAT MAY BE SEEN UPON THE EARTH.

BOOK III. —♦— SUMMER.

CHAPTER I. WHAT MAY BE SEEN IN THE HEAVENS.

CHAPTER II. WHAT MAY BE SEEN ON THE EARTH.

BOOK IV. —♦— AUTUMN.

CHAPTER I. WHAT MAY BE SEEN IN THE HEAVENS.

CHAPTER II. WHAT MAY BE SEEN UPON THE EARTH.

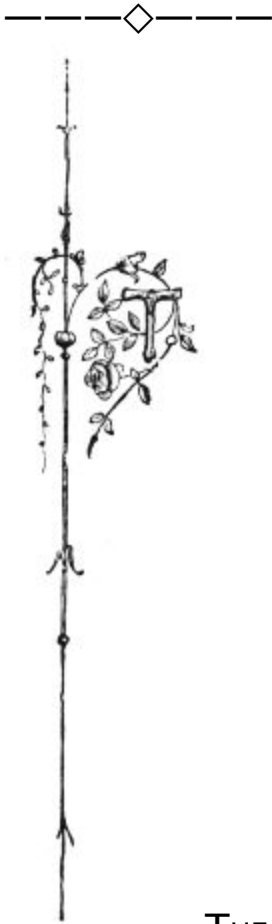
APPENDIX.

INDEX.



## **PREFACE.**

[Table of Contents](#)



THE very favourable reception accorded both by Press and Public to the "Circle of the Year," has induced me to prepare a second volume, similar in design, but dealing with different branches of the same subject. As the former

was founded on the *first* series of a popular French work, "Les Saisons," by M. Hoefer, so the present has been suggested by the *second* series; but in availing myself of it, I have omitted much, I have revised more, and at various parts my additions have been considerable. And here, as in my former effort, I have written from a popular rather than a scientific point of view. It has not been my object to sketch the outlines or lay down the foundations of any science; but to show, as best I could, how much of wonder and beauty enters into our daily life, and what inexhaustible sources of study lie at our very feet. It is, perhaps, a misfortune of our common systems of education that they too much neglect the tuition of the eye; that the young are not taught to mark the curious and interesting objects which are comprehended within their daily vision; that they know so much about ancient mythology and so little about modern science,—so much about gods and heroes, so little about stars and flowers.

I have called this volume "Everyday Objects," not because those which it describes may be seen every day, but because they mostly belong to the region of the commonplace and familiar; and I have called it "Picturesque Aspects of Natural History," because I have endeavoured, in companionship with my French *collaborateur*, to indicate the poetical side of the various sciences into which I have presumed to penetrate. If it should awaken a love of nature in any breast, or develop a spirit of inquiry, which may lead the student further and further on the path of knowledge, the labour bestowed upon these pages will not have been in vain.

The instinct of curiosity,—says M. Hoefer, in his preface to the first series of "Les Saisons,"—is the awakening of the intellectual life: it commences with the lisping of the child, accompanies the adult in every phase of his existence, and, far from becoming extinct with the last throb of the heart, revives before the unknown shadows of the grave. What, then, is there in the whole world of greater importance to follow and direct than the movements and impulses of this curiosity, of these uncertain pulsations of the soul? In this lies the secret of all education; and upon education depends the future of humanity.

Unfortunately, he continues, the methods hitherto employed have been absolutely insufficient. And the insufficiency is most notable as regards the imperfect and defective training given to the instinct of curiosity. Observe the child. Of everything which excites his attention, he never fails to ask you the *reason why*. It is thus that he enters into the connexion of "cause" and "effect." It is a sign. But instead of following up this natural indication, and developing the thought by the exercise of the reason, we proceed as if the being under our charge were incapable of reason; we overload the memory of the child with a multitude of words, whose value he cannot understand until later in life, and perhaps never. The true direction of the mind is to proceed from the thought to the word, and not from the word to the thought. It is for want of having recognised and applied this principle that our educational systems have failed so utterly.

Let us take, for example, the study of nature. No science, assuredly, ought to prove more attractive to the mind than

natural history. Yet mark how repulsive zoology, botany, and mineralogy are made at the very outset, by the dryness of their nomenclatures and the dreariness of their classifications. Undoubtedly, it is necessary to lay down a course of study in the midst of the marvels which everywhere surround us; undoubtedly names are required for the objects which attract our notice. But are not the methods we employ directly opposed to the end we set before ourselves?

I address myself to parents and teachers; and I say to them, Do you wish to inculcate a love of science, and yet put into the hands of your children or pupils books which differ as widely from the book of nature as human brotherhood—(a fiction!)—differs from universal gravitation? Instead of familiarising us at first with the animals and plants within our everyday reach, you collect, under the same irrevocable iron "form," genera and species never intended to meet in any one particular zone, and many of which are so rare that few persons will ever be fortunate enough to see them except in collections and engravings. And, curious to state, the rarest species nearly always obtain your preferences; judging, at least, from the minute descriptions which you consecrate to them. Monstrous absurdity! You seek at a distance that which lies close to your hands, as if the Everyday Objects above, beneath, and around, were unworthy of the science you profess.

But here we must pause. Upon the principles thus laid down by M. Hoefer, have been founded the two unpretending companion volumes, of which the second is now submitted to the lenient judgment of the public.

W. H. DAVENPORT ADAMS.





# BOOK I.

— — ◆ — —

## WINTER.

[Table of Contents](#)

---

Lastly, came Winter clothèd all in frieze,  
Chattering his teeth for cold that did him chill;  
Whilst on his hoary beard his breath did freeze,  
And the dull drops, that from his purpled bill  
As from a limbeck did adown distil:  
In his right hand a tippèd staff he held,  
With which his feeble steps he stayèd still;  
For he was faint with cold, and weak with eld;  
That scarce his loosèd limbs he able was to  
wield.

—SPENSER, *The Faerie Queene*, Canto vi.  
(Of Mutability).

---

You naked trees, whose shady leaves are lost,  
Wherein the birds were wont to build their  
bower,  
And now are clothed with moss and hoary frost,  
Instead of blossoms, wherewith your buds did  
flower;  
I see your tears that from your boughs do rain,  
Whose drops in dreary icicles remain.  
—SPENSER, *The Shepherd's Calendar*,  
Eclogue I.



# CHAPTER I.

## WHAT MAY BE SEEN IN THE HEAVENS.

[Table of Contents](#)

Skies flower'd with stars,  
Violet, rose, or pearl-hued, or soft blue,  
Golden, or green, the light now blended, now  
Alternate.

—P. J. BAILEY, *Festus*.



OUR observation of the celestial phenomena may most easily be made in the winter-time. Then the nights are long, and the vault of heaven is crowded with stars, and, unilluminated by the moon, exhibits all its splendours. In the other seasons of the year, and

particularly in summer, the twilight gleam encroaches, so to speak, upon a portion of the nights, which are otherwise so brief, and precludes our vision from any exact estimate of the stars. Those demitints, those soft subdued reflections of light, scarcely permit the eye to distinguish even stars of the first and second magnitude, which shine like spots of dull gold on a background of pale silver.

THE NUMBER OF THE STARS.

How many are the stars?

To such a question comes the immediate answer, They are infinite in number.

But, after a little meditation, we begin to perceive that the question, apparently so simple, is, in reality, one of very great complexity. Let us endeavour to disentangle its various threads.

We must not forget that, in every scientific analysis, it is important we should, in the first place, separate two intimately united elements,—the individual who observes, and the product of the observation. The former, the "sensorial factor," is subject to every condition of space and time; the second, the "intellectual factor," tends, by its generalisations, to free itself from those very conditions which are the inseparable co-efficients of matter and movement. The individual passes; save from an outer standpoint, we know not whence he comes, nor whither he goes. The product of the observation remains; transmissible from generation to generation, it will gradually expand and increase, if it be founded upon truth; but, on the contrary, its splendour will wane, and will eventually disappear, if it be founded upon error. Eternal is this spectacle of actors

and puppets succeeding one another uninterruptedly upon the same stage! As one falls, another steps forward into his place, and so the great army marches forward with unbroken ranks.

He who, "in cities pent," sees the sky only through a garret window, or in the narrow intervals between house and house, can form no accurate idea of the magnificence of the firmament. The peasant, the shepherd, or the labourer, spent with his daily work, prefers sleep to astronomical vigils; and even amongst those more favoured sons of fortune, who enjoy sufficient leisure, but few are found who feel a genuine pleasure in the study of the stars. Though they are the poetry of heaven, their music is inaudible to the majority of souls. We content ourselves with an occasional careless glance at their serene loveliness, and then turn again to the pleasures or avocations of commonplace life.

But, come; let us arouse ourselves! Let us quit the city for awhile; let us throw off all thought of its too-engrossing pursuits; let us find time to count the stars. Gentle readers, I ask you to follow me.

Ah, me! how small is the train of followers! How great my delusion in supposing that a complete phalanx of students of the celestial wonders would reply to my invitation!

We have now arrived in the open country; and here, on the summit of this gentle ascent, crowned with a clump of leafless trees, we pause. The sky glitters with a cold, keen light, which is reflected back by the snowy plains. While the eye ranges delightedly over the starry vault, the ear is struck by the distant sound of bells, which, at the midnight

hour, ring in the infant year—ring in so many hopes and expected joys, and unexpected sorrows—ring out so many passing pleasures and rudely dissipated visions.



FIG. 1.

As the chime glides softly over the meadows, and along the resounding vales, and through the leafless woods, repeated by echo after echo, until its music dies away in the distance, like our recollections of the dreams of youth, we murmur to ourselves that solemn song of the poet, which so aptly blends the regrets of the past with the anticipations of the future; we exclaim—

"Ring out, wild bells, to the wild sky,

The flying cloud, the frosty light:  
The year is dying in the night;  
Ring out, wild bells, and let him die.

"Ring out false pride in place and blood,  
The civic slander and the spite;  
Ring in the love of truth and right,  
Ring in the common love of good.

"Ring out old shapes of foul disease;  
Ring out the harrowing lust of gold;  
Ring out the thousand wars of old,  
Ring in the thousand years of peace.

"Ring in the valiant man and free,  
The larger heart, the kindlier hand;  
Ring out the darkness of the land,  
Ring in the Christ that is to be."[\[1\]](#)

The spectacle is majestic and impressive. Let us seek, in the first place, to ascertain our position in reference to the four points of the compass—the four cardinal points. But how is this to be done? By day it is easy enough. I have only to turn myself towards the sun when it has reached the highest point of its diurnal course, and there, in front of me, lies the south, in my rear the north, the east on my left, and on my right the west.

But is it possible to ascertain one's position during the absence of the "orb of day?"

Both possible and easy, provided the sky be clear and cloudless.



But this condition is as necessary by day as by night. How can we determine in which direction lies the south, if the sun be hidden from our gaze by an uniformly opaque atmosphere, and if objects, lit up by a diffuse light, project no shadow at any time of the day?

Endeavour to group together the stars which more particularly strike your gaze; and be careful, in these groupings, to define every fantastic figure which is suggested by your vivid imagination. Undoubtedly, our earliest ancestors, the "world's gray forefathers," proceeded in this manner, in their anxiety to lay hold of some definite guiding-marks in yonder ocean of sparkling atoms. And to study a science by its history is to follow up its successive development.

#### THE GREAT AND THE LITTLE BEAR.

Observe yonder very remarkable group of seven stars; nearly all are of the same splendour, and they are so arranged as to figure an antique chariot, provided with a somewhat curved axle pole.

Observe it carefully. And not far from this group you will detect another, by no means so conspicuous, but exactly resembling it in form. This second chariot is turned in an inverse direction, and the stars composing it, with three exceptions, are much less brilliant.

Here, then, are two groups of stars, clearly distinguished by their configuration—two *constellations*, for such is the scientific name given to all the stellar groups.



FIG. 2.—The Great Bear and Little Bear.

It has been the fortune of the first of these two groups to strike the eye of the most indifferent observer from the remotest antiquity; and its likeness to a *quadriga* early procured it the name of a *car* or *chariot*. For those Christians who pleased themselves in studding the sky with Biblical personages, it is *David's Chariot*. This species of apotheosis was borrowed from the Pagans. They placed in the skies their divinities, their demigods, their heroes, and the principal facts and stories of their mythology. For the Greeks and Romans the "Chariot of David" was the female of the Bear, an *ursa*, or ἀρκτὸς. Whence came this transfiguration? Listen to the fanciful old myth.

Callisto was the most beautiful of the daughters of the King Lycaon. Jupiter, who may appropriately be styled the "Don Juan" or "Lovelace" of the heathen Olympus, fell in

love with her; and she bore him a son, named Arcas, who gave his name to Arcadia, that land of song and fable, groves and streams, where Lycaon exercised his sovereign sway. Juno, the queen of heaven, and wife of the so-called king of gods and men, transported by her jealous rage, changed Callisto into a she-bear; who, one day, would have been unwittingly slain by Arcas, if Jupiter, opportunely appearing on the scene, had not metamorphosed the hunter into another animal, *Ursa Minor*, or the Little Bear. According to this myth, the Little Bear will be but a transformation of the former, who was the Great Bear, or, before all and above all, *the* Bear.

It is somewhat surprising, according to certain writers, that Homer should refer to only one of these constellations:

—

Ἄρκτοιθ' ἦν καὶ ἄμαξαν ἐπὶ κλησὶν καλέουσιν.

[2]

(The Bear, which men the Chariot also name).

But the learned commentators who have censured the poet for making no distinction between *Ursa Major* and *Ursa Minor*, probably never looked at the starry vault with an attentive eye; otherwise, like all the world, they might have convinced themselves that the seven stars, *septem triones* (whence the word "septentrion"), forming the beautiful constellation, which, undoubtedly, long before Homer's time, was known as "The Bear" or "The Celestial Chariot," were all that could be seen. With a single exception, these stars are of the second magnitude—that is to say, they, so far as regards their brilliancy, rank next to the most brilliant

stars of the firmament. The least conspicuous star in the group—one of the third magnitude—occupies the base of the pole of the Celestial Chariot, or of the Bear's tail; it is the fourth star counting from the extremity of the tail. On celestial charts, it is particularised by the fourth letter of the Greek alphabet,  $\delta$  (delta).

Observe, in passing, that the first of these charts, wherein the stars of a constellation were indicated by Greek characters, appeared in 1603, at Augsburg, under the title of "Uranometria." Its author, Jean Bayer, an amateur astronomer, who died in 1660, conceived the idea of designating by the first letters of the Greek alphabet— $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ , and so on—the most noticeable stars. The animals bearing the names of the constellations are drawn in this map with very considerable care; but it requires, let us hasten to add, much imagination and good-will to recognise, in the form of a stellar group, the animal shown in the drawing.

Thus far Ursa Major. The four stars of the quadriga, or chariot, have been employed to form the dorso-lumbar region of the animal; the three others define its tail; and, finally, twenty-four little stars, some of which are hardly visible to the naked eye, compose the head and paws of the celestial "plantigrade."

As for Ursa Minor, it is impossible to distinguish it immediately when you are unaccustomed to surveying or examining the celestial vault. To detect its position, you require to be forewarned of it; to know, in the first place, that there exists in the vicinity of the Bear an exactly similar stellar group. The point of the tail— $\alpha$  in Ursa Minor—alone

possesses a splendour comparable to that of the principal stars in Ursa Major. But how construct a figure with one star? The four other stars, two of which mark the anterior part of the animal's body, and two others the tail, properly so called, are only of the third magnitude: they are marked  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ . Finally, the stars which define the posterior portion, marked  $\zeta$  and  $\eta$  on Bayer's chart, are only of the fourth magnitude--in other words, are scarcely visible. The eye, to detect them, must be wholly free from any gleam of light.

Many generations passed before they succeeded in discovering what a single individual solved during his brief career. All Homer's contemporaries, and, prior to these, tens of millions of mortals, had contemplated the sky, and yet none of them had detected the difference between Ursa Major and Ursa Minor. The distinction, therefore, is of a comparatively recent date; probably does not date back earlier than the sixth century before the Christian era.

Let us recall ourselves, now, to the question propounded. The first impression produced by the aspect of the sky during a beautiful winter night is, we repeat, that the number of the stars is infinite. This wholly spontaneous thought, which, to some extent, imposes itself on the mind long before the reason attempts any calculation, is, strange to say, both false and true.

But how can a thought be both false and true? Nothing is easier than to explain the seeming contradiction. We shall return to it hereafter, after we have indulged in some indispensable digressions.

ORION.

One of the finest and loftiest flights of Longfellow's imagination is to be found in his poem on the occultation of Orion. He has seldom, if ever, sounded a more vigorous strain. After alluding to that music of the spheres which Pythagoras dreamed of, and which Shakespeare has described in a passage of great beauty, he continues:—

"Beneath the sky's triumphal arch  
This music sounded like a march,  
And with its chorus seemed to be  
Preluding some great tragedy.  
Sirius was rising in the east;  
And, slow ascending one by one,  
The kindling constellations shone.  
Begirt with many a blazing star,  
Stood the great giant Algebar,  
Orion, hunter of the beast!  
His sword hung gleaming by his side;  
And, on his arm, the lion's hide  
Scattered across the midnight air  
The golden radiance of its hair."

The most ancient observer who wished, with his own eyes, to assure himself whether the number of the stars was infinite, must have quickly perceived that, in spite of an apparent impossibility, it is no difficult task to complete their enumeration. To execute this operation conveniently, however, we must invent a process; and of all processes, the simplest, and that which first occurs to the mind, is to group the stars by configurations which, to a certain degree, are *mnemo-technical*. Such, in our belief, is the true origin—a point so often and laboriously discussed—of the *asterisms* or *constellations*. Their fanciful, mythological, or poetical embellishments, are of later date.

The census or enumeration of the stars, which we suppose to have commenced during our winter nights, must at first have been limited to the most characteristic groups,

composed of the most brilliant points. In this scientific labour the first rank would necessarily be occupied by Arctos (or Ursa Major) and Orion. Why? Because these two constellations attract and rivet everybody's gaze.

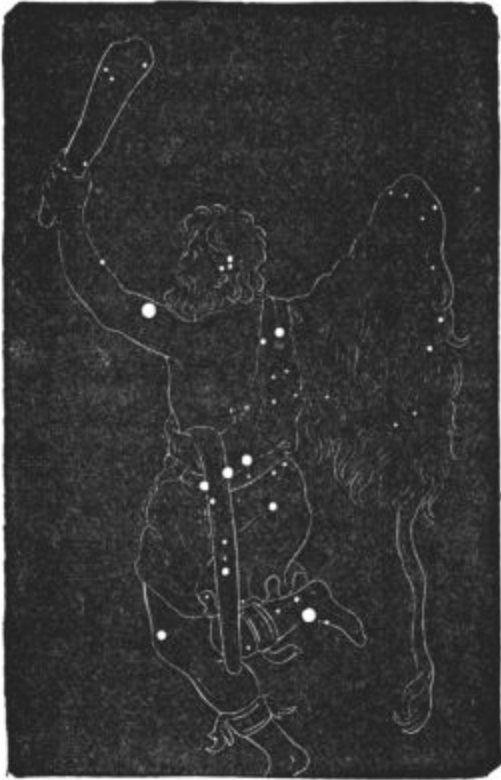


FIG. 3.—Orion.

Orion is situated on the side opposite to the Great Bear. It is the most beautiful constellation in our western sky. You may easily recognise it by three stars, very close together, which are inscribed, as it were, in the centre of a great trapezium of four stars, two of which are of the first magnitude. Beneath the three first stars, called the Three Kings, or Orion's Belt, is visible a small stellar group of the fourth and fifth magnitude, near which, with a good average glass, may be distinguished the largest and most remarkable of the nebulæ.



Here we find the mythologists—those theologians of the Greco-Roman polytheism—at disagreement. According to an ancient legend, immortalised by Homer—

"Aurora sought Orion's love,...  
Till, in Ortygia, Dian's wingèd dart  
Had pierced the hapless hunter to the heart."

[3]

The giant, in the lower world, is still animated by a burning passion for the chase—

"There huge Orion, of portentous size,  
Swift through the gloom a giant-hunter flies;  
A ponderous mace of brass, with direful sway,  
Aloft he whirls, to crush the savage prey;  
Stern beasts in trains that by his truncheon fell,  
Now, grisly forms, shoot o'er the lawns of hell."

[4]

According to later traditions, the giant Orion, son of Tura and Neptune, was endowed by his father with the faculty of walking upon the sea as well as upon earth. He abandoned himself to the fierce joys of the chase in the wooded isle of Crete, to whose shades he had accompanied Diana and Latona. Swollen with pride, he defied to combat all the monsters of the universe, and was slain by a scorpion which the earth had engendered under his feet. But, through the intercession of Diana, a place was given to him in the firmament opposite Scorpio.

DIURNAL MOVEMENT.

Let us put aside these dreams of the world's youth, and return to the reality.

Nature, transformed by the ancients into a multiple divinity, never fails to overwhelm with surprise the observer who interrogates her with simplicity and without any preconcerted system. And it was thus that he who first undertook to enumerate the stars, by the help of the constellations, made at once the greatest and most unexpected discovery. What, in fact, was not his astonishment on seeing the gradual displacement of objects which, at the first glance, appeared immovable!

To this very natural astonishment soon succeeded, we doubt not, a desire to analyse the phenomenon. The most beautiful constellations of the firmament, Ursa and Orion, will have their points of repery on the star-gemmed sphere. An attentive study, eagerly pursued through a certain lapse of time, would teach him that Orion rises and sets like the sun and the moon, while the Bear, remaining perpetually above the horizon, neither rises nor sets. Stimulated by curiosity, the observer would afterwards assure himself that the whole of the celestial vault revolved upon an axis, while the stars divided into groups; remain fixed, fixed in this sense, that they constantly maintain among themselves the same relations of distance. The idea of a solid sphere, to which the stars were attached like golden nails, then came quite naturally to the human mind. Such, undoubtedly, was the origin of the discovery of *diurnal movement*; of that general movement which carries all the stars from west to east, to bring them back to the same points in the course of one complete day.

To hear our professors of astronomy invariably repeating, that "the spectator of the starry vault may see, every moment, new stars rising above the horizon,—may see them mount the sky,—halt in their upward march when they have attained a certain elevation,—afterwards re-descend, and pass below the horizon;"—to hear, we say, these words incessantly reproduced, one would think that a cursory glance at the sky would suffice to reveal the general movement, and that what is within the ken of the first comer, should not be called a discovery.

But we see in this another of those illusions which blind contemporaries as to the time-long efforts of their predecessors to discover the very results which long ago became our common patrimony. Unquestionably, if you have eyes, you cannot fail to see the apparent movement of the earth and moon; but from thence to the relation of the whole celestial sphere is a wide interval. How many men are there who possess, on the one hand, sufficient patience to fix their gaze only for a couple of hours on the same point of the starry firmament; and, on the other, sufficient intelligence to estimate the relation of this point to a fixed point of the horizon, and to measure, by the thought, the interval separating these two points? Let each one ask himself.

#### DETERMINATION OF THE CARDINAL POINTS.

However it may be, the discovery of the rotation of the celestial system must have been rapidly brought to perfection as it was transmitted from one generation to another. It must soon have been recognised that this sphere is inclined in such a manner that one of its *poles*—the *poles*

*of the world*, which, in reality, are simply the prolonged extremities of the axis of terrestrial rotation—is always above the horizon, while the other remains below. And this phenomenon would lead to the geometrical conception of an axis of rotation of the celestial sphere. Thus we may explain, with perfect ease, why the Bear and the neighbouring constellations should describe perfect circles, and the other and more distant constellations only arcs of circles, of a greater or lesser diameter; finally, without even looking at the sky, we can understand that some stars there are which show themselves on the horizon, only to disappear immediately, and others which remain completely invisible to the inhabitants of our climates. By a singularly fortunate coincidence, the pole, that geometrical point around which revolve those circumpolar constellations that are continually above our horizon, is occupied by a star "well known to fame," and hence, on the faith of its renown, supposed by many people to be a star of peculiar brilliancy. [5] It is named the *Polar Star* ( $\alpha$  in Ursa Minor), and is between the second and third magnitude.

Now if, with arms extended, we so place ourselves that our back shall be turned to Polaris, we shall have opposite to us the point of the arc occupied by the sun at *noon*; on our left the east, and on our right the west. It is thus we may easily learn our position in the absence of the orb of day.

The discovery of this simple mode of guidance was, nevertheless, an epoch in history. From thence the mariner grew bold enough to quit the coast, which he had hitherto hugged with timorous prudence, and venture out into the open sea. Thenceforth, the darkness disappeared; new

countries were revealed to one another, and nations, which from time immemorial had remained apart, were brought into frequent communication.

It was with eyes fixed upon the Bear, which alone does not bathe itself in the waters of Ocean, that Ulysses set out from Calypso's enchanted island.

According to Homer, who reflects in his immortal work the condition of scientific knowledge among his contemporaries, the ocean was a great broad river, surrounding the earth with circumfluent volume, and in its waves the stars were bathed or extinguished in the evening, to be rekindled in the morning on the opposite side.

By saying that the Bear alone does not bathe in the waters of Ocean[6]—

Οἷη δ' ἄμμορός ἐστι λοετρῶν Ὀκεανοῖο—

the poet plainly shows that Ursa Minor, and the other circumpolar constellations, were unknown in his time.

If the knowledge of these constellations was from the beginning so useful and so necessary to navigation, the constellation nearest to the pole could not, at first, have served as a guide to any but a people essentially maritime. And here we find the Phœnicians, or Tyrians, in the foremost rank.

After reminding us that Ursa Major was also called Helice, or "the spiral," as in the famous passage in the "Argonauta" of Apollonius Rhodius,—

"Night in the east poured darkness; on the sea  
The wakeful sailor to Orion's star

And Helicè turned heedful,"—

and Ursa Minor, Cynosura,—that is, the dog's tail,—  
Manilius,[\[7\]](#) a Latin poet, who wrote at the beginning of the  
Christian era, goes on to say:—

"At one of the extremities of the world's axis are two  
constellations, well known to the hapless mariner: they are  
his guides when the bait of gain impels him across the  
ocean. Helice is the larger, and describes the larger circle: it  
is recognised by its seven stars, which rival one another in  
splendour; and by this it is that the Greeks steer their barks.  
The smaller, Cynosura, describes a lesser circle: it is inferior  
both in size and lustre; but, according to the witness of the  
Tyrians, is of greater importance. For the Phœnicians no  
safer guide exists when they seek to approach a coast  
invisible from the high seas."

The testimony of Manilius is confirmed by that of Aratus  
and Strabo. The pseudo-Eratosthenes, in his book on the  
constellations, refers to Ursa Minor under the name of  
Φοινίκη, the "Phœnician." It appears, then, to be established  
that the Phœnicians were the first to group a constellation  
of the same general outline as Helice, the Little Bear, or  
Ursa Minor. But that, as we have already explained, the two  
constellations do not lie in the same direction, every one  
may see:

"Nec paribus positæ sunt frontibus; utraque  
caudam  
Vergit in alterius rostrum, sequiturque  
sequentem."[\[8\]](#)