

## THE NATURALIST.

BOTANY.—I.

Botany derives its name from the Greek term for a vegetable, and comprehends all that relates to plants. Sometimes, indeed, it is restricted to a mere description of vegetable organs, and arrangements of systems; but, in this light, it appears a mere barren study of names; whereas the true Botanist investigates all the relations of plants.

Plants are not to be regarded as insulated objects: they are connected with surrounding bodies, and should be viewed in relation to the earth, in which they grow; to the water, which they imbibe; to the air, which they respire; and to the sun, by which they are adorned and animated. By their number and variety, they stimulate curiosity, as well as excite admiration. It is true, that Zoology rivals Botany in variety; but the contemplation of pain and death which it brings with it, frequently excites sad emotions. Every newly-discovered plant brings an accession of useful knowledge; and Bacon says of a garden, that it is the purest of earthly enjoyments. The proper system of horticultural planting is founded on a knowledge of the relations and antipathies of plants to each other. Different sorts of the potato, and different variety of fruit-trees, are constantly disappearing; and to perpetuate that cheap vegetable, and to replace those delicious fruits, is the work of the scientific botanist. Similar remarks apply to the Scotch fir and the English oak. Professor Lindley informs us, that, from neglect and ignorance, one of the most valuable kinds of the latter has been allowed almost to disappear. Indeed, Botany and Agriculture (and we may also include Chemistry,) may be regarded as parts of the same whole; for they mutually elucidate and assist each other.

The relations of plants to animals are very interesting. Thus, the mulberry-tree appears to be formed for the silk-worm; the cactus for cochineal, (which most of our readers are aware is an insect; the acacia, (one species of which yields gum-arabic,) for the giraffe, or camel-leopard; and mosses for the rein-deer. Lastly, we must consider the relation of plants to man. Nations which cultivate grain are the first to become civilized; for the harvest brings the people into contact and communion with each other. Many nations have chosen a flower as a national emblem: we need not mention the rose, shamrock, and thistle, as the floral emblems of the United Kingdom. The unequal distribution of plants furnishes the chief inducement to engage in commerce: witness the sugar-cane, the tea-plant, the cotton-plant, etc. Flowers have supplied ornaments to the arts, and figures to poetry. In the Bible, more than three hundred plants are mentioned; and many passages cannot be well understood without some knowledge of Botany. This furnishes one great source of interest to the "Pictorial Bible;" in the notes of which, the lights of modern science, and of Botany in particular, are made to shine on every obscure passage. Much curious information, on the same interesting subject, will also be found in Althan's "Scriptural Natural History." The general reader would probably not suspect that so many plants were mentioned in the Bible. This is only one instance of the extent of the subject—an extent which renders classification necessary; and this classification has likewise the good effect of cultivating the powers of observation and discrimination.

We shall endeavour then, in the course of a few short and concise papers, to make our readers acquainted with the general outline of this fascinating science. While we shall endeavour to avoid being so superficial as to be unsatisfactory, neither the space at our command, nor the nature of the work, will allow us to be minute. We hope to excite a taste for the study, in some cases in which it does not exist, and in others in which it does. After leading it forward to a certain extent, we should be satisfied to consign it to a study of the great book of Nature, assisted by some manual specifically devoted to the subject. We beg leave at the outset, once for all, to acknowledge our obligations, in the composition of the following essays, to the admirable lectures of Dr. Litton, in the Royal Society of Dublin.

Our readers are aware, that all the objects in nature are divided into *organic* and *inorganic*. Uniformity of substance is characteristic of inorganic bodies; and they are not capable of life. Organic bodies, on the other hand, are an assemblage of organs, composed of very different substances.—Herein they resemble a machine, but all their parts are themselves organized; while, in a machine, the mechanism soon ceases, and we arrive at uniformity of substance. Thus, all the parts of a spring are similar in composition.

Organized bodies are divided into *animal* and *vegetable*; thus forming, with inorganic bodies, what are called "the three Kingdoms of Nature;"—1. Animal; 2. Vegetable; 3. Mineral. From the infinite variety and complexity of organic bodies, and from the imperfection of human faculties, it is sometimes difficult to distinguish the members of the animal from those of the vegetable kingdom. One rule which has been proposed for distinguishing them, is, the want of symmetry in plants: for, while animals may generally be divided into symmetrical halves, by a line drawn down the middle, (called by anatomists the *median line*,) plants are not capable of this symmetrical division. Indeed, if a tree be cut into a regular shape, it loses its charm to the eye of taste.

Plants, likewise, have many organs imperfectly developed, such as abortive buds and branches; which add to their want of symmetry. Flowers and leaves, however, are generally symmetrical; but sometimes the *midrib* of the leaf (as it is called) is not in the middle. This is seen in the common lime-tree. On the other hand, many of the lower tribes of animals are not symmetrical. Those animals, for instance, which do not possess the power of locomotion, (that is, who cannot move as they please from place to place,) are not symmetrical; such as the oyster and many other shell-fish.

A second rule for distinguishing the two kingdoms is, the abrupt manner in which the branches of animals are given off, while the limbs of animals are rounded. But, though the distinction is, in general, sufficiently wide, some of the inferior animals, approach so near in appearance to vegetables as not to be distinguished by external form. This is the case with the well-shaped polypus, the tubulars, and the coralines. Indeed, these last mentioned were once thought to be vegetables. Perhaps the latter may be best distinguished from animals, by their want of voluntary motion.—N. R.

## AUTUMNAL TREES.

BY T. J. OUSELEY.

BEAUTIFUL trees!  
Clothed in your Autumn's dying robes—ye look  
More lovely far  
Than waning star;  
Or aught that's marked for death in Nature's book:  
Beautiful trees!

Those rainbow hues,  
Bathed in the shade and sunlight of the day,  
Bid thoughts arise  
Of Paradise,  
Th' eternal life. Ah! why should Time decay  
Those rainbow hues,

What is like ye,  
When ye're most lovely—perishing unseen?  
In emerald-gold,  
Your leaves unfold,  
And yet ye wither 'mid your glory's gleam:—  
What is like ye?

Th' endearing form  
Of maiden innocence in youthful eye;  
Th' unearthly bright  
Of her eyes light  
Flashing in beauty: still doth death inveave  
Th' endearing form.

The subdued smile;  
The rose-blush baking on her snowy cheek;  
The calm-drawn breath  
Speaks not of death;  
No writhing pain—no struggle—all is meek:—  
The subdued smile.

Yes, there is Death,  
Lurking beneath th' enchanting form of health;  
E'en as the leaf,  
Her life is brief;  
The Autumn Death his victim takes by stealth:—  
Yes, there is Death.

Beautiful trees!  
Clothed in your Autumn's dying robes—ye look  
More lovely far  
Than waning star!  
Or aught that's mark'd for death in Nature's book:  
Beautiful trees!

Metropolitan

## A PRISONER.

In Calamy's Memoirs, published a few years ago, there is an account of a man named Story, who was condemned for being in Monmouth's rebellion, but was reprieved by the interest of a friend with Judge Jeffries, and subsequently removed to Newgate. He was soon afterwards ordered to be brought before the Privy Council, in the same plight in which he then was, which was truly miserable. The keeper advised him, in case the king was present, that the wisest way for him would be to answer the questions put to him in a plain and direct manner, without concealing any thing—advice which he strictly followed.

When he was brought into the Council Chamber, he made so sad and sorrowful a figure, that all present were surprised and frightened, and he had so strong a smell by being so long confined, that it was very offensive.

When the king first cast his eyes upon him, he cried out, "Is that a man, or what else is it?"

Chancellor Jeffries told his Majesty that that was the Story of whom he had given his Majesty so distinct an account.

"Oh, Story!" says the king; "I remember him. That is a rare fellow, indeed!" Then turning towards him, he talked to him very freely and familiarly. "Pray, Mr. Story," says he, "you were in Monmouth's army in the west, were you not?"

He, according to the advice given him, made answer presently, "Yes, an't please your Majesty."

"And you," said he, "was a commissary there, were you not?"

And he again replied, "Yes, an't please your Majesty."

"And you," said he, "made a speech before great crowds of people, did you not?"

He again very readily answered, "Yes, an't please your Majesty."

"Pray," says the king to him, "if you haven't forgot what you said, let us have some taste of your fine florid speech; let us have a specimen of some of the flowers of your rhetoric, and a few of the main things on which you insisted."

Whereupon Mr. Story told us that he readily made answer, "I told them, an't please your Majesty, that it was you that fir'd the city of London."

"A rare rogue, upon my word!" said the king. "And pray what else did you tell them?"

"I told them," said he, "an't please your Majesty, that you poisoned your brother."

"Impudence in the utmost height of it!" said the king. "Pray let us have something further, if your memory serves you?"

"I further told them," said Mr. Story, "that your Majesty appeared to be fully determined to make the nation both papists and slaves."

By this time the king seemed to have heard enough of the prisoner's speech; and, therefore, crying out, "A rogue with a witness!" and cutting off short, he said, "To all this I doubt not but a thousand other villainous things were added; but what would you say, Story, if, after all this, I should grant you your life?"

To which he, without any demur, made answer, "that he should pray heartily for his Majesty as long as he lived."

"Why, then," says the king, "I freely pardon all that is past, and hope you will not, for the future, represent your king as inexorable."

A TURKISH CUSTOM.—The sun was quivering above the horizon, when I strolled forth from Jaffa to enjoy the coming breeze, amid the beautiful gardens that environ that agreeable town. Riding along the previous day, my attention had been attracted by a marble gate, the fragment of some old temple, that now served as the entrance into one of these enclosures, their secure boundary otherwise formed by a picturesque and impenetrable hedge of Indian fig. It is not a hundred yards from the town. Behind it stretches the plain of Ramle—the ancient Arimatea—broad and fertile, and, at this moment, green; for it was just after the latter rains, when Syria is most charming. The caravan-track winding through it, led to Jerusalem. The air was exquisitely soft and warm, and sweet with the perfume of the orange-blossoms. I passed through the marble portal, adorned with some florid, yet skilful sculptures, and found myself in a verdant wilderness of fruit-trees, rising in rich confusion from the turf, through which not a single path seemed to wander. There were vast groups of orange and lemon-trees, varied occasionally with the huge offspring of the citron-tree, and the glowing produce of the pomegranate; while, ever and anon, the tall banana raised its head aloft, with its green or golden clusters, and sometimes the graceful and languid crest of the date-bearing palm.

While I was in doubt as to the direction I should bend my steps, my ear was caught by the wild notes of Turkish music; and following the sounds, I emerged upon a plot of turf, clear from trees, in the middle of which was a fountain; and by its margin, seated on a delicate Persian carpet, a venerable Turk. Some slaves were near him, one of whom, at a little distance, was playing on a rude lyre. In his left hand was a volume of Arabian poetry, and he held in his right the serpentine tube of his Nargilly, or Syrian pipe. When he beheld me, he saluted me with all the dignity of the Orient, pressing his hand to his heart, but not rising. I apologized for my intrusion; but he welcomed me with serene cordiality, and invited me to share his carpet and touch his pipe. Some time elapsed in answering those questions respecting European horses and European arms, wherein the easterner's delight. At length the solemn and sonorous voice of the muezzin, from the minarets of Jaffa, came floating on the air. The sun had set; and, immediately, my host and his companions performed their ablutions in the fountain; and, kneeling toward Mecca, repeated their accustomed prayers. Then rising, the Turkish aga, for such was his rank, invited me to enjoy the evening breeze and accompany him in a walk round his garden.

As we proceeded, my companion plucked an orange, and, taking a knife from his girdle and cutting the fruit in half, offered me one moiety and threw the other away. More than once he repeated this ceremony, which somewhat excited my surprise. At length he inquired my opinion of his fruit. I enlarged, and with sincerity, on its admirable quality, the racy sweetness of its flavour, which I esteemed unequalled; but I could not refrain from expressing my surprise, that of fruit so exquisite, he should so studiously waste so considerable a portion.

"Effendi," said the Turk, with a grave, though gracious smile, "to friends we give only the sunny side."—By the Author of *Vivian Grey*.