

The green part of leaves consists of cells so arranged as to suit the climate or locality where they grow indigenous. In some plants the cells are very loosely arranged so as to leave a great number of air passages for a free egress of moisture; in others the cells are very compact and their position changed in order to hold all the moisture possible.

See how clearly design is shown in the different varieties of cactus, growing as they do in countries which have long hot seasons during which little rain falls, when their stalks and foliage above and their roots beneath, being early cut off by drought, the plants rest securely in their compact bulbs, filled with nourishment, and retaining their moisture until the rainy season comes, when they put forth leaves and buds with great rapidity, making what was an arid waste of sand green with foliage and gay with blossoms in almost a day. The leaves of the Oleander furnish another instance of peculiar construction. While most leaves of plants have only two layers of cells upon the upper surface those of the Oleander have four, of hard, thick-walled cells, arranged on end and closely packed together. All who have grown this plant know how a thrifty plant taken from the garden in the fall and placed in the cellar, soon from lack of moisture the leaves become dry, often curling up, and the plant looks dead. But when planted out in the spring time the leaves soon become bright and green flowering much more profusely than one that has been growing all winter.

4th. Carnivorous plants.

How strange to think that plants eat insects and how curious the contrivance provided them for catching their prey. The whole plant of what is called Catch-fly Pink is covered with a gummy substance, and when flies or other insects alight on it, they are stuck fast. In summer time you can see one of these flowers literally covered with gnats, flies and mosquitos. Another more striking is that of *Drosera rotundifolia* or Sundew. This curious little plant, instead of leaves closing upon its victims, has long, reddish hairs tipped with small drops of a clammy fluid, appearing like dew glistening in the sunshine. An unsuspecting insect, seeking to allay its thirst or obtain food, sees these glistening drops, eagerly alights upon the leaf, when the long hairs suddenly fly back upon him. Did we ever realize that flowers were cruel and deceptive? Perhaps the most wonderful of this kind of plants is the *Dionea* or Venus' Fly-Trap, common in some of the Southern States. On the summit of each leaf is an arrangement which acts like a steel trap. The moment a fly alights upon its surface and brushes against any one of the several long bristles that grow there. Then the trap suddenly closes, often catching the intruder. The more it struggles to get free the tighter it is pressed, and after all motion has ceased within the trap slowly opens; ready for another victim.

I might further point out the means for scattering the seed, the adaptability of leaves for special purposes. Can we not see in all this the work of a designer? Why does the majestic oak bear fruit only as large as the end of your thumb, while the squash vine bears fruit as large as a wash tub? Why does the juice or sap of some plants yield such delicious sugars, and others the rankest poison? Because it is natural, you say; but, frankly, how came nature to assume such contradictions? If one yields poison, why not all?

Well does Mr. Ruskin say, "Science gives lectures now-a-days on botany to prove that there is no such thing as a flower, on humanity to show that there is no such thing as a man, on theology to show that there is no such thing as a God but only a series of forces." The conclusion deduced from the above citations are completely summed up in an extract taken from *Little's Living Age*. "It is impossible to conceive too grandly of nature, or of the unbroken harmony and continuity of its movements. The very magnificence of its order is only a further illustration of divine wisdom; for surely the very thought of a divine mind implies the perfection of wisdom, or, in other words, of order, as its expression. The more, therefore, the order of nature is explained and its sequences seem to run into one another with unbroken continuity, only the more and not the less *loftily* will we be able to measure the workings of the divine mind.

JACOB.

Scraps from my Note Book.

IV.

OUR PATRON SAINT.

It may not be unimportant to us, as scholars, to know that our patron saint is St. Catharine, of Alexandria. There is another St. Catharine, she of Bologna; and another still, St. Catharine of Siena; both of whom were, undoubtedly, very excellent ladies, and as much deserving of canonization as most of the papal enthusiasts who enjoy that honor. But St. Catharine of Alexandria, whose legend is very fine, and whose supernatural marriage with the infant Savior is a favorite subject of art, is patroness of education, science, philosophy, and of all students and colleges. "As patroness of eloquence", says Mme. Clemeut, "she is invoked for all diseases of the tongue," a malady peculiar to extempore speakers; chiefly, in so far as my own observation extends, in the form of *looseness*. Her date is 307; and her burial place was Mt. Sinai; from which the famous convent of St. Catharine, founded by the Empress Helena, takes name.

St. Catharine was also patroness of Venice.

V.

SONGS OF THE PEOPLE.

I was a boy of thirteen, when I discovered that there is a vast body of popular songs which are not down in any of the books, nor recognized as of respectable parentage, but which enter into the joys and sorrows of the great mass of humankind, to the almost utter exclusion of verses more literary. How often have I stopped to listen to a stable boy, a wood-sawyer, or house "help", who was troling some song full of grotesque sentiment and ludicrous English! And the question always occurs to me, "Who can set such words to music?" But somebody evidently does it, and the music is frequently very tender and pathetic.

I shall never forget a Fourth of July boat-ride on Crooked Lake, New York—a sheet of water as beautiful as any in the wide world. The trip was memorable, not for the beauty of the scene, not for the glory of the day, and not for the great and happy company who were my fellow passengers. The memorable feature of that memorable occasion, was a song volunteered by Mr. Olney, to an audience of several hundred people, and sung with a voice so loud that he evidently intended to be heard. Boy of thirteen as I was, cold chills ran down my back as I pushed forward to the

front, and gazed upon the glowing and enthusiastic face of the singer. Mr. Olney was seated in an arm-chair, rocking gently forward and backward, and occasionally fanning his face with a real red bandanna, while he sung, or rather gently roared,

"When we met at the ball, I thought 'twould be right

To pretend that we never had met till that night; But when the captain saw me he came as if by chance,

And axed me all for to join in the dance."

The remainder of the song I cannot recall. I do not think I ever heard it before or since. But the impression made upon me at the time was profound. Perhaps something was due to the utter *sang froid* of Mr. Olney. He did not appear conscious that he had an audience, and entered into his work with an artist's fervor, and with a confidence in his ability to do the thing "handsome," that I ever remember as something morally sublime.

VI.

THE OLD AND THE NEW PAGANISM.

It is wonderful of what kindred bone and sinew are the Old and the New Paganism. An ancient Roman poet, Catullus, in the famous ode Ad Lesbia, says

"Vivamus, mea Lesbia, atque amemus.

Rumoresque senum severiorum

Omnes unius aestimemus assis.

Soles occidere, et redire possunt:

Nobis, cum semel occidit brevis lux,

Nox est perpetua una dormienda.

Da mi basia mille, deinde centum.

Dein mille altera, deinde centum, etc."

"Let us live and love, my Lesbia, and let us regard all the flim-flam talk of austere old age as of the same value. Sun set and can rise again; to us, when once the oriel light goes out, remains a night of perpetual sleep. Give me a thousand kisses, then a hundred, then another thousand, then another hundred," and so on.

Now all this was very natural in a simon-pure heathen. Death was to him the end of him, and he was not disposed to forego any pleasure, nor listen to the moralities of the "sere and yellow leaf," but to make the most of present opportunities. Consequently, he says to his girl, "Give me a thousand kisses, then a hundred; and keep on giving me thousands and hundreds, and let us be happy in that fashion while we may, for that is all of it."

And Matthew Arnold, a poet of the modern classical school and a son of old Dr. Thomas Arnold, whose written words still stir devout thoughts in many spirits,—has got back, by the emancipation of science, to the identical standpoint of Catullus, and exclaims

"The sea of faith

Was once, too, at the full, and round earth's shore

Lay like the folds of a bright girdle furled;

But now I only hear

Its melancholy, long, withdrawing roar,

Retreating to the breath

Of the night-wind down the vast edges drear

And naked shingles of the world.

Ah, love, let us be true

To one another!"

He sees faith going; he believes little or nothing; and like Catullus, as his last and only resource, turns to his girl and asks her to love and be true to him. "Ah, love, let us be true to one another!"

Thus are the old and new pagans alike thrown back on "Basia mille, deinde centum." They see no particular hope in the future, and vote sexual reciprocity the only tangible happiness.

VII.

COMPANION VERSES.

When Mr. Seward added Alaska to our national domain, and attempted the purchase of the island of St. Thomas, some one wrote in the *N. Y. Herald*

"O take me to Alaska,

Where it rains and snows always;
And take me to St. Thomas,
Where the lovely earthquake plays,
And the hurricane is lighted
By the sweet volcano's blaze."

A Nebraskan adds, in something of the same strain,

And take me down to Kansas,
Where the gay grasshopper prowls,
And take me to Nebraska
Where the surly wind e'er growls,
Or gets down upon its haunches
And lays back its ears, and howls.

It is the constancy of Nebraska breezes that gives us such a dry, healthful climate.

The Conversationalist as a Listener.

I confess to a fondness for the listener who lays an embargo on his tongue. The Medes were accustomed to sew up the mouths of those women who were notorious gossips. I am not so sure but that the custom will bear transplanting. Isocrates charged a youth two prices, because he would have to teach him two sciences; how to talk and how to keep silent. Having first learned to talk we should then be able to listen, and listen well.

This silence should not be like that of a stone, arising from inability but that of conscious power. Where there is exclusive reticence, the suspicion is engendered that they are like the cracked bell which refused to ring lest it revealed its defect.

To those who wear a profound look the saying of Fox concerning Lord Thurlow applies, "I know Thurlow must be a great hypocrite for no one can be as wise as he looks."

Shakespeare says:

There are a host of men whose visages
Do cream and mantle, like a standing pond;
And do a wilful stillness entertain,
With purpose to be dressed in an opinion
Of gravity, wisdom, profound conceit."

The golden mean lies between too great reserve and extreme loquacity. Conversation should resemble playing on a harp where as much depends upon holding the cords as vibrating them to bring out the music.

Madame Recamier, the most beautiful of French women, was noted for that attractive reticence which draws out and wins people. She was noted for her courteous and uniform attention. She drew out her friends, and dazzled by their own brilliancy they gave her credit for thoughts which were in reality their own. Make your companion pleased with *himself* and he will never find fault with you.

Robert Burns exhibited fine conversational powers. Possessing a singularly vivid imagination, a fine flow of language, having a voice and expression of countenance that varied to suit the sentiment, he fascinated by thoughts as striking and beautiful as the rugged Scotch scenery of his native home.

Addison, whom Mary Montague considered unsurpassed in serious conversation, was ever a deferent and respectful listener. Like most Englishmen he was never garrulous unless wine loosened the spell that bound his tongue.

It is well occasionally to diversify our conversation with a few brilliant flashes of silence. To those, who like the stream "go chattering on forever," the Persian proverb applies: "I hear the sound of the grinding but see no meal."

Let us follow the example of the French soldiers at Fontenoy who with beautiful politeness requested the enemy to fire first. It would also be well to keep the scriptural injunction in mind, "Be swift to hear but slow to speak." G. M. L.