

### Miscellaneous.

#### A GENTLE WORD.

BY LILLA A. CUSHMAN.

A gentle word—it falls like balm  
Upon the worn and weary heart;  
And calms the agony within,  
With more than magic art.

A gentle word—it hath the power  
To win the erring back,  
Though they have wandered far away  
From virtue's beaten track.

A gentle word—O give to all  
Sweet, gentle words of love,  
For they shall all return to thee,  
From God's own lips above.

—Conn. Common School Journal.

#### LESSONS IN NATURAL HISTORY.

"Arthur, I see you have something, and we will hear it the next time. Now we will attend to our lesson, which is

##### I.—"THE CARPENTER-BEE.

"——The bee,  
A more adventurous colonist than man,  
With whom he came across the eastern deep,  
Fills the savannas with his murmurings,  
And hides his sweets, as in the Golden Age,  
Within the hollow oak. I listen long  
To his domestic hum, and think I hear  
The sound of that advancing multitude  
Which soon shall fill these deserts. From the ground  
Comes up the laugh of children, the soft voice  
Of maidens, and the sweet and solemn hymn  
Of Sabbath worshippers. The low of herds  
Blends with the rustling of the heavy grain  
Over the dark-brown furrows. All at once  
A fresher wind sweeps by, and breaks my dream,  
And I am in the wilderness alone,"

Bryant.

"There are some bees which lead a solitary life, and seem to exercise a mechanical art. The first of these performs the labor of a carpenter, the next, that of a mason, while the third may be termed an upholsterer.

"The carpenter-bee is almost as large as the humble-bee; not so downy but more deeply colored. In spring, it seeks out some old post, or withered branch of a tree, to commence its habitation, carefully shunning, with a wonderful instinct, the green wood, which, from its toughness, would not suit its purpose. The position, also, as well as the quality, of the material, is taken into consideration; for the bee will not select a place where the sun rarely shines.

"As soon as a piece of dry, rotten wood is found, our carpenter begins to bore in an oblique direction and having gone a sufficient depth to answer the purpose, changes the direction of the cavity, and it is now continued on an axis, perpendicular to the horizon. The insect is thus occupied for weeks, and sometimes even for months.

"What a lesson is here given of perseverance, to those who are continually disposed to change their employment when in the least degree fatigued by its sameness! For days together, the bee may be seen going in and out of the hole,—shoveling out the sawdust which has accumulated from the patient labor. The cavity is from twelve to fifteen inches in length, and frequently large enough to admit a man's finger.

"After the tube is finished, it is divided into about a dozen compartments, each of which is to receive an egg. The bottom of the tube forms the foundation of the first room. Having the house completed, the bee collects the materials of which to make and pile up in this room a quantity of bee-bread, about half an inch in height. Upon this, one egg is laid; and over the whole mass a roof is formed which serves as a covering to the first division, and a floor to the next above it. Each of these partitions is about the thickness of a fifty-cent piece.

"The bee follows a very systematic plan, as well as a very curious one, in partitioning the house, and in arranging the cells. She begins by fastening the particles of saw-dust with a kind of glue around the walls of the cavity, until an annular projection is made. Inside the ring she glues more, and thus works from the circumference to the centre until, at last, a perfect covering of concentric circles of sawdust is formed.

"Having completed her first cell and deposited an egg, she now proceeds to form another heap of bee-bread, and a second egg is deposited, which she covers with a similar roof of glue and sawdust. A second cell being finished, her labors are continued until the whole cavity is filled by cells, one above another.

"Wonderful as it may seem to us who are gifted with reason, it thus seems that God teaches this little creature not only how to construct its cell, so as to accommodate its young, but to know the exact quantity of food the grub will consume from the moment of its life until it arrives at maturity; and it deposits precisely that supply which it will want from the period of its tenderest state until the time it shall come out as perfect as its parent.

"The honey-bee, it will be recollected, is furnished with a kind of basket, to carry home the pollen collected in the fields. The carpenter-bee, destitute of this convenience, makes use of a different apparatus to carry food for its nest. Says a distinguished naturalist, Reaumur; 'I observed several of these little insects walking in the forest of stamens which surround the flower of the poppy. By their bulk and weight they upset and pressed down all the little filaments which crossed their path. During their progress their hind legs became covered with pollen, which adhered to the downy hairs upon their surface. After they had thus gone over several flowers, the last pair of legs appeared as if enveloped in a footless boot.'

"When a load is thus secured, the insect flies home, and brushes off the pollen, which is then mixed with a proper quantity of honey, and deposited in its place.

"Each of the circles visible in the partitions or floors marks a pause in the labors of the architect; and their number bears testimony to the unwearied industry which formed them grain by grain, into a solid mass. The sawdust used for this purpose was a part of that which was removed when the carpenter was excavating the tube. When shoveled out, it fell upon the ground, and formed a little heap. Now, when materials are wanted to floor or roof the apartments, the bee issues forth and alights upon this heap of sawdust, selects a grain, and flies away to the interior of the cavity, and so continues to do, until the work is finished.

"From the order in which the eggs are laid, it follows that the grubs hatched will be of different ages; consequently, the lowest is ready to come out first. But how is this to be accomplished? Shall it wait until all those above have escaped from their cells?

"Nature provides for this emergency. The grubs are placed in the cell with their heads downwards; consequently, the first efforts to move will not be toward the upper cells. The mother-bee makes a hole at the bottom of the cavity, communicating with the lowest cell, and through this opening the young inhabitant escapes. When the food in the next cell is consumed by its occupant, it gnaws a hole through the floor, comes out through the previously vacated cell, and finds its way clear to the outlet which has been provided by its mother.

"Natural history, abounding as it does in interesting facts, presents few things more striking than the industry of this insect. Consider her labor,—boring out a tunnel fifteen or twenty times her own size, descending and then ascending to carry off the sawdust, and then, after having cleaned out the tube thoroughly, returning to this heap of sawdust, and collecting, grain by grain, a sufficient quantity to partition off the number of nurseries which the young bees may require.

"With what language more suitable can we close the account of the habits of this insect—so small in size, yet endowed with such wonderful instincts—than that of David, 'O Lord God, how manifold are thy works; in wisdom hast thou made them all!'"

(To be continued.)

### Educational Intelligence.

#### CANADA.

— UNIVERSITY SCHOLARSHIPS.—A scheme has originated in Prince Edward Co., having for its object the conferring of a University Scholarship on the most deserving pupil in the schools of that county—the amount to be raised by the proceeds of a series of pleasure excursions in the steamer *Trenton*, from the 10th to the 16th July. Among the Executive Committee who have taken the scheme in charge, are the following:—Hon. S. Washburn, D. B. Stevenson, Esq., M.P.P.; Absalom Greeley, Esq., Warden; R. Ramsay, Esq., Mayor; and J. Macdonald, Esq., Sheriff.

— VICTORIA COLLEGE COMMENCEMENT.—On Wednesday last the Academic year of the University of Victoria College came to an end. The commencement exercises took place in the Wesleyan Methodist Church, at 7 p.m., the Rev. S. S. Nelles, A. M., President of the College, occupying the chair. The service was begun by the choir singing "The Seraph," followed by prayer from the Rev. John Ryerson. The delivery of the essays then