

# DALHOUSIE GAZETTE.

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No. 8.

## A TRIP TO PETERSBURG.

We had been so pleasantly occupied in admiring the huge granite fortresses rearing their heads above the water on every side, and in discovering in each new direction batteries previously unnoticed, that we did not perceive the number of little boats which were rapidly making their way towards our vessel. We were soon boarded by a throng of shabby-genteels, who bowed and scraped to an intolerable extent as they handed us the cards of their respective firms, printed in every conceivable language. After these had been snugly disposed of in the slush-bucket, and their owners politely informed that their services were required no longer, we were greeted with the appearance of four military-looking men, who stepped quite consequentially upon the deck. Two of these were arrayed in gay uniforms, with a plentiful supply of crosses and medals, indicating their superior rank; the other two, whose duty was to do all the work, were more simply dressed. We were informed, by means of various signs, that all our goods and chattels must undergo a searching scrutiny, upon which the great men of the party went into the captain's cabin, and were there regaled with English beer as they looked over a "manifest" which they could not read, while the two underlings proceeded to the fore-castle armed with several hundred yards of tape, one or two pounds of soft sealing wax, and a huge Russian seal. Having worried sufficiently the patience of the sailors, by rummaging everything they could lay hands upon, they returned to the cabin to continue the search. Every trunk, drawer, carpet bag and satchel was turned inside out and upside down; every crack in the deck was thoroughly investigated, the very legs of the tables were sounded with a little hammer, brought for the purpose of testing their solidity; and as each article was examined it was tied up in red tape and stamped with the double-headed eagle. Everything was sealed—hatchways, portmanteaus, carpet bags—even our writing-desks would hardly have been exempted had we not raised serious objections.

During the process of investigation one of the diligent searchers gave vent to a furious yell of delight upon discovering in the bottom of a drawer half a dozen bottles of Sarsaparilla. His joy was however turned into grief when he was assured that the contents were not whiskey as he supposed. Why he was so exultant upon making the discovery we did not succeed in learning, we only know that he was sadly disappointed. When we had passed through this anything but pleasant ordeal and the officials were about to depart, we were assured as well as possible without the aid of language, that immediately upon their arrival at headquarters an officer should be sent on board, whose business would be to pace the deck continually, take particular care that none of the bonded goods were meddled with, and never go asleep day or night during our stay in port. We only needed one glance at the jolly, good natured, portly individual, who dragged his body lazily over our bulwarks half an hour afterwards, to know how well that duty would be performed. Our descrip-

tion of the Custom's examination has perhaps been unnecessarily long, but we wish to give our readers some idea of the inconvenience to which foreigners are subjected in landing at a Russian sea-port.

When we were able to go ashore we found Cronstadt, as we had expected, a very flat city. The streets are wide and straight but badly paved. There are very few public buildings at all remarkable; the churches, although large, are simple, and their architecture not at all attractive. The houses are generally built of brick, but occasionally one sees a wooden dwelling on the outskirts of the town, which reminds him of the log huts to be found in the remote regions of Nova Scotia. The Russian houses, it is true, are a great improvement upon the log cabins of our own backwoods, but the style of building, by laying one piece of timber upon another without the support of frames, is exactly the same in both cases. All the buildings, even in the poorer parts of the town, had a clean and neat appearance, which we thought extraordinary when placed in contrast with their inhabitants, who revelled in excessive filth.

Two out of every three men whom we met were dressed in some sort of uniform, which indicated that they belonged either to the army, the navy, the custom house service, the police force or the postal or telegraph departments. Consequently, until we had examined the livery of the different departments, we were only able to get a very indefinite idea of a man's employment or rank from the uniform which he wore.

Upon first landing, we were struck with the appearance of little vehicles (unlike anything we can at present remember) stationed at the different street corners or jolting over the rough pavement, to which were attached miserable, half-starved little horses peculiarly harnessed. These vehicles are called *droshkies*, and serve the purpose of cabs, although it is only by excessive squeezing that they can be made to accommodate—i. e. to hold—more than one person. The driver, called by the Russians an *istvostchick*, is generally a young man, between 16 and 24 years of age, is always good humored, and very oddly dressed in a long blue coat buttoned up to his chin, with a sash tied loosely about his waist, and head covered with a peculiarly shaped hat not unlike a cut down beaver. In fact we think that the *droshky* with its little pony and fantastically dressed *istvostchick* is the greatest curiosity in all Russia.

The extensive shipping business, carried on at the port of Cronstadt during the summer months, induces a large number of peasants to flock into the city at this season of the year, consequently the great bulk of the population, with the exception of sailors and soldiers, consists of this class of persons. Russian peasants are very distinct from the higher and even from the middle classes. They can easily be distinguished by their long gray coats, their large untidy boots, and little flat cloth caps. Their chief characteristic is laziness. At any hour of the day one may see numbers of them coiled up in a sunny part of the sidewalk in a state of sound slumber, from which they can only be awakened by an invi-

tation to have a glass of Russian whiskey. They are pre-eminently a dirty and a drunken race of men; so much so that we were inclined to believe that those qualities constitute a part of their religion.

It is only occasionally that one meets a woman upon the street, and when he does happen to be so fortunate, she is not generally either on account of her youth, beauty or respectability such a lady as he can admire. For some reason (unknown to us) the Russian damsels spend the most of their time in-doors, and it is a rare thing to see a respectable young lady even at the public gardens.

We have already occupied so much of the reader's attention, in discussing the peculiarities that attracted us upon our arrival at Cronstadt, that our description of Petersburg itself must necessarily be short and imperfect. In order to give an intelligible idea of the appearance of this mighty modern metropolis, a more intimate familiarity with architecture, a greater command over language, and a much more extensive vocabulary of superlatives than we possess is required. Possibly the reader has heard of the towers and minarets, and lofty domes of dazzling brightness, which meet the spectators eye as he gazes upon this wonderful city of palaces, but, no matter how vivid the description, his conception of the magnificence of this beautiful city must be very meagre until he is able for himself to behold her matchless glories.

Petersburg is truly a modern town. The mathematical precision with which the wide, straight, level avenues are arranged (whether at right angles to each other, or in the form of the spokes of a wheel), and the regularity of height, proportion and style displayed by the long ranges of three-storied buildings, show the traveller at a glance that he is not wandering through streets nor beholding edifices which have endured for thousands or even hundreds of years.

In the very heart of Petersburg, and forming as it were the *hub* to the mighty thoroughfares which there converge to a point, is a mammoth square, and here more than in any other place the visitor finds full scope for the development of his esthetic taste. On one side are the Admiralty Buildings with their needle-like spires, rising high into the air, and seeming almost to pierce the clouds. Directly opposite is seen the Winter Palace of the Czar—a massive building of immense area, which, although only four stories high, is capable of accommodating 5000 persons. Its architecture can hardly be criticised from the fact that its length and width are so exceedingly out of proportion to its height as actually to destroy the unpleasant effect, which such incongruity naturally occasions.

But the chief glory of Petersburg is the gorgeous Cathedral erected in the centre of the square, which in magnificence, architecture and situation rivals all the other buildings of the great metropolis. The Isaac Cathedral is a majestic edifice 200 feet square. Standing as it does in the most prominent part of the city, with no other building near to detract from its beauty, the golden dome and four gilded cupolas, all glittering in the sunlight with dazzling brightness, produce a miraculous effect. Each of its four fronts is studded with 20 immense pillars of polished granite, reaching to a height of 60 feet, and surmounted by another set of smaller columns, of the same beautiful material. But the external grandeur of this temple is far surpassed by the richness and splendour of its interior, which, however, space forbids us to describe. Looking at it from a pecuniary point of view, it has been estimated that the amount required to build the Isaac Cathedral would be sufficient to support the whole population of Russia for one year. But we leave it in its grandeur and sublimity to visit the humble dwelling of a noble man; which, notwithstanding its lack of architectural beauty and elaborate adornment, contains far more of interest to the lover of historical characters than all the modern edifices that have ever been erected.

The Palace of Peter the Great is a plain simple little log cottage about 25 feet by 15, evidently built more for convenience than for the gratification of taste, but even this simplicity itself makes it much more attractive than if it were a monstrous edifice, covering acres of ground, and adorned with all the sculpture of modern artists. It is at present enclosed in a glass case to protect it from ruin, inside of which are to be seen a few relics of the ship-carpenter King; the most interesting being a boat built by his own royal hands.

It is not because we have exhausted all the points of interest and of beauty, which attract the traveller on visiting the city of Petersburg, that we here close our tedious narrative,—it is not even because we have said all, that we might say of the very few buildings we have attempted to describe. The Hermitage and Marble Palace, the Kazan and Royal Academy, the Nevskoi Prospect and the Botanical Gardens, the river Neva and the gondolas that are continually skimming its surface are each sufficient to occupy as much space as we have given to our meagre description of the whole city. But in the short space at our disposal we have taken up the objects which appeared to us the most interesting, and which we presume will be most attractive to our readers.

ALEXIS.

#### "THERE IS NO ROYAL ROAD TO LEARNING."

AMONG the numerous proverbs which adorn the English language, the above is one, the truth of which very many have learned by observation, and not a few unfortunate beings by bitter experience. Go to any civilized country, visit the seats of learning, and there you will find men of different ranks, apparently busy in the pursuit of knowledge. But observe more closely, and do not be surprised if, before long, you discover some deluded persons who expect to pass through the course on the slippery path of noble birth, or wealthy parentage; who have such an enlarged idea of *self* that all else sinks beneath their horizon, and were it not for the little modesty they possess—if indeed they can be guilty of having such—you would probably hear—

"I am monarch of all I survey,"

sounding in your ears.

You will very likely meet with still another class, that would fain travel the easy, if not the royal, road to learning. It is composed of those who think they possess the constituent elements characteristic of a *genius*. These we think deserve a large share of pity. The remainder, leaving out those who are too lazy to work, consists of men, or it may be boys, who really wish to succeed, and who take the proper and only way by which they can attain the end in view. It is needless to say what this is. We now wish you to note the progress made by each of the classes just mentioned.

It must not be supposed that we maintain that all who are of noble birth or have wealthy parents do not make good students, or successful men. Not so by any means. We admit that money is absolutely necessary to enable any person to prosecute his studies, and if he make a proper use of it, the more he may have the better. He who possesses wealth enjoys much, and has many advantages over his poorer class-mate who can scarcely purchase the required books. What we hold is, that he who expects his gold and silver to do all, or nearly all, while he puts forth very little

exertion himself, will certainly fail in the end. Noble birth, in itself, is of no value whatever unless the ability, and more especially, the will to study go hand in hand with it. Many men, possessed of more than ordinary mental capacity, have become intellectual wrecks, simply because they were *rich*.

The *dignified* chap next demands your attention. He is continually coming in contact with some of his *inferiors*, and gradually the sharp corners of his dignity become blunted. He loses ground, and soon sees objects rising around him, and darkening his little horizon. He finds in the course of his studies that some have even had the *audacity* to set him down as a mere *idea*. If in two or three years he does not realize his true position; if he does not bid adieu to his dignity and condescend to look upon himself as an ordinary man, and work as such, he probably becomes disgusted with college life, and concludes that "some other calling is better adapted to his peculiar disposition." Thus he returns to his former sphere, where he can with more ease and comfort cultivate his much prized *virtue*. Intolerable character! may he, and his many compeers, torment us no more, unless they doff their haughty garb, and assume the more becoming ones of modesty and industry. Then will they be welcome in the halls of learning wherever situated. Many a man of superior ability has ridden to ruin on his dignity, and we fear more will follow in his trail.

Though your patience is probably almost exhausted, we must ask you to look at our Genius a moment. He is a character who can see *everything* at a glance, who does not require to apply himself like his *less gifted* but industrious companions. He, in a word, considers himself a *Genius*. Well, we feel very doubtful. His chances are exceedingly few, and in nine hundred and ninety-nine cases out of a thousand he is a deceived man. He soon finds that he cannot thread his way through the intricacies of difficult theories, of which he has but a misty knowledge. He is now lost; his genius is gone; he has never learned to apply himself, and he must now awake and view his plodding brothers far in advance—an apt illustration of the simple story of the *Hare and the Tortoise*. Some such men, however, see their folly; bestir themselves, and still prove successful, but the majority follow their genius in its fall, and with it sink into obscurity.

These are doubtless rather dark pictures, but their is no fiction in them, all is reality. You may, however, turn and view, for yourself, the brighter side. Mark the progress of the industrious student in his onward and upward course; slow it may be, but none the less sure; hard it may be, but still success follows his steps. He believes that "there is no Royal Road to Learning," and goes right to work without wasting time, precious to him, in searching for that which cannot be found.

The rich, as well as the poor, have to undergo the same course of training. The student who claims an Earl, or a Duke, or some great potentate for his ancestor must solve the same mathematical problems, study the same authors, both ancient and modern, decipher the same chemical formulæ as he who can only point to some laboring man as his father, and a humble rustic cot as his residence. If any one feels inclined to think that there must be some "Royal Road to Learning," we can only tell him to go in search of it, and pity him for his folly.

## PUBLIC SPEAKING.

THE following advice on Public Speaking, is from one who understands the practice of that subject as well as the theory,—Henry Ward Beecher. We recommend the various members of our literary societies, to peruse carefully these words of wisdom:—

1. The sooner one begins to practice public speaking the better. For although the gift, in point of fact, develops late in life, it is only in the case of those who have a strong, though, it may be, dormant talent for it. No man has learned any art until he can practice it spontaneously, without conscious volition. If this proves true in music, in drawing, in the dance, or graceful posturing, it is even more apparent in oratory. Parents and teachers should encourage children to narrate, to converse—for story-telling and fluent conversation are essentially of the same nature as oratory.

2. The habit of *thinking on one's feet* is invaluable. Great orations may be prepared with elaboration and study, not alone in their substance, but in form. Such we know to have been the preparation of orations which continue to be read from age to age.

But for the purposes of American life, one must be qualified to speak well without laborious preparation of language, and this can only be done when one can command his thoughts in the face of an audience. The faculty of doing this is greatly helped by early and persistent practice. Aspirants for oratorical honors, without neglecting the severe preparation of the study for special occasions, should lose no opportunity of speaking off-hand. One should not be down-cast at failures. They are often far better for the student than successes. He who goes to school to his mistakes, will always have a good schoolmaster, and will not be likely to become either idle or conceited.

3. Public speaking *means business*, or ought to. Although there is a great deal of fancy talking, after dinner speeches, complimentary speeches, and religious exhortations, all of which are meant to fill up time, yet public speaking, in its nobler aspect, is an attempt to gain some definite and important end by the use of reasons and persuasions. When a man seeks his neighbor for a business conversation, he knows just what he wants, and he settles with himself by what method he will get it. This is the very genius of a good preparation for a speech—to know definitely what you wish to gain of an audience, and the means by which you propose to secure it. All true oratory is practical psychology.

4. A man may speak deliberately or even slowly, but no man can succeed who speaks hesitatingly—who goes back on a sentence and begins again. Such a speech is like a shying horse or a balking mule. At all hazards the young speaker must learn to push on—to keep a current moving from beginning to end of his address. If you drop a stitch do not stop to pick it up. If you stumble on a word, let it go. Do not go back to it. Keep right on, no matter what happens, to the end. Momentum is of more value than verbal accuracy. Of course the best speech is that which is full of good substance, expressed by the best language and fluently uttered. But while one is learning, he should never let himself be tripped up by a word, or the want of one. Jump the gap—run over the mistake. Keep right on. It will be time enough the next endeavor to profit by the experience of mistakes.

5. If one is slow of thought, dull of feeling, very cautious and secretive in nature, without that talent of combativeness, which tends to protect one's mind upon another's, or if one be excessively sensitive, so that a mistake gashes like a lancet, it is not likely that he will succeed as a public speaker.

But one may as well stop here as anywhere. The theme opens like an endless prairie. Perhaps somebody will ask for light on some special point, and retrench this immense *generality*.

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WHEN this paper became the property of the students of this University, it assumed the position of exponent of student-thought and feeling. The leading spirits in the movement, proposed that the GAZETTE should be a chronicle of student-life in the University,—a channel for the outflow of the literary talent among us, and a medium through which our graduates might communicate their more matured thoughts on questions immediately connected with our College, or on more general subjects. The project originated with the undergraduates, and in point of possession and responsibility, the paper is peculiarly theirs. It is their duty, through an annually elected corps of editors, to take supervision of its literary and financial management. But the graduate Alumni have also an interest in the paper, and ought to give it their support; not merely that tantalizing support, which consists in giving a lullaby wish for its prosperity, but tangible support in the shape of contributions. The GAZETTE, although primarily a sheet for the training of literary tyros, ought not to be so entirely. It wants something to give it stamina and backbone. It has too much of the molluscous; it wants more of the vertebrate type of literature. Let no one suppose that we are speaking satirically, or writing against ourselves. For we think, that both from our friends, and from disinterested outsiders, the weight of criticism is largely on the favourable side. We are comparing what is with what might be, if all our alumni, undergraduate and graduate, gave us an earnest, hearty support. We can reach the delinquent undergraduates through the living voice, and have often lectured them as to their duty; but the only way that we can arraign our graduates, is through this big "love-letter," which old "Alma Mater," with the kindest of hearts and the best of wishes, sends out to them every fortnight. As love-letters are said by those who profess to have knowledge in this matter, to be spiced with a little scolding now and then, we take shelter

under the precedent and indulge somewhat further in that luxury.

In previous years, graduates have held up the hands of the editors to a considerable extent; but this year, with a few honorable exceptions, they have left them to droop. We believe, indeed, that at any time there can be selected from the students of the University, an editorial staff with sufficient pluck, perseverance and literary talent, to carry on the paper successfully. Editors, however, have studies as hard as their fellow-students, and need as much time to prepare them. They have no Aladdin's lamp, no secret magic, by which they can solve problems, grasp principles and understand theories without a thought. Hence, if they are compelled to write the literary articles, and attend to the editorial supervision of the paper at the same time, either the GAZETTE or the study must be slighted, and probably both. We ask, then, a more general and hearty support from our graduate Alumni than we have hitherto received. They surely have thoughts on questions connected with College Reform, incidents of College life and interesting matter on many literary and scientific subjects, which they might give us, with very little trouble to themselves and great benefit to us and our readers. We hope that at the coming meeting of the Alumni Association in the spring, the claims of the GAZETTE will be taken into consideration, and some definite pledge of support given to it.

THOUGH we all regard it as a truism, that the body requires culture as well as the mind, there is no truth that we, as students, more habitually and systematically disregard. We know that if we neglect the culture of the mind, the rank and noisome weeds of ignorance, superstition and crime, will grow there, and as a consequence, our physical frame will lose the guidance of a directing and controlling power. It is equally true, however, that if we neglect physical culture, the mind will become weakened and unfit for work. Metaphysicians have reasoned and theorized interminably about the interdependence of body and mind, but no one feels it so sensibly as the student who plods on over his books from morning to night. Physical energy must flow out in some channel; if it does not, it is like the excess of steam generated in the steam-engine, which causes destruction, unless it escape through the safety-valve. Physical exercise is a kind of safety-valve to the system; other things being equal, it lengthens life.

Though we are all well acquainted with these facts, we are far from acting up to our knowledge. Desiring to excel and gain collegiate honors, we neglect our bodies in the pursuit of our studies, and the result is, a constitution sadly impaired, if not altogether broken down. Moreover the greater part of our students come from country-places, where they have been accustomed to much exhilarating exercise in the open air, and consequently, the sedentary habits of a diligent student tell far more quickly upon their system than if they had previously been used to such habits. Now, although the greater part of the blame that arises out of the neglect of physical exercise, lies at the student's own door, yet, we cannot refrain from expressing the opinion that the Governors of

this institution are also indirectly to blame, in not providing for us the most convenient and best means of exercise, viz: a gymnasium. True, the streets are wide and free, and pedestrianism is a healthy exercise, but a walk that would be of any service, takes a longer time than can be spared every day from the study. We have a foot-ball club too, but, unfortunately, the conditions are often wanting in the winter to admit of playing foot-ball. This exercise comes by fits and starts, and is perhaps worse than no exercise at all. A gymnasium is the easiest and readiest means of obtaining regular, profitable exercise, and, at the present time, when many reforms are being made, we would suggest to the Governors that they take this one into consideration as by no means the least important. While they present a rich and sumptuous mental feast for their students we hope they will not forget their physical wants. We trust that the Governors, even if the idea seems to them at present somewhat *Utopian*, will not banish it to the waste-basket of their memory, but will keep it before them, and endeavor to have it realized as soon as possible.

#### A FEW WORDS ABOUT GOLD.

To those of our students who have recently been engaged in the study of "Au 196.7," a few notes upon gold may not prove devoid of interest or instruction. We shall not attempt to discuss the precious metal from a chemical point of view, nor yet in its commercial importance; but content ourselves by briefly describing the manner in which, in this country, it is procured.

As our readers are well aware, gold in Nova Scotia is generally obtained from quartz. Alluvial gold has, indeed, in one or two places been found in considerable quantity, but the supply was soon exhausted, and the main source became what it still continues to be—the quartz veins. These veins or "leads," as they are called by the miners, occur in a hard rock, familiarly known as "whin." The veins run parallel at different distances, and vary in size from one or two inches to several feet. The narrowest, as a rule, are believed to be the most auriferous. All the veins "dip," i. e. diverge from the perpendicular at an angle more or less acute; and when the angle is large, the miner is compelled to lease several adjoining areas so that he may not be stopped when following up a rich lead, by coming to the line which separates his own from his neighbours property. The mining process, though laborious, is very simple. It consists in laying bare the quartz veins by blasting away the surrounding rock. The exposed quartz is then hoisted up to the surface of the ground by horse or steam power, according to the depth of the workings, and is broken into small pieces so as to facilitate the crushing. If the lead be a rich one, numerous sights or small nuggets of gold will be rendered visible during this operation. These are carefully picked out and preserved. The next step is to pulverize the quartz, which is effected by passing it through the "battery" of a "crusher." Here it is subjected to the fall of heavy iron stampers, which with their continuous pounding in a short time reduce both

quartz and gold to a fine powder. A certain quantity of quicksilver is put into the batteries along with the quartz, and this combining with the gold dust, forms an amalgam which on account of its weight, lodges in crevices prepared for its reception, while the remaining quartz is carried away by a stream of water passing under the stampers. The discoloured mixture of water and pulverized quartz flows down a series of inclined planes coated with quicksilver, and these being rocked laterally to and fro, arrest and collect any gold which may not have been previously separated. At intervals the crusher is stopped, and the amalgam carefully washed out of the cavities in which it has collected. The whole process of crushing is a very interesting one to those who have sufficiently good ears to endure the deafening noise which is its necessary accompaniment.

The amalgam, a grayish white mass, in appearance not unlike the granulated zinc, with which many of our readers have become familiar in the laboratory, is now placed in an iron retort in order that the mercury and the gold may be separated. This is easily effected by the application of heat. The former metal passes off in a state of vapour, and is condensed and collected in the ordinary way. The gold remains at the bottom of the retort. When taken out, it is light and porous, and bears but little resemblance to the bright, yellow, heavy metal with the appearance of which everybody is so familiar. To make it assume this appearance, however, nothing is necessary but to melt it in a crucible and then run it into bars or ingots, in which state it passes from the hands of the miner to those of the gold broker or jeweller, to reappear in a thousand forms of ornament and utility, and to play its many-sided part in the great drama of life.

#### THE STUDY OF NATURAL SCIENCE.

We just wish to say a word on what appears to be too popular a failing among students. In doing so we are well aware that many who have distinguished themselves in literature, science and art, may seem to disagree with us, yet we strenuously maintain our position. A student preparing for the practice of law, medicine, theology or any other profession, is too apt to confine his attention solely to those subjects having a direct bearing on what he considers to be his vocation, to the neglect of other very important branches of a proper education. This, if carried too far, as we know it is, is very damaging to success in after life—more now, than in former times. It is quite proper, and even necessary to success, that special departments of knowledge should be specially investigated, yet we hold that to those should be added a general knowledge of many subjects, as the phrase is, "One should know something of everything, and everything of something." A rigid specialist may do very much to advance his own science or art, but he is a one sided man; he is the man who deserves to be noticed as riding a hobby, one who can see nothing clearly out of his own sphere. In extreme cases he approaches the monomaniac. If a man wishes to be intellectually well balanced, he should have, at least, a rudimentary knowledge of every common subject. The prescribed

compulsory courses in our Colleges and Universities have this as their object. Yet we do not object to the introduction of the elective system, to a small extent, in the latter part of a University Course. The most absolute powers have to pander more or less to popular opinion at some time or other. But the subjects to which we especially refer, may in the greatest majority of cases not form a part of the curriculum or only partially form it. These are the Natural Sciences. It is surely too bad to see one who professes to have a thorough education, walking on this fair world of ours, ignorant of the leading features of its phenomena and laws,—to see such a man look on the beauties of the field and forest, rock and river, with a sentiment little elevated above that of a savage. Of all classes we would say that the Theologian should be the most thoroughly versed in the general sciences. Language, History, Mental Philosophy, and the like, he is sure to know. Physical Science, also, should by every means be well cultivated.

The cause of religion would be spared many unnecessary buffets from scientific infidels, if all our clergy knew the difference between the contradictions of their own misconceived opinions and the truth of Scripture. Then, what a source of intelligent and beautiful analogy, as well as argument when need be, would be opened up by the systematic study of nature in spare hours. What a beauty and meaning would every appearance of Nature have. There could we find:—

“Sermons in stones;  
Books in the running brooks;  
And good in everything.”

Such a knowledge would be convenient, were it only rudimentary. It would be a key to the language of nature, which would gradually and insensibly unfold its treasures in the course of our professional duties. It would be the source of such refined pleasures as could not be had from other sources. Besides it would enable a person to engage in an interesting conversation with any one, and to derive knowledge from every source. In a word a general knowledge of science tends to correct undue partiality, to widen narrow views, to indicate advantages wherever they may be, to give liberal ideas, substantial information, and unclinging pleasure.

#### NOTES OF EXCHANGES.

THE place of merit among the exchanges received since last issue, must be given to the *Oxford Under-Graduate's Journal*, which we gladly welcome to our table. It does not, perhaps, approach so near to ideal excellence, in form and typography, as some of our American exchanges, but in real, good, solid reading, it surpasses them all. In arrangement and matter, we consider it to be the typical University paper, as Oxford itself is in many respects the typical University. The local news, which in many collegiate periodicals are dry and uninteresting, except to those that are intimately acquainted with the working of the college, are in the Oxford journal of the greatest interest, because Oxford teachers, Oxford students, Oxford “eights” and Oxford cricketers have a world-wide notoriety.

Our sprightly friend, *The College Mercury*, the organ of Racine College, Wisconsin, thinks that we have slighted it in not giving it some notice in a late criticism on collegiate periodicals. We could not, of course, in a general *critique*,

which was intended to bring out the salient points of college journalism, notice every paper in detail, and our criticism of western papers may have been rather sweeping in its condemnation. We hope however that the *Mercury* will not take it as apologetic, but as honest criticism, when we say that in its external appearance we consider it to be in the first rank, and in contents only inferior to the *Chronicle* and *The Tripod*, which we singled out as representatives of western college literature.

The *Yale Naughtical Almanac*, got up by the Josh Billings' of Yale, is on our table. When sleep is drawing down the eyelids, we can draw it out from our pile of exchanges and drive the “dull god” away, by the rollicking fun in its pages. Some of the jokes and caricatures are local, and we cannot fully appreciate them; others, however, such as the *Blarsted Stoodint*, and the *Boyhood of George Washington Truthful Puer*, touch the weak points of our gravity. *Humanum est jocari*, if we be allowed to alter the old “saw” to suit our present purpose, but jest may be carried too far, and we think that the *Yale Naughtical* presents the ludicrous side of affairs, in some cases, a little too prominently.

### Correspondence.

MESSRS EDITORS:—It is with great pleasure that I receive the regular fortnightly issues of your paper. I peruse its pages with delight, and am glad to notice any signs of progress or improvement. I have also a word of criticism for anything that may seem to me to deserve it, and it is in the character of critic that I intend to appear before you now. Your last number contains some verses, (I shall not honour them with the title of poetry) which suggested to me the thought, that you were in communication with some maudlin, sentimental young woman, who had taken deep draughts from the Pierian spring. Your poetess was probably recovering from a period of sickness, and was sufficiently convalescent to enjoy the pleasant air of a summer evening in a “bower.” A wayward Zephyr, it appears, happened along at this time, but the simpering poetess will not let it go on its way in peace, and with an exclamation, such as one would give when the hideous noises of a street-brawl break upon the midnight air, calls attention to this *sly* Zephyr, that is *stealing* “its airy way into the bower” and putting forth its “breezy hand” for “the fairest, sweetest flower,” a simile by the way very suggestive of the conduct of Ah Sin on that eventful day, August the third.

The Zephyr is then asked in lines which remind us very forcibly of a common nursery rhyme, the reason for this intrusion and “intent to deceive.” Whereupon it condescends to answer for itself, and detail the purposes of its mission to the “bower,” which, it would appear, are not at all consistent with the suspicion that fastened upon it at an earlier stage of its progress. Its mission to the bower is to “fan the flow'rets lest they fade,” and to be a “vesper.” Very good offices these, but the Zephyr cannot fulfill them without considerable simpering, which adds something to the internal evidence that these lines were written by some brain-sick girl. The Zephyr, or rather its breath, which would seem to be, as somebody said, “a distinction without a difference,” “sighs for parting day, weeping dew-tears like a pilgrim, &c.” Why this sudden change? In the preceding verse it was “a vesper, breathing sweetness in its song.” Perhaps it was still singing through its tears. It, (the Zephyr) then embraces the opportunity, as public speakers sometimes say, of addressing a few words to the human family through its auditor, the poetess. Naughty Zephyr! how could you do that, after *stealing* into the bower and all that you know. However, you no doubt

considered this a good chance to exhort "mortals" to their duty. But if the exhortation fails to have any effect upon the human family, it seems to have done the poetess good. She reflects, perhaps with "dew-tears" in her eyes, that although she cannot at the same time "fan the flow'rets," "be a vesper," "weep for departing day," and give counsel to weary mortals, she can nevertheless "gather balm" (not spruce gum, we suppose) to administer to aching hearts. I finished the reading of these verses, thoroughly disgusted with all poetry of the "balmy Zephyr" class, and resolved to advise any of my lady-friends who had any intention of devoting themselves to literature, either not to write poetry at all, or be very chary of meddling with Zephyrs.

ANTI-ZEPHYRITE.

## Scientific Items.

ONE of the most remarkable features of the present age is the wide-spread enthusiasm for expedition and discovery, especially for the purposes of natural science. In almost every clime, geologists, relic and fossil-hunters may be found, endeavoring to read in the earth's strata, in the uncovered ruin, and the exhumed skeleton, the history which neither tradition nor written document furnishes. On this continent the Smithsonian Institute, under the patronage and favour of the United States Government, is doing a noble work for the sciences of Palaeontology and Ethnology. Much is also being done by the collegiate institutions, and foremost among these is Yale. Professor Marsh, of Yale, who is an enthusiastic palaeontologist, has organized and successfully carried through two expeditions to the Rocky Mountains and Pacific coast, the first in 1870, of which extended notice was taken in the last volume of this paper, and the second in 1871. Of the results of the latter the *Courant* says:

"The expedition throughout, although a very difficult one, was successful in every respect. Large collections were made, not alone of fossils, which include at least fifty species of animals new to science, but also many skeletons of rare species belonging to the present fauna of the regions visited, and in addition many valuable antiquities, which will aid in throwing light upon the history of man on this continent. Moreover, as the regions traversed were in many places unexplored, no little geographical information was obtained. The collections secured, in connection with those obtained the year before, will place this department of the Yale Museum far in advance of any in this country, and but little, if any, behind the finest collections of Europe. The stores of fossils obtained by the expedition are now being examined by Professor Marsh, and the more important scientific results will soon be published."

THE exigencies of the Parisian siege have brought prominently before us the use of micro-photography. A writer in the *British Journal of Photography* predicts that we will soon have our daily paper handed to us the size of a postage stamp, and carry our favorite poets in our vest buttons. We will see "a new edition of Macaulay complete in three shirt studs," or "the city edition of Dickens" complete in two sleeve-buttons. Every one will then carry a microscope as we do now a penknife.—*College Courant*.

ONE of the most useful inventions of the past year is that of the sand-blast, by B. C. Tilgham of Philadelphia. A piece of corundum or any other obdurate material is pierced by means of a shower of sand forced by a current of steam

through a tube with great violence. The sand-blast is also utilised for engraving upon glass. The force of steam is not needed here, and the sand is dashed against the glass by a current of air produced by a rotary fan. By means of an interposing medium, the most fantastic and beautiful tracery and designs can be made upon the glass. So different is the effect of the shower of sand upon such a medium and on the glass, that the delicate frond of a fern will effectually resist the sand, leaving a perfect pattern upon the glass. Under a covering of wire-gauze, glass has been turned by the sand-jet into a form resembling "delicate squares of blond-lace with meshes of one-twelfth of an inch and threads of one-sixteenth, a result unattainable by any other process."

By the use of a very small electrical surface sparks have been obtained and measured, the duration of whose main constituent was only forty billionths of a second. With their light, brief as it is, distinct vision is possible. Thus, for example, the letters on a printed page are plainly to be seen; also, if a polariscope be used, the cross and rings around the axis of crystals can be observed, with all their peculiarities.

There seems, also, to be evidence that this minute interval of time is sufficient for the production of various subjective optical phenomena. For example, the radiating structure of the crystalline lens can be detected when the light is suitably presented to the eye. Hence, if the retina retains and combines a whole series of impressions, whose entire duration is forty billionths of a second, it follows that a much smaller interval will suffice for simple vision. If we could still further limit the number of the views presented to the eye in a single case, it would result that four billionths of a second is sufficient, or even perhaps a far shorter time. All of which is not so wonderful, if we accept the doctrines of the undulatory theory of light; for, according to it, in four billionths of a second nearly two and a half millions of the undulations of light reach and act upon the eye.—*The Tripod*.

## College Notes.

OXFORD.—Prince Hassan, son of the Sultan of Egypt, arrived at Oxford on Monday, January 21st, with his Oriental suite to continue his studies.

ROBERT COLLEGE.—For the first time, Robert College, near Constantinople, celebrated its Commencement this year on its own ground and under its own roof. Its massive building, completed at last after two years of labor, and six years of impatient waiting for permission to build, "stands on its regal eminence, a feature of the Bosphorus from the Euxine to the Marmora." Its hundred and fifty students include Greeks, Armenians, Turks, Jews and Bulgarians; Germans, English, Scotch and Americans; Swiss, French and Italians, and a dozen nationalities besides; all brought together in their youth to have part in the same class and be moulded in the same instruction. The College Faculty is as diverse in blood and speech as the young men under their care.—*Williams Vidette*.

SUBSCRIPTIONS received since the last issue from the following:—T. C. Shreve, Geo. Ross, Rev. S. Boyd, R. Scott, F. D. Corbett & Co., H. Hind, Rev. J. Elliot, Rev. J. Munroe, Farquhar & Forrest, J. Forrest, B. A., J. H. Pipes, A. Mingo, A. Cameron, J. J. Cameron, B. A., Rev. T. Sedgwick, R. Noble, W. Bearisto, J. S. Smith, J. D. Storey, A. Creelman, H. Primrose, Rev. R. Sedgwick, I. A. Grant, Dr. Avery, J. S. Maclean, S. Waddell, J. S. Hutton, J. W. Gorham, J. J. Richards, W. M. Brown, Mrs. J. McKean, I. Matheson, C. Primrose, W. S. Robinson, Hon. Provincial Sec'y, Rev. A. C. McDonald.

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