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# February 1894

The Dakota Student

February 1894

Vol. VII. No. 4.

# THE STUDENT

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# THE STUDENT

VOL. VIII. UNIVERSITY, NORTH DAKOTA. NO. 4

## Bacteria.

[CONTINUED FROM DECEMBER NUMBER, 1893.]

### IV. PHYSIOLOGY.

#### HABITAT.

Of all known forms of life, none are so universally found as bacteria. They are in the air we breathe, the water we drink, the food we eat, and the soil we tread upon. Our bodies, our clothing, and our houses swarm with them. They do not, however, thrive equally well in all these media.

Those found in the air are in a dessicated condition, having been wafted into it along with particles of dead organic matter. In this condition the currents of air may carry them to distant localities. The number of bacteria in the air varies much in different places and under varying conditions. But few are found in the air in mid-ocean, and on the summits of high mountains, while near stagnant pools, and in crowded cities, the air contains them in enormous numbers. They are most numerous in the air laden with dust during dry weather. The air after heavy rains is nearly free from them. Bacteria can not escape into the air from the surfaces of cess-pools, sewers, and liquids containing them, but the level of these may be so lowered as to allow surfaces before covered to become dry and particles to which bacteria are attached to be carried off by the wind. When no longer wafted by the wind they fall upon exposed surfaces, on which, if given the required moisture and temperature, they grow and multiply rapidly.

The extended experiments made in Paris by Miquel during the years 1880, 1881, and 1882, are full of interest. He obtained an average of three hundred thirty-four germs in one cubic metre of air from the laboratory at Montsouri, and sixty-one, in an equal volume of air from the park at the same place. Though these figures include not only bacteria, but also the spores of the mould-fungi, so apt to be present in all open air experiments in even greater numbers than the bacteria themselves, they serve to show the great difference in the relative number of bacteria present under different conditions.

The water of the ocean, of lakes and streams, being exposed to the dust laden currents of air passing over them must necessarily receive bacteria from the constantly falling dust and the down-washing of the rain. The rate of their increase in any fluid will depend chiefly upon its temperature and the amount of organic matter it contains. The water in springs and wells which comes from deep strata have only few germs, while that of stagnant pools, sluggish streams, and the sewers of large cities teems with micro-organisms.

It is highly interesting to notice how greatly the number of germs varies in water from different sources. The water from the melted snow of a glacier in Norway was found by Schmelck to contain only two bacteria per cubic centimetre. An examination of rainwater collected in the centre of Paris, during a rainy season, gave only 19 bacteria per c. c. The water of the Seine before reaching Paris has been found to contain 300 bacteria per c. c., while it contained 200,000 per c. c. after receiving the sewerage of the city. The examination made in 1886 of the water in the Potomac at Washington gave 3,774 bacteria per c. c. in January and only 75 per c. c. in October. Lake water, as a rule, contains fewer bacteria than that of rivers. The water of Lake Geneva was, by Fol and Dunant, found to contain 38 bacteria per c. c. In wells, fed or contaminated by surface water, bacteria are very abundant. Link examined the water of forty-seven wells in Stettin and obtained from 100 to 18,000 bacteria per c. c. Springs are often free from bacteria. The water supplied to Dantzig from the Prangenaur Spring has in several examinations failed to show the presence of bacteria. There are, however, exceptions to this rule, as the water from certain springs near Jena have been found to contain from 32 to 156 bacteria per c. c. No water is so rich in germs as that of sewers. Bischoff estimates the number of bacteria in the water of the London sewers at 7,500,000 per c. c.

We should like to think of our food as being free from bacteria, but the results of numerous examinations, make this impossible. The knowledge of the great numbers in which they exist in nearly every article of diet is enough to startle almost every one. Milk, being almost universally used, has been made subject to very rigorous examinations. The results obtained by Sedgwick and Batchelder may, in this connection, be studied with profit. They found in milk from cows well-fed, and kept in clean stables, and milked into sterilized bottles, 530 bacteria per c. c. From milk obtained under the usual conditions they obtained on an average 30,500 bacteria per c. c. From fifty-seven samples of milk taken directly from the milk-wagons in Boston they obtained an average of 2,355,500 bacteria per c. c. Prof. Renk examined the milk supplied to the people of Halle and found it to contain from 6,000,000 to 30,000,000 bacteria per c. c. It is here well to remember that disease-producing bacteria have only occasionally been found in milk.

Surface soil is no less rich in germs than is water. As it is chiefly composed of dead organic matter it offers an abundance of pabulum or nourishment for bacteria. These forms are of great interest and importance on account of their relation to disease, nitrification, and decomposition. Soil not disturbed contains fewer bacteria than that which has been cultivated and fertilized. According to Miquel, one grain of earth from the park at Montsouri, Paris, contained 700,000 bacteria, while one grain from a cultivated and fertilized field gave 900,000. The depth at which bacteria are most numerous in the soil seems to be about one-half metre. Below one and one-half metres no bacteria have been found in a few instances. Sandy soil contains fewer germs than soil rich in clay and humus. Manfredi, in 1892, published the results of his investigations of the dust in the streets of Naples. In the streets least used, where the hygienic conditions were the best, he obtained 10,000,000 bacteria per grain, while dirty and busy streets gave as high results as 1,000,000,000 bacteria per grain.

The surface of the human body is far from being free from bacteria. The excretions from the skin and the dead epithelial cells supply their necessary nutriment. The personal

habits, the clothing worn, and the season of the year determine to a large degree the number, as well as the species, here found. More than twenty different species have been found upon the surface of the human body. Of these about nine are disease-producing. Miquel, in examining the "wash-water" from the floating laundries of the Seine, found it richer in bacteria than even the sewers of Paris. He estimated their number at twenty-six millions per c. c.

The number of germs found in the mucous membrane of the eyes, the nose, and the mouth is far greater than that of the surface of the body. The amount of moisture and organic matter, and the temperature of these parts are highly favorable to their development. More than eighteen species have been found in the nose, and about fifty in the mouth. Of the latter more than twenty species cause disease.

The stomach, receiving the secretions of the mouth, which are laden with germs, often contains numerous bacteria. This is, however, not the case when the stomach is in its normal condition, as the gastric juice, containing hydrochloric acid, destroys several species of bacteria.

The intestines are more favorable to the development of bacteria than the stomach, on account of their alkaline reaction. More than sixty forms have been found in the intestines of man. Of these at least twenty-five are pathogenic bacteria.

### MOVEMENT.

Most forms of bacteria are capable of motion. In many of these motile species there have been discovered slender whip-like processes called flagella. The character of the movement varies greatly with different species. The micrococci, or spherical forms, are in general devoid of movement, and have no flagella. Their vibratory movement, which is common to all minute particles suspended in a fluid, has often been mistaken for a vital movement. But recently movement has been detected in two micro-cocci forms, and in one of these flagella have been discovered. The individuals of this motile form move by means of their flagella alone. But when joined to form filaments their movement is slow and worm-like. The spirilla, or spiral form, have a rapid corkscrew movement. The bacilli, or rod-shaped form, move to and fro, or dart rapidly forward. When joined to form a flexible filament they have a serpentine motion.

### NUTRITION.

Bacteria, being vegetable organisms, destitute, as a rule, of chlorophyl, require oxygen, nitrogen, carbon, water, and certain mineral salts for their nutrition. The three forms of nutrition recognized among bacteria are the saprophytic, the holophytic, and the parasitic. The saprophytes, which are far the most numerous, are characterized by being able to render the food-stuffs they absorb soluble and diffusible outside their bodies. The holophytes, or those having chlorophyl, like true plants decompose carbon di-oxide and combine the carbon with the water and mineral salts they contain. Van Teighem mentions three of these forms. There may, however, be some doubt whether these are true bacteria or algae. The parasites do not live upon decomposing but living organisms. They derive their nourishment from the food-stuffs already made diffusible by their host. All bacteria require oxygen, though some forms, called anaerobies, are destroyed, or injured by it in the free form found in the air. Those thriving in free oxygen are called aerobies. The former derive their oxygen from the compounds they decompose. Carbon is derived from the various organic substances, such as sugar and starch, found in the solutions in which they grow.

Water is necessary to the growth of bacteria as it is to all forms of life. Some forms are killed by dessication, while others only remain inactive during the process. Very small quantities of mineral salts are necessary to the life of bacteria. The more important of these are the compounds of sodium and potassium, with a few phosphates and sulphates.

PRODUCTS.

In all active cells, animal or vegetable, there is a continuous exchange of matter. Certain elements are taken in as aliments and others are excreted as waste matter. Grouping bacteria according to their products, or the changes they produce in the media in which they grow, we have the chromogenic, or pigment-forming, the zymogenic, or fermentative, the saprophytic or putrefactive, and the pathogenic, or disease-producing bacteria.

The various pigment-forming bacteria elaborate substances of all the different shades and colors. The pigment being generally outside the cell-wall and in some cases soluble, may be isolated and carefully studied.

The action of the fermentative bacteria may be seen in the production of acetic acid from the alcohol of wines. They are the cause of those delicate flavors we prize so much in butter and cheese. Success in the production of the various kinds of cheese and of butter depends chiefly upon the kind of bacteria we allow to enter and perform the ripening processes.

The importance of the putrefactive bacteria is even greater than that of the fermentative. These act as the scavengers of the earth. Were it not for the gigantic work they perform in producing decay, the surface of the earth would become uninhabitable, owing to the vast accumulation of fallen vegetation and of dead animal matter. They make possible the perpetual equilibrium of animal and vegetable life, by reducing dead organic substances to such a form as can be used in the nutrition of plants, which in turn serve to nourish animal life. Were it not for bacteria, animal life and plant life would be absolutely impossible.

REPRODUCTION.

All bacteria multiply by simple transverse fission. In some this is the only mode of reproduction. In others reproduction takes place by the formation of spores. When the division of transverse fission continues, and the cells remain linked together, a chain or streptococus is formed in case of micro-cocci, and a filament or leptothrix in case of bacilli. The micro-cocci, or spherical bacteria, may, besides dividing in one direction into pairs, divide in two directions into fours, and in three directions into "packets."

Some bacteria, under favorable conditions, divide every twenty minutes. In twenty-four hours, a cell will, at this rate, have a progeny of 16,777,200 daughter cells. Two processes of spore-formation occur in bacteria, resulting in endospores and arthrospores. In the formation of endospores the protoplasm of a long filament becomes granular and small specks appear at certain points. These specks develop into egg-shaped spores, which are set free at the disappearance of the cell-wall of the filament. In the formation of arthrospores certain cells of a filament enlarge, while the remaining cells die, setting free the enlarged cells which form the spores.

Spores, on account of the difficulty in staining, and their great resistance to heat and chemical reagents, are thought to have two cell-walls. The temperature best suited to the multiplication of bacteria is that of the human blood. Spores will retain their vitality in much higher temperatures than fully formed bacteria. Low temperatures arrest the activity of

bacteria though it does not destroy either the spores or those fully developed. When the spores are placed in suitable media their protoplasm breaks through the cell-wall and develops rapidly into bacteria.

The questions pertaining to the pathogenic, or disease-producing bacteria, will be considered in a following article.

CARL A. ENGEBRETSON.

## Obituary.

Death "like an untimely frost upon the sweetest flower of all the field" on the 16th of January took from us Blancha S. Percival.

Friends, instructors and classmates unite to mourn her loss.

In comparatively good health she left us to spend Christmas vacation at her home in Devils Lake. When the time came to return she was too ill to leave home and physicians agreed that she was suffering from an attack of typho-malarial fever. With the best of care and medical treatment she had begun to improve; but human hands were not destined to preserve the life of the loved one, and on Tuesday, January 16, at 8:20 P. M., she passed peacefully away.

Miss Percival was born in Jericho, Vt., Feb. 11, 1873, and at the age of ten came with her parents to Devils Lake. Thus she was one of North Dakota's own daughters and possessed the sprightliness and energy so characteristic of this Northwest. In October, 1889, she came to the University and had lived and labored here until the present time. In a few short months she would have graduated with the highest honors, as a member of the class of '94. Earnest, zealous, and sincere, she was a brilliant scholar and a faithful friend. Socially she was a universal favorite and the happiness and joy she afforded all about her seemed but a part of her nature.

We can not find words in which to express our appreciation of her noble character. Ever kind and gentle, she possessed withal a rare independence of character—an independence which staunchly maintained the right and ever defended the weaker side.

In lives such as that of Miss Percival the world loses in the measure in which it has gained. She had accomplished much and had been useful to many; a future of rare usefulness extended before her. Those who knew something of her plans and ambitions, bow with sorrowing hearts to the Divine will.

"Nothing now is left
But a majestic memory"

And yet "Death is the gate of life."

RESOLUTIONS.

Adopted by the Senior class Jan. 19, 1894:

*Whereas*, Our Heavenly Father in his infinite wisdom, has removed from our midst Blancha S. Percival, and

*Whereas*, We realize that in the death of our beloved classmate we have sustained an irreparable loss, therefore be it

*Resolved*, That, while bowing to the will of God, we deeply mourn the death of her whose sterling qualities as a student, as a genial companion and as a loyal friend, have made her dear to all;

That we shall always hold her in loving rememberance as one who, ever faithful, kind and noble, was the life and pride of this her class;

That we extend to her sorrowing parents and sister our deepest sympathy, and in their great bereavement commend them to Him who comforts the afflicted.

(Signed,) WILLIAM L. COOPER,
FRED E. SMITH,
HARRY A. BRONSON,
HENRIETTA T. PAULSON.

The following resolutions were adopted by the student body as a whole:

*Whereas*, Almighty God has seen fit to call from us our beloved fellow-student, Blancha Sophia Percival, and

*Whereas*, The departed was a zealous student, a bright and genial companion whose happy disposition and noble character won for her the friendship and esteem of all about her; therefore, be it

*Resolved*, By us, her schoolmates, that in her death we feel we have lost a loving companion, and the University one of its most loyal daughters.

*Resolved*, That we sincerely sympathize with the father, the mother, and the sister in their bereavement, and pray that God may strengthen and comfort them.

*Resolved*, That a copy of these resolutions be sent to the parents of the deceased, and further, that they be published in THE STUDENT and newspapers of Devils Lake.

For the students: GEORGE A. BRENNAN,
HARRY A. BRONSON,
WILLA E. CAROTHERS.
Committee.

---

It becomes our sad duty to record the death of our fellow-student, Miss Clementena L. Styles, who died at her home in Nowesta, N. D., January 9th, 1894. She became a member of the University last September, entering the first preparatory class. Soon after returning home for Christmas vacation she was taken sick with typhoid fever, which brought her, at the age of eighteen, to the grave. She was with us a short time only and, consequently, was not so well known in this institution as those who have been here for years. But what little we know of her leads us to believe that by her death we have been deprived of one who gave great promise of future usefulness. In her deportment she was always a lady, in her relations with her companions, kind and gentle, and in her classes an industrious, conscientious student. What more can be truly said of the best of us? While we mourn her untimely death, we offer our heartfelt sympathy to her sorrowing relatives and friends.

## Communication.

Editor Student:

In reading the article on Bacteria in the December number of THE STUDENT by Mr. Carl Engebretson, '95, I noticed a few discrepancies. The article says: "Leenwenhoeck invented the microscope in 1775." That is hardly so, for he died 1723. I have no books at my command, on the subject, but the dnate of invention is more nearly 1682 than 1775. In another place we read: "Muller observed their (i. e. bacteria) forms, mode of progression and other characteristics in 1786." Muller died 1784. Again we read: "Muller, in 1773, grouped the micro-organisms into two forms of Infusoria, the Monas and the Vibrio." Now this is a little inconsistent when we see stated in the first part of the paper: "Leenwenhoeck invented the microscope in 1775 and shortly afterward gave to the world the first description of these minute organisms." How was it possible for Muller to group the micro-organisms into two forms without the aid of a microscope?

W. W. K.

Thompson, N. D., Dec. 16, 1893.

[The above communication was received too late for publication in the January issue of THE STUDENT. We gladly publish it now, and wish to say in explanation of the seeming inconsistencies that in copying his manuscript Mr. Engebretson wrote "1775" in place of "1675" and so the article should have read: "Leenwenhoeck improved the microscope in 1675." In regard to the criticisms on Muller's observations, Crookshank in his Manual of Bacteriology says, page 5: "Muller in 1786 criticized the work of those previous writers and took into account the form of the micro-organism, its mode of progression, and other biological characters." From this it would seem that Muller's works were not published until after he died, but we do not know such to be the case.—ED.]

# THE STUDENT

Published monthly during the University year by the Students of the University of North Dakota.

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THE Question is often asked, and we think justly, why is there such a wide difference in our two courses in the matter of elective studies? In the junior and senior years of the Arts course, analytical geometry, physics, calculus, mineralogy, biology, astronomy and international law are all elective, while in the same years of the Scientific courses there is not a single elective study. We fail to see why the Scientific course, which, from its very nature, should be more flexible than the other, is bound by such strict laws and offers so little choice. It may be urged that, in making the course more elective, we still run the chance of turning out a class of specialists who can see nothing of value in anything outside their own narrow line—a class of people utterly disgusting; but, on the other hand, are we not in danger of committing the more serious offense under the present system of spreading the student uniformly over so many subjects, some of which are foreign to his liking, that in the end he will be too thin and transparent to stand the test of either scholarship or usefulness? Of course, we are only laying a foundation for an education here and that foundation must be broad if we are to build high, but yet we feel that electives could be so arranged that this base, besides having breadth, might also have sufficient depth and stability to support the superstructure we propose to rear upon it. It is folly, for example, to force a student through calculus, analytical mechanics, or meteorology when he has no liking for them or when they can be of little value to him, and meanwhile deprive him of the privilege of a more extended study in other lines in which he might be useful in after years. Our time is very limited. We cannot get all. Why not get something we may take with us and use? It is time this subject was being discussed and we hope to hear more about it soon. The columns of THE STTDENT are open for the discussion of this or any other subject that students may deem of interest.

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IN The busy life of today, we are everywhere reminded that constant application and thoroughness are essential to success. The specialist devotes his whole energy, time and talent to the pursuit of his purpose. Competition necessitates concentration rather than expansion of energy. Granted that the student enters college to obtain an education, is there not many a student who yields to just this tendency under circumstances that are not governed by this law? He feels that soon he must compete with a world of educators, that there is a multitude of facts with which he must familiarize himself, that book learning alone is

what he must seek to acquire. He makes books his only companions and avoids society. If by chance he is persuaded to go to an opera or reception, his conscience mars all pleasure. He does not pause from his arduous duties long enough to consider the true meaning of education. He is the college hermit. Education consists in the development of the *whole* man, physically, morally, and intellectually. Surroundings should exert a great influence over the college student, since he is passing through the process which makes or unmakes him as a man. Since Fate has placed us so far from humanity and seems to say *Feras non culpes*, let us at least make something of the social opportunities given to us. There is surely sufficient genius among us to make our societies and Saturday evening receptions more attractive than they now are. It is a mistake to suppose that the able scholar is so because he devotes all his time to study. He is always noted for the skillful allotment of his time and his power to "buckle down;" while physical, mental, and social development are contained in his definition of a liberal education.

---

A Few weeks ago the board of editors petitioned the faculty to have original work on THE STUDENT accepted as an equivalent for one original production in rhetoricals each term. But alas! our hopes are dead and our petition still sleeps on the "table." This is only another reminder of our self blown pride. By some means we had come to make ourselves feel that our work was at least not viewed with disfavor by those worthy to judge, that one day we might hope for a smile of encouragement in our toils. These were idle dreams, and like the spring poet who has just beheld his choicest production vanish into the waste basket of the city editor, we return to give vent to our sorrow and then forget all. Do better, ye editors, do! Three issues of THE STUDENT are not an equivalent for one encyclopedic-plagiarized rhetorical!

---

IN a time of such wide-spread sickness as the one through which we are just passing our comparative freedom from the disease at the University is noteworthy and is a cause for congratulation. True, three of our stu-students have died this term, but they all fell ill at home during vacation. Whatever be the causes of this disease, so fatal to the young, the University has been remarkably free from it. Some medical authorities assert that it is caused by a germ floating in the air, others that it is caused by animal poison taken into the system through impure water, and that it is not contagious. The latter hypothesis seems to be strengthened by our own experience, for while, as stated above, the city has been suffering, the University has gone almost free, a fact which becomes significant when we remember that all the water used at the University for cooking and drinking purposes is boiled and filtered, while this is the case with the city to a limited extent only. All this leads us to believe that the disease is not contagious and there is consequently no ground for fear on the part of students or their parents or relatives With our ample precautions we are safer here than we would be in most other places. It has always been so and it is so now. Therefore we can not help regarding the ordering home of students as both unnecessary and unwise, since, while it does not insure immunity from the disease, it renders unavoidable the wasting of both time and money.

---

BY Numerous and vigorous objections to the new schedule of recitations in Tactics, the boys have at last succeeded In getting it changed. The lessons will hereafter be only half as long as the original plan provided. We

can now reasonably expect to find time to study our lessons in Tactics and to learn a little something about military science. Under the former system we found both extremely difficult.

---

IN The recent discussion in Adelphi on pessimissm and optimism, the optimists might have silenced their opponents forever by pointing out the remarkable fact, that our faculty have lately taken steps toward excusing us, the young men, from practical instruction in military drill before the completion of the college course. Their ideas still seem to be vague and their plans indefinite, but we think their minds are earnestly seeking after the truth. Although a cadet's chance of being excused depends on his becoming a commissioned officer, so that if he does not reach the dignity of at least second lieutenant he can never be excused from drill at all till he graduates; and although he will not even then be exempt from service in the military department, since he will be required to assist the commandant in giving theoretical instruction to cadets; still, insignificant as these concessions may seem to others, they are to us the most hopeful indications of a better time. There is now a possibility, though a remote one, we confess, that the time may be reduced from seven to five years of military drill. Just see what a gain that would be. If there are thirty-eight weeks in a school year and a student spends two hours a day for four days each week on Tactics—which is the very lowest estimate—then in two years he will save 608 hours or, reckoning eight hours for each day, 76 days. There still remains the respectable number of 190 days which he must devote to "acquiring a gentlemanly carriage and learning to obey constituted authority." From this last reflection it would seem that we are still perfectly safe; the bars are not all down yet. But in the face of the fact that such a movement is afoot among us and that the authorities have even considered the suggestion to shorten the time for drill, who is there so bold as to declare that the world is growing worse? Pessimist and Kicker, begone! Seek some other and more congenial community. Henceforth we are all optimists.

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WE Are pleased to publish in this issue a second article from Mr. Engebretson on Bacteria. In this time of so much sickness this subject is of great importance and Mr. Engebretson brings forth many suggestions well worthy of our consideration. The subject will be completed in the April number.

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THE Course of lectures arranged to be delivered by the members of the faculty came to an abrupt close about the middle of last term. Much was expected in this line and in the beginning our hopes were justified. Several excellent talks and lectures were given and were well received by the students. We are sure that the professors have not exhausted their store of information, and equally sure they would not lack willing and interested listeners. Many students who are here for the first time are especially anxious to hear the professors lecture. Some few members of the faculty have not been heard from and they should be called upon, since we are sure they could give us interesting productions. This has been an important feature of our school life and we hope the matter will be given the attention it merits.

---

DURING the last few weeks our museum has received several important additions. The valuable collection of North Dakota clays, prepared by Prof. Babcock and exhibited at the World's Fair, was mentioned in our last issue. A liberal share of the North Dakota exhibit was allotted to us, and through the efforts of Prof.

Kennedy, who made a special trip to Chicago, many valuable exhibits from other quarters were secured. Mrs. Lettie Dobell of Grand Forks, has turned over to the University an assortment of ores, a rare collection of old firearms, coins and Indian relics, to be held in trust for a term of years. We are especially thankful for the latter addition and commend Mrs. Dobell's example to the attention of others having private collections. Our museum is steadily growing in interest and value. Anything of interest will be thankfully received and due credit will be given.

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ON Account of the disordered condition of the State finances, it was rumored during the holidays, that the University would be closed this winter. We are pleased to state that there is now no danger of such a calamity. There is a lack of ready funds, it is true, but measures have been taken to tide the matter over. The co-operation of the faculty has been necessary and they suffer most by the arrangement. Their salaries come slowly though surely. We are under deep obligations to them for their sacrifice.

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### Favorite Strains of Famous Singers.

Miss L. R.—For they all love Jack.

Mr. C. A. E.—Can hearts so soon forget!

Mr. H. G. B.—I was seeing Nellie home.

Miss N. B.—See him again, I never will, so boys, I'm on the market still.

Mr. G. B.—Kissing my sweet-heart as lovers can.

Mr. W. L. C.—And the cat came back.

Miss McC.—But I'm sorry I introduced her to the dude who couldn't dance.

Mr. F. B.—O, who will smoke my meerschaum pipe, when I am gone away.

Miss H. T. P.—Love is a dream, O beware of the waking.

Mr. C. B.—Had I called Sweet William in.

Miss B. M.—Kiss and let's make up, my darling.

## College · World

St. Peter—"Halt."

New Spirit—"May I come in?"

St. Peter—"I'd rather not. You are just out of college, and we don't want any advice about running the Universe."—*Ex.*

Geo. R. Smith College opened at Sedalia, Missouri, Jan. 18.

We are promised some news from the Fargo Agricultural College for next month.

Miss Dorothea Klumpke, who received the degree of Doctor of Mathematics in Paris, Dec. 14, was the first woman who ever passed such an examination.

In Cambridge, Mass., an evening college has been organized among the working men. Harvard professors give their time, and it costs the men twenty-five cents per month.

Dartmouth, in whom we all feel a certain interest since we have furnished her with a professor of biology, gets $10,000 as the gift of Lucy Spaulding of Nashua, N. H. This college will no longer confer the degree of Ph. D.

The following is from an *Augusta Chronicle* of last year, but is no less interesting at present: "We know that every year many Americans go abroad to study, but we scarcely appreciate the strength of the current setting this way. An examination of recent university catalogues shows that practically every civilized nation in the world is represented by students now in America. In a single great institution, the University of Pennsylvania, there are students from 28 foreign countries. The Massachusetts Institute of Technology alone shows students of 18 nationalities; 17 are represented in the University of California, 15 in both Harvard and Yale, 14 at Cornell and Michigan, 10 at Prince-

ton, 9 at Lehigh and 2 each in Brown and Wesleyan. Even remote countries like Japan send many students here, Yale having this year seven Japanese students, the University of Pennsylvania six, Cornell five, Harvard four, and many other colleges one or two. Our excellent professional courses are the attraction to most of these foreigners, the University of Pennsylvania medical and dental schools showing today seventy-five foreign students, chiefly Europeans.

# The Alumni

Graduates are requested to communicate items of interest to this column.

Corrections of any errors made in this column will be thankfully received.

Matter for publication should be sent in before the twentieth of each month.

Address all letters to

THE STUDENT,
UNIVERSITY, N. D.

It seems to be the opinion of many of the Alumni that in view of the stringency in the money market the proposed banquet in June could not have a very full attendance, and so, for the present, the matter will be dropped. We do wish some graduate would write to this column and tell the other members and under-graduates what he or she is doing and how he is getting along. We are all interested in you. It takes a person half his time to answer questions about the members of the Alumni. Write and tell them something about yourself. For the next issue we ask John S. Macnie, '93, to give some of his impressions of the College of Physicians and Surgeons, New York.

The following is clipped from the Montreal Daily Herald, of Saturday, December 9, 1893: "During the recent visit to town of His Excellency, the Governor-General, and Countess Aberdeen, Sir Donald Smith gave a dinner in their honor, which later on in the evening developed into a reception of considerable magnitude. One of the features of the evening, to my mind, and it evidently attracted the attention of many of the guests, was a solo played on the guitar by an accomplished young artist, Mr. C. F. E. Fiset. His Excellency took great interest and manifested considerable delight in the performance of the young artist, whose execution on the instrument was somewhat of a revelation to many of those present."

# Athletics

We are pleased to note that Lieut. Farnsworth's gymnasium class is beginning to revive the old athletic spirit among the boys. It is high time that some movement be taken and we hope the returning interest will inspire the students to make some plans for the summer sports. All eastern colleges have their boat crews and baseball teams organized and in training by February first. Although our gymnasium is too small to practice out-of-door sports in we should nevertheless manifest our interest by reorganizing the Olympic Athletic Association and by taking some steps to insure its success for the coming summer, not forgetting to avail ourselves of all the advantages our gymnasium offers. It has been stated by some of our leading athletes that we have material for an excellent baseball team, and it is their intention to spare no pains in making it a success. In the first place, they expect to have a manager who thoroughly understands the management of a nine and who will give special attention to coaching the club in team-playing—a thing which is very essential to a successful nine and

which has heretofore been sadly neglected. The nine will be organized under the immediate control of the manager, with regular hours for practice and systematic training. It is their expectation now, not to confine their games to matches with clubs of the immediate vicinity but to arrange games with some of our sister colleges. It is understood that the nine can obtain the use of the Y. M. C. A. baseball park in Grand Forks and in that way may be able to pay their own expenses. Now in order that these plans may mature, it is necessary to have the co-operation of every student. For, in the first place, the nine must have suits and an entire new apparatus before any successful work can be done. Let each of us then assume our responsibility and do what we can to make a good baseball nine and a successful Field Day.

Call a meeting of the O. A. A. Elect new officers (for the old ones seem to have hibernated). Solicit new members and make plans for raising money. Remember that athletics are a very important factor in college life and that we all are responsible for their success. Shall we then let ourselves be eclipsed by our sister colleges and let any country nine beat our baseball team? Wake up, boys, and let us see if we can distinguish ourselves this season.

### Y. W. C. A. Topics for February.

| DATE. | SUBJECT. | LEADERS. |
|---|---|---|
| Feb. 4 | Lessons from Paul's Life, Acts 28: 30-31 | Miss Bisbee |
| Feb. 11 | Giving Our Best to God, Mark 12:28-33, 41-44 | Miss Paulson |
| Feb. 18 | God's Promises and their Proofs, Heb. 6:9-20 | Miss Kildahl |
| Feb. 25 | What Shall I do to be Saved? | Mrs. Babcock |

Y. M. C. A. PRAYER MEETING TOPICS FOR FEBRUARY.

| | | |
|---|---|---|
| Feb. 7 | The Power of God's Word in the Heart, | Ps. 119:9-16 |
| Feb. 14 | Thou God seest Me | Jer. 23:24 |
| Feb. 21 | Afraid to do Right | Mark 15:15 |
| Feb. 28 | Led by the Spirit | John 14:15-16 |

Instructor in Latin.—Will you decline that noun, please?

Student.—Yes sir, with thanks.

# Exchange

*The Earlhamite*, from Earlham College, is a welcome visitor to our exchange.

***

The *Macalester Echo* is one of the brightest bi-weeklies on our exchange table.

***

The special number of the *Common School* for January contains Mr. Perrott's lecture on the University of Oxford, as delivered before the State Teachers' Association.

***

The student who takes a living interest in societies, school papers, athletic associations, and other organizations is one who will work with zeal in every walk of life, social, religious, or political, after leaving his *Alma Mater.*—*Ex.*

***

THE STUDENT, of the University of North Dakota, is one of our best exchanges. Its neatness and high literary character as well as the fact that it is a practical students' paper, make it equalled by few of our college magazines.—*Volante, U. S. D.*

***

Students should not neglect to read the exchanges. They will be found on a table in the library. The list contains many of the best college monthlies and weeklies in the country, and will repay any one who has time to glance over them from time to time.

***

The faculty of Boston University have voted, to permit work on the college papers to count an hour's work in the college course, allowing seven hours per week to the managing editor and two hours to each of his associates. We might say to other institutions of learning: "Go thou and do likewise."—*Palladium.*

[We second the motion.]

Cadet in Co. A. to cadet in Co. B.—Well, did you get an appointment in the last general order?

Cadet Co. B.—Yes,—a *dis*-appointment.

# Local

Fred Bechdolt is with us again.

Mr. Bonlie, an old student, returned Jan. 19.

A. H. McDonald returned to his work a week late.

An open meeting of the Adelphi is to be held February 22.

Hon. Alfred Dickey visited the U the early part of this term.

Mr. Love has resumed his work in the Commercial department.

Miss Lizzie Angier visited a day with Miss Forbes at Minto, Jan. 2.

Miss Nellie McClory of Grand Harbor, N. D., is one of our new students.

A number of our students attended the teachers' examination Jan. 12.

Miss Fannie Robinson was called home on account of the illness of her father.

Miss Cora Adams, one of our town students, has recovered from an attack of the fever.

Alonzo McDonald, one of our old-time students, returned to us the first of the term.

The students of the Commercial department attended the funeral services of Miss Frank.

Robt. Ray, who has had some trouble with his eyes, spent a few days at home this month.

Miss Nellie Wilkinson, of Devils Lake, was called home by the illness of her mother a short time ago.

Miss E. Nelson from White Earth, Minn., is among the list of new students in the preparatory department.

Miss Olson, of Fisher, visited her sisters here Jan. 13 and 14, while on her way to attend school at Moorhead.

Mr. Silvernail will deliver a lecture on penmanship before the next meeting of the teachers' association of this county.

A number of promotions were made in the military companies this term. From present indications it looks as if ability is to be recognized in the future.

Miss Hershey, formerly a student in the normal department, now a teacher in the public schools of Grafton, spent a night with Miss Paulson a short time ago.

Sister Augustava, from Dr. Engstad's hospital, is the University nurse. She pleases all with her quiet, gentle ways and will, no doubt, prove a treasure to the U.

Misses Hays, Irwin, and Taliff of Park River, N. Dak., visited the University Jan. 3. Miss Hayes is the principal and Miss Irwin one of the teachers in the Park River schools.

The Misses Milla and Clara Olson of Fisher, Minn., are among the new ones who have come in this term. We are glad to see new girls coming in as "girls" are notably scarce this year at the U.

Mr. Blanchard has lately taken charge of the singing at the chapel exercises. He meets those who are desirous of learning to sing for ten minutes' practice before school in chapel each morning.

The band made its first public appearance for this year in chapel on Jan. 11. We must say that our band is one of which we can be truly proud. Everyone was pleased beyond measure to see the progress it has made.

Mr. Austin, a former student, now principal of the Emerado schools, visited with us a few days this term. Mr. Austin is a conscientious worker and the people of Emerado are fortunate in securing his services for another year.

Fred Bechdolt went down to Hillsboro Sunday, Jan, 21, on *business*. It evidently took some time to transact it as Fred did not return until Wednesday night. Wonder what was the attraction? We also wonder what that market basket he brought up to one of the girls, contained.

The way the students cling to the University is quite remarkable. Many have received letters to come home on account of the sickness, but all who could have remained here, and have written home assuring their parents that they are perfectly safe here. This is as it should be. It shows the students' interest in their work and their faith in the management of the University.

We are pleased to state that Miss Lottie Robinson, who has been confined to her bed for some time with the fever, is rapidly recovering and we hope by the time THE STUDENT appears to see her entirely recovered. Her mother, Mrs. Robinson, has been here the past week caring for her.

The preparatory students have the Per Gradus entirely in their own hands. A number of the young ladies have been admitted this term. This is an excellent chance for the young people of the lower grades to embark in literary work. If they get practice in this line of work before entering the Freshman year they will have little cause to fear the chapel rhetoricals.

The January number of the *Common School* finds occasion to make an attack on our normal department. We think the attack uncalled for. It will be time enough to close our educational institutions when the state demands it. The *Common School*, when it writes again, would do well to say something about the cost of maintaining our normal department and also the class of work done here. Surely it is not the place of the only educational journal in North Dakota to attempt to tear down the oldest established normal school in the state.

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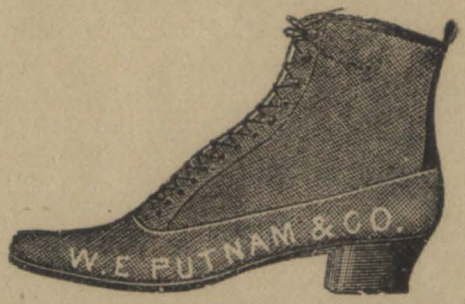


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