

Spring 5-15-1894

The Cadet May 1894

The Cadet Staff

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THE CADET



A New Year's
Greeting.

JANUARY NUMBER.

A Good New Year's Thought for Cadet Readers.

"There is no action of man in this life, which is not the beginning of so long a chain of consequences, as that no human providence is high enough to give us a prospect to the end."

THOMAS OF MALMESBURY.

Legislative Number.

The Cadet.

PUBLISHED BY THE STUDENTS
OF THE MAINE STATE COLLEGE.

ILLUSTRATED.

1894-'95.

ILLUSTRATIONS.

FRONTISPIECES.

May.....	Prof. Walter Balentine
June.....	Pres. Harris
July.....	Hon. Louis C. Southard, '75
October.....	Lieut. Mark L. Hersey
November.....	Oliver Wendell Holmes
December.....	"Three Witches they were 'neath the gallows tree"
January.....	Chief Justice Peters
March.....	U. S. National Museum
April.....	Longwood, Napoleon's House at St. Helena

OTHER ILLUSTRATIONS.

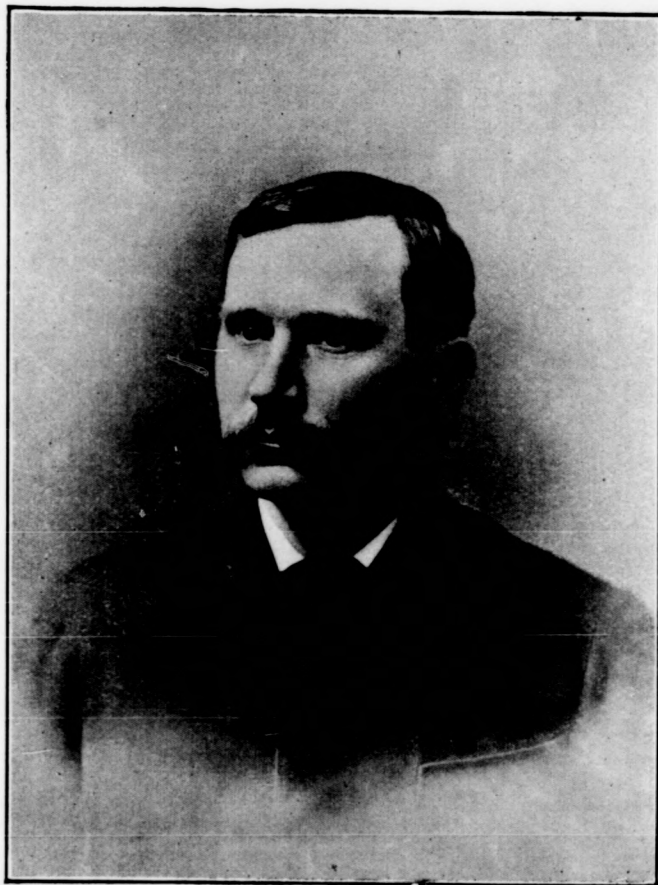
Prof. Balentine's Early Home	6
The Base Ball Situation	34
Earth's Magnetic Force (Fig.)	43-45
"Heep Big Injin"	112
Muttawheelya.....	114
Majatis	116
Class of '98, opp. pp.....	126
Corner in Robing Room U. S. Supreme Court	146
"Archie," the Old Attendant.....	147
Justice Gray.....	149
Chief Justice Fuller	150
Judge Brewer.....	150
Justice Field.....	151
Fitch's Model Steamboat	157
Section of Chain and Paddle.....	157
Condenser, Cylinder and Air-pump	157
Henry Voight's Double Cylinder, Boiler and Grate.....	158
Fitch's Steamboat of 1786-7	158
Wingate Hall	174
"Co. A's Mascot"	179
Edison's Slates.....	184
United States Patent Office	227
John G. Whittier	233
Haller David Seavey.....	255
Ground Plan of National Museum.....	260
\$4,000,000 of Bonds.....	266
John Vanderlyn	270

CONTENTS OF VOLUME IX.

Alumni	22, 61, 94, 134, 185, 220, 250, 283
Another Victim of Our Neglect.....	270
Athletics.....	26, 64, 104, 140, 188, 223, 255, 287
A Sketch of the History of Mathematics— <i>L. R. Folsom</i> , '95.....	15, 48, 83, 123
A Campaign Episode.....	201
A Dilemma, <i>Harriet Converse Fernald</i> , '84.....	199
A Sermon to College Boys— <i>Alumnus</i>	85
Boarding House Pie—"W".....	241
Character Sketches of the late Prof. Balentine.....	6
College World.....	32, 72, 109, 141, 191
College Directory.....	143, 192
College Magazine Reviews.....	290
Cap and Gown— <i>Frank Damon</i> , '95.....	80
Christmas Roses— <i>Virginia Mary Ring</i>	202
Commencement 1894.....	98
Col. Hughes' Report	107
Chief Justice John A. Peters	235
Determination of the Horizontal Component of the Earth's Magnetic Force— <i>O. L. Grover</i> , '95.....	42
Design for an Electro Magnet for Specific Duty— <i>Instructor E. P. Chapin</i>	153
Dr. Holmes as a Hymnist.....	160
Dr. Holmes' Memorial Hall Poem.....	161
Double Puns.....	210
Easy Chair.....	17, 52, 88, 127, 175, 213, 244, 277
Exchanges	190
Gladstone's Fortune— <i>Frank Damon</i> , '95.....	268
Helmholtz— <i>Frank Damon</i> , '95.....	120
Ivy Day.....	58
James Anthony Froude	165
Local Notes.....	19, 54, 90, 129, 178, 215, 245, 280
Looking Backward.....	198
Mathematical Notes	16, 51, 126, 173
Memorial Day.....	59
Mr. Wingate's 85th Anniversary.....	174
My First School.....	206
Modern Half-tone Engraving.....	211

Contents of Volume IX.

Our Celestial Neighbors— <i>Prof. J. N. Hart</i> , '85.....	75
"Our Exhibit".....	126
Oliver Wendell Holmes— <i>Prof. H. M. Estabrooke</i> , '76.....	162
Progress of Science— <i>Prof. J. S. Stevens</i>	12, 47, 82, 122, 166
Progress among the American Indians— <i>Lieut. Mark L. Hersey</i>	111
Prof. Rogers' Lecture.....	275
Steps in the Life History of the Earth— <i>Prof. F. L. Harvey</i>	1
Scientific Notes	13
Society Notes.....	14
Sophomore Prize Declamations, '96.....	63
Sophomore Prize Declamations, '97	243
Sight Seeing in Washington— <i>L. R. Folsom</i> , '95.....	264
The Life History of the Silk-Worm— <i>O. W. Knight</i> , '95.....	10
The Coinage Problem— <i>Prof. Rogers</i>	37
The New Electrical Course and Instructor.....	86
The Prism— <i>E. E. G.</i> , '96.....	87
The Study of Local History.....	118
The Course in Library Economy	139
The Supreme Court of the United States— <i>L. C. Southard</i> , '75.....	145
The Inventor of the Steamboat— <i>Frank Damon</i> , '95.....	156
The Last of the Great Poets of France.....	166
The Encampment— <i>Albion Moulton</i>	171
The Witches— <i>Prof. H. M. Estabrooke</i> , '76.....	193
The Hunt.....	205
The Class of '75.....	212
The Tea Riot	219
The United States Patent Office— <i>S. W. Bates</i> , '75	225
The Poet of the Pines— <i>Percia V. White</i> , '79.....	233
The Waterways of Maine	236
The Woods of Maine— <i>L. A. Rogers</i>	239
The United States National Museum— <i>Dr. G. P. Merrill</i> , '79.....	257
The Financial Situation and the Seven Plans Proposed for Relief.....	272
The Four Hundred.....	274
Y. M. C. A. Reception.....	121



THE LATE PROF. VALENTINE.



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THE CADET.

NEW SERIES.

VOLUME IX.

MAY, 1894.

No. 1.

STEPS IN THE LIFE HISTORY OF THE EARTH.



THE short space allowed into the unrecorded, or *Cosmogony*, and will permit us to give only the recorded, or *Geology*. The former the salient steps in the life consists of plausible theories of the history of the earth as they early condition of matter and worlds up have been made out by scientists. The to the time forces began to make records data is obtained from a study of forces of their action. *Geology* is a later history now at work changing the features of the earth; from a record these forces revealed in its structure and by a have made in the past in the structure study of forces now in operation. In of the earth and from a study of the studying plants and animals that present conditions of matter in the require only a few days or weeks universe by the aid of the spectroscope to complete the cycle of their life history and telescope. By reasoning scientifically, we are able to follow the natural order of unfolding from inception to above sources, broad generalizations decay, but as the cycle of the earth's regarding the early condition of all matter history is so long that millions of years are deduced and a plausible theory of have been required to evolve it to its the early history of the earth made out. present stage of development, we have Geologists believe that the atmospheric, to begin our study with current events aqueous, igneous and organic agencies and work backward. Our most exact now changing the earth are the only knowledge of the earth is of current forces that have ever been at work upon events, and it becomes more obscure as it, though some have decreased and we go backward into the geological others increased in activity with the ages until the broad abyss of the progress of time. unknown is reached, when reason tries

The history of the earth is therefore to bridge over the chasm by a plausible a series of events, that has resulted from cosmological philosophy. Of the origin the activity of physical, chemical, vital and essence of matter, or the origin of and psychical forces. No history is force, nothing is known. It is difficult able to record its own beginning. The for a finite mind to comprehend how earliest records are always veiled in matter could have been created out of more or less obscurity and beyond the nothing, and equally as hard to conceive recorded is the unknown. The history how it could be eternal. To say force of the earth, therefore, may be divided and matter originated from spirit does

not make it clearer, and with the child, when told God made every thing, we are inclined to ask out of what did He make it and who made God? Practically, scientists assume the existence of matter and forces and that they are governed by unchanging laws, that there is no annihilation of matter and forces, but infinite changes due to their interaction. The history of the earth would begin with Cosmological Philosophy. A careful study of nebulae, the sun, the earth and the moon reveals matter in all stages of condensation; gaseous, liquid and solid and at all temperatures; between incandescence and practically cooled. These investigations show that matter in the universe is undergoing cooling and condensation; has reached different stages of the process in different parts of the heavens and that the process still continues. These considerations have led to the belief, that all matter was one time in the nebulous condition, intensely heated and expanded. This theory is known as the *nebular hypothesis*.

Matter is believed to have been, at one time, in one or more nebulous masses, and slowly rotating. Back of the nebulae the condition of matter is all conjecture. Whether intense heat, attenuation and motion were the primal conditions of matter, will probably never be known. We start with nebulae as we know of no prior conditions. At present the heat of the universe, as concentrated in nebulae, suns and other heated heavenly bodies, is being radiated into the immensity of space and dissipated in slightly elevating its temperature, or is being converted into other forms of energy. The matter of our solar system was at one time incandescent, nebulous and rotating. By a process of cooling, the rate of rotation increased, until in the outer parts centrifugal force overcome gravity and a portion left the central mass as a planet. Still farther condensation produced other planets with smaller orbits, until

the earth was born. Finally, by farther condensation our earth begat the moon. The sun is, therefore, the mother of our earth and the moon her granddaughter. We can find excuse for sun worshipers. The earth was never an independent body. All her physical and chemical force she inherited from the sun. She has no power of creating energy and is constantly dependent upon the mother for an annuity of heat and light. Regardless of motherly oversight, she has not been able to hold her own. Terrestrial forces are gradually waning, the earth is undergoing a decline of force activity and many things point to an ultimate physical death. The phenomena that constitute the history of the earth are but a series of symptoms of the various stages of this decline. The sun is also losing its energy. The withdrawal of sunlight and heat and the death of heat forces in the earth, will make it a cold and lifeless globe.

After the earth threw off the moon, it rapidly condensed and cooled by radiation of heat into the intensely cold space through which it passed. Substances that were liquid became solid, and gaseous substances became liquid. The temperature at which substances assume the solid and liquid form is quite variable. Though the earth's surface is practically cooled, it is still surrounded by an immense gaseous envelope called the atmosphere, composed of gases requiring a low temperature to solidify. Between this and the solid crust is liquid water enough if evenly distributed to cover the entire surface fully 2000 feet deep. Some substances assume the solid form at a very high temperature. At a high heat the earth's crust began to form. Most of the substances of which the earth's crust is composed, contract when they solidify and become heavier. Pressure would tend to keep such in the solid form. The first solids formed in the cooling earth would tend to sink toward the centre, and pressure

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of the superincumbent material would keep them at a high temperature in the solid form. From this reasoning and also astronomical data, geologists believe the earth is practically solid, and its interior is composed of intensely heated matter kept in the solid form by pressure. The disassociated oxygen and hydrogen gases in the atmosphere finally cooled and combined to form watery vapor. When the temperature of 212° F. was reached, the water settled on the earth as a universal ocean. Some portions of the earth's crust cooled faster than others, producing unequal radial contraction. This caused hollows into which the water gathered and the dry land appeared. This contraction continued, and the land areas became higher and broader. At first the whole crust of the earth was cooling and contracting more rapidly than the interior. This caused great crevices of tension, allowing deep-seated material, from which the pressure had been removed, to melt, expand and overflow, producing lava beds and volcanic phenomena. Finally the outside became practically cooled, and the inside began shrinking away from the crust. The crust is now too large for the interior, causing lateral pressure and a tendency to make deeper and deeper folds. As soon as the land appeared, the rains and rivers began to erode the surface, and the debris was carried into the seas where it accumulated in the sinking sea bottoms near the land. Finally these sediments became so thick that they were softened at the bottom by the intrusion of heat from below, making a weak line deep in the earth's crust, and the lateral thrust of the immense earth folds on the sides crushed these water deposits together, elevating them slowly into mountain ranges. The earth folds went down, lessening the circumference of the earth and bringing about an equilibrium. When the Appalachian system was thrown up, the circumference of the earth was lessened over 70 miles. The various mountain ranges of the North American continent have been elevated successively westward at different times geological in history, lessening totally the circumference of the earth several hundred miles. The Pacific coast range is the most recent, and the immense deposits now gathering in the subsiding Pacific may be the preparatory steps for another range westward.

The circumference of the earth has also been decreased by the formation of great fissures, the sides of which have slipped by in many cases several miles, allowing the crust to settle upon the interior. The cooling of the earth has produced increasing extent and elevation of land areas. Pitted against the heat forces have been the atmospheric and water forces, which have tended to reduce the land again to the ocean level. The continents are at present wearing away at the rate of one foot in 5000 years. This debris is carried into the sea bottoms. This process has been going on throughout the ages. The earth's crust has never been stable, and is now sinking or rising over its entire surface. The land and seas have changed places many times. The sediments put down in seas are cemented into rocks, elevated into continents, only to be disintegrated by atmospheric forces and carried again to the seas as sediments. The material of the earth's crust has been worked over and over again. The maximum thickness of the sediment amounts to over twenty miles, and is sufficient to cover the surface of the earth evenly 6000 feet deep.

Within these sediments are recorded the introduction and evolution of plant and animal life on the earth. Until the earth had cooled sufficiently to permit the existence of organic forms it was the theatre of the action of *physical* and *chemical* forces alone. Where was the *vital* force during these countless ages? Was it created when needed? Is life merely a physical and chemical

phenomenon? Or is vital force generically distinct and like other forces eternal and was only waiting until the proper physical and chemical conditions could be evolved to manifest itself? Whatever its nature or origin, it manifested itself feebly at first in *protoplasmic* matter and low grades of unicellular organisms. The gradual evolution of more congenial environment, together with an inherent tendency of organizations to unfold to a higher grade, has given us a succession of forms gradually increasing in complexity until in man and the plants of to-day we have the highest types of life that have ever been upon the earth. Two theories have been propounded to account for this succession of forms. The *special creation* and *evolution* hypotheses. The former announces that each species of life, that has lived on the earth, was the result of an act of special creation, adapting the form to its environment. The latter, that there is no definiteness in species in nature and that the environment and innate tendencies to unfold have peopled the earth with forms of gradually increasing complexity by the evolution of higher from lower organisms. The latter is more in accordance with God's way of working in the world to-day. We all can see the want of fixity in animal and plant forms in nature, and know the varieties that have been produced by the breeder and horticulturist. We all admit that there is no special creation in the present age and believe all life comes from preexistent life. The strata of the earth's crust show the remains of intermediate and generalized types of life and a gradual unfolding of forms in geological time. A study of the life histories of animals strengthens this belief, as all animals pass along the same developmental path in unfolding and stop at their particular grade.

The development of the human individual from inception to maturity is an epitome of the development of the whole

animal kingdom from its introduction on the earth in low forms through the successive geological ages. Man starts with a single cell which is the permanent condition of the lower animals, and passes through stages resembling the successive grades of animals, until he transcends them all, the human characters being the last developed. If the human in a few months passes through all the grades of life from the lowest to the highest, what difficulty is there in believing the animal kingdom has evolved from lower forms during the long geological ages. The facts of nature cannot be explained on any other assumption. A belief in evolution of organic forms is gradually gaining ground among thoughtful people. The acceptance of this theory has no theological bearing unless it gives a broader and grander conception of God's method of unfolding the vegetable and animal kingdoms. Many are willing to believe the evolution of the lower animals, but insist upon a special creation for man. There is a wide difference between man and the lower animals, but the difference is psychological. Physically, he has the organization of the higher anthropoids and has to be classed with them. Even if God did make man by special creation, those who believe it must admit, that the resulting organization into which he breathed the breath of life and made a human soul, was *anthropoid* in all of its essential characters. Would it not have been less degrading and more like God's way of working to have evolved man from existing animals rather than by special creation from inorganic matter? Are vital, mental and moral activities merely different phases of the same force, and like the physical forces, heat, light and electricity, correlative, or are they *generically distinct*? Did vital force merge into mental and mental into moral, as the physical organization in the animal kingdom gradually became more perfect? May not the mental and

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moral forces, like physical and chemical forces, be eternal and when the physical organization through the vital force had evolved the proper grade of organization the reign of mind began, feebly at first, but stronger as the physical unfolded, until finally, when sufficiently developed the moral force took possession of the anthropoid form and it became a living soul, possessed of a knowledge of right and wrong and all the psychic characters that trenchantly separate man from the lower animals. The appearance of man introduced the present age and the dynasty of psychic forces. The gradual perfection of the activity of these forces has resulted in the evolution of civilized man from the barbaric races. The high order of mental development occasionally seen in mental giants and the strong moral force manifested in the lives of good men, points to greater achievement of these forces in the future.

The natural phenomena about us are cycles of events of lesser importance and shorter duration, which are parts or steps of cycles of larger sweep and longer duration, widening into the past history of the earth, which is but the beginning of a great cycle that has required millions of years to evolve it to its present stage of development. But the end is not yet. This is not an age of rest. The changes now being made on the earth by physical, chemical, vital, mental and psychic forces, are as important as any in the past.

The imagination and reason struggle to complete the earth's history and to grasp a conception of that grander succession of events, which involves the universe and eternity and compared with which, the life history of the earth is but an insignificant and passing event.

Prof. F. L. Harvey.





PROF. BALENTINE'S EARLY HOME.

CHARACTER SKETCHES OF THE LATE PROFESSOR BALENTINE.

IN the class-room, Prof. Balentine was always clear, thorough, and able in his instruction.

He won not only the good-will but the affection of his pupils.

As an associate, he was most companionable. As a friend he was warm-hearted, generous, sympathetic, and loyal.

His sturdy good sense, practical judgment, and calm temperament enlivened by a vein of gentle humor, contributed to make him a valued and valuable college officer.

The same attractive qualities won for

him a large and appreciative recognition wherever he was known. The College and the State sustain a great loss in his untimely death, a loss lamented by all who knew him, but most sincerely and deeply by those who knew him best.

It was my fortune to have known him as a student in college and as an associate, neighbor, and warm personal friend through many years. Now, that he has been called from us, I mourn his loss, in common with his large circle of friends, as a profound personal bereavement.

M. C. Fernald.

MY acquaintance with Prof. Balentine commenced soon after he assumed the chair of Agriculture at Orono and our relations for years have been most intimate. I loved him as a brother, and his death so sudden and so unexpected, at a time when we had planned to work so closely together, was a cruel shock to me.

What I most admired in Walter Balentine was his simplicity of character, joined to thorough honesty and earnest devotion to duty.

His manners were modest and unassuming, never courting notoriety, nor doing anything for effect.

He was honest through and through, and could find an excuse for anything sooner than for dishonesty, or meanness which to him meant substantially the same. He was not only honest in his dealings, but was honest in his scientific work, never making a statement which he did not believe to be fully proven and when convinced of a mistake, as honest in freely declaring his error.

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CHARACTER SKETCHES OF THE LATE PROF. BALENTINE. 7

Having taken up his life work at the State College, he devoted himself to it with an earnestness that nothing could daunt, and with a faithfulness that refused all offers of lucrative positions in other fields. During my last interview with him at his home, on a quiet Sabbath in midwinter, he showed me letters conveying most tempting overtures to engage in other pursuits, but, said he, "I mean to do my work here." Little did we think his work would so soon be done. The snows that have since enwreathed his quiet resting place were not whiter than was the soul of him who so peacefully slept beneath them.

Edward Wiggin.

IT gives me pleasure to put myself on record as one of Prof. Balentine's acquaintances. I was honored with his friendship for about fourteen years. His frankness and sound common sense were my especial admiration; for when his opinion was asked it was given and one always knew that he meant just what he said, and that he would say just what he deemed right, regardless of the opinions of others. Even when he differed radically from others his opinion always carried great weight, because the judgment back of it was recognized.

My pleasantest remembrances of him were connected with outing expeditions which we took together frequently. I think one can judge of another's characteristics and disposition on a hunting or fishing trip, better than anywhere else; and surely Prof. Balentine was a model companion at such times. His generosity and fair mindedness not only to his companions but to game as well, was always apparent. He never killed a fish, bird or animal merely for sport, and I have seen him stop fishing many a time when the trout were biting well, simply because he had what he could take care of. His coolness and judgment could always be depended upon, and I was never afraid of being taken for a deer when still hunting with him. He never complained of hard luck and when in camp always did his full share of the unpleasant tasks of camp duty. Such was his deportment in all the walks of life.

Walter Flint.

MY acquaintance with Prof. Walter Balentine begun some years ago, ripened into feelings of sincere friendship. I soon learned that he was a man who never made pretences and whose heart was in his work. Never striving for notoriety, or seeking to draw attention to himself unless he had something which seemed to him to be of value, he early came to be regarded as being a man in whose judgment his friends could rely, and as the intimacy increased there came with it more and more, a knowledge of his sterling worth as a man. When we consider his virtues and peculiar qualifications for filling his position, we are led to say that a bright and shining light has gone from among us, and that the walks which he filled will not soon be filled by one more worthy. Patient in research, slow to form conclusions, courageous in his convictions, and ready to wait for the highest proofs of uniform repeated results, he could afford to wait until his labors had proved his positions, then he always had something to say from these results which carried conviction with it. Coupled with these business characteristics were attributes of a higher nature. The kind heart, the ready hand to aid, the desire to be first with all, the disposition to excuse seeming inconsistencies in others; these endeared him to all; and I can well and truthfully say that in his death our cause has lost an able supporter, and there also has gone a tried and true friend.

B. Walker McKeen.

. "That soul that can
Be honest is the only perfect man."

Professor Balentine certainly filled this condition of the poet's perfect man. It was my good fortune to be associated with him, and to know him intimately, from earliest childhood; in the primary school, in fitting school and in college, both as a student and as an associate on the faculty, and during all these years it was apparent that the love of truth for its own sake was one of his abiding characteristics. He was discrete, but his prudence was not of the designing selfish kind, but was always exercised in the interest of harmony and fellowship, so that his associates always had perfect confidence in him. In all his relations he sought to govern his speech with the utmost consideration for others. In considering measures before the faculty I have never known him to irritate any member, by an unkind word, and, although always modest and unassuming, he always had great influence with his associates. He was whole souled and liberal in all things. The students with whom he came in contact always found in him a friend ready to give ear and counsel, and when

it was in his power financial assistance.

He was thoroughly devoted to the welfare of his Alma Mater and never allowed his judgment to be warped by any selfish interest, in his own particular department. Through his membership in the Q. T. V. Fraternity he skillfully settled many differences between students and the faculty which, otherwise would have made trouble.

Born on a farm, and educated in its practical school for twenty years, he realized the needs of the farmer, in a manner impossible to one lacking his early training. His usefulness to the intelligent farmer was very great, and his influence in elevating the profession of agriculture, in this state will extend far into the future.

In the death of Professor Balentine the student body of this college has lost an able teacher, and a true and loving friend.

The faculty has suffered a loss which I cannot express in words. He has gone from us in bodily presence, but his spirit will ever be present with us, and will continue to exert a powerful influence, for a long time.

Geo. H Hamlin.

I wish to add my testimonial to the character and worth of Professor Balentine, who has so suddenly been stricken down in the prime of life.

My acquaintance with Prof. Balentine commenced when we were both students, and has continued uninterrupted to his death. For the last fifteen years I have also had personal acquaintance with other members of his family and from my intimate acquaintance with him I have learned to appreciate him both as a man and as an instructor of youth in the line of his chosen profession.

Prof. Balentine came from good strong New England stock, inheriting natural traits of keen preception and good common sense accompanied with presistent industry and attention to whatever it

became his lot in life to do. He was naturally of a quiet, reserved temperament yet persistent in his undertakings, possessing that peculiar characteristic of accomplishing whatever he undertook, while others would barely know that he was at work upon the subject. As a student he was a favorite both with classmates and professors, always accomplishing good work. In choosing the pursuit of professor of agriculture at the time he did, he entered upon practically an untired field in this country; and characterizes his natural foresight and judgement of discerning what could be but dimly seen by others for the future of such a profession. Raised upon a farm and having a natural love for agricultural pursuits, led him to become an

CHARACTER SKETCHES OF THE LATE PROF. BALENTINE. 9

enthusiast upon the subject of agriculture and agricultural education. After leaving college at Orono he immediately entered upon an advance course of study in both this country and Europe and when he returned to take the chair of Professor of Agriculture in the State College, he came as well equipped for the position as could be expected of any man of his age. During his professorship at the college he kept close in touch with the work that was being done in his line both in this country and in Europe and had a better understanding of what his department needed in the college than others may have given him credit for who did not have the benefit of an intimate acquaintance with him and had he been allowed to live a sufficient time the State would have seen, in my judgement, the benefit of his labors, which may never fully be understood on account of not having been completed. Gradually public sentiment in favor of agricultural education has improved, which is due largely to the efforts of just such men as Prof. Balentine, both to their work in the class room and their outside work in creating sentiment. Prof. Balentine always made a favorable impression upon legislative committees and others with whom he came in contact in public life. Not naturally a speaker he had trained himself to state clearly whatever ideas he had to advance. But the most efficient work that he did in securing appropriations for his department and in adding and creating sentiment in favor of the college was done by personal and private interviews with prominent men whose influence and assistance was needed to carry forward legislation and other work for the college.

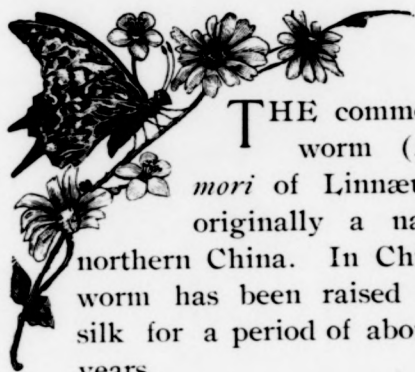
As Professor, at Orono he had in addition to the ordinary interest of a professor in a college that enthusiasm so common among college graduates for his Alma Mater in an unusual degree. He did work that he would not have been willing to have done had it not been that it was for his Alma Mater. His work in the Alumni Association was most effectual. The policy of that organization and plans and purposes were largely shaped by him. The loss of Prof. Balentine to the College cannot be estimated. He leaves the work of his department but commenced. Its future must be determined by other hands. There is no department in the College that could have sustained a greater loss than has the Department of Agriculture in the loss of Prof. Balentine, but whatever the future of this department may be it must always look back to the foundation and original plans which have been so well formed by Prof. Balentine.

The suddenness of his death to his friends was a great shock and sorrow and none who knew him can fail to testify to his excellent character and entire devotion to his Alma Mater. I wish to join with others in extending my sympathy to his family in their great loss of husband and father. No loss is keener felt by the graduates of a college than to see one with whom they have been associated both as student and professor stricken down in the prime of life as was Prof. Balentine. His death is a loss, not only to his family, his friends and to the college but is a loss that will be generally felt by those who realize the work he was doing for his State.

William T. Haines.



THE LIFE HISTORY OF THE SILK WORM.



THE common silkworm (*Bombyx mori* of Linnæus) was originally a native of northern China. In China this worm has been raised for the silk for a period of about 4,400 years.

According to the greatest Chinese authorities, the worms were first raised for the silk by the Empress Si-ling about 2,600 years B. C. The eggs were first introduced into Europe about 530 A. D., and were brought from China by two Augustinian monks, who concealed the eggs in their hollow staffs. It was necessary to thus conceal the eggs, in order to prevent their being found by the Chinese, who searched every one leaving the country in order to prevent the eggs of the silkworm from being introduced into other countries. The monks succeeded in getting the eggs into Europe, and from this time silk culture in Europe takes its beginning.

Now for a description of the insect itself. The moths have a wing expanse of about one and one-half inches, and are of a white color. After being fertilized, the female lays about five hundred eggs of a yellow color, and about the size of a pinhead. In a week or ten days the color of the eggs changes to a drab slightly tinged with blue. After this the eggs remain unchanged for about eight months. At the end of this time they begin to grow lighter in color, and from each

egg hatches a grey caterpillar about one-eighth of an inch long. Mulberry leaves are now placed before them, and they begin to eat immediately. The mulberry leaves are cut up and fed to the young worms five or six times daily. At the end of four days the worms cease eating and remain still for twelve hours. They then shed their skins, or, in technical language, they moult. After this moult they are about one-fourth of an inch long and of a light grey color. They now begin eating again. When they are nine days old they have the second moult, and six days after this they have the third moult. The worms are now fifteen days old; they are about an inch in length, and of a greyish white color. When they are twenty-two days old they have the fourth and last moult. They now begin eating voraciously, and grow rapidly for eight or nine days; then they cease eating and will not be tempted by the juiciest mulberry leaf that can be offered to them. They are about three inches long when full grown, and are of a clear light yellow color; and at this stage they leave the food and wander uneasily about, seeking for a suitable place to spin their cocoon.

If a bunch of excelsior is placed before them they will crawl into it and begin spinning their cocoon. In three days the cocoon, which is snowy white or yellow in color, is finished. It should be firm to the touch, about the size of one's thumb, and slightly indented around the middle.

The cocoons which are designed to or twelve days after the cocoons are be reeled, must now be steamed or made the moths emerge from them, baked for fifteen minutes to kill the and soon afterward the moths pair. insect inside. If this were not done, The females now lay their eggs and the moth in emerging from the cocoon thus complete the life history of the would cut the threads and thus render insect. The eggs remain unchanged it impossible to reel the cocoon. The through the winter and hatch in the strongest and largest of the cocoons spring about the time the mulberry are kept alive in order to provide for trees leave out. the continuance of the species. Ten

Ora W. Knight, '95.



“Science then

Shall be a precious visitant ; and then
And only then, be worthy of her name ;
For then her heart shall kindle, her dull eye,
Dull and inanimate, no more shall hang
Chained to its object in brute slavery ;
But taught with patient interest to watch
The process of things, and serve the cause
Of order and distinctness, not for this
Shall it forget that its most noble use,
Its most illustrious province, must be found
In furnishing clear guidance, a support
Not treacherous, to the mind's *excursive* power.”

Wordsworth's Excursion, Bk. iv.



THE PROGRESS OF SCIENCE.

"The work of Science is to substitute facts for appearances and demonstrations for impressions."

—RUSKIN.

AERIAL NAVIGATION.

THE idea of utilizing the air as a proper field for locomotion has for many years proved attractive to inventors.

Quite recently there have been a number of experiments made in this direction which give considerable promise of ultimate success. Prof. O. Lilienthal, a German, has made an apparatus by use of which one can take flying leaps down the side of a hill with comfort and safety. The operator stands in a light, bird-shaped car, and by shifting his center of gravity he can regulate his speed and direction.

Prof. Langley of the Smithsonian Institute thinks that when the method by which birds support themselves in mid-air without motion is learned, a great advance will be made in solving the problem of aerial navigation.

Hiram Maxim, inventor of the Maxim gun, assumes that if a machine with wing-like surfaces is projected horizontally at a rate sufficiently rapid, it can be made to leave the earth and soar into the air. He has thus far been unsuccessful, but it is owing, he claims, to the weight of the machine and the slow velocity with which it has been projected. The *Scientific American* for April 14 contains a full description of his invention.

GRAVITATION.

A prize has been recently offered for something new and valuable on the subject of gravitation. Since the time that Newton discovered that its force

extended throughout the universe and that its action was not at a distance, but from particle to particle, no appreciable gain has been made in the world's knowledge of the subject. There are a great many problems connected with gravitation which are of interest, and which have not as yet been solved: An experimental proof of the law inverse squares, the function of ether in the attraction between two bodies at a distance, the relation of electrical energy to gravitation, are a few of the most prominent.

THE FOURTH DIMENSION.

Prof. Simon Newcomb, in a paper recently read before the *New York Mathematical Society*, discussed the subject of the fourth dimension. He said that there was no possibility of proving the existence of more than three dimensions by any principles of mathematics or physics at present known. A boy in studying plane geometry deals with only two dimensions and can draw a line perpendicular to another line at a fixed point, only in one direction. If he assumes a point within a circle he can not take it out of the circle without cutting the circumference. When solid geometry is taken up, all this changes. He can draw an infinite number of lines perpendicular to another line at a given point. He can take the point out of the circle without cutting the circumference.

So, it is urged, there may be a higher form of geometry which will enable one to draw four lines which shall be mutually perpendicular. In this case

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one could pass from the inside to the outside of a spherical shell without actually penetrating the shell—a point worthy of the consideration of convicts.

In a universe where space had four dimensions, a straight line might return to itself if followed far enough; a

gymnast could turn a somersault and come down right side left without the slightest bodily distortion; and an astronomer could take his stand a little distance above the earth and actually see every part of it, inside and out.



SCIENTIFIC NOTES.

An improved seismograph has been contrived by Dr. Cancani of Italy, which registers the precise time of an earthquake by making an instantaneous photograph of the dial of a chronometer at the instant of shock. The shock moves a system of levers which throw a magnet and batteries in circuit and an incandescent lamp is lighted for an instant and the image of the dial is thrown on the plate.

It is said that there are in Rome five or six slabs of elastic marble which, when set on end, bend backward and forward; or, when laid horizontally and one end raised they form a curve, or if raised in the middle they will form a curve with both ends resting on the table. The grain is like that of the finest Greek marble and they seem to have passed through some attack of fire. A similar slab, highly polished, is in the British Museum. An experimenter, M. Fleuvian de Belvae, has succeeded in making common granular limestone completely flexible by exposing it to a certain degree of heat.

In the *American Engineer and Rail Road Journal* for April is given an interesting résumé of accidents to locomotive engineers and firemen for the past year. There were 450 accidents resulting in the death of 108 engineers and 114 firemen, and in the injury of 251 of the former and 223 of the latter. Of the causes we find collisions to be

responsible for 148; derailments, 50; misplaced switches, 29; boiler explosions, 29; cattle on track, 9; runaway engine, 9; unknown and miscellaneous, 176.

A system of pneumatic tubes has been laid in the streets of Chicago, connecting the City Hall and the Police Stations with the office of the City Press Association. Vitrified clay pipes are laid in deep trenches inside of which are seamless drawn pneumatic tubes of brass; the whole is incased in cement. The diameter of the tube is two and one-half inches. The carriers are made of leather with a wire frame and about eight inches in length. The motive power is said to be a jet of steam discharged through an injector. The time of transmission of messages between most distinctly separated parts is but one minute.

The depth to which the sun's rays penetrate in water has recently been determined by aid of photography to be 553 feet. At that depth the darkness is like that of a clear but moonless night. Sensitized plates, after being exposed for a considerable time, showed no evidence of light action.

Within the last ten years the government has placed in the Black Sea a fleet of twenty-one war vessels, mostly torpedo boats. Three more have been ordered in England and the purchase of two iron-clads is under contemplation.



SOCIETY NOTES.

LITERARY CLUB.

The last session of the Literary Club was one of unusual interest, due to the presence of Prof. Rogers who gave an address upon the subject of Taxation. The speaker after referring to the early forms and methods of taxation, explained in a very clear and graphic manner the different methods of the present day in this country, the faults and abuses, and discussed to some length, possible solutions to some of the problems. The so called "listing system" was considered very fully. At the close of his remarks, an informal discussion was held by the members, and many questions which had been somewhat obscure were fully answered. President Damon thanked Professor Rogers in behalf of the Club, for his assistance, and expressed their appreciation.

At the business session, Mr. Wilder of the Executive Committee tendered his resignation because of his departure from college, and Mr. Wood was elected to fill the vacancy. The committee reported the program for the next session to be the consideration of the Hiawaiian question, opened by an address by Pres. Harris. After the transaction of some minor business, the session was adjourned.

C. E. SOCIETY.

The last meeting of the C. E. Society was held Thursday evening. G. P. Cowan resigned his position as first on

the executive committee. L. O. Norwood was elected to fill the vacancy. G. G. Atwood was also elected to serve as third on that committee.

Mr. Norwood gave a very interesting and instructive paper on photographic surveying which was discussed at length. A vote of thanks was extended to him.

ELECTRICAL SOCIETY.

An interesting session of the Electrical Society was held last Tuesday evening. G. H. Hall read an interesting paper on electro plating. The discussion was opened by O. L. Grover. A. H. Buck gave a paper on The Maine Water Power for Electrical Purposes. The Ticker was taken by H. M. Wilder. The person assigned to the Open Circuit being absent, that department was presided over by Mr. Hall.

Y. M. C. A.

The election of officers for the ensuing year will probably have occurred before this number is out. The Sunday afternoon Bible Class has been resumed, with Mr. Niles as leader. Efforts will be made to increase the number. The visit of Mr. Hunt has proved to be a help in more ways than one. Unfortunately the finances are not in as good a condition as we could wish. It is hoped that the next lecture will be by Rev. John S. Sewall, D. D., of Bangor.

A SKETCH OF THE HISTORY OF MATHEMATICS.



THERE are no records which enable us to trace the history of mathematics accurately, farther back than the time of the Ionian Greeks. From that time the history may be divided into three periods: the first extends over a period of about 1,200 years beginning with the teachings of Thales in the sixth century, B. C.; the second is that of mathematics during the middle ages, and the third, modern mathematics. Though the history begins with the Greeks, we have reason to believe that the Phoenicians and Egyptians had considerable knowledge of numbers and geometry. It is thought by some writers that the Chinese were able to make many mathematical calculations as far back as 3000 B. C., but the recent investigations have shown that they had made no attempt to classify the few rules which they did know, or to explain the causes of the phenomena with which they were acquainted. The only geometrical theorem with which any record shows the ancient Chinese to have been acquainted was, that the area of the square described on the hypotenuse of a right angled triangle is equal to the sum of the areas of the squares described on the sides, and this only, when the ratio of the sides was 3:4:5 or $1:1:\sqrt{2}$.

The only races with whom the Greeks of Asia Minor came in contact, were the Egyptians and Phoenicians, therefore we may suppose that the Greeks obtained some mathematical principles from these people. The magnitude of the commercial transactions of Tyre

and Sidon, must however, have developed arithmetic to considerable extent.

A manuscript written by a priest named Ahmes, which was deciphered a few years ago, throws considerable light on the mathematical knowledge of the Egyptians. However, the processes by which the results were obtained are rarely explained. In one place, however, he tells how a certain number, as x , was multiplied by 13. He first multiplied by 2 and got $2x$, then doubled it getting $4x$, doubled that and got $8x$, he then added x , $4x$ and $8x$. The question of fractions seems to have presented great difficulty to all the early races. The Egyptians and Greeks reduced a fraction to the sum of several fractions whose numerators were unity, so they had only to consider the denominators.

Geometry is supposed to have had its origin in land surveying. The principles of land surveying must have been understood from very early times but the universal tradition of antiquity asserted, that the origin of geometry must be sought in Egypt.

The derivation of the word from *g e* the earth and *metrein* to measure indicates that it arose from the necessity of surveying. The name does not refer to their practice, but rather to the use which was made of it by those from whom they obtained their knowledge.

The only real knowledge of Egyptian geometry is found in the Rhind papyrus at the British Museum. Ahmes gives several numerical values of the contents but does not give any definite shape for them. But, however, when the measurements were given as a , b , and c , the

answer indicated that he multiplied together a , b , and $(c + \frac{1}{2}c)$. He gives the area of a circle as $(d - \frac{1}{9}d)^2$, d being the diameter. This makes π equal to 3.16049.

Ahmes also gives some problems in pyramids which have not been explained until very recently. He desires to find the ratio of certain lines, which is the same as finding the ratio of certain angles trigonometrically. The arithmetical part of the work shows that there was some knowledge of algebraic symbols. A symbol which means *heap* was used to represent an unknown quantity; a pair of legs walking forward represents addition, and a pair of legs walking backward represents subtraction.

All the Egyptian problems in geometry deal with some particular numbers and

not with general theorems; and though the results were stated as universally true, they were probably only proved so by a very wide induction. It is not probable that geometry made any progress in Egypt after the work of Ahmes.

The Greeks recognized Egypt as being an important school of geometry for about two hundred years after the time of Thebes, but they outstripped their teachers in a very short time. We know but little of the applied mathematics of the Egyptians and Phœnicians; in fact, we are not certain that they had any. There are yet several papers among the Rhind papyrus which have not been interpreted, and until they are we can only infer a great deal of what is asserted of the Egyptian and Phœnician mathematics. —L. R. F., '95.

[To be Continued.]



MATHEMATICAL NOTES.

The mathematical department is designed to take up any problems which may come up in practical work as well as to publish papers on mathematical subjects.

Any student or alumnus having a problem which may be of interest generally will confer a favor by bringing it to the notice of this department.

With this issue begins a series of papers on the history of mathematics, a great deal of the data being taken from Prof. Ball's History of Mathematics.

Newton seems to have avoided the use of trigonometry in his analyses, and as far as we know did not publish any work on that subject.

One of the great difficulties in the way of students in mathematics is their lack of precision. In order to draw correct conclusions in logical reasoning every link must be complete, and so it is with mathematical calculations. Every step must be traced carefully and precisely. If every one will remember this, methodical habits will be formed which will enable nearly every student to do his work in mathematics as well as elsewhere, in a much more satisfactory manner both to himself and his instructors.

Lagrange said of Newton: "He was not only the greatest genius who has ever existed, but he was also the most fortunate, for there is but one universe and it can happen to but one man in the world's history to be the interpreter of its laws."

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THE CADET.

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L. R. FOLSOM, '95, P. D. SARGENT, '96.
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WITH this issue of the CADET a new Board of Editors undertakes its duties, realizing fully their youth and inexperience. When they see the work accomplished by the gentlemen who have served on the board of this magazine with so marked success from its organization up to the present time, they realize fully the efforts necessary to be put forth in order that it may not fall below its usual standard of excellence. The board is a unit in its determination to devote its best thought and efforts to promote the welfare of this magazine, and they trust the slight changes they have deemed best to make in its form will meet the approval of its many friends and if its patrons will give to them the same generous support awarded their predecessors, they will deem themselves fortunate indeed.

* *

THE advent of spring is hardly anywhere more marked than on a college campus, and on our own campus every one seems to have roused from the winter torpor and to feel the inspiration of these bright days. The remark made by many that "They have never seen

things boom so as they are now," seems true. Capt. Haynes is putting the base ball team through its paces with good effect and the interest in the Field Day meet seems to be increasing, in fact the way the hammer handles are broken is an indication that something is up. Even our mail carrier has felt the impulse and occasionally gets around on time.

* *

OUR pride will show itself sometimes over really trivial matters; as we have noticed in regard to the new base ball suits which have arrived. It does not seem too much to say that the equipment of the team with these suits has stimulated the interest of nearly all on the campus as scarcely anything of like importance would have done. The remarks heard on all sides seem to confirm this statement. We expect our team to make somewhat of a showing this summer and they will not disappoint us, we feel sure. And on the other hand they have a right to expect from us, as a body, a good enthusiastic support, financially what we can and also our true confidence and encouragement.

* *

IT is not a little amusing to notice the personal bias which enters into many of the articles written on or about college affairs. While this might be expected from outsiders, it also occurs in articles from college paper sanctums, as for instance in the editorial of the *University Chronical* of Utah, which appeared de-

nouncing the military department of that institution "as physically and morally productive of harmful results." And the last issue fairly blazed as it proclaimed the discontinuation of the above objectionable department by the Regents.

* *

ULTRA democratic writers have and may rail at the institution and observance of forms and ceremonies, but the fact remains nevertheless that our whole social fabric is really woven to a greater or less extent on the warp of those ceremonies and forms which we call etiquette. As a preparation for the duties of citizenship the cultivation of our taste for refined social intercourse is to a certain degree of equal importance with the cultivation of our faculties in more bread and butter like ways. The courtesies which have been extended to members of the College by several of the Faculty and their ladies should be regarded not as mere society observances, but rather as opportunities for the improvement of the ethical side of our natures, and too valuable to ourselves to be missed.

* *

AGAIN, we notice in the April number of the *North American Review*, a somewhat caustic article from the pen of Mr. E. Irenæus Stevenson on "College Theatricals—as we have them." After stating the work required for preparation, the make-up of the actors, the presentations, etc., he says: "College theatricals . . . are as such, a discredit and a foe,—a foe to the physical and intellectual and moral health of the young American man." While to some strong-minded persons it may seem just a little silly for a young man to don tights, abbreviated skirts and rouge, and gyrate about a stage, and though we would respectfully beg to agree with them, it seems to us that a young man whose "physical, intellectual and moral health" is likely to be impaired by such a performance owes it as a duty to himself and to society to withdraw from his

Alma Mater to a sanitarium for feeble minded and recuperate.

* *

WE are glad to call attention to an article in the *Forum* for April on "American Universities and the Training of Teachers." The writer, Mr. G. Stanley Hall, makes some interesting points to members of colleges like our own. After noting the growth of our colleges from 1820 to 1890, and also the introduction of the elective system and commenting thereon he says: "To the old A.B. and A.M. there have now been added, according to Mr. Thomas, fifty-three other degrees. In 1883 an eminent professor who is now the energetic and progressive President of Cornell University, true to the spirit of the founder, who desired an institution where 'any person can find instruction in any study,' declared that 'the steam engine is as sacred as Greek,' that 'philosophy is not more venerable than road-making.'" He also says: "These newer institutions and corresponding movements in the older institutions have wrought great changes. About half of all the students in our 415 colleges still seek the A.B.; but this degree, especially in the West, often implies no Greek, or even Latin, and those seeking it are fewer and fewer." Again, "General Walker thinks a good technical course produces 'better educated men in all that the term implies,' than the ordinary college course, and Sir H. E. Roscoe derides the 'high-falutin' talk' about culture and humanities, which may be for the ten per cent. but not for the ninety per cent. of humanity struggling for existence."

In another place he says: "In fine, we are clearly in a period of transition, of golden opportunity, and things were never so plastic."

As we have indicated we think Mr. Hall has made good points in his argument but whether he can hold his ground when the Conservative party attacks him, as they surely will, openly or privately, will be interesting to follow.

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LOCAL NOTES.

"Master, Master! News, old news, and such news as you never heard of."

—The Taming of the Shrew,—Act III, Sc. 2.

Thomas "swat" Robinson.

Miss Farrar has returned.

Duncan, '95, has been very ill, threatened with brain fever.

Jackee Lee-lee

Too muchee girlee.

Morse, who has been taking a special course, has entered '96.

Robinson, '95, on account of sickness has been to his home in Patten.

Faces we seldom see—Prof. Hamlin's, Prof. Flint's and Prof. Harvey's—at chapel.

Where is the rear rank of the first set of fours?

"Come out to the gymnasium."

"Hey?"

"I beg pardon, I should have said shed."

The '95 which the Juniors first had worked in the side of Wingate Hall over their ivy looked decidedly "jagged."

The large crowd of students who attended the production of "Venus" in Bangor on the 13th pronounced it "out of sight."

'96 has received another addition in the person of Mr. W. R. Page who took a partial course here a few years ago.

The outlook now is, that '98 will be the largest class in the history of the institution.

Wood, '94, takes Wilder's place on the Executive Committee of the Literary Society.

It is rumored that Chase, '95, recently refused a very flattering offer as one of the artists on the staff of Music and Drama.

Spring put in an appearance very early. On April 5th both companies were seen on the parade grounds in company drill.

Ex-President Fernald accompanied by his youngest son made a short visit to the College recently. Both he and his family now reside in Dover, Maine.

The Sophomores have chosen May 29, as the date of their Ivy Day exercises. On the same evening they hold a banquet at the Bangor Exchange.

The band will appear soon with white helmets and gold braid across the front of their blouses, spreading out to form a clover leaf.

The College stores report a remarkable decrease in the sales of paper tablets since the College began to furnish such excellent paper. Inference.

Fernald, '96, has changed his course from Mechanical to Civil Engineering owing to an injury done to his hand which prevents him from taking the required shop work of the Mechanical course.

If '96 was bound to choose some of the Freshmen for their class colors, why instead of selecting brown and white didn't they take Brown and Flint? But then, this would give more of a tinge of malachite!

The remarks that Lieut. Hersey made recently in regard to social

and military etiquette were well put, and it is hoped that they were appreciated by all and that the gentle hints will be taken.

The Q. T. V. Society is making extensive repairs on the interior of their chapter house.

Wilder, who has been taking a special course in Electricity since graduating from Bowdoin last year, has left college. He intends to go to Germany this Fall to pursue further his electrical studies.

That \$500 which was appropriated for an athletic field may be truly said to be under ground, as a ploughed field, half drained, is all there is to show for the above named out-put. The chances of having anything more done in that direction this term seem to be very small.

What we regard as a tribute to the College was the election at a joint session of the City Government of Bangor, of Prof. G. H. Hamlin as City Engineer of that place. That the work of that office will be carried out in accordance with the most approved engineering methods, goes without saying.

The base ball nine look very natty in their new uniforms. They consist of a light gray shirt and pants with dark blue trimmings, the cap having a very pretty monogram of M. S. C. upon it. They are decidedly more "up to date" than the antediluvian relics which were worn during the memorable season of '93.

President and Mrs. Harris, very cordially entertained the Freshmen on the evenings of March 31, and April 7, half of the class being received at a time. They were assisted on these occasions by other members of the Faculty and their wives who helped in making them pass a very enjoyable evening.

E. Clarence Hunt of Toronto University, college secretary of the International Committee of Y. M. C. A., addressed a meeting of that organization in its rooms Sunday afternoon, April 8, and again made a short talk after chapel Monday morning in regard to the college being represented at the coming convention to be held at Northfield, Mass., this summer.

Professor Stevens and wife very pleasantly entertained the Sophomores at their home on April 10. The evening was spent most agreeably in playing games, etc., and after refreshments were served all joined heartily in the singing of college songs. '96 unanimously agreed that the Professor again not only showed himself to be a true friend of the Sophomores but proved himself an admirable host.

The following Sophomores have been appointed for the stage to compete in the Prize Declamations which occur June 1st: Steward, Sargent, Palmer, Jeffery, Glidden, Weston, Urann, Randlette, Walker, and Gibbs. It will be noticed that the time has been changed, it formerly being a part of the Commencement exercises in June. It will be extremely hard for those who have parts in the Ivy Day exercises, which take place the same week but it is understood that after this year the scheduled time for the Prize Declamations will be at the end of the fall term.

Capt. Murray has shown himself to be not only an able commander when in charge of the Cadets, but has now proved himself an equally good instructor of military drill when in the difficult position of instructing a squad of young ladies. The torch-light drill which was so admirably executed in Town Hall, on the even-

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ings of April 4, and 9, by thirty-two of Orono's young ladies, showed efficient training. It is said that during one of the first rehearsals when Capt. Murray commanded them to "dress properly," one of these same young ladies actually blushed! And this right here in Orono!

Although the good work that the college band is doing is fully appreciated by the student body, the everlasting toot! toot! toot! of all kinds of horns at all hours, both night and day, which is of course necessary for them to keep up to become eminent musicians, is not so well appreciated by those who have not a keen ear for *music*! Why wouldn't it be an excellent idea to petition the Maine legislature, which is so generous toward us, for a sum sufficiently large to build a band hall out in "The Pines" somewhere so that "the village pharmacist" would not be driven to death putting up headache cures and pain killers?

Don't anybody let his name be found missing on the subscription paper for the support of athletics. While not any of us are overburdened with ready cash, athletics must be supported financially as well as physically, not only for our own good but for the good of the College, and money is one of the first requisites which is needed for success in this line. Again, if your name is down on the paper don't let your \$3.00 or whatever you subscribe be "shy" when the day of reckoning comes, for to this deficiency may be traced the financial embarrassment which we find ourselves in at the end of every base ball or foot ball season.

One poor Freshman literally "laid himself on the shelf" recently. It

was the evening of the President's reception to the members of his class and on account of the "brashness" which he had manifested during that day some omnipresent Sophomores had locked him in his room. On looking through the transom later no Freshman was to be seen, and it was supposed that the "bird had flown" by means of the fire escape, but in the morning his resting place was found to be on the shelf in the top of his closet, where, happy in the thought that he was safe from his tormentors, he had slept soundly, awaking in the morning greatly refreshed with the only noticeable damage to himself, being a slight warp in his lower limbs.

The position of scorer on the ball team was knocked off to the highest bidder in regular auction style at a recent college meeting. Manager Folsom acted as auctioneer and run the bids up affably until \$18.75 was reached which proved to be the limit, Havey, '97, being the highest bidder. It is an enviable position for anyone who can spare the time and likes base ball. This method of choosing the scorer is quite unique and increases the treasury of the athletic association to a certain extent, but would it not be better to adopt the custom of the other colleges of the state and elect the scorer, having it understood that the following year he should become manager? This gives him a year's experience in base ball matters in which he makes valuable acquaintances and obtains points in managing a team, which under the present conditions are not acquired until the season is nearly closed.

❀ ALUMNI NOTES ❀

DR. FERNALD'S PORTRAIT.

It may be of interest to the Alumni to know what progress has been made in connection with the portrait of ex-President Merritt C. Fernald which the Alumni Association voted at last Commencement to have executed for presentation to the College.

The committee to whom was delegated the task of perfecting the necessary arrangements have attended to their duties. After due consideration Alger V. Currier, of Hallowell, was selected as the artist to paint the portrait, and the committee feel that they were very fortunate in securing the services of so talented a gentleman. Mr. Currier is a young man of only 32 years and yet he is undoubtedly the most brilliant portrait artist in Maine to-day. Commencing his art studies in the vicinity of his Hallowell home, Mr. Currier was for three years a student in the School of Fine Arts, in the Boston Art Museum, after which he visited Paris where he continued the pursuit of his chosen profession under such talented instructors as Boulanger, LeFebvre, M. Carolus Doran and Benjamin Constant. During his third year in Paris, Mr. Currier painted four pieces that were accepted for exhibition at the Salon, two in oil and two in water colors. Two of his paintings have also been exhibited at the Union League, New York.

He is a member of the Paris association of American Artists.

After the Alumni Committee had settled upon Mr. Currier as the artist to execute the portrait in oil, Dr. Fernald visited Hallowell and sojourned for a time at the artist's hospitable home. During the fall and winter months the doctor gave numerous sittings to the artist, and the finishing touches to the features were executed in the presence of Mrs. Fernald. The portrait is now completed and is a work of high merit, being warmly praised by all who have seen it. It represents the doctor in a standing position with a Commencement Day programme in one hand, and is an admirable portrayal of the gentleman who, for twenty-five years as a professor or president, was associated with the Maine State College, his connection therewith dating back to the very inception of the institution.

The canvas of the Fernald painting is 34x59 inches and it has been enclosed in an elegant frame. It will be placed on exhibition for a time in the cities of Portland, Augusta and Bangor, and will be presented to the College during the next Commencement. The college library is already adorned with a fine painting of ex-President Allen executed some years ago by Miss Skeele of Portland, also a donation from the Alumni.

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PROF. LAMSON-SCRIBNER.

The recent determination of Secretary Morton of the U. S. Department of Agriculture, to secure the services of a capable agrostologist, whose entire time should be devoted to the subject of grasses, has resulted in the selection of Prof. Frank Lamson-Scribner, of the class of '73, who has accepted the position offered to him.

There are no means of estimating with any degree of accuracy the total value of the grass production of this country, but the value of the average hay crop exceeds \$400,000,000, and while no data are available to estimate the annual value of the pasture lands, it is clear that, added to the hay value, a total grass product will result probably more valuable than any other single crop in the country. The importance of collecting and imparting useful information regarding our grasses is therefore evident. The duties of the agrostologist are thus summarized in a letter in which the place was tendered to Professor Scribner: * * * "The identification of grasses and the investigation of forage plants in this Department * * * To prepare monographs on grasses; care for the grasses of the herbarium; to identify such as may be sent here for that purpose; to conduct correspondence on this subject, and to have charge of any special investigation of grasses and forage plants which may be undertaken by this Department."

The manner of Professor Scribner's selection for the place testifies strongly to the high place he holds in the estimation of the leading botanists in the country. As soon as the creation of the place was decided upon, letters were addressed to twenty-four of the leading botanists in the country, advising them of this intention, and they were invited to suggest the names of persons whom they regarded as best fitted for the place. Ten of the parties so addressed

replied recommending Prof. Lamson-Scribner, and four others speak of him as the right man, provided his services could be secured. Among those highly recommending Professor Scribner are: Prof. Charles E. Bessey, of University of Nebraska, who speaks of him as "the one person above all others whose services the Department should secure if it is possible." Dr. J. Bernard Britton, of Philadelphia, who pronounces him "the best grass expert in the United States." Prof. N. L. Britton, Columbia College, New York, who says "the scientific knowledge of grasses possessed by Prof. Frank Lamson-Scribner is greater than that of any other American botanist." Dr. John M. Coulter, President of Lake Forest University, Ill., says "probably the best equipped man in the country." Prof. W. G. Farlow, of Harvard University, says "in my opinion the person having the largest and most accurate knowledge of grasses among North American botanists." Professor Hitchcock, of Kansas State College, says "probably the best equipped man for the position." Mr. Thomas Meehan, Germantown, Pa., says "the best fitted person in the Union for 'grass man' in your department." A number of others speak of Prof. Lamson-Scribner in the same or at least equally laudatory terms. Upon such recommendations Secretary Morton promptly tendered the place to Professor Scribner, through Assistant Secretary Dabney, and after some correspondence the Professor concluded to accept and his appointment has been made out.

Prof. Scribner, who is now Director of the Tennessee Agricultural Experiment Station and Botanist, was born in Massachusetts in 1851. His family name was Lamson, but having early lost his parents he was adopted into a family of the name of Scribner, living near Augusta, Maine; and there he was

brought up. From his youth Prof. Scribner showed his natural bent for botanical pursuits. At the age of 18, while still on the farm, he prepared a treatise on the "Weeds of Maine," an illustrated pamphlet of sixty-two pages, prepared for the State Board of Agriculture, and his first botanical collections, made in 1866-67, were acquired by Bowdoin College.

In 1870, he entered The Maine State College from which he received the degree of B. S. In May, 1885, Professor Scribner was appointed Assistant Botanist in the Department of Agricul-

ture and later became Chief of the Section of Vegetable Pathology. Professor Scribner is a member of a number of scientific societies and in 1889 he received from the French Government, for his services in matters pertaining to viticulture and the diseases of the vine, the Chevalier's Cross of the Order of Merite Agricole. He has written extensively upon botanical subjects and especially on grasses and has one of the largest private collections of grasses in the country, numbering nearly 5,000 specimens.

The Maine State College Association of New York City and vicinity held its fifth semi-annual reunion at the Arlington Dining Rooms on Tuesday evening, April 10. Those present were: Pres. A. W. Harris; A. E. Mitchell, '75; C. C. Elwell, '78; L. W. Riggs, '85; J. F. Lockwood, '86; J. S. Ferguson, '89; C. G. Cushman, '89; H. C. Farrington, '90; F. W. Sawyer, '90; Cyrus Hamlin, '91; Jos. C. Graves, '91, and Hiram Williams, '93.

Matters pertaining to the welfare of the College were freely discussed, and many laughable incidents of college life were related by some of the older members of the alumni. The "boys" were much pleased to make the acquaintance of President Harris and are heartily in accord with his efforts to develop our *Alma Mater*. The old board of officers were re-elected with the addition of Williams, '93, to the Ex. Com.

L. W. Riggs, Secretary.

Chas. C. Garland, '82, banker and broker, late of Minneapolis, recently made a trip to Mexico where he will probably locate.

L. W. Riggs, '85, has accepted the position of instructor and assistant in Chemistry in the Medical Department of the University of the City of New York. Mr. Riggs has been doing special work in Physiological Chemistry and Toxicology, under the direction of Prof. Witthaus.

J. W. Edgerly, '89, has been elected Selectman and Supervisor of Schools at Princeton.

E. F. Heath, '90, who is engaged in the hardware business at Monmouth, has recently been elected Supervisor of Schools at that place.

C. S. Williams, '90, is assistant to Prof. Chandler at Columbia School of Mines. Mr. Williams has been doing advanced analytic and synthetic work in Organic Chemistry.

Dr. F. W. Sawyer, '90, has an excellent position as surgeon at St. John's Hospital, Yonkers, N. Y.

L. H. Jones, '90, is at present draughting for a firm in Boston, Mass.

Cyrus Hamlin, '91, has lately received the degree M.D. from the Long Island Medical School.

F. C. Moulton, '91, is taking a post-graduate course in chemistry at Harvard.

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During the winter he has been making original investigations and has discovered over a dozen new Cupri-anilin compounds.

We understand that H. E. Doolittle, '92, is engaged in the dry goods business at Tamaroa, Ill.

Hiram Williams, '93, is taking a course in the medical department of the University of the City of New York.

C. P. Kittredge, '93, writes us from Des Moines township, Iowa, where he is teaching.

Mr. John R. Morris, ex-'93, of Bangor, and Miss Villa Bernice Lowell, of Brewer, were married April 10, at the residence of the bride's parents on Holyoke street. The ceremony was performed by Rev. H. E. Foss, of Grace church. At 8 o'clock the newly married couple left on a two weeks trip to Boston and New York. Mr. Morris is one of Bangor's most popular young men and is at present employed as bookkeeper by the Noyes & Nutter Manufacturing Co.

J. R. Small, ex-'94, is with the Al Martz' minstrel troupe.

Prof. W. B. Olerson, of Honolulu, who has been President of Hamehameha College for fifteen years, and who is one of the authors of Picturesque Hawaii, was a member of the first class of the Maine State College.—*Bangor Commercial*.

Resolutions on the Death of Professor Walter Balentine.

Whereas, death has removed from our midst our beloved brother, Walter Balentine, and

Whereas, we recognize and honor the true and noble life he lived.

Resolved, That the Orono Chapter of the Q. T. V. Fraternity has lost a brother who never swerved in his loyalty to his Chapter or his duty to his fellow men.

Resolved, That we extend our heartfelt sympathy to his family.

Resolved, That a copy of these resolutions be sent to the family of our departed brother; that copies be placed on file in the Chapter Records, and that they be published in THE CADET and *Quarterly*.

HERBERT MURRAY,	} Committee on Resolutions.
WALLACE H. JOSE,	
E. B. WOOD,	





A FEW NOTES ON TRAINING.

A great many people who know nothing, or at the best, very little, and even some who are supposed to be well posted, about athletics in general and the athlete himself in particular; to whom if he should say "I go into training for the race to-morrow" would immediately feel sorry for him; for they think training and dieting means very hard, disagreeable work for one thing, and starvation for another. If, however, they could see and understand the modern method of training a man for a field day, a tennis or boxing contest, etc., they would undoubtedly be greatly surprised.

In the first place, let us regard eating or dieting. Ninety-nine per cent. of the human race (the other one per cent. is composed of athletes and a few fortunate persons who have found the true road to health) eat just about twice as much food as they need, and not only this, but pay very little attention to what they do eat. If an ordinary man would write down a list of the different kinds of food, or what passes for food, he would be greatly surprised at the length of his list towards evening. If now he should go carefully over his list and place a check mark on each kind that he did not need, he would be more surprised at the large number of his check marks. Now, dieting in its most important and correct sense, means the abolishment of that food which is unnecessary in the support of the various muscles and tissues of the body, and the use of that food that is needed.

A word as to drink: If we lived on

the food which is supplied by nature for the use of man, we would *not need drink of any kind at our meals*. This statement, perhaps, gives rise to the question, "What is the natural food of man?" I answer most emphatically, fruit and the cereals. It has been shown by prominent physicians that the teeth of man were not made for the purpose of masticating meat, and that his digestive organs were not constructed for that use. Why is it that at all large colleges you see set before the 'varsity eleven, nine, or eight, dishes of all kinds of fruit? It is because the men who are training these athletes know that they are better fitted for the struggle in which they are to enter, whether on land or water, by eating fruit and the cereals. They are in better health, look better and feel better every way for it.

"The strongest men of those of the manliest races in the world at present are non carnivorous."

A few points as to eating may not be out of place here. Eat slowly and thoroughly masticate your food. We are nourished by what we digest, not by what we eat. Never eat if you have no appetite, and finish your last meal three hours before you retire. There should be an hour after every meal for perfect rest. Do not eat until you have leisure to digest. So much for dieting; now as to baths. Baths are one of the most important adjuncts to a healthy life. Baths should be short and sharp. The *safest* bath for all to take is: sponge all over with warm water, then sponge off with water cold enough to give a com-

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portable shock to the system. Dry with an absorbent towel and then use some muscle and a flesh mitten until a nice glow appears, changing the color of the skin to an healthy pink. This bath need not take over three minutes if it is done as it should be. The best time for a cold bath is immediately upon rising. A bath is an absolute necessity after exercising. As to training in general, there is one rule which a novice is almost sure to break the first day he starts in. *Don't overdo* — exercise steadily and regularly. The muscles are strengthened by moderate exertions and not by violent or fitful ones. In regard to reducing fat, "where the most heat is, there is the most reduction." Keep the fattest parts of the body covered the most when exercising. Sleep is one of the most beneficial factors of training of all kinds and for all contests. Summed up, training may be said to be, "Taking the best possible care of yourself in order to attain a desired end."

F. L. M., '96.

BASE BALL.

The prospects for a successful season at base ball were never more promising at M. S. C. than at the present time. During the year a number of base ball men have entered college, while we have lost but one of last year's players.

Among the most promising of the new men are Haynes, ex-'93, who distinguished himself on the Tufts College team last year; Brown of Skowhegan; Bass, '97, and Cowan, '97. All these men are at home in the box as well as being all round players. Thus we shall be sure of a good man in the box. As we have been weak at this point for the past two seasons the team will be materially strengthened. For the past month and a half Capt. Haynes has had a squad of about twenty-five men working hard in the gymnasium and on the diamond. The men are showing up well and as things look now we can but put a winning team in the field. Of course to make the team a success we need the encouragement and support not only of the student body but of everyone who feels at all interested.

The following is the schedule of games arranged by Manager Folsom:

Bangor at Bangor, April 21.
M. C. I. at Orono, April 28.

M. C. I. at Pittsfield, May 4.
Colby at Waterville, May 5.
Bates at Lewiston, May 11.
Bowdoin at Brunswick, May 12.
Bates at Orono, May 15.
Bates at Lewiston, May 18.
Colby at Waterville, May 19.
Colby at Orono, June 2.

Negotiations are on for games with several other teams but the dates have not been finally fixed.

The suits for the base ball team came Monday, April 16. They are satisfactory in every respect and the team presents a very neat and attractive appearance in them. The trousers and shirt are of light gray while the stockings and cap are of dark blue. The monogram on the cap adds much to the appearance of the uniform.

The practice game with the Old Towns April 14 resulted in a victory for M. S. C. The playing showed that the boys had been putting in some hard practice and that the right men were in the right place.

A good deal of amusement was occasioned when the scorer's position was auctioned off. Havey bid it off at \$18.50.

P. D. S., '96.

The prospects for a very successful year in base ball look exceedingly bright. The men who are training for the team are as conscientious a set as you will find anywhere, considering the way they are handicapped. The small amount of time allotted to them for athletics and the season being so far advanced before active work on the field can be commenced, it is surprising how well the College has been represented on this diamond in years past. This year the season began much earlier and with the material and the amount of practice we hope to accomplish, I think we shall develop into a winning team. Let every student contribute to the support of the nine either by words of encouragement or by money. We are fitted out this year with new suits for which we are truly grateful, and through the kindness of Lieut. Hersey, the men are excused from drill so that that hour is used in practice. A word for our manager. It would be a wonderful thing if a manager suited everybody, and I think none have ever succeeded in doing that. If you will stop and think of the hard work and worry he undergoes during the season, I'm sure you will not grumble at any slight mistake on his part. If you will all heartily co-operate with him and help him his duties will be lessened a great deal. I trust that all will feel it their duty to be on the field when we are at work and give us encouragement at every opportunity and I assure you that our record at the end of the season will be one that you will all be proud of.

C. I. H., '96.

OUR FIRST ANNUAL FIELD MEET.

It has been said with truth that with the first annual field meet of a college there comes a decided increase of life and interest in athletic sports.

Our first annual meet is set for Wednesday, May 23d, 1894, and let us hope and trust that with it will come what M. S. C. needs so much, *increase of interest in athletics*. It is not because of any lack of good material that we are somewhat behind the times in athletics, but on account of this lack of interest, undoubtedly due in a great degree to lack of time for training.

The list of track events includes a hurdle race, five runs, and two wheel races; and the list of field events, four jumps, two vaults, putting the shot, and throwing the hammer. We want a large list of entries in each of the events, so find out by a little practice the ones in which you wish to compete, enter for them, and then train hard and faithfully. Do not be satisfied with entering one or two events, but enter five or six as

though you meant to win two or three and take second place in the others.

We must not feel discouraged because this is our first attempt at a field meet. Remember that we have men here at M. S. C. who can make records which will stand well with those made at the other colleges of Maine. Some of our men have in mere preliminary practice gone ahead of records made at Bowdoin in June, 1893.

It is expected that the meet will be held at the Old Town Park, where there is a good half-mile track and good ground for the field events. The entries will close May 15th, in order to give time for getting out programs. These will be complete in every way and will be sold to help pay the expenses. A silver medal of elegant design will be presented to the winner of each event and it is hoped that a championship trophy will be secured for the man scoring the most points, first place counting five, second three, and third

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one. All [necessary apparatus is provided and will be found on the field by the "gym," although of course some will practice to a certain extent in private. Let us remember that w

for M. S. C. when we are training to make the records what they should be. May the time come when we shall have a fine "gym" and the best athletic field wori in the State. H. H. Hywood, '96.



M. S. C. vs. M. C. I.

On Saturday, April 28, a crowd of about five hundred people had the pleasure of seeing what at first looked like a very interesting game of ball. At the end of the first inning the score was tied, three all. In the third M. C. I. got a small lead but in the fourth M. S. C. took a big lead which they kept through the game. The features of the game were the loose playing of M. C. I. and the strong batting and excellent team work of M. S. C. Bass did great work in the box and Cowan at short played a good game with the exception of a poor throw to first. For the visitors Mildram did fine fielding. The score :

M. C. I.										
A.B.	R.	1B.	T.B.	S.H.	P.O.	A.	E.			
Ferguson, l. f.....4	2	0	0	0	4	0	0			
Graves, ss.....6	2	2	3	0	1	7	3			
Bean, c. f.....5	1	2	2	0	1	0	0			
Friend, 1st b.....4	3	2	2	0	9	1	1			
Young, p., r. f.....5	1	2	2	1	1	4	0			
Bowman, 2d b.....4	0	2	2	0	0	0	2			
Giles, 3d b.....5	0	2	2	0	0	1	3			
Waldron, c.....5	0	0	0	0	6	0	1			
Mildram, r. f., p.....5	0	2	2	0	2	0	1			
Total.....43	9	14	15	1	24	13	11			

M. S. C.										
A.B.	R.	1B.	T.B.	S.H.	P.O.	A.	E.			
Bass, p.....5	4	2	2	0	0	6	0			
Frost, l. f.....6	2	2	2	0	1	0	0			
Haynes, 2d b.....5	4	4	6	0	2	2	1			
Palmer, c.....6	3	4	6	0	8	1	0			
Farrell, 3d b.....6	3	1	1	1	1	0	0			
Gilbert, c. f.....6	1	2	3	0	1	0	1			
Cowan, ss.....4	1	1	1	0	3	5	2			
De Haseth, 1st b.....5	2	3	5	0	10	2	1			
Dunham, r. f.....5	3	2	3	0	1	0	0			
Total.....48	23	21	29	1	27	16	5			

Three base hits—Palmer, De Haseth. Two base hits—Haynes, 2; Gilbert, Durham, Graves. Stolen bases, M. S. C. 9; M. C. I., 11. Double play—De Haseth, Palmer. Bases on balls—by Young, 6; Mildram, Bass, 3. Hit by pitched ball—Friend. Struck out—by Young, 1; Mildram, 1; Bass, 6. Time of game—2½ hrs. Umpire—W. E. Keith.

M. S. C. FRESHMEN, 17; E. M. C. S., 5.

The E. M. C. S. team came up from Bucksport on Saturday, April 21st, and played the Freshman nine on the home grounds. The Seminary boys presented a good team but their inability to hit Bass, together with costly errors on their part, enabled '97 to win the game.

The score by innings.

M. S. C., Freshmen.	1	0	1	0	0	4	5	1	5	—17
E. M. C. Seminary.	0	0	0	0	2	0	3	0	0	—5

Batteries—Bass and Palmer, Freshmen; Tillock and McBean, and Morse, E. M. C. S.

M. S. C., 22; BANGOR, 7.

A crowd of 500 people witnessed the first ball game of the season which took place on the College diamond Fast Day, our opponents being a picked team from Bangor. The Bangors were minus a pitcher so Bass, '97, was loaned them and although he was batted freely at times, he pitched a remarkably good game.

Errors were numerous on both sides but the redeeming feature of the game was the batting of our team, especially that of Haynes.

The make-up of the home team was as follows: Palmer, c.; Brown, p.; de Haseth, 1 b.; Haynes, 2b. (Captain); Farrell, 3 b.; Merrill, s.s.; Durham, r.f.; Cowan, c.f.; Frost l.f.

Score by innings.

M. S. C.	7	0	6	2	4	2	1	0	—22
Bangor.	2	0	2	2	0	0	1	0	—7

Batteries—Brown and Palmer, M. S. C.; Bass and Cobb, Bangor.

LAWN TENNIS.

The annual meeting of the Maine Intercollegiate Tennis Association was held at Lewiston a few weeks ago. It was decided to hold a tournament at Portland this year as usual, the dates being fixed at June 6-9.

Heretofore the railroad expenses have been much heavier for Colby and M. S. C. than for Bowdoin and Bates on account of their greater distance from Portland. This point was discussed, and Bowdoin and Bates very kindly agreed to average the traveling expenses of the four colleges. Thus our expenses will be materially lessened.

We should make a good showing at the tournament as we shall have plenty of time and opportunity to practice. Tournaments will be arranged with the Bangor Theological Seminary and the Bangor Y. M. C. A. teams. These games will be arranged to be played part at home and part in Bangor.

Everyone who can handle a racquet at all should enter the college tournament, for it is in this way that our representatives to the Intercollegiate tournament are decided upon.

The courts on the campus have been put in shape and the fellows are enjoying tennis to their heart's content.

The latest additions to our military uniform are greatly appreciated by tennis men.

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FOOT BALL.

At a meeting of the foot ball experts held in New York the following points were practically decided on, subject to the approval of the foot ball authorities at the leading colleges.

1. The piling upon a man when he is down will be heavily penalized, probably fifteen yards will be exacted from the perpetrator.

2. A man making and about to make a fair catch will be amply protected, the

penalty again being fifteen yards loss for interference.

3. Legislation looking to the adoption of a more open game will be enacted. Actual kicks will have to be made at the kick-off, upon a fair catch, and at the twenty-five yard line.

4. A man intending to make a fair catch must indicate his purpose by raising his arm as a signal.

5. An additional official to be known as linesman is to be appointed. He will remain outside the side lines, keep the actual time, note the downs, etc.

6. In all probability the playing time will be reduced from its present duration of two and a half hours.

7. A premium will be placed upon drop-kicking by increasing its relative value, otherwise the present ratio of values will be maintained.

**

Walter Camp has lately written letters asking old players to answer these questions:

How many years did you play?

What was the most serious injury you received?

Was that injury permanent?

Was it received in a match or in practice?

Had you been properly trained?

By this means he hopes to obtain evidence which will silence the objections raised on the ground of brutality and injurious results.

The Yale, Princeton and Harvard foot ball men have already begun training for next season's contests.

**

NOTES.

Brown has already forty-two games of base ball scheduled for this season.

There are forty-three base ball clubs in England, or as many as there are cricket clubs in America.

The following intercollegiate records broken during '93 may be of interest: Putting the shot—former record, 40 ft. 9 1-2 in.; new record, 41 ft., made by W. C. Hickok of Yale. Throwing the hammer—former record, 107 ft. 7 1-2 ins.; new record, 110 ft. 4 1-2 ins., by Hickok of Yale. Pole vault—former record, 10 ft. 9 3-4 ins.; new record, 10 ft. 10 1-8 ins., by C. T. Buckholtz, U. of P. Two mile bicycle race—former record, 5 m. 47 2-5 s.; new record, 5 m. 41 4-5 s., by W. W. Clenny of Yale.

The athletic exhibition and ball given on Friday evening, April 27, under the auspices of the M. S. C. Athletic Association, was a decided success, socially if not financially.

At 8.30, "first call" was sounded and at 8.15 a picked squad of 16 men fell in under command of Capt. Murray. First the silent bayonet drill was given; then, after a few company movements the drill was concluded by the silent manual which was executed in a very creditable manner and called forth loud applause.

Next on the program was a fencing match, best three out of five, between Messrs. Murray and Jose.

The score by bouts.....	1	2	3
Murray	5	5	1
Jose	6	2	3

making eleven points each, hence honors were even.

During the interval between fencing bouts an exhibition with single sticks was given by Marston, '96, and A. E. Sager, instructor at the Y. M. C. A. gymnasium, Bangor.

Both these events were received with hearty applause.

Following this came the wand drill by a squad of Freshmen under command of Dalot, '97.

The entertainment was concluded by a fine exhibition of club swinging by Marston, '96.

The grand march was formed about 10 o'clock, music being furnished by Pullen's Orchestra. A program of fourteen dances and three extras was successfully carried out. At intermission the company repaired to the dining hall and enjoyed light refreshments.

LAI D UP FOR REPAIRS.

Only a tangle of twisted wire,

Only a busted pneumatic tire,

Only a header in deep black mire,

Only a short, sharp nail;

Only a suit of clothes all torn,

Only a lump in the head next morn,

While two black eyes the face adorn,

Only a wheel for sale.

—London Tidbits.



COLLEGE WORLD

PRINCETON has 1092 students.

There are about 12000 students in the scientific schools of this country.

Professor Henry Drummond has been called to the presidency of McGill University, Montreal, Canada.—*Ex.*

John D. Rockefeller has sent the University of Chicago \$50,000 to be immediately expended in books.—*Ex.*

The first American College paper was published in 1880, at Dartmouth College; name, "Dartmouth Gazette."

The University of Michigan recently received a bequest of \$5,000 for the endowment of the Bible chairs.—*Ex.*

Bowdoin College celebrates its one hundredth anniversary next June. She will soon have a \$150,000 science building.

A new medical school has recently been established in Scotland, called after its founder,—The Muirhead College for Women.

Drake University and Penn. College will meet in joint debate on April 11, at the Masonic Opera House, Oskaloosa, Iowa.—*Ex.*

The New York Trade School is in a very prosperous condition. It has, in its day and evening classes combined, 555 young men.

The students of Chicago University have formed a "Students' Express company," incorporated under the State law with a capital stock of ten thousand dollars.—*Ex.*

The University of Pennsylvania has an attendance of 2223, thus ranking third in size of the American Universities. Harvard and Michigan surpassing it.—*Ex.*

The foundations for the new Fogg Art Museum at Harvard University are now nearly completed and the brick work will be begun immediately.

In England, one man in 5000 attends college; in Scotland, one in 650; in Germany, one in 213; in the United States, one in 2000.—*Ex.*

No college in all England publishes a college paper. This is another illustration of the superior energy of America, where about 200 colleges publish periodic journals.—*Ex.*

Egypt carries off the palm for a popular university. That located at Cairo, founded in the year 973 of our era, has an enrollment of 10,000.—*Ex.*

The first record we have of tennis is found in the Bible in these words: "Joseph served in Paroah's court and Israel returned out of Egypt.—*Ex.*"

Football in every form has been prohibited by the university at Heidelberg, Germany. They draw the line at dueling and will allow nothing more dangerous.—*Ex.*

Cornell is to have what is known as a Students' Tribunal, corresponding in general to the Amherst Senate. Its primary object is to eradicate the frauds practiced in examinations there.—*Ex.*

The largest scholarship given by an American college is the Stinnecke scholarship at Princeton. It is given for excellence in Greek and Latin, amounts to \$1500, and is awarded tri-annually.—*University News.*

The schedules for the Yale-Harvard-Princeton debates are as follows: Yale vs. Harvard, March 20, at Cambridge; Harvard vs. Princeton, April 20; Yale vs. Princeton, May 10, at New Haven.—*Ex.*

The African Prince Besolow, who is a member of the class of '97 of Williams College, has received a call from his native land to return and take possession of his kingdom.

The eightieth anniversary of North Yarmouth Academy in Yarmouth, Me., will be observed in June. This old academy has many distinguished alumni, among them, General O. O. Howard, Congressman Charles A. Bontelle, Charles Parsons, the great New York railroad magnate, and others. It is thought that both General Howard and Congressman Bontelle will be present.

Lord Kelvin, who has announced his desire to resign the Glasgow University chair of natural philosophy, was appointed in 1846, when he was only twenty-two. He has held his chair longer than any other university professor in the kingdom.

The 124th annual spring term of Dartmouth College opened April 13th. The department of Biology has been strengthened by the appointment of J. H. Gerould of the Harvard Graduate School, as assistant instructor. Ex-United States Senator Henry L. Dawes was to open his course of lectures there, on United States History during and since the civil war, on April 23d.

At a meeting of the Harvard class-day committee, Bishop Lawrence was appointed to preach the baccalaureate sermon to the graduating class.

The question of a Normal School building in Boston is now being discussed.

The prize speakers from the sophomore class of Tufts College will not be appointed this year by the professor of oratory, as in the past. The positions will be open to the competition of the whole class, the trial being made before a committee of the Faculty, who will decide upon the speakers who are to compete in June.

The Eastern Conference of Presidents of the college Y. M. C. Associations was opened April 12th with the Amherst College association. The conference was continued through the week.

Johns Hopkins University has secured a large portion of the exhibit of the Charities and Correction Bureau of the World's Columbian Exposition. The material consists of books published on the subject of charities and corrections, penology, etc., models of public institutions, a number of charts, maps and drawings, illustrative of the methods pursued in the administration of charities and corrections, besides a large number of photographs of interest and importance in the study of these subjects. It will be the first working laboratory of this science to be established in the United States if not the world.

The Harvard freshmen crew is trying a new experiment this year, in the shape of a series of races which have been arranged with the 'varsity crew. It is thought to be a good scheme, as it varies the monotony of regular work and gets the crew accustomed

to starting. The first races are to be short ones over a mile course on April 19, the second on the 26th, and the third is to be a week before class races on the third of May. This year's freshman crew is, on the whole, a better crew than that of last year's freshman.

Buildings will soon be well under construction on the new site of Columbia College at Riverside Heights. On one side of the quadrangle a large building, including the library, chapel and dining hall will be built, together with the offices of administration and academic theater, capable of seating 2,000 or 2,500 people. On the other side of the quadrangle are to be buildings devoted to the various departments. A gymnasium will also be erected. The buildings will not exceed four stories in height. The removal of the College to the new site will probably be accompanied by the adoption of the dormitory system.

N. of M. Daily.

The benefits derived from combining with our public school system a course of instruction in manual training in the mechanical and domestic arts are now so well known that many cities are adopting the plan. The city of Toledo, Ohio, seems to have developed the most perfect system of this nature, by the co-operation of its Board of Education and the Directors of the Toledo University.

The effect of this union has been to add practical instruction in manual training to the Grammar and High schools of the city. In order to do this, the school day is lengthened an hour and this time is devoted each day to practical work. The end desired in these practical courses is not to turn out finished workmen but to train the hand to do the bidding of the mind. One great object of the school is to foster a higher appreciation of the value of intelligent labor. The person who sees only brute force in labor, despises both the work and the workman. With the acquirement of skill, himself, he sees the value of skill in labor and honors the laborer.

The prize speakers from the Sophomore class at Tufts College will not be appointed this year by the professor of oratory, as in the past. The positions will be open to the competition of the whole class, the trial being made before a committee of the faculty, who will decide upon the speakers who are to compete in June.

Oxford has an annual income of \$6,000,000.—*Ex.*

A museum of Classical Archeology costing \$20,000, has recently been dedicated to Cornell University.—*Ex.*

College sports have been forbidden at the University of Kentucky, on account of alleged gambling connected with them.—*Ex.*

At Leland Stanford, the faculty have organized among themselves a base ball nine, which have defeated every team the students have founded.—*Ex.*

The eastern conference of presidents of the College Y.M.C. Associations was opened April 12th with the Amherst College Association. The conference was continued through the week.

The University of Missouri has received from the state legislature, since February, 1891, by direct appropriation and interest on its endowments, \$1,525,000. Would that Maine might follow the good example.

Brown and the University of Pennsylvania have arranged a series of base ball games for the next two years. Two games will be played in Providence this season and two in Philadelphia next year.—*Ex.*

The six colleges or universities in the United States having the largest number of graduate students are Johns Hopkins, 262; University of Chicago, 256; Harvard, 254; Cornell, 161; University of Pennsylvania, 154; Yale, 143.—*Ex.*



THE BASE BALL SITUATION.

The subscription for the Phillips Brooks house at Harvard is rapidly nearing the hundred thousand mark. The house will be a great undergraduate club, where students and professors may meet on a common level.

Every northern state west of the Alleghenies has a State University. The University of Michigan has the largest attendance of any of the State Universities and is a part of the public school system of the state.—*Ex.*

On April 1st, the first class of nurses graduated from the Corney Hospital training school. The class consisted of only three young women and the exercises of the graduation were very simple. The school was organized in Sept., 1892, and at the present time has about 20 young women in attendance.

Vassar College is about to collect on a large scale, the nests and eggs of birds native to that section. A collector has been engaged who will devote his attention exclusively to this work. The collection of birds of North America at the college is said to be the largest and to contain the finest stuffed specimens in the world. It is valued at \$30,000.

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