

# The Calendar

OF

## KING'S COLLEGE,

WINDSOR, NOVA SCOTIA,

FOR THE YEAR OF OUR LORD

1861.

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PUBLISHED UNDER THE DIRECTION OF THE BOARD OF GOVERNORS.

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HALIFAX, N. S.  
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1861.

The University

of the State

1864



# UNIVERSITY CALENDAR

FOR THE

ACADEMICAL YEAR 1861—1862.

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1861.

September.

- Sept. 2. Michaelmas Term begins.  
" 3. Meeting of College Board.  
" 8. "Welsford Testimonial" presented.  
" 21. Cricket Prize game.  
" 27. Alumni Scholarship examination.

December.

- Dec. 5. Degree Examinations begin.  
" 6. Responsions.  
" 9. Terminal Examinations begin.  
" 15. Michaelmas Term ends.

1862.

January.

- Jan. 20. Lent Term begins.

April.

- Apr. 7. Terminal Examination begins.  
" 12. Lent Term ends.  
" 28. Easter Term begins.

June.

- June 16. Terminal Examinations begin.  
" 18. }  
" 19. } Degree Examinations.  
" 20. }  
" 23. Prize Examinations.  
" 24. Collegiate School Examination.  
" 25. Annual Meeting of Associate Alumni.  
" 26. ENCENIA.  
July 1. Academical Year closes.

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# KING'S COLLEGE,

WINDSOR, N. S.

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IN presenting to the friends of King's College the usual yearly account of the Institution, the Governors have much pleasure in congratulating them on its present flourishing and satisfactory condition. At no period of its history has there been stronger ground for such congratulations. The number of students is greater than it ever was before, there having been eighteen matriculations during the year, and there is a prospect of large additions in a short time.

The Report of the President, which will be found as usual in the Appendix, speaks in the highest terms of the good order, diligence, and general improvement which have marked the conduct of the students during the year; and the Governors are happy to be able to add, that there have been no appeals requiring the interposition of their authority, in regard to the discipline of the College. All possible watchfulness appears to be exercised by the officers, over the moral and religious, as well as the intellectual culture of those entrusted to their care; and the Governors believe that the utmost reliance may be placed by parents and guardians, on due attention being always paid to this most essential feature of education.

It is gratifying to find, that in reference to this particular, as well as to the capabilities of the Institution for imparting sound and thorough instruction, in the various branches of Classical and

Scientific learning, public confidence has largely increased within the last few years.

There are now students from New Brunswick, Newfoundland and P. E. Island, bearing off a fair proportion of the prizes and the honors which are held up as incentives to the zealous prosecution of study, and it is expected that through their means many more of the youths of those Colonies will be induced to resort to our Halls. The vastly increased facilities of inter-communication have removed objections which formerly existed, on the score of distance and irregularity of conveyance. In fact, it is as easy now for a youth to reach Windsor from New Brunswick or P. E. Island, or even from Newfoundland, as from some remote parts of our own Province.

The great pecuniary advantage attached to College Certificates, of exemption from all fees, (amounting annually to between twenty and thirty pounds,) is every year becoming more apparent, and has already attracted many students to the Institution. The holders of these Certificates may be safely assured as they were at the outset, that to themselves or to their heirs (for they are hereditary and perpetual), they will prove a valuable investment; and this consideration should quicken all those subscribers whose notes are yet unpaid, in liquidating their obligations, lest they should forfeit so important a privilege, and suffer their Certificates to be cancelled.

Another advantage held out at King's College, and which did not exist there under the old system, is the permission to pursue *elective studies*, without going through the whole curriculum, so that the young man may take his choice of the various departments of learning as may best comport with his future destination in life. He may also reside out of College, in any place approved of by the President. Several have availed themselves of this liberty, and more may be expected to do so in the present circumstances of these Colonies.

The Governors endeavour, as far as the funds will admit, to meet the demands of the several Professors for all needful appliances in their respective departments, and every year witnesses some addition to these. Thus a temporary Observatory is in pro-

gress, to enable the learned Professor of Astronomy to use his instruments with advantage to the students. And to facilitate the study of Natural History, the Cabinet under the direction of the indefatigable Professor of that branch has been largely increased, chiefly by the liberality of the Alumni, aided by various donations from kind benefactors, whose example, it is hoped, will be more generally followed, especially by all who have been educated at Windsor. If each of these would take care to send to the museum annually at least one contribution, we would soon possess a large and attractive collection.

Nor ought the Governors to omit, among the many considerations which unite in recommending to parents the Collegiate establishments at Windsor, for the education of their sons—the remarkably healthy character of their location. Of this, sufficient evidence may be found in the fact, which the Governors would record with devout gratitude to the gracious Preserver of men, that during the seventy years which have elapsed since the foundation of these Institutions not a single death of a pupil has occurred within the walls of college or school. It may be questioned whether a parallel can be found for such merciful immunity from the inroads of death, in any institution of like numbers in the world.

In the Calendar of last year was recorded an address from the Governors to His Royal Highness Albert Prince of Wales, then on a visit to Nova Scotia, together with his reply. This year the College has been honored by a visit from another son of our beloved Queen, His Royal Highness Prince Alfred, who was received with due distinction by the President, Professors, and students, and after inspecting the Library and other parts of the Establishment, expressed himself pleased and interested with all he saw. King's College, founded by the third George, has now been looked upon by four of that Royal House, viz: the Duke of Kent, father of Her Majesty, Prince William Henry, (afterwards William IV,) and by the two youthful Princes whose footsteps, after the interval of more than half a century, have now been turned to the same favoured and beautiful spot. It is gratifying to know, that these last distinguished visitors have found the University established by their



Royal Progenitor, still fulfilling to a third generation, His gracious designs of providing for the people of this country, in all time coming, "a Seminary of sound, religious, and useful learning."

And in looking to the future, there is much to inspire the hope that under the Divine Blessing, a bright career of usefulness is before us. Our Provincial wealth and resources are becoming rapidly more developed, and no doubt a large influx of population will consequently be attracted to our shores, for whose educational wants they will find a handsome provision already made in our Collegiate Institutions at Windsor, which may be expected to be crowded with students. And in this connexion it is pleasing to announce that active measures are in progress, under a joint-committee of Governors and Alumni to increase the accommodation at the College, by adding a building for the purposes of a Hall, Library, and Chapel, towards which object very liberal contributions have been made.

The Collegiate School which is under the control of the Governors, and has ever been regarded as an important feeder of the College, has recently changed hands. The Rev. D. W. Pickett, under whose kind and careful superintendence it has been for the last six years, resigned the charge in July, in order to remove to a mission in New Brunswick, carrying with him the esteem and regard of this Board, of the President and Professors of the College with whom he has been placed in closest connexion, as well as the affectionate respect of his pupils.

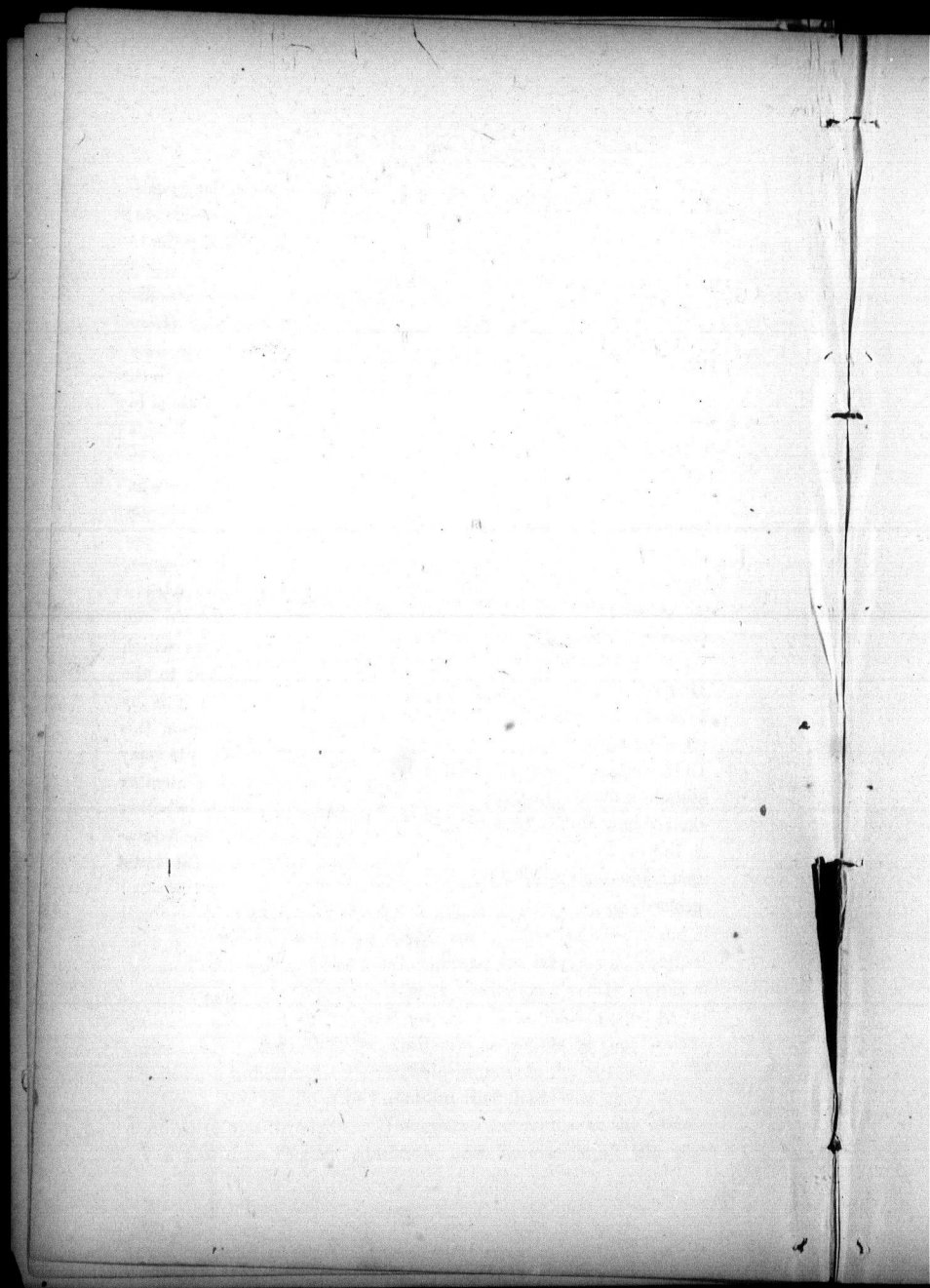
The Governors are expecting to procure as his successor Mr. Reginald St. Patrick, of Queen's College, Oxford, whose testimonials from various distinguished men are highly satisfactory, and it is hoped that under the new management the school will continue to flourish, and send up to the higher Institution a yearly supply of well-grounded and well-trained pupils. Attention is called to the various prizes attached to the Academy, as well as to the College, which have hitherto given a valuable impulse to the studies of the scholars. Nor should it be forgotten, that those who may not be destined to pass through the University, can acquire at the Academy a first rate English education, and likewise enjoy the great

advantage of instruction in the four principal modern languages from Professor Stiefelhagen, of whose ability, zeal and assiduity as a successful teacher in that department, of both College and School, the Governors cannot speak too highly.

Instruction in Chemistry is also given at the school (if a sufficient number can be found to form a class), by Professor How, D. C. L., who has so fully justified the high testimonials which he brought with him from the Parent Kingdom, and has acquired fresh distinction by his various discoveries, and his able contributions to Science, since his appointment to the chair he fills in King's College.

In closing this document, the Governors have much pleasure in announcing, that Charles Inglis, Esq., eldest son of the late Bishop of Nova Scotia, who died recently at Aylesford, N. S., has bequeathed to King's College, the valuable estate called Clermont, the country seat of his father and grandfather, together with a valuable library, and other property.

This generous bequest is the last of numerous evidences which Mr. Inglis has uniformly given, of his ardent attachment to the Institution at which he received his early education; and it is by far the largest benefaction, that has ever been bestowed upon this University. It is to be hoped that such a noble example may stimulate many others of our Alumni, substantially to remember their Alma Mater, when disposing of their worldly goods, whether in life or death, that so they may assist in perpetuating the educational blessings which they have themselves enjoyed, to the latest generation.



## APPENDIX.

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### KING'S COLLEGE, WINDSOR, N. S.

FOUNDED A. D. 1789. CHARTERED BY H. M. GEORGE III., 1802.

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#### BOARD OF GOVERNORS

FOR THE YEAR 1861.

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The Right Rev. HIBBERT BINNEY, D.D., Lord Bishop of Nova-Scotia,  
*President.*

Rev. GEORGE McCRAWLEY, D.D.

Hon. Mr. Justice WILKINS, B.A.

HARRY KING, Esq., D. C. L.

WILLIAM J. ALMON, Esq., A. B., M. D.

JAMES C. COGSWELL, Esq., D. C. L.

Rev. J. W. D. Gray, D. D., Rector of Saint John, N. B.

ANDREW M. UNIACKE, Esq., D. C. L.

Hon. MATHER BYLES ALMON.

SAMUEL P. FAIRBANKS, Esq., Q. C.

Hon. ALEXANDER STEWART, C. B.

Right Rev. JOHN MEDLEY, D. D., Lord Bishop of  
Fredericton.

P. C. HILL, Esq., D. C. L.

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J. C. HALLIBURTON, Esq., *Treasurer.*

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Rev. JAMES C. COCHRAN, M. A., *Secretary.*

# FACULTY.

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President of the College.

The Rev. GEORGE McCRAWLEY, D. D.

---

Professor of Divinity, including Pastoral Theology.

The Rev. JOHN MANUEL HENSLEY, M. A.

---

Professor of Mathematics, Natural Philosophy, and Astronomy.

JOSEPH D. EVERETT, Esq., M. A.

---

Professor of Chemistry and Natural History.

HENRY HOW, Esq., D. C. L.

---

Professor of Modern Languages, viz., French, German, Spanish and Italian, (also qualified to instruct in Drawing.)

HENRY STIEFELHAGEN, Esq., Ph. D.

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Librarian and Bursar.

Professor HENSLEY, M. A.



## TABLE OF FEES AND DUES

FROM WHICH NOMINEES ARE EXEMPT.

	Currency.
	£ s. d.
Matriculation.....	0 10 0
Tuition, each Term.....	4 0 0
Modern Languages, per term.....	1 0 0
Professor of Natural History and Chemistry, per Term,	2 10 0
Library, per annum.....	1 5 0
Degree of B. A.....	3 0 0

THE FOLLOWING ARE PAYABLE BY ALL.

Degree of M. A.....	3 0 0
Any higher Degree.....	5 0 0
Certificate from the Register, each.....	0 5 0
Every Certificate or Instrument under the seal of the University.....	1 0 0

### EXPENSES.

BOARD.—For Breakfast and Dinner, which are taken in the College Hall—per week.....	0 12 6
Attendance, portorage, messenger, and sundry small services per week, in Term time.....	0 1 0
Do. when two live together, each per week.....	0 0 9
Luncheon, if required.....	0 0 3
College road-money, yearly.....	0 2 6

Students take their evening meal in their own apartments, and provide lights and fuel, as also beds and bedding, and room furniture.

FEES ESTABLISHED FOR THE DEPARTMENT OF THE PROFESSOR  
OF CHEMISTRY AND NATURAL HISTORY.

To Individuals or Companies requiring the analysis of any substance or mineral:

	£	s.	d.
For ascertaining the <i>nature</i> of any such mineral or substance.....	1	0	0
If the <i>quantity</i> of one or two elements is to be determined.....	1	15	0
If a <i>complete</i> analysis of a <i>simple</i> mineral is required....	3	0	0
If a <i>complete</i> analysis of any coal or other complex substance be required, such as soils, minerals of a mixed nature, &c.,.....	6	0	0
These fees are subject to modification according to circumstances.			

PRACTICAL AND ANALYTICAL CLASS.

For the above there shall be two Terms: one from September to December 15, the other from January 15 to June 15.  
Hours of attendance—from 10 to 12 o'clock.

FEES PAYABLE BY ALL STUDENTS IN THIS DEPARTMENT, WHETHER  
NOMINATED OR NOT.

	Short Term.	Long Term.
Five Lectures per week.....	£3 10 0	£5 0 0
Four " " .....	2 16 0	4 0 0
Three " " .....	2 2 0	3 0 0
Two " " .....	1 8 0	2 0 0
One " " .....	0 15 0	1 0 0

All materials and apparatus provided by the College.

All damage, breakage, &c., to be paid for by the student at cost prices.

Additional charges for increased time.

## SCHOLARSHIPS.

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### THE WILLIAM COGSWELL SCHOLARSHIP.

£30 per annum, open to Candidates for Holy Orders. Under the direction of the Trustees.

*Scholar*—FERDINAND PRYOR.

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### DIVINITY SCHOLARSHIP.

Paid by the Society for the Propagation of the Gospel in Foreign Parts—open to Students for Holy Orders, actually requiring assistance—and subject to the control of the Bishop of the Diocese.

*Ten in number*—£30 currency, per annum, each.

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### THE DR. BINNEY EXHIBITION.

Open to Students in indigent circumstances, and of exemplary conduct.

£30 per annum.

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### THE ALUMNI SCHOLARSHIP.

£10 for the best Classical Scholar.—Open to all residents who have not passed the B. A. examination.

## PRIZES.

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### THE MCCAWLEY HEBREW PRIZE.

THE MCCAWLEY HEBREW PRIZE of £9 sterling, open to all Members of the University who are below the standing for M. A., and who have not already gained the first premium in Hebrew.

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### THE BISHOP'S PRIZE.

THE BISHOP'S PRIZE of £5 in books.

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### DR. COGSWELL'S CRICKET PRIZE.

CHARLES COGSWELL, Esq., M. D., has made a donation of £100 to the Governors of King's College, the interest of which is to be expended in the purchase of a set of Cricket bats, balls, &c., to be given to the best player among the winning party of a Cricket match, to be contended for annually, on the College grounds, on some day in the month of September. "The object of the donation is to promote the health of the Students, and encourage them in the prosecution of their studies."

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### DR. ALMON'S WELSFORD TESTIMONIAL.

WILLIAM J. ALMON, Esq., M. D., has endowed King's College with £100, the interest of which is to be appropriated as a prize to be competed for every June, by matriculated students, in their first year. The prize is to be presented by the President in the College Hall, on the 8th September, being the anniversary of the attack upon the Redan, in which Major WELSFORD fell—on which day, in every year, his gallant and loyal deeds are to be commemorated in Latin.

If no candidate shall be deemed deserving of the prize, it will be appropriated to the purchase of books for the College library.

## ALUMNI PRIZES.

For 1861-2.

£5 to the best in Mathematics.

£7 to the best in Modern Languages, (viz : £3 10s., French ;  
and £3 10s., German.)

£5 to the best in Natural Science.

£5 for Matriculation prize.

## EXAMINERS FOR 1861.

Rev. J. ROBERTSON, L. L. D.

Rev. J. STORRS, B. A. (T. C. D.)

B. CURREN, Esq., M. A.

A. MOREN, Esq., M. D., M. A.

## PRIZEMEN 1861.

CHAS. BULLOCK, Welsford Testimonial.

MR. MATTHEW, Mathematics.

MR. HOLDEN, Chemistry.

MR. MOORE, French.

MR. WOOD, Chemical Physics.

MR. ARMSTRONG, German.



## EXTRACTS FROM THE STATUTES.

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No Undergraduate shall resort to any inn, tavern, or public house, except for some special cause, to be approved by the President, or shall spend his time in the streets of the town.

All bills of Undergraduates are to be sent by the tradesmen with whom the debts are incurred to the Bursar, at the end of every Term; and parents are particularly requested to refuse payment of any bill not thus sent in.

The introduction of spirituous liquors into the College is absolutely prohibited.

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## NOMINATIONS.

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THE following is the form of nomination of a student to pass through the University, free of fees, and must be addressed to the Secretary of the Board of Governors:

To .....

Secretary of the Governors of King's College, Windsor.

I do hereby nominate (A.B.) to pass through the University, free of fees, by virtue of certificate No. —, held by me.

(Date.)

(C. D.)

In case of a joint certificate, the above form must be complied with, and the same must be signed by all the holders.

Each nominee is exempt from the payment of yearly fees, amounting to £74 15s. for the three years' course, including the fee for a B. A. degree. There being eighty-five certificates conferring this privilege, it is easy for students to obtain it. If a scholarship is held besides, nearly the whole yearly cost of education will thus be covered.

## COLLEGIATE SCHOOL, AT WINDSOR.

UNDER THE CONTROL OF THE GOVERNORS OF KING'S COLLEGE.

..... Principal.  
 H. STIEFELHAGEN, Ph. D., Prof. of Modern Languages.  
 ..... Assistant.

**Terms.**

BOARDERS—under fourteen years £35; if over that age at the time of admission, £40 per annum, *payable quarterly in advance*; this includes tuition, board, washing, and ordinary mending.

DAY SCHOLARS—£8 per annum.

Instruction in one or all of the four modern languages by Professor STIEFELHAGEN, £3 per annum.

**Vacations.**

From July 1 to August 15.

From December 15 to January 15.

There are two exhibitions of £8 and £4 each, to be competed for annually. The first is open to the senior form, and the successful candidate must be qualified, though not required to enter College. The second is open to the whole school. To entitle a pupil to become a candidate for an exhibition, he must have been enrolled as a scholar at the College School for at least one year previous to the examination.

There are, in connexion with this school, six exhibitions, each £15 per annum, tenable for three years, to be given to sons of clergymen, and to those who are designed for the ministry.

The annual alumni Prizes of £8 and £4 will be open for competition in June, 1862.

The Prize of £2 10s. founded by the Hon. Judge STEWART, C. B., for the best proficient in Practical Arithmetic, and of £2 10s. for the best in French, at the Collegiate School, is to be competed for in June, 1862. The requisite knowledge may be obtained elsewhere.

# King's College, Windsor.

CHRISTMAS, 1860.

THE *B. A.* examination has been passed by Mr. Wilkins, who has obtained a *satisfact.*

The following is the list of students who have passed the *Responsions* :—

Smith,	Armstrong,	Bullock,
Townshend,	Wainwright,	McCully,
	Bowman.	

Among the *matriculations* and entrances for special studies, the names following have been recorded during the term :—

A. D. Jamison,	Hoyles,	Sargent,
Archibald, E. S.	Carman,	Ward, E. S.

On the 8th September Mr. Smith delivered his Latin eulogium before the University, and received the Almon "*Welsford Testimonial*."

The Almon prize for the best *Herbarium Siccum* was adjudged to Mr. J. B. Uniacke.

The Cogswell Cricket Prize was gained by Mr. W. H. E. Bullock.

## TERMINAL EXAMINATIONS.

<i>In Literis Humanioribus.</i>	<i>In Disciplinis Mathematicis et Physicis.</i>	<i>In Theologia.</i>		<i>In Scientiis Naturali.</i>	<i>In Linguis Recentioribus.</i>
		<i>Schol. Fac.</i>	<i>Schol. Art.</i>		
Pryor Uniacke Sutherland Smith Bullock Armstrong Townshend McCully Bowman Wainwright Hoyles Harrington Kaulbach Lynch Wood Jamison Almon A. Jamison Holden, ab. McKiel, ab.	H. Brown Brown Pryor Sutherland Smith Armstrong Townshend Bowman Bullock McCully, ab. Harrington Wood Kaulbach Moore Mekiel Hoyles Almon A. Jamison	Uniacke, B.A. Hodgson Ansell Pryor Uniacke Bullock Armstrong Wood Hoyle Kaulbach Lynch A. Jamison McKiel, ab.	Smith Townshend Sutherland Wainwright Moore H. Brown Lytleton Almon Bowman Smith H. Brown Harrington Halden, ab. ex.	<i>Physiol.</i> Uniacke H. Brown Pryor Brown Sutherland Bowman <i>Chem. Inorg.</i> Bowman Smith H. Brown Lytleton Townshend Armstrong McCully Wainwright Archibald, ab. <i>Phys. Chem.</i> Wainwright H. Brown Harrington Kaulbach Lynch Moore Lytleton A. Jamison Hoyle Jamison Holden McKiel Archibald } ab. <i>Chem. Pract.</i> H. Brown Smith Bowman	<i>Class.</i> Townshend McCully Smith Armstrong Bullock Brown Sutherland Hoyle Moore H. Brown Harrington Lynch Lytleton Almon Wood Wainwright Kaulbach H. Brown Brown <i>Test.</i> Pryor Kaulbach Bullock Townshend Armstrong Hoyle

## CLASSICS.

The *Classical* authors studied in part during the term, comprise Euripides, Sophocles and Æschylus; Demosthenes and Homer; Juvenal, Horace, Tacitus and Terence.

In *Ethics*—Cicero with references to Aristotle, Paley, Gisborne and Stewart.

In *Logic* and *Intellectual Philosophy*—Aldrich, Huyshe—Young and Mansel.

In *Rhetoric*—Aristotle with references to Quintilian, Cicero de Oratore, and Whately.

Themes and Essays have been written weekly, and daily exercises in prose or verse have been composed.

The term exercise was a translation into Latin Heroics of the concluding lines of the VII. Canto of the Henriade.

The elective students were allowed to prepare instead an essay on "The teaching of Holy Scripture on Slavery."

## THEOLOGY.

The Catechetical Sunday evening lecture for the general class, comprehended St. Matthew's Gospel in Greek, and a systematic analysis of the Old Testament history. With students of the faculty, Browne's Exposition of the Articles has been studied, the O. T. Lessons have been read in Hebrew and Greek, and the Acts and some of the Apostolical Epistles in the original. Portions of Gresley's Ecclesiastes Anglicanus, including his references to Whately, have been expounded, as well as the principles of the composition of sermons. The Liturgy has been reviewed with Wheatly and the Manual of Adolphus, and Paley's Evidences have been completed. Portions of Genesis have been translated critically and parsed in Hebrew, and the grammar of the language examined and practically applied, and examples of the irregular verbs have been written out. Practical instruction in Pastoral Theology, in its various branches, has been given on Sundays, and occasionally at other times, by the Professor of the Faculty.

### MATHEMATICS AND NATURAL PHILOSOPHY.

The Professor's lectures for the past term have included Statics, Plane Trigonometry, Plane and Solid Geometry, Arithmetic and Algebra. The text books chiefly used have been Goodwin, Snowball, Hinds and Chambers. Problems and questions on all these subjects, ranging from such as are elementary to the more involved and difficult, have been solved and answered on the blackboard, slate or paper, as well as *viva voce*. The Professor has also instructed his classes in Practical Mathematics, in forming and solving problems on "Heights and Distances;" and, as a preparation for the study of Practical Astronomy, he has grounded them in Spherical Trigonometry, and taught them the use of the Theodolite, the Sextant, and the Artificial Globes.

### NATURAL SCIENCE.

In *Human Physiology* the Professor has given a general outline of the subject, viz. :—The relative position and the structure of the chief organs; the connection between nerves, muscles and bones; the *ultimate* chemical elements concerned, and the *proximate* elements into which they are made up in food, and the simple and compound tissues of the body, introducing also the most obvious of the laws of health.

In *General Chemistry* he has gone systematically through the subject of the elements from Oxygen to Arsenic; this course has been as usual experimental, and the mode of preparation of the elements and their most important compounds, with their more striking properties, when scientifically or practically interesting, exhibited in various instances. The most valuable ores and minerals were shown, and attention directed to the smelting of metals, the composition of gunpowder, ink, glass, earthenware, &c.

✓ In *Chemical Physics*, the subjects have been heat, light, electricity and magnetism; taking specific gravities; the thermometer; the various relations of electricity, chemistry and magnetism; the telegraphs in use, as practical applications of electro-magnetism, and the present extended use of magneto-electricity in the workshop, in military operations of exploding mines, in illuminating light-houses, and the very recent mercurial electric light of Prof. Way.



In *Practical Chemistry*, several minerals found in Nova Scotia and elsewhere have been analysed, and laboratory preparations made by the more advanced students, and metals and salts tested by those beginning the study.

His Excellency the Lieutenant-Governor forwarded for examination, through Col. Nelson, R. E., a specimen of a mineral which he met with in the summer: it proved to be *Oxide of Manganese*, a marketable substance if found in quantity.

#### MODERN LANGUAGES.

In *French* the *Causeries Parisiennes* and *Grandpere* have been nearly finished. Ollendorff and Ahn have served as grammatical text books. Exercises on points of grammar, especially on the use of the prepositions and the irregular verbs, have been constantly written, principally as answers to questions dictated in the lecture-room. Much daily practice has been furnished also in letters, notes and conversation.

In *German* several fine specimens of select prose have been studied, as well as some of the most admired of Schiller's *Gedichte* (erste, zweite, dritte periode). The grammar has been studied, and practical exemplifications written from the Professor's dictation.

In *Italian* the rudiments of the grammar have been taught.

In *Spanish* it has not been found convenient to form a class during the past term.

#### DISCIPLINE.

A meeting of the *College Board* has been held every Monday in term, in the classical lecture room, for a review of the performance and conduct of the undergraduates during the preceding week. The reports of all the Professors on these occasions have constantly yielded much gratification to the President, as confirming his own observation of the high tone of moral, gentlemanly and scholarlike feeling actuating the whole University. The written reports of the Professors at the close of term have expressed these sentiments in very emphatic language with regard to all their pupils, now numbering 32 members in attendance at the class rooms.

## VOLUNTARY EXERCISES.

These improving exercises are becoming more popular and interesting in College.

The weekly *Bible Class*, formed by the Professor of Pastoral Theology, continues to be well attended, and *Sacred Music* is regularly practised.

The *Shakspearian Readings* are usually held once a week, in which two or more of the Professors take an active part.

The *Quintilian Society* meets every week in term, for debate on questions of interest and importance.

## REFERENCES TO COLLEGE CALENDAR.

1. Students of other denominations are permitted to attend the ministrations and instruction of their appointed pastors.

2. Permission is given to *Elective Students* to devote their attention to certain branches of study exclusively, in preparation for a particular profession.

3. Students may obtain the President's sanction to reside out of College with approved families.

4. The remission of the whole amount of fees for a four years course, including the B. A. fee, is secured by a nomination; *practical* chemistry, however, is necessarily excepted. This reduces the expenses of a student within the smallest limits.

5. The following resolution has been passed by the Incorporated Alumni: "*Resolved*, that a Prize of Five Pounds be given to the Student passing the best examination for Matriculation in June next; the day of examination, and all other details to be arranged by the Reverend the President of King's College."

6. The examination for the Prize in *Hebrew and Biblical Greek* will comprehend the book of *Joshua* and the *Acts* of the Holy Apostles.

7. The *Statutes* of the University, the *Calendars* annually published by the Governors, and obtainable from their Secretary, Rev. J. C. Cochran, M. A., Halifax, and the *Reports* of the Alumni, contain all other necessary information on Scholarships, Exhibitions and Prizes.

## DONATIONS.

The following catalogue of valuable presents, received since the last report, will be read with pleasure by our numerous friends:—

Melodeon for the College Chapel—E. Binney, Esq.

61 volumes Standard Theological Works, £30—E. Binney, Esq.

Procopius, 1623—T. B. Aikens, Esq.

Works of Nicolo Macchiavelli—Hon. Judge Stewart, C. B.

Pearson on Creed, and Piscator's Commentarii, 1613—late Rev.

Dr. Twining.

Vol. 1 Mathematical Monthly—Rev. J. H. Clinch, M.A.

Parliamentary Journals of N. S., several bound volumes—

W. Seaman, Esq.

Novum Testamentum Bezae, 1589—Rev. W. Armstrong.

English Bible (Psalms—John 5th ch. 1648.) Newcomb & Bill,  
illustrated—Rev. W. Armstrong.

Haydyn's Creation—J. R. Willis, Esq.

Various College Calendars—Colonial and other Universities.

Claudian and nine other volumes—Rev. R. Payne.

Master Key to Public Offices, Boulger—S. P. Fairbanks, Esq.

Homilies of St. Macarius (Greek) 1539—Rev. H. L. Owen, M.A.

Grammar and Dictionary Yoruba Language; series of Catalogues  
of Bowdoin College, &c.—Rev. E. Ballard.

Two Gold Coins, Portuguese, John V.—H. Pryor, Esq.

Pennsylvania Three-penny Note, Gov. Jarvis, 1775—W. B.  
Almon, Esq.

Sicca Rupee (silver)—G. A. Crichton, Esq.

Bombay do. do. —G. A. Crichton, Esq.

Large collection of curious Copper Coins—Rev. C. Bowman,  
M.A.

A box of Fossils, collected and arranged by Rev. Mr. Honey-  
man, has been purchased by the Alumni at an expense of £25,  
and added to the College Museum—Associate Alumni.

Box of interesting Silurian Fossils, from Arisaig, and some  
Indian arrow and spear heads—Henry P. Hill, Esq., High  
Sheriff.

A small Herbarium of Scotch Plants—Dr. Gossip.

Carboniferous Fossils—H. Poole, Esq.

Minerals and Oolitic Fossils—Dr. Gossip.

Two specimens of Zeolites—H. Brown, Esq.

Specimen of Cuba Copper Ore—late Honble. J. E. Fairbanks.

Specimen of Acton (Canada) Copper Ore—late Rev. Dr. Twining.

Specimen of Gold in Quartz, from Tangier, N.S.—W. Pryor, Esq.

Coral, Sponges, and a Shell, Eggs of Mother Cary's Chicken (*Thalassidroma pelagica*) and an Egg of a Tern (*Sterna Hirundo*), all of Nova Scotia—Rev. J. Ambrose, M.A.

Land Crab (*Gecarcinus*), Cuba—J. R. Willis, Esq.

Stuffed specimen of Thresher (*Carcharias Vulpes*), 12ft. 13in. in length, caught near Halifax; also, a Human Skull. A stuffed specimen of Kingfisher (*Alcedo alcyon*) N.S.—Dr. Cogswell.

A Polaroscope, adapted for experiments with liquids, and, an Endosmometer, with a copy of his published paper "on the Endosmotic Action of Medicines"—Dr. Cogswell.

A piece of the Town Bell of Sebastopol, broken off in the siege—Dr. McIlree, Principal Medical Officer.

Tongue of Ship's Bell, and Grape Shot, from the spot where H.M.S. Tribune was wrecked in 1797. Fragments of steamer *Hungarian*—Rev. J. C. Cochran, M.A.

Several specimens of Granite from Rio Janeiro, containing rubies. Two beautiful specimens of Coral from St. Thomas's, W.I.—J. R. Willis, Esq.

Specimens of the Porcupine (*Hystrix dorsata*), and of a species of *Mustela*, both shot near the College—C. Ryan, 62d. Regt. Crim. Med.

Model of Welsford and Parker Monument—H. Hesslein, Esq.

Inauguration of do.—The Committee and Rev. G. W. Hill, M.A.

Tessellated Pavement from Carthage (two specimens), also Ram's horn stone, from do.—M. Suther, Esq., Lieut. Royal Marines.

Autographs of His Royal Highness the Prince of Wales and Suite.

Autograph—Prince Regent—Rev. G. Townshend, M.A.

“ George III.—T. R. Almon, Esq.

“ General Walker—W. B. Almon, Esq.

“ Physician to Japanese Expedition—A. Allison,  
Esq.

“ of Wilkes, Churchill, and other celebrities—C. B.  
Bowman, Esq.

#### COLLEGIATE SCHOOL.

The register of the last half year shews the number of about 40 scholars in attendance at the Academy, of whom nearly 30 are boarders.

The studies pursued under the Head Master and Assistants, comprise the Greek and Latin Classics, Mathematics, and the various branches of a good English Education, including particularly Grammar, History and Geography, with daily practice in the spelling and definition of words. Instruction is also afforded in the German, French, Italian and Spanish Languages, and whenever a convenient number of pupils desire it, in Chemistry, in Perspective and Drawing. A satisfactory report of the Christmas examination of this School has been submitted to the Governors of King's College.

GEORGE McCAWLEY,  
*President.*



## King's College, Windsor.

EASTER, 1861.

LENT Term closed, with the presentation as usual of the Term exercises immediately after Chapel, on Saturday the 23rd March, being the eve of Palm Sunday.

## TERMINAL EXAMINATIONS.

In Literis Humanioribus.	In Disciplinis Mathematicis et Physicis.	In Theologicis.		In Scientiis Naturali.	In Linguis Recentioribus.
		Schol. Facul.	Schol. Art.		
Pryor Sutherland Uniake Smith Armstrong Bullock Townshend Bowman Wainwright McCully Holden Harrington Kaulbach Mckiel A. D. Jamison Wood Moore Jamison Almon Sargent	Brown H. Brown, eg. Pryor Sutherland Smith Armstrong Wainwright Bullock McCully Bowman (eg.) Townshend Harrington Wood Hoyles Kaulbach Sargent A. D. Jamison Moore Mckiel Lyttleton Hoyles Jamison Almon Archibald	Uniake, B.A. Hodgson Wilkins Pryor Uniake Armstrong Bullock Wood Hoyles Kaulbach Sargent A. D. Jamison	Smith Townshend Wainwright Bowman Lyttleton Moore Almon Sutherland eg. Hoyles, eg. Brown, eg. McCully, ex. Harrington, ex.	Physiol. Uniake Pryor Sutherland Brown H. Brown, eg. Chem. Inor. & Or. Smith Lyttleton Bowman McCully Wainwright Archibald Townshend Archibald Chem. Inor. Holden Harrington Wood Lyttleton Kaulbach Lynch Archibald Mckiel Almon A. D. Jamison Moore Mckiel Jamison Chem. Pract. Brown Bowman Archibald Lyttleton H. Brown, eg.	Call. McCully Townshend Smith Sutherland Hoyles Bullock Bowman Hoyles McKiel Harrington Lyttleton Archibald Almon Holden Wainwright Brown 7 <sup>th</sup> Ed. Pryor Townshend Bullock Hoyles Kaulbach

## CLASSICS.

To the *Classical* authors read with *The President* during Michaelmas Term have been added portions of Thucydides, Herodotus and Xenophon, Livy, Cicero and Virgil.

The other subjects referred to this department have been continued with copious references to the late edition of Sir William Hamilton, by Mansel & Veitch.

The term exercise was a translation into Latin Elegiacs of Schiller's "Mädchen aus der Fremde."

Among the *Classical* examination papers most distinguished for neatness were those of the following gentlemen:—Pryor, J. B. Uniacke, Smith, Armstrong and Harrington.

#### THEOLOGY.

The Greek Testament (Gosp., Acts and Ep.) and the Old Testament History have been continued in the lectures of *Professor Hensley*, and also the Liturgy and Articles. Chrysostom on the Priesthood, in Greek, as well as Pearson and Butler, have been studied. With these have been conjoined, for Senior Students of the Faculty, Homiletica and Pastoralia. In Hebrew, portions of Genesis and Joshua have been read, and the Grammar continued.

#### MATHEMATICS AND NATURAL PHILOSOPHY.

The subjects of Mathematical Study illustrated in *Professor Everett's* classes have been Arithmetic, Algebra—including many of the chapters contained in Colenso (first part)—Logarithms and use of Tables, Mechanics—including parallel forces, mechanical powers, and centre of gravity—Trigonometry, analytical—including DeMoivre's theorem—and practical, with numerous examples, Solid Geometry, Conic Sections, Mensuration and Practical Geometry.

#### NATURAL SCIENCE.

*Professor How* in continuing the subject of *Human Physiology*, has discussed the structure and functions of the skeleton, the muscles, and the nervous system. The necessity of exercise in the open air for maintaining the health of the body and of assiduous application for developing the powers of the brain, has been clearly shown by reference to the best authorities.

In *Inorganic Chemistry*, the curious effects of arsenic on the system, and the means of detecting it in cases of poisoning—the action of hard and soft water upon lead, as affecting water for

domestic purposes—the antidotes for the poisonous metallic compounds—the nature of the more important alloys—the forms in which the metals are found in nature, and the simplest means of recognising them have been illustrated and exhibited.

In *Organic Chemistry*, the theory of compound radicals, of types, and of substitutions, were dwelt upon, and afterwards the chief topics were : the properties and relations of starch, the sugars, gum, lignine, and the action of re-agents in transforming lignine into sugar, into gun-cotton, and into the recently-applied paper parchment, and the nature and results of fermentation.

An Elementary Course of Chemical Lectures has been delivered to the Junior Students, which, as well as the preceding, has been illustrated by a variety of experiments adapted to render the subject fully intelligible.

In *Practical Chemistry*, the usual course of systematic testing, analysis and preparation of substances for use has been pursued individually by the several students.

#### MODERN LANGUAGES.

In *French*, *Dr. Stiefel* has lectured to three classes, and to one in *German*. Besides reading choice specimens of the best literature in prose and verse in both these languages, the pupils have been carefully trained by the Professor to express their thoughts in writing and in conversation on the most important and interesting topics of the day.

#### NOTICE OF JUNE EXAMINATIONS.

1. The Right Rev. The Visitor will appoint the *Dr. Binney Scholar* for the ensuing year at the Encænna.

2. The Trustees of the *Cogswell Scholarship* have decided upon the following subjects of examination :

*Greek Testament*—Gospel of St. Matthew.

*Bible History*—Acts of the Apostles.

*The Articles*, with Scripture proofs.

“The candidates will be expected to have read the works of the late Rev. Wm. Cogswell, in memory of whose pious labors the

Scholarship was founded." The examination will take place on the 14th and 25th of June. The candidates must be nineteen years of age, must be communicants of the Church of England, and must produce satisfactory testimonials of their moral and religious character. Names are to be given in to The President on or before May 18th.

3. The examiners appointed for the Alumni prizes are: the Rev. Dr. Robertson, the Rev. J. Storrs, M. A., B. Curren, Esq., M. A., and Dr. Moren.

4. The *Welsford Testimonial*, founded by Dr. Almon, is open to all first year men, who will be examined in all the subjects of their course.

5. The Mathematical Prize will be given to the student who shall pass the best examination in Plane Trigonometry, analytical and practical, Algebra to progression (Colenso), Euclid, 1, 2, 3, 4, and 6 books.

6. The *Prizes in Chemistry* will be given to the best proficient in—1. *Chemical Physics*, Heat, Electricity and Magnetism. 2. *General Principles of Chemistry*, and Chemistry of non-metallic Elements.

7. The *Prizes in Modern Languages* will be assigned to the student who shall pass the best examination in—1. Schiller's *Glocke*, and the prose pieces in *Adler* to p. 110; and in—2. Pages 1-21, "*Causeries Parisiennes*;" and "*Le Courier de l'Europe*" for May will be used as a test of proficiency in French.

The examination for these prizes will probably be held on the 24th and 25th June.

#### MATRICULATION.

8. The examination for *Matriculation* will be held on the 13th of June, and continued, if necessary, on the following day. Names of Candidates should be forwarded at least a week previous. The *Prize* subjects have been already published. Vid. Stat., cap. II. 2, and also King's College Calendar, 1860, page 36.

The examination of the Collegiate School will take place during the Commemoration week.

The *Encaenia* will be held on the 27th of June, after which all Academical business for the term will cease.

## DONATIONS.

Letters have been received from Sir William Denison announcing the despatch of his exchange fossils, &c. Along with them was sent a large and very elaborate section of the country from which the specimens were obtained, executed by the Government examiner of coal fields of New South Wales.

The following gifts, with several others, have been received during the term:—

Livy (commencing with the 4th Decad), Frankfort, 1578—Rev.

J. T. Moody.

Several interesting scientific pamphlets—Dr. Cogswell and Major Graham, U.S.A.

Sword of a Sword-fish—Alderman J. Duggan.

A small fish (genus unknown)—Rev. J. Ambrose, M. A.

Snake skin, and a beautiful specimen of Alga—H. C. Carman, Esq.

Bull of Pope Urban VIII., in Spanish.

Fac-simile of the first newspaper issued by Benj. Franklin, Feb., 11th, 1723.

A six-pound cannon ball from Bloody Creek, the scene of the massacre of the English by the Acadian French and Indians.

Rev. J. M. Campbell, M.A.

Several handsome interleaved Almanacks, a *second supply* from their publisher—C. H. Belcher, Esq.

Medal in memory of the obsequies of the Duke of York, 1825—C. B. Bowman, Esq.

Medal in memory of the obsequies of the Duke of Wellington, 1852—A Lady.

GEORGE McCRAWLEY,  
President.



## King's College, Windsor,

JULY, 1861.

THE Academical Year has closed with the ordinary examinations, extending over a space of ten days previous to the Encænia. The Examiners were—

Rev. J. Robertson, L. L. D.

Rev. J. Storrs, B. A. (T. C. D.)

B. Curren, Esq., M. A.

A. Moren, Esq., M. D., M. A.

Also the gentlemen forming the Committee for the Cogswell Scholarship, with Rev. R. F. Uniacke, M. A., Chairman.

Mr. Pryor, elected Alumni Scholar in September last, was appointed to the vacant Cogswell Scholarship, with high commendations to his competitors. Mr. Charles Bullock obtained the Welsford Testimonial, founded by Dr. Almon, which will be formally presented to him on 8th September next, immediately after his Latin eulogium on Major Welsford. Mr. Matthew was declared successful in Mathematics, Mr. Armstrong in German, Mr. Moore in French, Mr. Wood in Chemical Physics, and Mr. Holden in Chemistry. The Matriculation Prize was adjudged to William Cogswell, the First Exhibition to J. P. Chandler, and the Second to J. Harris.

On the 27th June the Encænia was celebrated according to the Statutes.

The Annual Sermon was preached before the University by the Rev. Prof. Hensley, M. A.

The Commemoration was observed by the Rev. the President of the University.

The Professor of Chemistry and Natural History discoursed on the History of Chemistry.

Francis Duncan, Esq., M. A., of Marischal College, Aberdeen,

Lieutenant R. A., Fellow of the Geological Society of London, read his exercises on the Civil Law.

The Right Rev. the Visitor announced his appointment of Wm. E. Bullock, as Dr. Binney Scholar.

The President announced the University Honors, when Henry Pryor, Esq., D. C. L., President of the Alumni, called up and presented the successful competitors.

A Prize of £10, offered by Lieut. Duncan, D. C. L., to be awarded at the Encenia of 1862, to the best student in Geology, with particular reference to the Geology of this Province, provided there are at least four competitors, was announced as having been proposed to the Governors and met with their approval.

Professor Everett's prizes were awarded to Mr. Smith and Mr. Wood.

S. P. Fairbanks, Esq., one of our esteemed Governors, has made a donation of £10 towards the building of the Observatory, to which the Lord Bishop and Dr. Almon have made liberal additions.

The honorary degree of D. C. L. was conferred upon a distinguished friend of our University, the Regius Professor of Chemistry in the University of Glasgow, Thomas Anderson, M. D., F. R. G. E., F. C. S. The President, in a Latin speech, set forth his claims to distinction, and the Bishop gave an explanation in English. The same degree was also conferred upon Prof. How.

Lieut. Duncan, M. A., of Marischal College, Aberdeen, was presented by Rev. Prof. Hensley, and admitted *ad eundem gradum*, and afterwards proceeded through the degree of B. C. L., to that of D. C. L.

A. Moren, Esq., M. D., of the University of Edinburgh, and B. A. of this College, having been presented by Rev. Professor Hensley, was admitted M. A.

Rev. E. Ansell, having been presented by Rev. Prof. Hensley, was admitted B. A.

Mr. G. Hodgson, having been presented by Rev. Prof. Hensley, was admitted B. A.

Mr. L. M. Wilkins, having been presented by Rev. Professor Hensley, was admitted B. A.

At the suggestion of the Lord Bishop, a vote of thanks to the Rev. Preacher was moved by Rev. Dr. Gray, and passed unanimously by the Governors, for his sound and well-timed exposition of the doctrine of the *Inspiration of Holy Scripture*.

#### MATRICULATIONS.

Eighteen Matriculations have been registered during the year, the following at the close of the present term :—

Cogswell,	Richardson,
Harris,	Jos. Chandler,
J. P. Chandler,	G. Armstrong,
Burgess,	A. Brown,
Barclay.	

#### EXCHANGE.

The specimens forwarded by Sir W. Denison, illustrating the Geology of Australia, in return for those sent from this College, have been received, and are exhibited.

#### DONATIONS.

Specimens of auriferous quartz from Laurencetown, from Mr. Glenie.

Substance supposed to be of meteoric origin, Mrs. Judge Hill.

Life of Major Andre, by Winthrop Sargent, presented by W.

J. Almon, Esq., M. D.

Gregory's Astronomy, by D. D. Harrington, Esq.

(Euvres de Machiavelli, by Rev. G. W. Hill.

Sallustii Opera, by J. P. Sargent, Esq.

A Marine Plant, by Mr. Carman.

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Michaelmas Term will begin on Monday, 2d September.

GEORGE McCRAWLEY,  
*President.*

## CURRICULUM, OR COURSE OF STUDY, &c.

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### CLASSICS.

THESE consist of Historians, Orators, Poets, and Philosophers. Portions of the standard Greek and Latin authors, under each of these denominations, are studied.

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#### In the First Year.

Homer's Iliad or Odyssey.  
 Xenophon's Cyropædia or Anabasis.  
 Demosthenes' Select Orations.  
 Horace's Satires and Epistles.  
 Livy, first or third decade.  
 Cicero de Officiis and Orations.

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#### In Second Year.

Herodotus, Thucydides, Euripides.  
 Virgil's Georgics, Terence occasionally.  
 Tacitus: Germania, Agricola.  
 Juvenal and Persius.

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#### In Third Year.

Sophocles, Æschylus, Longinus.  
 Aristophanes occasionally,  
 Tacitus and Juvenal, continued.  
 Lucretius occasionally.

Variations in the Course are sometimes admitted; and other authors, such as portions of Pindar, of Plato and of Aristotle's Ethics



and Poetics, under favorable circumstances, are read; but the Degree subjects are usually Euripides, Sophocles, Æschylus, Longinus, Tacitus and Juvenal.

In *Logic*, Aldrich's treatise with reference to Whateley and others.

In *Rhetoric*, Aristotle, Quintilian, or Cicero de Oratore with reference to Whateley and others.

Suitable Exercises, Themes and Essays are required.

### HEBREW.

The Grammar is carefully studied, and reference to the best subsidiary aids are constantly made.

Portions of the Old Testament are critically read and carefully compared with the variations in the Septuagint, and examination papers frequently written.

The following resolution has been passed by the Alumni, at their late Annual Meeting:

*Resolved*, that a prize of five pounds be given to the student passing the best examination for *Matriculation* in *June next*, the day of examination and all other details to be arranged by the Rev'd the President of King's College.

GEORGE McCRAWLEY.

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HOURS OF PRAYER.....	7 A. M., 3.30 P. M.
HOURS OF MEALS.....	Breakfast 8, Dinner 3.50.
MORNING BELL.....	6.30 A. M.
EVENING BELL.....	10 P. M.



# THEOLOGICAL DEPARTMENT.

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## PROFESSOR HENSLEY.

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### DIVINITY STUDENTS.

#### First Year.

Greek Testament: Acts.

Evidences: *Paley, Horn.*

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#### Second Year.

Greek Testament: Epistles.

Ecc. Hist. to accession of Constantine: *Burton, Mosheim.*

Liturgy: *Adolphus, Wheatly, Palmer.*

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#### Third Year.

Greek Testament: Epistles.

Articles: Scripture proofs and explanations.

Ecc. History, Reformation and Church of England:

*Hardwicke, Mosheim.*

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#### Fourth Year.

#### PREPARATION FOR ORDERS.

Greek Testament: Epistles.

Septuagint.

The Creed: *Pearson.*

The Articles: *Browne.*

Ecclesiastical Polity: *Hooker, V.*

Church Government: *Potter.*

Ecclesiastical History.

Chrysostom de Sacerdotio.  
Composition of Sermons.

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Butler's Analogy.  
Magee on the Atonement.  
Bingham's Antiquities.  
Wall on Infant Baptism.

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The Sunday evening lecture at 7 P.M., is attended by all resident under-graduates.

*Subjects :* Greek Testament : Gospels.  
Bible History.



## MATHEMATICAL COURSE.

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PROFESSOR EVERETT.

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**First Year.**

Arithmetic.  
Algebra.  
Euclid I to VI.  
Use of Logarithms.  
Mensuration.  
Elements of Plane Trigonometry.

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**Second Year.**

Algebra.  
Plane and Spherical Trigonometry.  
Euclid XI.  
Practical Mechanics.

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**Third Year.**

Statics.  
Dynamics.  
Hydrostatics, Optics, Astronomy.  
Analytical Geometry.  
Differential Calculus.

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The above course will be varied as circumstances may require.  
The books required for the first year are, Euclid, Colenso's Algebra and Arithmetic, and Chambers' Mathematical Tables.

## LECTURES IN CHEMISTRY AND NATURAL HISTORY.

## PROFESSOR HOW.

## First Year.

Chemistry and Mineralogy.  
 Powers of Matter.  
 Attraction, Heat, Light.  
 Electricity, Chemical Attraction.  
 Elements, Minerals.

## Second Year.

Organic Chemistry.  
 Human Physiology.  
 Botany, in Summer Season.

## Third Year.

Zoology and Geology.  
 Botany, in Summer Season.

## TEXT BOOKS.

Chemistry.—DRAPER'S.  
 Chemistry, Analytical.—FRESENIUS.  
 Mineralogy.—DANA'S *Manual*.  
 Geology.—LOOMIS'S *Principles*.  
 Physiology.—LAMBERT; Zoology.—AGASSIZ.  
 Botany.—ASA GRAY'S *How Plants Grow*.

It would be convenient if students would provide themselves with these books in Halifax.

## LECTURES IN MODERN LANGUAGES.

PROFESSOR STIEFELHAGEN.

## FRENCH.

## First Year.

*Ollendorff's Grammar*, combined with a systematic course of the pronunciation and the regular and irregular verbs. In this year the scholars read the reading-pieces in *Pinney's First Book of French*, because I find them excellent to practise the pronunciation.

## Second Year.

Continuation of *Ollendorff's Grammar*. The scholars begin to read and learn by heart the *Causees Parisiennes*, by *Peschier*," a book which I find better adapted for my purpose than any I ever met with. They are supposed to finish *Ollendorff's Grammar* in two years, at latest. If it is finished sooner, I begin my course of *Syntax*, &c., which is generally reserved for the third year, in the second.

## Third Year.

In this year, I go through a regular course of *Syntax*, partly as a repetition, and partly to supply the wants of *OLLENDORFF'S* system. The scholars are then supposed to be familiar with all the leading rules of *Syntax* from *OLLENDORFF'S Grammar*, and, in going through them again, I call their attention to the niceties, dictate rules on them, and cause the class to practise them, by writing exercises after my own dictation, principally consisting of letters and conversations on topics of general interest, &c. In this year I have, moreover, constant verbal exercises in conversation, and the scholars are obliged to speak French as much as possible. They read *Christomathie Française*, par *Boniface*, an excellent book, containing all the varieties of style to be found in French authors.



## GERMAN.

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First Year.

OLLENDORFF's Grammar, combined with a regular course of the pronounciation and the regular and irregular verbs. *Adler's Reader.*

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Second Year.

Continuation of OLLENDORFF's Grammar. The scholars continue to read *Adler's Reader*, and begin SCHILLER's *Lyrical Poems*, and one of his *Comedies* in prose.

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Third Year.

In this year I follow the same plan as in French. The scholars read one or more of SCHILLER's Tragedies, besides one of the *Comedies* in prose, by the same author.



DISCOURSE  
ON THE  
HISTORY OF APPLIED CHEMISTRY,

DELIVERED BY PROFESSOR HOW, D. C. L., AT THE ENCÆNIA, KING'S COLLEGE, 1861.

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THE Chemist's vocation is not generally interesting in its details, and it does not require frequent addresses to a mixed assemblage for its success, though these are necessary for the teaching of its importance to the world at large. The Chemist's work, his solid, daily labour, is done in seclusion, and much of it is never heard of, that, namely, which consists in trying to find truth without attaining success; though this labour is not really lost, for the knowledge of where something is not, is of course an aid to detecting its whereabouts, yet, so far as the external world is concerned, it is nothing, because it has produced nothing, and it is only occasionally that the patient investigation of truth meets with results that the world generally can see and appreciate. Chemistry is not singular in this respect, but there is a special difficulty in addresses on chemical matters, for the objection finds place that they cannot be understood without experiment; however, if illustrations, the fruit of experiment, can be drawn from familiar objects, a chemical address may not prove useless on this occasion, for it is less necessary for its usefulness that an unprofessional audience be acquainted with the processes, than with the results brought forward, and I propose therefore to touch very lightly on the History of Chemistry, and endeavour to contrast its bearings on some of the more important arts of life in olden days and in our own, and I may in the latter connexion be able to show how very curiously some sciences, usually looked upon as totally unconnected, are brought to assist and develop each other.

The arts of domestic life to which Chemistry is chiefly subservient, whether its operations are understood or not by those who employ them, are those in which natural substances are separated or put together, or artificial products are made for man's use, or materials are put together for attaining certain

results considered to be of direct benefit; and they may be treated of just now as embracing those relating to the preparation of colouring materials for the dyer and painter, of soaps, of artificial lights, and also of food, for the agriculture of to-day is in many countries essentially dependent on the application of chemical principles, and so are the operations of the dairy and kitchen, though less apparently.

In very ancient days there could have been but scanty chemical knowledge, if indeed there was any properly so called, and the arts of life in which it could be used, must have been of the very simplest nature consistent with their existence. This is shown by the few notices of chemical operations that we meet with in our oldest historic record, and these when interpreted by the light of modern science teach us that those of olden times had to deal with natural productions only; and one or two of these notices may be mentioned as shewing that they are not intelligible without some knowledge of chemistry. The word nitre is used in our version of the Bible, in, I believe, two places only, and in both what is really meant is the mineral natron, or what we call carbonate of soda, nitre or saltpetre being, as is well known, one of the ingredients of gunpowder. In one of these cases the expression is, "though thou wash thee with nitre," Jer. ii. 22, which has no meaning with our nitre as the material, but is clear enough if washing-soda is indicated. In the other, in the book of Proverbs, we read, "As he that taketh away a garment in cold weather, and as vinegar upon nitre, so is he that singeth songs to a heavy heart." Now, the effect of pouring vinegar upon our nitre would be nothing, no result whatever would follow, but when vinegar is poured upon natron, that is carbonate of soda, a lively effervescence takes place, which Solomon probably meant as symbolical of the increased perturbation of spirit caused by a song sung to a heavy heart, so ill-timed as to be most unfit to "ease the anguish of a torturing hour."

Another word occurring in the Bible that requires chemical explanation is "salt," and there is one important use of it in the New Testament (Matt. v. 13,) which is to me unintelligible if the literal acceptance of the term is to be taken. It is in the familiar passage, "Ye are the salt of the earth: but if the salt have lost its savour, wherewith shall it be salted? it is thenceforth good for nothing, but to be cast out and trodden under foot of men." Now, our salt, which, from its being used as a preservative of animal matters, may, to most persons, seem quite probably indicated, cannot lose its savour, i. e., its taste, for this is the only savour it has, and still be salt, therefore I accept the explanation, "that a fragrant bitumenous salt, from Lake Asphaltites, is probably alluded to, which was thrown over the sacrifices to counteract their smell, and which, when it had lost its aromatic flavour, was strewn over

the pavement of the temple to prevent the priests from slipping." The word salt, it may be mentioned, was applied in a most comprehensive way to a variety of mineral substances.

As an illustration of the history of the chemistry of food, a mention of butter will not be out of place; although the word is used in our version of the Bible, it is doubtful whether the Hebrews were acquainted with the substance; it is said that the most express statement concerning it, viz., in Prov. (xxx. 33), "surely the churning of milk bringeth forth butter," really refers in the original to the operation of milking, and in the other references cream is probably intended. Butter seems to have been invented by the Scythians; among the Greeks and Romans it was used as an ointment before it was employed as food; and since it appears that all the ancient authors speak of butter as something fluid,\* it is thought the ancients did not know how, by means of kneading, washing and salting, to render butter clean and firm as we have it.

The history of soap affords us another curious insight into the simplicity of olden life. Liebig says, I think, that the civilization of a country may be measured by its consumption of soap, and vast quantities of it are, we are aware, daily used in civilized life, and almost every one knows that it is made by boiling lye of some kind with fat or oil; it is in fact a chemical preparation; yet the first express mention of it, really meaning soap, occurs in Pliny, who wrote about the year 60, and it seems that the earliest use of it was as a hair-dye, or kind of pomade, and before it was employed for cleansing purposes: these were effected in the case of clothes by rubbing or stamping on them in water, without the addition of any substance whatever, or by the use of ashes, or natron before alluded to, or the juice of certain plants, or a natural substance now only employed in certain cloth manufactures, or finally, fuller's earth, which term probably included different kinds of earth, some of which were employed upon the person in baths, as is the case still in the Levant.

With regard to the art of dyeing, it is undoubtedly of great antiquity, and is essentially a chemical art. The honour of the invention is attributed to the Tyrians, and one of the most famous colours is spoken of as the Tyrian purple; this can still be produced, as doubtless it was got in former times, from a species of shell-fish: and a very curious fact, known from all antiquity, since the very existence of the dye depends upon it, is that in the living animal the substance is at first colorless, or rather yellowish, and, exposed to the light of the sun, in a moist state, it becomes of a pure violet hue, being chemically changed. It is probable that the choice of colours in dyeing in remote times was very limited, for it is stated that till the time of Alexander, no other dye

\* Beckman, I. 499, 508.



is found mentioned among the Greeks than purple and scarlet; which two colours and blue had, however, been long known, for they are particularly named by Moses. It is thought also that the ancient colours exceeded the modern in permanency, but were not nearly so bright.

Limited, however, as the ancients seem to have been to natural substances, it cannot be denied they made good chemical use of them, and therewith performed many operations which we carry on by means of artificially made bodies, and indeed there are upon record circumstances which would seem to involve a knowledge not now possessed, and a knowledge in some cases almost necessarily chemical. Was it an acquaintance with chemistry, for example, that enabled the Magicians of Egypt, in the terms of the narrative, to turn water into blood? or Moses to destroy the Golden Calf? the means narrated for the accomplishment of the latter operation are not those which we should take to produce a like result, and to a chemist the passage containing the details presents difficulties not easy of solution.

It is much later on in the world's history that we meet with anything like description of chemical operations, and these were limited at first to the pursuits of Alchemy. The unsettled question as to the origin of the word Chemistry does not help us much in deciding where its processes were first attempted, but it was probably in Egypt. Hermes Trismegistus, who is said to have lived in the year of the World 2076, is generally quoted as the oldest of the Alchemists, but the writings attributed to him are considered to be certainly spurious, and somewhat more credit is given to one Geber, an Arabian, who is thought to have lived in the 7th century, as being the author of chemical treatises which are among the oldest extant and which were published in 1523; treatises on alchemy were also published in 1130, and at intervals up to the middle of the 17th century. The chief object of the alchemists was the transmutation of the common metals into silver and gold, especially the latter; they sought also to prolong life, in spite of the ills that flesh is heir to, to the patriarchal duration, and one of them is said to have attained the age of 1025 by the miraculous use of his medicines. Both these effects were expected from their much desired philosopher's stone, some of whose properties are thus described in the so-called writings of Hermes; by its means "through the permission of the Omnipotent, the greatest disease is cured, and sorrow, distress, evil, and every hurtful thing evaded; by the help of which we pass from darkness to light, from a desert and wilderness to a habitation and a home, and from straitness and necessities to a large and ample estate;" and another worthy, after giving minute details for the preparation of it, says, "Thus, friend, you have a description of the universal medicine, not only



for curing disease and prolonging life, but also for transmuting all metals into gold."

Numerous accounts are extant of gold being really produced in this way from common metals, as lead and tin, some of which were really believed as authentic narrations of matters of fact by enlightened chemists of the 17th century. A very brief extract from one of these accounts may interest as showing how the change was said to be effected; it is given on the authority of M. Gros, a Genevese clergyman, of the most unexceptionable character, and at the same time a skilful physician and expert chemist. "About the year 1650, an unknown Italian came to Geneva and got introduced to M. Gros as a person able to converse in Italian, and after about a fortnight he began to complain of poverty; this frightened M. Gros who thought he was going to try and borrow money of him; however, he only asked him to find a goldsmith willing to lend the use of a room where they could work in secret and also the necessary apparatus and materials. A goldsmith was found who readily furnished crucibles, pure tin, quicksilver, and other requisites, and then left his workshop to the operators. The Italian melted the tin and poured the heated quicksilver into it, and at the same time projected a red powder enclosed in wax into the mixture, and the result was the production of six ingots, which the goldsmith who was called in to examine them declared to be gold, purer than any he had ever worked upon, and the greater part of them, for the smallest ingot was given to the goldsmith, was sold for its weight of Spanish gold coin."

It is hardly necessary to say that such a story cannot be true, and although it has been said of such accounts that unless we reject all historical evidence, we must allow those which have such character and testimony to be entitled to some confidence, Mr. Brande sums up the case by saying, "that all the histories of transmutation are of a suspicious character; sometimes the fraud was open and intentional, seconded by juggling dexterity; at other times the performers deceived themselves; they purchased what was called a powder of projection, prepared by the adepts, containing a portion of gold, and when they threw it into the fire with mercury, and found that portion of gold remaining in the crucible, they mistook its source. But the cases which are quoted as least exceptionable are often exactly those which are really impossible, namely, where the weight of the powder of projection, and of the lead or other base metal taken conjointly, was exceeded by that of the gold produced."

I may state that there is, perhaps, no sane chemist in the present day who believes it possible to convert one simple body into another.

The principal benefit derived from the labours of the true Alchemists was the invention of various furnaces and apparatus still in use, but they had con-

temporaries who did not waste all their time in visionary pursuits, but really made many interesting and most important discoveries. I will name but one, Sulphuric Acid, which was discovered about the 10th century, and of which it is impossible to overrate the importance in modern arts, not less than 100,000 tons of it being annually consumed in Great Britain alone.

Coming to our own times, what a contrast do we find between the simple life of those long passed away, and the essentially artificial existence of to-day, depending, as regards all classes, on operations of science, it is not doubted that our civilization is of a higher order than that which has preceded it, and though it might be possible to shew from excellent authorities how necessary it has become, and in what respect as regards the training of the mind it is advantageous, to add a study of Physical Sciences to the other indispensable elements of education, I wish on this occasion to dwell rather on the facts of scientific development, particularly those of a chemical nature, which form in great part the mainspring of the complicated machinery of scientific application by which every individual in civilized life is continually affected. For, to quote from a most interesting address of Sir B. Brodie, as President of R. Society of London in 1859, "If our houses and our cities are better and more economically lighted; if our population is better and more cheaply clothed; if our fields are more productive; if we travel by steam and communicate with those who are hundreds of miles distant from us by the telegraph; if a brighter light shines in our light-houses to guide the mariner at night—these and a thousand of things besides are but the result of the application by practical men of the discoveries made in the physical sciences to practical purposes. If sanitary and other improvements (these being the result of greater knowledge), have added to the average length of human life, be it observed that this fact includes another fact, viz., that they have added to human happiness, for true it is that the causes which tend to the shortening of life, are, with few exceptions, such as produce physical pain or moral suffering."

I said I wish to look at the chemical results of to-day, and who does not know, by name at least, Chloroform, Benzine, Glycerine, and Aniline, and, such is the familiarizing power of habitual use, it would be impertinent to do more than advert to Coal Gas and Washing Soda, or the arts of Photography and of depositing metals by electricity, yet these are all the really recent gifts of Chemistry to mankind and accepted as the common accompaniments of civilized life, and I anticipate at least a smile as I include the lucifer match as an evidence of our advantages over former peoples, yet, humble instrument as it is, we have only to compare it, and many here can do so from experience, with the now historical tinder-box, flint and steel, and sulphur-tipped

match arrangement, to find in it a happy illustration of applied chemical knowledge.

It has been pithily said that "modern Chemistry is the most universal and the most useful of all scavengers; it collects refuse from every possible quarter and extracts beauty from it. A horse's hoof or an ox-horn is quite a treasure to the chemist; he will utterly destroy it so far as form and component structure are concerned; but look at the glittering crystals and the brilliant colors, and the useful acids and salts he will obtain by the transformation." It is true; from hoofs and old iron he makes Prussian blue, from bones he makes the phosphorus for lucifer matches; and twenty years ago guano was useless, but the chemist having taught its value to farmers, to-day hundreds of ships are employed in carrying it across the globe, and as the supply is getting exhausted the chemist makes its substitute from various refuse matters. In coal-tar and similar substances there is nothing to delight the senses, and till quite recently these were used chiefly in operations of which few but those engaged in ship-building and allied arts knew anything; but to-day the paraffine oil which illuminates so splendidly, the artificial oil of bitter almonds which charms in perfumery, the aniline dyes, the superb magenta, mauve, and other colors which quite rival the most gorgeous tints of flowers and shells, are all got by chemists from coal-tar.

From clay chemists have made commercially serviceable the metal aluminum, no longer spoken of as a new metal even popularly, and yet it is scarcely ten years since it was anything but a most rare chemical curiosity. From the earth magnesia has been lately prepared in a pure state the metal magnesium, and it promises to rival the electric light as a means of illuminating light-houses, for, drawn into wire, it is found to burn in a common flame with a light only some 525 times less intense than that of the sun.

The kinds of transmutations the modern chemist effects are of rags and old ropes into sugar, potato starch into gum, and paper into parchment; for, under a patent only seven years old, parchment, a little inferior in strength, but superior in some other respects to the ordinary animal-parchment, is made from blotting paper, and is already used by tons.

Among the results lately obtained by the combination of optical and chemical science, one has doubtless seemed as much out of all reason to most general readers as the old belief in the elixir of life, or the transmutation of other metals into gold: it is that chemists have ascertained, here on the earth, some of the materials of which the sun is composed, and yet we are so accustomed to call in the aid of light in analytical investigations, that there is nothing shocking to our sense of probability in the statement that the sun is found to be made of some of the matters composing our earth, while others we have

are probably wanting in its composition. One thing we certainly know respecting the planetary world, from the analysis of meteoric stones which come to us from space, that as regards the arrangement of the elements in these strangers, we have nothing similar, as yet found, in the earth itself.

Many modern sciences and arts are linked together and aided in their progress by photography, hitherto held to be unquestionably a legitimate child of Chemistry,\* and nurtured under the care of chemists to its present goodly growth. It is known to all as the cheap and universal portrait-painter, and the delineator of passing scenes and remarkable localities on the earth, but it is also the assistant of the astronomer in preserving celestial appearances, as those of the moon and fixed stars, and the daily portrait of the sun with his changing spots, and the most interesting features in eclipses. In another direction the variations in the weight of the air, and in the direction and intensity of the earth's magnetism, are made to register themselves by its means. Appearances seen under the microscope it faithfully transfers to paper; daguerreotypes have been etched in copper by electricity, and then prints have been taken from the copper plates in the ordinary way. But it would be an endless task to name the directions in which photography is either actually used or promises utility, or to dwell upon the other manifold applications of modern science.

In concluding my sketch of some few features of contrast between the life of olden times and that of to-day, I need not insist on the claims of scientific study upon the promoters of sound and useful education: an acquaintance with the principles involved in making our life so dependent as it is upon science, especially chemical science, is provided for in the course of instruction on these matters now added to the other necessary elements of education taught in this Institution; young men may here acquire also the practical knowledge that may enable them to develop the resources of their country, and, entering on the path of discovery, to add to the material well-being of mankind. Speaking on the subject simply in the character of an historian, I cannot but think that this Province owes the Governors of this College a debt of gratitude in thus keeping pace with the progress of the age. As there are few who know how recent an addition the systematic teaching of practical Chemistry is to the advantages of our times, it may be well to state that it is not much more than a quarter of century old, and less than twenty years ago there was so little offered in this respect in any of the seats of learning in Great Britain, that most of those who desired a practical acquaintance with Chemistry sought it on the Continent of Europe. The plan pursued at Gießen, in Germany, under the world-renowned Liebig, attracted students from

\* Vide Eclectic for June, p. 277.



many countries; it was adopted in the Royal College of Chemistry, which was founded in London exclusively for the practical and theoretical teaching of the science, and went into operation in 1845. Many R. C. C. students now teach as Professors in Universities, or in purely scientific institutions, or direct the practical application of chemical principles for various purposes. Other schools arose throughout the kingdom, and now so changed is the educational system of Great Britain in this respect, that there is probably not even a single University where practical Chemistry does not form a more or less prominent advantage offered to students. The same is certainly true of some Colonial Universities, and here I have been trying to develop the system of the Royal College, which I know to be a good one. Wherever the subject is introduced, it has its way to win, and I trust it will do so here, palpably shewing forth its utility.

