

esteem of all, while his daily life was a source of encouragement to many, and a great influence for good in the college. From his record while here we learn the vigor of his intellect, the kindly ardor of his enthusiasm, the largeness of his views; and from those more intimately acquainted with him we learn the warmth of his friendship, the generosity and frequency of his acts of kindness, the integrity of his private life. So highly was he esteemed by the students, and so much was his worth and faithful service recognized, that he was appointed President of our Association; and to his ardent zeal in the cause of Christ, and untiring energy in the duties of his office, is due in a large measure the efficient work which the College Y.M.C.A. has been enabled to do among the undergraduates. His untimely demise fills all our hearts with sadness. To the sorrowing ones we extend our heart-felt sympathies, and sincerely pray that the God of all consolation will most graciously maintain them under the pressure of their great affliction, and sanctify it to their spiritual and eternal welfare.

Signed on behalf of the Association,

J. W. WHEATON,  
*President.*

J. H. LAMONT.

JOHN McNICOL,  
*General Secretary.*

### MUSICAL SCALES.

The Mathematical and Physical Society held their first open meeting during the current year on Friday, Jan. 22nd. The programme consisted of a paper by Mr. Loudon on "Musical Scales, their Origin, Formation, and the Physical Relation which they bear to Music." Reference was made to the ancient five-toned scales of the Chinese, the Hindoos and the ancient Britons, to the Arabian scale of unequal temperament with a system of half-tones and third-tones, and others involving serious complications. The character of all music of this era must have been very simple and comparable only to some of the weird Hungarian airs of the present day. With ancient people it was never customary to express their feelings by music, and consequently their music would have sounded exceedingly harsh to modern ears.

About the sixth century B.C., Pythagora, a man thoroughly imbued with musical sentiment, and who regarded it as celestial and divine, gathered together fragments of different systems and reduced all to one common scale, known as the Pythagorean, and which forms the basis of our diatonic scale. From this were developed the seven Greek scales, by commencing on each note in succession. The character of the Greek music was simple, their choruses were composed of male singers who sang the air and of boys who sang in octaves above.

With the development of the organ, piano and other stringed instruments came mechanical difficulties in the way of playing in different keys, which have been overcome by the modern method of adopting a scale of equal temperament. This is necessary in mechanical stringed instruments, but in perfect instruments, such as the human voice and the violin, we may commence at any note and proceed with the same intervals as defined by the major and minor diatonic scales. In the scales of equal temperament the octave is defined as twelve semi-tones, each obtained from the preceding by multiplying by the twelfth root of two. This scale, although really one of imperfection, possesses many advantages; it has developed harmony as it could not otherwise have been developed, and has made the playing of mechanical instruments comparatively easy.

The connection between music and mathematics was then dealt with, and the lecture closed with an appeal to those interested in the study of mathematics to cultivate a taste for music.

The next meeting of the Society will be held on Friday,

Feb. 5th, at 3.30 p.m., at which Mr. F. D. Davis, '92, will read a paper on "The Relation Between Algebra and Geometry," and Messrs. Govenlock and McQueen will produce, by means of the projecting lantern, the optical combination of two vibratory motions at right angles to each other, commonly called Lissajous' Experiment.

### NATURAL SCIENCE ASSOCIATION.

A regular meeting of the above Society was held in the Biological Lecture Room on the 26th Jan., a large number being present in anticipation of hearing Dr. Coleman. The question of the Cawthorne Medal was again introduced, and the Secretary reported that he was unable to write Mr. Shutt as he had not succeeded in obtaining a report from the Examining Committee. The President volunteered to have such a report presented at the next meeting when this much-vexed and, we must say, somewhat ill-managed affair will be satisfactorily settled.

The Society then had the pleasure of hearing Dr. Coleman on "The Geology of the Rare Metals." The speaker reviewed these metals, making them fit into groups in Mendelejeff's Table, thus showing the great importance of this table from a mineralogical as well as from a chemical point of view. Prof. Coleman drew particular attention to the element germanium, which is found at only one locality in the world. It occurs in small quantity in a mineral called argerodite, a small piece of which Dr. Coleman has in his possession, and the Society had the pleasure of seeing what is probably the only specimen of the kind on this side the Atlantic. After thoroughly reviewing the practical side of the question, the reader referred to some interesting theories with regard to the original distribution of mineral matter.

A paper of this kind is both instructive and intensely interesting, and Dr. Coleman is worthy of the hearty thanks of the Society, and we can but hope of again having the pleasure of hearing him address us.

The following nominations for membership were made: Messrs. C. C. Stuart, E. Lawson and Miss Bradshaw.

Messrs. McKenzie (Pres.), Smale and McIntosh were appointed a committee to make arrangements for a reading room for the Association.

### MODERN LANGUAGE CLUB.

This Club held its regular meeting on Monday Jan. 25. The programme consisted of a chorus by the Modern Language Glee Club, and two essays, one on the Life of Auerbach, by Miss Jeffrey, the other on Benigna, by Miss Hillock. The German song by the Glee Club was excellent, and their selections will henceforth furnish an entertaining part of the programme. The essays were better than usual, but it was the essay on Benigna that called forth the eulogies of the chairman. He too had—when he was poetical—like the hero of Benigna, met a rosy, blue-eyed Saxon maiden that had thrilled his heart, but whom he had till then never had perfectly described. Of course it was a good joke, and everybody admired the inventive genius of the 1st Vice., but we have since learned that this Saxon lass really did exist somewhere in the remote past, and that Freddie finds adequate expression in the words of the poet:—

Nebel schwimmt mit silberschauer  
Um ihr reizendes Geschicht.

A letter from Mr. Brown, President, was read, offering his resignation, since he was unable, on account of ill-health, to continue his course. The resignation was accepted and a vote of thanks tendered the retiring President. Mr. Hellems also tendered his resignation as Vice-President, and on it being accepted nominations for the vacant offices were made—for President, Messrs. Edgar and Cameron; for Vice-President, Messrs. Norman and Beatty.

W. E. L.