

Cambridge was the mother of the New England university, while from Emmanuel came many of the most illustrious of the founders of Massachusetts. College presidents, too, were numerous; among the rest, Dwight of Yale, Gilman of Johns Hopkins, Angell of Ann Arbor, McCosh of Princeton, Adams of Cornell, and the youthful head of old Bowdoin, William De Witt Hyde, of the Harvard class of 1879. The degree of doctor of laws was conferred on most of those who had not already received it, and also on Leidy of Pennsylvania, Charles Deane of Cambridge, and Gildersleeve of Baltimore.

Mr. Lowell's oration contained that happy mixture of wit and scholarly wisdom so essential to an interesting address. As an example of this, was the remark that the college buildings, unlike those of the old country, never looked old, and never would. "Time refuses to console them," he said. "They all look as though they meant business, and nothing more. And it is precisely because this college meant business, — business of the gravest import, — and did that business as thoroughly as it might with no means that were not niggardly, except an abundant purpose to do its best, — it is precisely for this that we are gathered to-day." Further on, after describing the Puritan society of the early time, Mr. Lowell said, "It was a community without charm, or with a homely charm at best, and the life it led was visited by no muse, not even in dream; but it was the stuff out of which fortunate ancestors are made, and twenty-five years ago their sons showed in no diminished measure the qualities of the breed." But the portion that aroused the most enthusiasm was at the close, when he referred to the President of our country. "We have no politics here," he said, "but the sons of Harvard all belong to the party which admires courage, strength of purpose, and fidelity to duty. . . . He has left the helm of state to be with us here; and so long as it is intrusted to his hands, we are sure, that, should the storm come, he will say with Seneca's pilot, 'O Neptune, you may save me if you will, you may sink me if you will; but, whatever happens, I shall keep my rudder true.'" Coming after this oration, Dr. Holmes's poem proved disappointing to many.

In the afternoon the alumni dined in the great hall, and, after satisfying the inner man as well as they could, they listened to more speeches. Especially deserving of remembrance was that of President Angell of the University of Michigan. In brief he declared that all American colleges were indebted to Harvard for "her brave experimentations in college and university problems. . . . Especially under the present vigorous administra-

tion, there have been such exhaustive study and such courageous experimenting, that the excitement and stir have reached the remotest country college and the most secluded village academy. . . . This has made an epoch. Never before did the college and the people get so near together. Those who do not accept the doctrines in favor here, and those who do, are alike indebted to you, for we have all been stirred."

While the men were thus passing their time, Mrs. Eliot was introducing Mrs. Cleveland to the ladies of Cambridge. In the evening a public reception was held in the Hemenway gymnasium, and the festival so happily conceived and so admirably conducted was brought to a close. Indeed, perhaps not the least fruitful part of the whole celebration were the social relations which were begun or continued in the hospitable parlors of the college town.

NOTES AND NEWS.

THE semi-annual meeting of the trustees of Princeton college last week was the occasion for the presentation of a report on the state of the college by President McCosh. This year the college has more students than any previous year in its history. Eighty-nine graduates are attending classes, fifty of whom follow Dr. McCosh's lectures on contemporary philosophy. The trustees adopted a scheme similar to that in operation at Amherst and Harvard, by which the students choose a standing committee to represent them in conferences with the faculty. This plan goes into effect at once. The plans of President McCosh looking to the transformation of the college into a thoroughly equipped university were listened to with approval, and referred to a special committee consisting of the standing committee on curriculum and two other members of the board of trustees.

— The following is a complete list of the papers entered to be read before the National sciences academy at the recent session in Boston, Nov. 9–11: S. P. Langley, The solar-lunar spectrum; T. Sterry Hunt, A basis of chemistry; Alpheus Hyatt, Primitive forms of Cephalopoda; Alpheus Hyatt, A case of evolution in the migration of forms; Alpheus Hyatt, *Lituites* of the limestones of Phillipsburg, Canada; F. W. Putnam, Archeological explorations in the Little Miami valley, Ohio, conducted by F. W. Putnam and C. L. Metz; E. C. Pickering, Draper memorial photographs; E. D. Cope, On lemurine reversion in human dentition; E. D. Cope, On the columella auris of the tailed *Batrachia*; Edw'd S. Morse, Change in *Mya* since the *pliocene*; A. S. Packard, The cave

fauna of North America, with remarks on the anatomy and origin of blind forms; C. H. F. Peters, A chart of the stars in the group Praesepe; C. H. F. Peters, A catalogue of stars from positions in various astronomical periodicals; O. T. Sherman, A catalogue of bright lines, observed in the atmosphere of β Lyrae; W. L. Elkin, On the relative motions of the Pleiades group deduced from measurements made with the Königsberg and Yale college heliometers; C. A. Young, Some observations with Pritchard's wedge photometer; C. Abbe, The question of barometer exposure; G. W. Hill, On the construction of new tables of Saturn; R. Pumpelly, On the relation of the Green Mountain rocks to the Taconic; T. Sterry Hunt, Hardness and chemical indifference in solids; Alfred Russell Wallace, On wind as a seed-carrier in relation to one of the most difficult problems in geographical distribution; W. M. Davis, The mechanical origin of the triassic monoclinical in the Connecticut valley.

—The committee having in charge the presentation to Prof. Edward Zeller of Berlin, as a commemoration of the fiftieth anniversary of his attainment of his doctorate, of the bust of the celebrated historian and philosopher himself, moulded by Professor Schaper, met and presented the bust to Professor Zeller on Oct. 31. On the long list of subscribers to the commemoration are a number of English and American professors and students of philosophy, among them those of President Angell of the University of Michigan, Professor Bain of Aberdeen, President Bascom of the University of Wisconsin, Professor Burt of Ann Arbor, Dr. Nicholas Murray Butler of Columbia college, Prof. Edward Caird of Glasgow, Prof. G. H. Howison of the University of California, Prof. T. H. Huxley of London, Prof. Benjamin Jowett of Oxford, Prof. George T. Ladd of Yale college, Dr. James Martineau of London, Prof. George S. Morris of Ann Arbor, Prof. George H. Palmer of Harvard college, Prof. W. H. Payne of Ann Arbor, ex-President Noah Porter of Yale, President Robinson of Brown university, Prof. J. G. Schurman of Cornell university, and Prof. C. W. Shields of Princeton college.

—*Appalachia*, vol. i. No. 1, has been republished, and copies will be furnished by the sales-agents, W. B. Clarke & Carruth, Boston, Mass.

—The London literary journals announce that two interesting manuscripts have lately been presented to the British museum by her majesty's consul at Chungking, China. The larger of the two fills seventy-three folios, and is in the Lolo character, being written in verse of five characters

to a line. The smaller one is of thirteen folios, and is in the writing of the Shin-kia, a Shan tribe of the southern portion of the province Kweichow. This is the first specimen of the writing of this tribe to reach Europe. The characters are adaptations of contracted forms of an early kind of Chinese writing, with an admixture of pictorial signs. The work is one on divination, each sentence closing with words of good or evil augury.

—Previous to 1879 typhoid-fever was very prevalent in Vienna, Austria. At that time the drinking-water was the water of the Danube. In that year a new source for the city's water was drawn upon, and since then the disease has very much decreased.

—The citizens and authorities of Chicago are very much interested at the present time in the solution of the problem of preventing the further contamination of the water-supply of that city. The plan which seems to promise the best results is to divert all the sewage from the lake to the river, and to pump from the river into the canal 12,000 cubic feet per minute for every 1,000 of the population. The report of Dr. Rauch, submitted to the Illinois state board of health at its last meeting, shows that by the adoption of such a plan the water of the lake would be in all respects adapted for domestic purposes, and would be entirely free from contamination, while at the same time no contamination will result in the water of the river at points where other cities take their water-supply.

—The Russian government is about to have constructed a petroleum pipe-line, with a capacity of 160,000,000 gallons of oil a year, extending from Baku, on the Caspian, to the Black Sea, a distance of about six hundred miles.

—Mr. Daniel G. Brinton has been elected professor of American linguistics and archeology in the University of Pennsylvania.

—A lady aged sixty-two had for many years suffered from neuralgia of the face and ear, and had also had an abscess form in the right ear. She subsequently contracted what she supposed was a severe cold in the head, and, while blowing the nose forcibly, expelled what proved to be a wisdom-tooth. She remembered that some thirty years before, she had suffered from 'cutting a wisdom-tooth,' but she was at that time relieved without the appearance of the tooth. It doubtless found its way upward into the upper jaw, and finally liberated itself by ulceration through the nose in the manner described.

—From a series of experiments by Zott, of

Munich, it would appear that gold-beater's skin is a much better dialyzer than parchment paper, so extensively employed for that purpose in chemical and other laboratories. Taking gold-beater's skin as the unit, Zott ascribes the following figures of effectiveness to the substances named: gold-beater's skin, 1; sow-bladder, 0.7; parchment paper, 0.5; leather 2 mm. thick, 0.02; caoutchouc, 0.001. Porous earthenware cells, employed as dialyzers, are but one-sixtieth as effective as gold-beater's skin.

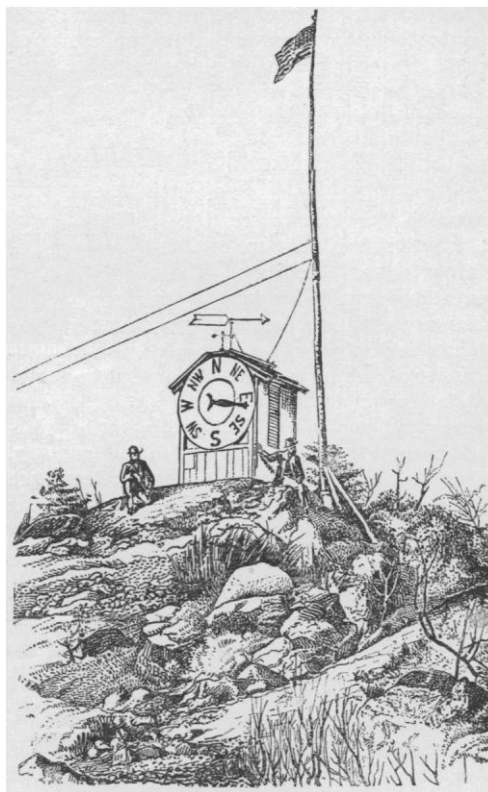
—T. B. Stowell, Ph.D., in a paper read before the American philosophical society, has given in a most concise and thorough manner the anatomy of the trigeminal nerve of the domestic cat. Dr. Stowell has in this contribution to comparative neurology cleared up many points which have hitherto been obscure, and has thus indirectly been of great service to students of human physiology. His paper on the vagus nerve in the same animal, read before the same society some years ago, was equally valuable, and together they will have an important bearing on the future of neurological science.

—Professor Vogel calls attention to the effect upon plants of growing them under unnatural conditions. He states the hemlock does not produce conine in Scotland, and that the cinchona plants will not yield quinine when grown in hot-houses. He finds that tannin is produced in greatest quantity in those which have had a full supply of direct sunlight.

—Dr. Shoemaker of Philadelphia records in the *Therapeutic gazette* his experiences under the influence of ether. In the first period, which was brief and without excitement, he was able to ask a rational question about the sheet with which he was to be covered; but immediately thereupon control over the vocal apparatus was lost. Of this he was conscious. Then came the second or unconscious period. Throughout this time there was present the single impression of "two endless parallel lines in swift longitudinal motion, each line being deflected at a certain point to form a wave." All this was set on a misty background, showing little of the lines at once, though the lower line was clearly moving from left to right. The lower line gave ascending waves, which intersected with the descending waves of the upper line. There was also a low but distinct, constant whir, as if due to the running lines. These lines occupied the whole mental field. There were no visions, no dreams of past experiences, not even a conception as to what being it was that was regarding the two lines, or that there was any such

being. All trace of personality was gone. Then the lines began to move irregularly; the patient drew a deep breath; it dawned upon him that he was looking at the lines, and the third period (of recovery) was begun. Then came, in an order which could not be remembered, a series of curious impressions. He felt that he had glimpsed the essential nature of human existence. The lines were the existence of the soul, of his soul; and the waves were his animal life, and were thus a temporary modification of a primary condition. The idea was felt to be new and important, and ought by all means to be remembered. But the attempt was in vain; there was a spiritual power controlling him and preventing it. Though an unimaginative man, it took days to shake off the feeling that another phase of existence had been revealed.

—The accompanying cut illustrates a meteorological observatory for automatic instruments, erected by Mr. W. H. Childs last May on Mount



Wantastiquet, over the eastern side of the Connecticut River, opposite Brattleboro', Vt. It is 1,060 feet above the river, or about 1,500 feet

above sea-level. The wind-vane turns the pointer on the dial (seven feet in diameter) so that the wind-direction can be read with a glass from the town below. The Robinson anemometer is connected by wire with Mr. Child's office, where it has made continuous record since June 1. During the summer, there has been a Draper thermograph belonging to the New England meteorological society inside the shelter, and a corresponding instrument belonging to Mr. Childs in the town below. Next summer it is proposed to add self-recording instruments of the Richard-frères pattern. During the winter, the weekly ascents of the mountain, required for attention to the thermograph, have to be given up.

—M. Meguin claims to be able to determine the date of death by studying the generations of *Acarina* which have been at work upon the body. Brouardel produced the cadaver of a young woman before the French academy of medicine, which had lain in a cellar for a year. He was able to trace five different species of *Acarina*, and the order of succession and duration of each species. He found *dermestes sarcophagus*, *laticrus*, and *lucina cadaverina*. One species consumes the fatty acids, another absorbs the fluids, and each dies when its work is ended. The period of life of each in summer is from six to eight weeks. In a case of murder in which the remains of the victim were discovered in a garden, Meguin was able to establish the date of burial with great accuracy. The value of these observations and deductions, if confirmed, cannot be overestimated, as hardly a month passes without the discovery of a murdered body, and in the course of the prosecution the probable date of death is always an important factor. So far as we know, no one has taken up this work of Meguin, Brouardel, and Laboutbene in this country, and yet it would seem that no field offers more inducements to the medico-legal expert than the one just opened by these enterprising French *savants*.

—Dr. Lemuseau, in *Le moniteur du praticien*, gives a *résumé* of the progress made in the examination of blood and its detection during the last fifty years. At the present time there are four methods employed for the determination of the presence of blood. The first is that by means of the haematine crystals, due to Teichman, and improved by Struve and Morache. The second method is spectroscopic examination. The third is that of Taylor, consisting in the employment of tincture of guaiacum, which, combined with the essence of turpentine or ozonized ether, yields a beautiful blue color if blood be present. The

fourth is microscopic examination. In reference to the possibility of determining whether a given specimen of blood is human or not, Vibet says it remains impossible to assert with positiveness that a blood-stain is formed of human blood. It is in certain cases only admissible to say that it may be caused by human blood. Sometimes it can be affirmed that the stain is of the blood of some other kind of mammalia, but not of man; but in order to justify this opinion it will be necessary that the blood-corpuscles of the alleged animal be much smaller than those of man.

—Dr. Tipton of Selma, Ala., in the *Sanitarian*, gives some very interesting facts and figures, the result of his life among the blacks of the south. He claims that their death-rate exceeds their birth-rate, the mortality being 30 per 1,000. While during the slave state consumption was practically unknown, now it is the principal factor in the diminution of the race. One-half the male population is syphilitic, and most of the women have uterine disease. Hysteria, rheumatism, and alcoholism are common. If Dr. Tipton's opinions are correct, it is only a question of time when the whole race becomes extinct, unless by intermarriage with the whites the otherwise inevitable result is altered. Even this will but postpone the blotting-out of this people, if disease prevails to the extent indicated.

—Lieutenant Yate, who accompanied the Anglo-Russian boundary commission as a correspondent, has in press a book entitled 'England and Russia face to face in Asia.' It will describe the work of the boundary commission, the topography of the country, and the character of the native tribes. Lieutenant Yate is expected to throw new light on what the diplomatists unite in calling the 'affair' at Penjdeh.

LETTERS TO THE EDITOR.

The teaching of natural history.

IN the last number of *Science* 'A teacher' complains rather bitterly of your review of French's 'Butterflies,' and adds some comments on methods of instruction in natural history. I have never had any experience as a teacher, but the method of teaching natural history has too much influence on the future growth of that science to fail to interest any naturalist, even if he be unconnected with a school or college.

Without now inquiring whether the demand expresses what is best for the advancement of knowledge, it seems to me that the actual demand of teachers and learners in entomology in this country is for a handbook of some group of insects on some such plan as is followed in Gray's 'Manual of botany,' in which, by analysis and by the characterization of each category of groups, the *relative affinities* of the objects under treatment are throughout brought to