months in the coast region, an expedition was made into the interior, into the little known lake region about the head waters of the Santa Cruz river and to the northward into an absolutely unknown region of the Cordilleros. Here many new glaciers were discovered and important water courses located.

The time spent in this region was most enjoyable, and the results there attained contributed even more to the success of the trip than those nearer the coast. Being an unexplored country not only were new facts relating to the geography of the region discovered, but many animals and plants new to science were also collected; and the series of observations made, and facts obtained, relating to the age of the Cordilleros and other geological phenomena of the entire region, are of the greatest value. Scattering over the plains region of the interior were found numerous volcanic cones hitherto unreported which were shown to have been the source of the great lava beds which in many places are spread in great sheets over the surface of the country.

On account of the difficult travelling and the length of time consumed on this trip into the interior, it was absolutely impossible to take any great supply of provisions, so that it became necessary to limit the personnel of the expedition to Messrs. Hatcher and Peterson, who were gone five months on this trip, during which time not only was it impossible for them to receive or dispatch any mail, but they never met with or saw a single human being but their two selves.

The result of the work done in Patagonia may be briefly summarized as follows:

The discovery of many new facts relating to the geography of the region.

The discovery of several geological horizons new to Patagonia.

The making of a complete geological section from the igneous rocks forming the mass of the Cordilleros to the uppermost Tertiary rocks, and extending from the Cordilleros to the Atlantic coast.

The collecting of a nearly complete series of the mosses, hepatical and flowering plants, not including grasses; of some 800 skins and skeletons of recent birds and animals and about eight tons of fossils, including more than 1,000 skulls and many nearly complete skeletons—altogether, the most valuable collection from that region to be found anywhere in the world.

After spending a little more than a year on the mainland, the expedition proceeded to Tierra del Fuego and the adjoining islands, where important collections were also made, especially of the plants of that archipelago, and observations were made concerning the geology and paleontology of the islands, which it is believed will be of considerable importance. Some attention was also given to the Indians of this region, especially of the Channel and Canoe Indians, who live almost entirely in frail boats of their own manufacture and subsist wholly upon shell fish, which they are able to pick up in great abundance along the shore. The great accumulation of shell heaps observed at certain points along the shores is believed to point to a great antiquity for this exceedingly primitive tribe.

Throughout their work the Argentine government was very generous and courteous to the expedition, giving to its members transportation on its war vessels from Buenos Aires to Gallegos and return, and offering to place at its disposal a smaller vessel for use in researches among the islands.

SCIENTIFIC NOTES AND NEWS.

GRANTS FROM THE BRITISH ASSOCIATION FOR SCIENTIFIC RESEARCH.

As we have already noted, the British Association appropriated at the Toronto meeting £1,350 (more than $6,500) to committees for

scientific work. The sum was larger than usual, as the the large attendance at the Liverpool meeting left a surplus, and it was wished to favor this year the inauguration or continuation of special work in Canada. It is with reluctance that we state for comparison that last year the American Association appropriated $200 and this year $100 for scientific work. It should be remembered that such appropriations not only contribute greatly to the advancement of science, but also add much to the interest of the meetings at which the reports of the committees are presented.

The responsible member of the committee, the subject of the work and the amount in pounds each of the appropriations is as follows:

	£
Mathematics and Physics.—Professor Carey Foster: Electrical Standards	75 0 0
Mr. G. J. Symons: Seismological Observations	75 0 0
Dr. E. Atkinson: Abstracts of Physical Papers	100 0 0
Rev. R. Harley: Calculation of Certain Integrals	20 0 0
Mr. W. N. Shaw: Electrolysis and Electrochemistry	35 0 0
Professor H. L. Callendar: Meteorological Observatory at Montreal	50 0 0
Chemistry.—Sir H. E. Roscoe: Wave-length Tables of the Spectra of the Elements	20 0 0
Professor J. Emerson Reynolds: Electrolysis Quantitative Analysis	12 0 0
Dr. T. E. Thorpe: Action upon Light Dyed Colours	8 0 0
Sir J. Evans: Promotion of Agriculture	5 0 0
Geology.—Professor E. Hull: Erratic Blocks	5 0 0
Professor T. G. Bonney: Investigation of a Coral Reef	40 0 0
Sir W. H. Flower: Fauna of Singapore Caves (unexpended balance in hand, 40*l.*)	—
Professor J. Geikie: Photographs of Geological Interest	10 0 0
Mr. J. E. Marr: Life-zones in British Carboniferous Rocks (unexpended balance in hand)	—
Professor W. Boyd Dawkins: Remains of the Irish Elk in the Isle of Man (unexpended balance in hand)	—
Mr. T. F. Jamieson: Age of Rocks near Moreseat	10 0 0
Sir J. W. Dawson: Pleistocene Fauna and Flora in Canada	20 0 0
Zoology.—Professor W. A. Herdman: Table at the Zoological Station, Naples	100 0 0
Mr. G. C. Bourne: Table at the Biological Laboratory, Plymouth	20 0 0
Sir W. H. Flower: Index Generum et Specierum Animalium	100 0 0
Professor L. C. Miall: Biology of the Lakes of Ontario	75 0 0
Professor W. A. Herdman: Healthy and Unhealthy Oysters	30 0 0
Geography.—Mr. E. G. Ravenstein: Climatology of Tropical Africa	10 0 0
Economic Science and Statistics.—Professor H. Sidgwick: State Monopolies in other Countries	15 0 0
Mr. L. L. Price: Future Dealings in Raw Produce	10 0 0
Mechanical Science.—Mr. W. H. Preece: Small Screw Gauge	20 0 0
Anthropology.—Professor E. B. Tylor: Northwestern Tribes of Canada	75 0 0
Dr. R. Munro: Lake Village at Glastonbury	37 10 0
Mr. E. W. Brabrook: Ethnographical Survey (and unexpended balance in hand)	25 0 0
Mr. A. J. Evans: Silchester Excavation	7 10 0
Dr. G. M. Dawson: Ethnological Survey of Canada	75 0 0
Sir W. Turner: Anthropology and Natural History of Torres Strait	125 0 0
Physiology.—Dr. W. H. Gaskell: Investigation of Changes associated with the Functional Activity of Nerve Cells and their Peripheral Extensions	100 0 0
Botany.—Professor J. B. Farmer: Fertilization in Phæophyceæ	15 0 0
Corresponding Societies.—Professor R. Meldola: Preparation of Report	25 0 0

THE NEW YORK BOTANICAL GARDEN.

THE New York City Board of Estimate and Apportionment gave a public hearing on September 29th in the matter of the appropriation for the Bontanical Museum for the Botanical Garden in Bronx Park. Some persons have been objecting to the plans approved by the Park Board, but in the public hearing they only took exception in a general way to the use of a portion of a Park for a Botanical Garden. The Board of Estimate and Appropriation unanimously passed a resolution granting the appropriation, after listening to a statement from the trustees, which was as follows:

"The establishment of a Botanical Garden in the city of New York has been actively prosecuted since the year 1889, the necessary legislation having been obtained in an act passed in 1891 and amended in 1894 and 1896. The project through all this period received most cordial support from the city officials and from the public. The present Board of Managers was organized on March 21, 1895, and on June 18, 1895, the condition of the act of incorporation requiring the subscription of $250,000 was fully met. At a meeting of the managers, held on that date, a special committee of five members was appointed a committee on plans, and this committee has been since continued. The securing of the necessary $250,500 as a subscription fund was reported to the Commissioners of Parks, as authorized and directed by the act of incorporation, and the selection of site was duly accepted by the Board of Managers. On October 30, 1895, the present Board of Estimate and Apportionment authorized the issue of bonds to an amount not exceeding $25,000 for surveys, plans, etc.; but these have not been issued. Prior to the organization of the Board of Managers, many of the members of the corporation had given continuous study to the project since its inception. Several of them have made critical studies of botanical gardens in the Old World.

"The committee on plans, appointed in June, 1895, studied the subject in all its aspects for a year, with the aid of advice and suggestion from many botanists, landscape gardeners, architects, and others interested, in this country and in Europe, and determined the principal ends desirable to be reached, and the most economic, artistic and practical methods of reaching them, having always in mind the beautiful features of the grounds and the great value of these to the institution; their preservation has been determined on from the very first. On June 17, 1896, the preparation of a general plan to embody the results reached after this long and careful consideration was referred to a commission of experts, consisting of N. L. Britton, director-in-chief; R. W. Gibson, architect; John R. Brinley, civil and landscape engineer; Lucien M. Underwood, professor of botany, Columbia University; Samuel Henshaw, landscape gardener; Lincoln Pierson, secretary Lord & Burnham Company, greenhouse architects. All these are men well and favorably known in their professions, and it is maintained that in this commission were included all the elements necessary or desirable for the purpose of the general study, the determination of the detailed landscape treatment and special planting being wisely deferred until the general scheme had been approved; these will be taken up under the best advice obtainable."

GENERAL.

THE Eighth International Geological Congress will meet in Paris in 1900. In 1903 the place of meeting will be Vienna.

THE New York Academy of Sciences is in great need of a building for its meetings, for its library and as a center for the scientific life of the city. A university lecture room has not been a satisfactory place of meeting, and in view of the removal of Columbia University the Academy will this year meet at the Mott Memorial Library, 64 Madison Avenue. Visitors interested in the subjects presented are welcomed at the meetings, and citizens of New York should remember that the sections meet on Monday evenings as follows: Section of Astronomy and Physics, first Monday of the month; Section of Biology, second Monday; Section of Geology and Mineralogy, third Monday; Sections of Psychology, Anthropology and Philology, fourth Monday.

OF the other societies composing the Scientific Alliance of New York the Torrey Botanical Club will meet at the College of Pharmacy, the Linnæan Society and the Entomological Society at the American Museum of Natural History, the Chemical Society at the College of the City of New York, and the Mineralogical Club and the Microscopical Society at the Mott Memorial Library.

THE New York Section of the American Chemical Society will hold its annual meeting on October 15th. Officers for the ensuing year will be elected and the retiring President, Dr. Wm. McMurtrie, will make an address on 'Some Records of Recent Progress in Industrial Chemistry.' A special meeting of the Society was held on the evening of October 1st, in honor of Professor Henry E. Armstrong, of London, who came to this country to take part in the meeting of the British Association. An address was made by Dr. H. Carrington Bolton.

THE first section of the Brooklyn Museum of Arts and Sciences was dedicated on October 2d. Addresses were made by the President of the Board of Trustees, Mr. A. A. Healy, and by the Director of the Institute, Professor Franklin W. Hooper, by Mayor Wurster, of Brooklyn, and by President Eliot, of Harvard University,

who spoke on 'The Functions of Education in Democratic Society.' The present building, which is already crowded by the collections of art and natural history, was informally opened at the beginning of June, and was visited during August by 12,000 persons. The building as projected will be thirty-two times as large as the present structure, erected by the city of Brooklyn as one of its last public works at a cost of $300,000. The charter of the combined cities composing New York at the beginning of next year provides for the liberal maintenance of the Brooklyn Institute, which will be one of the chief centers of art, science and culture in the great city.

IN his address at the recent meeting of the Associated Chambers of Commerce, Sir Courtney Boyle announced his intention of establishing a museum of samples in connection with the British Board of Trade. The scope and objects of the museum would be similar to those of the recently established commercial museums at Philadelphia.

THE sum of £442 has been collected in British India as a contribution to the Pasteur Memorial Fund.

THE Maharaja of Patiala has presented the Indian government with a site for the Pasteur Institute to be established at Simla.

THE American Public Health Association will hold its twenty-fifth annual meeting at Philadelphia from the 26th to the 29th of October.

A SCHOOL of ethics and social philosophy has been formed in London, with a general committee including the Master of Balliol, Mr. Leslie Stephen, Mr. R. B. Haldane, Mr. W. L. Courtney, Professor Sully and Mrs. Bryant. The aim of the new school is to approach social questions from the side of psychology and ethics. Lectures have been promised by Professor Henry Sidgwick, Mr. Sidney Webb, Mr. F. W. H. Myers, Mr. Bosanquet, Professor Lewis Campbell and others.

THE first installment of a card catalogue of the New York Public Library was put in use at the Astor Library this week. Some twenty-five assistants are working under Dr. Billings on the catalogue, and it is hoped that it will be completed in about three years.

THE prize lists of the Institution of Civil Engineers for the session of 1896-97 awards the Howard prize of 50 guineas to Mr. Hilary Bauerman, in recognition of his work on the metallurgy of iron. For original papers presented to the Institution, Telford medals, with premiums of books or instruments, are awarded to Messrs. H. A. Humphrey, for 'The Mond Gas-Producer Plant and its Application;' to Colonel Pennycuick, R.E., for 'The Diversion of the Parivar;' to Mr. E. C. Shankland, for 'Steel Skeleton Construction in Chicago;' to Mr. Dugald Drummond, for 'High Pressure in Locomotives;' and to Mr. Thomas Holgate, for 'The Enrichment of Coal Gas.' George Stephenson medals and Telford premiums are awarded to Mr. Cruttwell, for 'The Tower-bridge Superstructure,' and to Professor Unwin, for 'A new Indentation Test for Determining the Hardness of Metals;' Watt medals and Telford premiums to Messrs. Hay and Fitzmaurice for their joint paper on 'The Blackwall Tunnel.'

THE Royal Society of New South Wales offers its medal and ten guineas for the best communication (provided it be of sufficient merit) containing the result of original research or observations on the following subjects; 'On the Iron-ore deposits of New South Wales' (time limit, May 1, 1898); 'On the Life History of the Australian Teredo and other specimens of Australasian wood-eating Marine Invertebrata, and on the means of protecting timber from their attacks' (time limit, May 1, 1899). The competition is not confined to members of the Society, nor to residents in Australia. The Society is fully sensible that the money value of the prize will not repay an investigator for the expenditure of his time and labor, but it is hoped that the honor will be regarded as a sufficient inducement and reward.

THE United States Civil Service Commission announces that on October 25, 1897, it will hold examinations to establish a register from which selections may be made to fill numerous minor vacancies in special and technical positions in the government service. A list of the examinations which will be held, and of the cities at which they may be taken, will be furnished on request.

Secretary Wilson, of the Agricultural Department, will, in his annual report, ask Congress to make an increase in the appropriation for the Bureau of Animal Industry, the Farmers' Bulletins and the Weather Bureau.

Professor Wiesner, of Vienna, has undertaken during the past summer, says *Nature*, a journey to Spitsbergen to complete his observations, previously made in the Tropics, as to the effect of light and other external conditions on the growth of plants.

The members of the Stanford University party who have been engaged in branding seals by electricity on Pribyloff Islands have, as we learn from the daily press, arrived at Palo Alto. They claim that the experiment was successful. Besides the work of taking the seal census and building a fence enclosing the salt lagoon to prevent the redriving of bachelor seals, a number of bird skins, skeletons, insects and marine invertebrates were collected. The party consisted of Messrs. Greely, '98; Snodgrass, '99; Edwards, 1900; Bristow and Adams, 1900, and Instructor Farmer.

We learn from the London *Times* that Miss Ormerod, of Torrington-house, St. Albans, continues to supply the leaflet on the common sparrow, and that several of the largest British landowners are interesting themselves in the endeavor to reduce the numbers of *Passer domesticus* to within reasonable limits. Since attention was first drawn to the matter a few weeks ago Miss Ormerod has received applications for the pamphlet from most unexpected places—Stavanger, St. Petersburg and Smyrna, for example. So great is the demand that yet another edition of 5,000 copies has been printed. Miss Ormerod sends the pamphlet free on a receipt of a stamp for postage and many copies should find their way to America.

A despatch to the daily papers from Bombay states that the latest health statistics show that the bubonic plague is again active, having crept unobserved from hamlet to hamlet until a wide area is affected. The newspapers assert that the withdrawal of the medical officers for service with the troops on the frontier will entail consequences more disastrous than anything happening on the frontier.

As we learn from *Nature*, the Commission du Musée d'Histoire Naturelle at Geneva has formed itself into a committee having for its object the erection of a monument to the memory of François Jules Pictet de la Rive. A site for the monument has been granted in front of the museum. Old students of the eminent investigator, and all who are interested in the work which he accomplished, are invited to send subscriptions for the memorial fund to MM. Lombard, Odier et Cie, Genève.

The Icelandic Parliament has voted a subsidy for the laying of a cable from Scotland to Iceland by way of Faroe Islands. The Great Northern Telegraph Company will lay the cable during the early summer next year.

A refugee hut on the Zugspite, the highest mountain in Germany (10,000 feet), near Garmisch, in the center of the Bavarian Highlands, has been opened. It stands on the Grat between the east and west peaks, affords accommodations for twenty-two guests, and has been erected at a cost of $10,000.

With the beginning of the next volume in January *The American Naturalist* will be published by Ginn & Co., Boston, New York and Chicago.

The government of India and Lord George Hamilton have offered hearty congratulations to Sir Joseph Hooker on the occasion of the completion of the 'Flora of British India,' on which he has been engaged for twenty-five years. Sir Joseph will now undertake to complete the 'Flora of Ceylon,' left unfinished by the death of Dr. Trimen.

We have received from John P. Morton & Son, Louisville, a guide to the Mammoth Cave, of Kentucky, by Horace C. Hovey and R. Ellsworth Call. Both of the authors have for years been familiar with the Mammoth Cave and have published works on American caverns. It is a great advantage to have a guide book by men of science, written with accuracy and without exaggeration. Visitors to the cave using this book will learn much of its geology and natural history, and it will also prove useful to those who are studying the scientific problems involved.

The three leading articles of the October *Monist* deal with questions of evolution. The

first is a posthumous essay by the late George J. Romanes on 'Isolation as a Factor of Organic Evolution,' wherein Mr. Romanes discusses the contributions of Mr. Gulick to the theory of development, and gives it as his opinion that isolation is to be ranked with heredity and variability as 'the third pillar of a tripod on which is reared the whole superstructure of organic evolution.' He contends that even the principle of natural selection lies less deep, and makes of the latter a special case of isolation. Mr. Romanes also discusses his own doctrine of physiological selection. The second article, by Professor Eimer, of Tübingen, on 'The Origin of Species,' gives a concise digest of his views of evolution and exemplifies them by material and illustrations from his new forthcoming researches on butterflies. Eimer explains the origin of species, (1) by cessation of development at definite stages, (2) by evolution *per saltum*, and (3) by prevention of impregnation, which is similar to Romanes's physiological selection. He accords to natural selection a subordinate rôle only, having efficacy in the preservation but not in the origination of species. The transmutation of forms is controlled by orthogenesis, or definite development, and not by chance variation. The article is substantially Professor Eimer's Leyden address, which has not yet appeared in German. The third article is by Dr. Paul Topinard, and constitutes part of his series 'Man As a Member of Society,' in which the French anthropologist traces the influence of the factors which have affected social development from the beginning of civilization to its highest consummation.

THE following field meetings have been arranged by the Torrey Botanical Club, of New York:

Oct. 2d.—Mosholu, N. Y., N. Y. & P. R. R. Leave 155th St. (Ninth and Sixth Ave. Terminal, Manhattan Elevated R. R.) at 9:30 a. m. Returning, leave Mosholu at 12:37 p. m., or as desired. Object: Asters and Goldenrods. Excursion fare, 30 cts. Guide, Professor Burgess.

Oct. 9th.—Woodhaven, Long Island, L. I. R. R. Leave foot E. 34th St. at 1:30 p. m. Returning, leave Woodhaven as desired. Excursion fare, 35 cts. Guide, Mr. Hulst.

Oct. 16th.—Caryl, N. Y., N. Y. & P. R. R. Leave 155th St. at 1:00 p. m. Returning, leave Caryl at 5:17 or 5:47. Excursion fare, 30 cts. Guide, Mr. Constantine.

Oct. 23d.—Tarrytown and Sleepy Hollow, N. Y., N. Y. C. & H. R. R. R. Leave Grand Central Station at 1:00 p. m. Returning, leave Tarrytown at 5:37 p. m. Excursion fare, $1.00 Guide, Dr. Barnhart.

Oct. 30th.—Fort Lee, N. Y. Leave foot of 125th St. at 1:00 p. m. Returning as desired. Fare, 10 cts. Guide, Mr. Clute.

THE Committee of Fifty has requested Professor C. F. Hodge, Clark University, to gather the testimony of physiologists upon two topics relating to the practical teaching of the physiology of alcohol, and he is asking the following questions: *First*, as to the facts at our disposal, will you please give a list of the points which you consider sufficiently well established and of essential importance to the education of medical and university students? We wish to learn your own view of the physiology value of alcohol as a food, condiment, stimulant and medicine; its influence upon the tissues, organs and upon physiological processes. Please give also a list of the important points that you think are not sufficiently well proved to form a part of our teaching material, the points about which there is too much present difference of opinion. *Second*, to what extent do you think it wise to introduce alchohol physiology into elementary public school courses? I refer to the 'Scientific Temperance Instruction' promoted by the W. C. T. U., viz.: the requirement by law that the subject be given considererable prominence throughout the school course. Have you examined any of the 'approved and endorsed' physiologies? If so, which ones? What is your opinion of them? Finally, will you give a list of the arguments which seem most conclusive to yourself either for or against this method of preventing alcoholism?

MR. JOSEPH COLLINSON, writing to the London *Times*, from Walsingham, Durham county, after referring to the reports showing that three golden eagles have been killed in Great Britain within the last six months, and two last year, says: "Our country is being rapidly deprived of some of the noblest of its feathered inhabit-

ants. During the last few years a number of species have become extinct, and other species are fast disappearing. Most of us, unfortunately, have never had the pleasure of seeing many of these birds, and I agree with Hudson as to the cause—the direct action of man, the greedy collector mainly, whose methods are as discreditable as his action is injurious. No one wishes to preserve birds which are really harmful, if such there be; but all birds which are merely curious and rare should be strictly preserved by the legislature. There must be a remedy for this state of things. In pointing out that the Wild Birds Protection Acts should be made general in terms, I beg to suggest that, if all birds cannot be protected, the right principle is to enumerate just those species which are to be outside the pale of protection, not those which are to be within it."

In Argentina, Cyprus and many other countries the locust is a formidable crop pest. A successful series of experiments carried out in Natal, a report of which has been published in that colony as a government notice, and is abstracted in the London *Times*, will prove of interest in many parts of the world. All attempts to suppress the locust scourge in Natal have proved only partially successful, with the exception of the plan of poisoning with arsenic, which, it is asserted, has met with absolute and unqualified success. The mixture used is prepared by heating four gallons of water to boiling point and then adding 1 pound of caustic soda. As soon as this is dissolved, 1 pound of arsenic is added, after which the liquid is well stirred and boiled for a few minutes, care being taken that the fumes are not inhaled. Being poisonous the mixture is kept under lock and key, but when required for use half a gallon of it is added to four gallons of hot or cold water, with brown sugar or treacle. Maize stalks, grass, etc., dipped in the mixture are placed along the roads and in the fields, and the material can also be splashed with a whitewash brush upon anything which the locusts are known to have a liking for. Attracted by the odor of the sugar or treacle over a distance of as much as 100 yards, the locusts will eat of the mixture and die. Arsenic is quite effective in destroying flying locusts, but as they come and go very suddenly, it is difficult to have the poison in readiness at the critical moment, and hence the most deadly blow can be dealt at the pest when it is in the hopper stage.

A message to all interested in promoting the education of the deaf in Europe has been sent from the officers and directors of the Columbia Institution for the Deaf and Dumb, at Washington, signed by William McKinley, Edward M. Gallaudet and others. In the opening paragraphs it is stated that the oldest school for the deaf in the United States was established in 1817, eighty years ago. In 1857 there were nineteen schools, the buildings and grounds of which had cost $1,371,736, the annual support of which involved an expenditure of $285,416, and in which 1,771 pupils were being educated. At the present time there are eighty-nine schools, with 11,054 pupils under instruction during 1896. Thirty-four of these schools are in private hands, or are day-schools connected with the common-school system of some city or town. No statistics are available as to the cost of buildings and current expenses of these. For the fifty-five public institutions more than $11,000,000 have been expended on buildings and grounds, and nearly $2,000,000 are appropriated, annually, for current expenses. In every State of the Union public provision is made for the education of the deaf, thirty-nine States having schools of their own, and the six States without them providing for the education of their deaf children in the schools of the neighboring States.

It is safe to predict that the forests of Alaska will be of greater value to the world than its gold. *Garden and Forest* devotes the leading article of the last issue to the subject, saying: "Trees cannot be cut lawfully in Alaska for timber or fuel, for there is no law which permits the sale of stumpage or timber-lands, and no law relating in any way to the forests but the one which forbids all shipment of wood from the Territory. There are a few sawmills in Alaska, however, and the number will soon be increased, and a large quantity of firewood is consumed at the salmon canneries and quartz mines, but the government gets nothing for it, and is powerless to prevent damage to the

public domain. Fortunately, the climate of southeastern Alaska is so humid that forest fires are rare and never very destructive, and reproduction is sure and rapid. These forests, therefore, even with American methods, will not soon or easily be destroyed; and here and to the southward, along the coast ranges and islands of British Columbia, through nine degrees of latitude from Cross Sound, at the north of Chicago Island, to the Straits of Fuca, is now the greatest continuous body of coniverous timber in the world, almost unmarked as yet by the axe, safe from fire and of easy access, from which the world will be able to draw great stores of material when the Redwoods and Douglas Spruces of the South have fallen, and the south-Atlantic and Gulf-shore pineries are only dim memories."

UNIVERSITY AND EDUCATIONAL NEWS.

THE attendance at the American colleges and universities will be larger this year than ever before. The numbers given at present are subject to revision, but nearly all institutions report the largest entrance classes ever recorded. At Harvard the Freshman class will be over 500. At Yale the academic Freshmen number about 350 (a slight decrease as compared with last year), and the Freshmen in the scientific department about 175. At Pennsylvania nearly 200 Freshmen were registered, about 35 more than last year. The entrance class at Princeton will number over 300.

THE colleges for women—Bryn Mawr, Vassar, Wellesley, Smith and others—also report an increased attendance. It is noteworthy that there are in the United States 139 colleges and universities exclusively for men and 162 exclusively for women.

IT is now stated that the estate of the late Henry M. Pierce will yield $750,000 to each of the five legatees, which include Harvard University and Massachusetts Institute of Technology.

BY the will of the late Dr. Antoine Ruppaner the Harvard Medical School will receive $10,000, to be called the Dr. Ruppaner Fund.

MR. H. H. HUNNEWELL has given $5,000 towards the endowment of the Surgical Laboratory of the Harvard Medical School.

THE Rev. Dr. Eliphalet Nott Potter, formerly President of Union College and of Hobart College, has accepted the presidency of the Cosmopolitan 'University' (Correspondence School).

DR. HANS REUSCH, director of the geological survey of Norway, has been appointed for 1897–98 to the Sturgis-Hooper professorship of geology in Harvard University, left vacant since the death of Professor J. D. Whitney a year ago. Dr. Reusch will lecture on Vulcanism during the first half year, treating volcanoes and eruptive rocks in general; earthquakes and movements of the earth's crust. In the second half year he will lecture on the Geology of Northern Europe, and its relations to general geology. The third hour of each week will be set apart for seminary work. In the spring Professor Reusch proposes to take part in the instruction of advanced students in the field.

IN addition to a number of assistants, the following instructors have been appointed at the Massachusetts Institute of Technology: Carl H. Clark, S.B., in mechanical engineering; Frederick A. Hannah, S.B., in mechanical engineering; Charles M. Spofford, S.B., in civil engineering. The following promotions have also been made: Arthur A. Noyes, S.B., Ph.D., associate professor of organic chemistry; Frank A. Laws, S.B., assistant professor of electrical measurements; Harry M. Goodwin, S.B., Ph.D., assistant professor of physics.

DISCUSSION AND CORRESPONDENCE.

RESULTS FROM THE HIGHEST KITE FLIGHT.

TO THE EDITOR OF SCIENCE: Aided by a grant from the Hodgkins Fund of the Smithsonian Institution, the Blue Hill Observatory is endeavoring to obtain meteorological records in the free air at heights exceeding 10,000 feet, and on September 19th such records were obtained at the highest level which kites are known by the writer to have attained.

The flight in question was conducted without mishaps by my assistants, Messrs. Clayton, Fergusson and Sweetland. On the day mentioned, the sky was clear and the wind blew from the south in gusts of from 20 to 35 miles an hour. The Richard baro-thermo-hygrograph, which weighs three pounds and was suspended 130 feet below two large kites of Mr.