

like outlets in its north-facing escarpment, and then traverse a sloping plain that descends to a barren sandy strip before reaching the sea. They form the natural paths of travel by which the hill tribesmen always go to and from the coast.

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CURRENT NOTES ON ANTHROPOLOGY.

STUDIES IN MAYAN HIEROGLYPHS.

IT is as agreeable as it is rare to find a sane student of the Mayan hieroglyphs. For that reason among others it is pleasurable to mention several articles which have appeared lately from the pen of Mr. Lewis W. Gunckel, of Dayton, Ohio.

Two of these are in the *American Antiquarian* for the present year. They are entitled, 'The numeral signs in the Palenque tablets,' and 'An Analysis of the day-signs in the Palenquen inscriptions.' A third is in the *American Anthropologist* for May on, 'The direction in which Mayan inscriptions should be read.' All of these indicate thorough investigation and calm judgment, as well as a good acquaintance with what his predecessors in the field have accomplished. The method pursued is scientific and the presentation of the results temperate.

Of course, some of such results may have to be modified by future research, and they may not be good in all cases, that is, in other parts of the field; but the plan which Mr. Gunckel has adopted of approaching these intricate problems is one sure to be productive of additions to our positive knowledge concerning them.

PRIMITIVE DECORATIVE ART.

FOR the analysis of primitive art-motives no paper has appeared for a long while more instructive than that by Dr. Franz Boas in the *Bulletin of the American Museum of Natural History*, Vol. IX., en-

titled 'The decorative art of the Indians of the North Pacific Coast.' The tribes whom he has in view are celebrated for the abundance of their painting and sculpture, their totem poles, colored dishes and carved pipes, and all are somewhat familiar with their strange and perplexing designs. These are analyzed in the article referred to with masterly skill, and the text is furnished with ample and accurate illustrations, which enable the reader to follow the demonstration step by step.

Certain general principles furnish the key to these primitive art-motives. It was the aim of the artist to bring into prominence the most specific feature of the animal he drew, and yet to show as much of the whole of it as he could. As he knew nothing of perspective, he resorted to the most curious devices to accomplish his aim. He represented his subject in sections and distortions, and sometimes by its specific feature reduced to a mere symbol, as a beaver by its incisor teeth only. Many of these devices belong to primitive art generally, and hence this paper will efficiently aid the student in other fields than the Northwest Coast.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

SCIENTIFIC NOTES AND NEWS.

WE publish elsewhere a full report, by the General Secretary, of the Detroit meeting of the American Association for the Advancement of Science. Although the attendance was small, the scientific programs were in many sections unusually strong and promise well for the future of the Association. A notable meeting on the occasion of the fiftieth anniversary of the Association next year at Boston, with Professor Putnam as President and Mr. Howard as Permanent Secretary, is assured.

WE are glad to be able to publish in this issue the address of the President of the British Association, given on Wednesday of this week. The addresses of the Presidents of the Sections

were of great interest. These were in most cases on general topics, and in accordance with the custom of the Association a special title was not given to most of the addresses and the subjects were withheld until they were delivered. The programs promise the discussion of many interesting topics, American men of science being well represented.

THE French journals publish the programs for the meeting of the French Association for the Advancement of Science, held last week at Saint-Étienne. There were fifteen papers presented in mathematics, fifteen in the physical and chemical sciences, seventy-two in the natural sciences and twenty-eight in the economic sciences. Many interesting topics were brought forward, but, contrary to the usual programs of the British Association, there is a noticeable absence of the names of French men of science having an international reputation. The Association appears, however, to be in a flourishing condition as regards number of members and finances, the annual receipts amounting to nearly \$20,000.

THE British Treasury has appointed a committee "to consider and report upon the desirability of establishing a National Physical Laboratory for the testing and verification of instruments for physical investigation, for the construction and preservation of standards of measurement, and for the systematic determination of physical constants and numerical *data* useful for scientific and industrial purposes, and to report whether the work of such an institution, if established, could be associated with any testing or standardizing work already performed, wholly or partly at the public cost." The members of the committee are: Lord Rayleigh (chairman), Sir Courtenay Boyle, Sir Andrew Noble, Sir John Wolfe Barry, W. C. Roberts-Austen, Esq., Robert Chalmers, Esq., A. W. Rücker, Esq., Alexander Siemens, Esq., and T. E. Thorpe, Esq.

THE bill regarding the use of the metric system in Great Britain has been passed by the House of Lords.

THE American Museum of Natural History, New York, has been presented with two fine collections of butterflies. Mr. William Shaus,

formerly of New York, but now resident in London, has given his collection of tropical butterflies, said to contain over 10,000 specimens and valued at \$20,000. Dean E. A. Hoffman, of the General Theological Seminary, New York, is the other donor, and his collection is said to be complete with regard to North American species.

THE Arnold Arboretum, Harvard University, has received from Miss Abbey A. Bradley, of Hingham, Mass., a gift of \$20,000. The money has been given in memory of her father, the late William L. Bradley, the income to be used in scientific investigations on arboriculture.

THE British House of Commons has voted £809,992 for the Department of Science and Art and £162,439 for the British Museum.

M. FALGUIÈRE has now completed his model for the statue of Pasteur. It is expected that the Municipal Council will permit the erection of the statue on the space between the Panthéon and l'Odéon.

DR. JOSEPH J. KINYOUN, of the U. S. Marine Hospital Service, has been designated by the Secretary of the Treasury as a delegate to the International Conference on Leprosy, to be held at Berlin during October, and has also been directed to visit the Continental bacteriological laboratories for the information of the Marine Hospital Service.

MR. T. I. POCKOCK has been appointed Assistant Geologist in the British Geological Survey. Dr. W. F. Hume and Mr. L. Gorrings have been appointed assistants of the Geological Survey of Egypt, the work of which, as we announced last week, has been greatly enlarged.

THE Brooklyn Institute announces that Dr. Fridjof Nansen is one of the lecturers engaged for the coming season.

THE Royal College of Physicians, London, has conferred the Moxon gold medal on Sir Samuel Wilks, President of the College, for his work in clinical medicine, and the Baly medal on Professor Schäfer, for his work in physiology.

THE Civil Service Commission announce a vacancy in the position of computer in the

office of the Coast and Geodetic Survey, and several vacancies in the position of fish culturist. Details can be obtained by application to the Commission.

PROFESSOR LANGLEY was present at the meeting of the Paris Academy of Sciences on August 2d, and was welcomed by the President and M. Berthelot. Professor Langley gave an account of the results of his experiments with the aërodrome.

LORD KELVIN arrived in New York last Friday on the 'Campania.' He will return to New York on his way home after the meeting of the British Association and a visit to Nova Scotia.

THE second International Bibliographical Conference opened its proceedings, under the presidency of M. le Chevalier Descamps David and M. Lafontaine, at Brussels on August 2d. At the opening session the delegates gave an account of bibliographical progress in their respective countries.

THE conference of South African States on the rinderpest was opened at Pretoria on August 2d, with Mr. Schutte as chairman. Rinderpest is reported to have destroyed the buffalo in North Matabeleland. The natives state that since the disappearance of the buffalo the tsetse fly has been unknown in the fly belt.

THE British Institute of Mechanical Engineers celebrated, beginning on July 29th, the fiftieth anniversary of its foundation. The meeting was at Birmingham, where the Institute was founded and where it had its headquarters until 1877, when it was removed to London. The President, Mr. E. Windsor Richards, gave an account of the history of the Institute, with special reference to the presidents, beginning with George Stevenson. A gift of £3,000 was voted to the retiring Secretary, Mr. Bache, in recognition of his services which have contributed so greatly to the success of the Institute.

THE Third International Congress of Sociology met at the Sorbonne, Paris, during the last week in July, under the presidency of M. Paul de Lilienfeld, Senator of the Russian Empire.

WE learn from the *Revue Scientifique* that M. Louis Adrien Levat, President of the *Ligue Française ornithophile*, having its headquarters in Aix-en-Provence, is engaged in organizing an international congress for the protection of insectivorous birds. It is proposed to hold the congress in October next and foreign societies are invited to send delegates.

THE Sixteenth Congress of the Sanitary Institute of Great Britain will be held at Leeds from the 14th to the 18th of September, under the presidency of Dr. Robert Farquharson, M. P. An exhibition will be held in connection with the Congress.

THE commissioners for the Exhibition of 1881 have made appointments to Science Research Scholarships for the year 1897, on the recommendation of the authorities of the respective universities and colleges. The scholarships are of the value of £150 a year, and are ordinarily tenable for two years in any university at home or abroad. The scholars are to devote themselves exclusively to study and research in some branch of science, the extension of which is important to the industries of the country. A limited number of the scholarships are renewed for a third year where it appears that the renewal is likely to result directly in work of scientific importance. This year three scholars have been reappointed for a third term, fourteen have been reappointed for a second term, and nineteen new appointments have been made. The Scholarships Committee consisted of Sir Henry Roscoe, chairman, Lord Rayleigh, Lord Kelvin, Lord Playfair, the late Mr. Muddella, Dr. William Garnett and Sir J. Norman Lockyer.

THE John Lucas Walker studentship of pathology at Cambridge is vacant and candidates are invited to send applications to Dr. A. A. Kanthack, Cambridge, not later than October 15th. The scholarship is for original research in pathology and is of the annual value of £250, tenable for three years. It is open to women as well as men.

IT is well known that before the success of the Atlantic Cable a company was formed to establish communication with Europe by an overland telegraph line via Alaska and Siberia,

and surveys in Alaska were made for this purpose. Mr. R. A. Fessenden contributes an article to the *Electrical World* raising the question of reviving the plan for such a telegraph line. He maintains that commerce with the East would justify the cost and that high speed systems of telegraphy would give it a great advantage over sub-marine cables even in communication between America and Europe.

THE Appalachian Mountain Club of Boston, has arranged an excursion to the Isle of Shoals, N. H., leaving Boston by special car at 9:40 a. m. on September 4th, returning on September 7th.

It is reported that the biological expedition of Columbia University returning from Alaska lost its specimens and instruments in the wreck of the steamship *Mexico*. It was also reported that the anthropological expedition of the Field Columbia Museum had lost the extensive collections secured in Alaska, but this appears to be incorrect.

It is stated in the *Scientific American* that Mr. H. P. Flower, Mayor of New Orleans, has just returned from Paris, where he went in order to study the Bertillon system for the identification of criminals. The system will be adopted in New Orleans, and will be taught to the police captains by Mr. Flower.

WE recorded last spring the sale of a great auk's egg for £294. Though the subject has, perhaps, no greater scientific interest than that of the sale of a rare postage stamp, it may be noticed that another of the eggs, slightly cracked, has been sold in London for £168. The purchaser, Mr. Middlebrook, has now three specimens in his collection.

THE recent French motor-car race from Paris to Dieppe showed an advance, in that the carriages were not entered by the makers, but by the owners. Fifty-nine carriages started, the winner traversing the distance of ninety-three and three-fourths miles in scarcely more than four hours. There was only one steam-carriage and none with electrical motor, oil being used in fifty-eight of the fifty-nine carriages.

THE issue of the *Scientific American* for August 7th very properly criticises another journal for publishing a story about [an English

lady who lost her diamond ring in the dough of a cake and found it by means of X-rays, remarking that "this very improbable story doubtless originated in the brain of some reporter." It happens, however, that a few pages further on in the same issue the *Scientific American* publishes a long article translated from a French illustrated journal on the X-rays in the custom house. The article contains elaborate illustrations of the radioscopic examination of a valise, of the detection of a smuggler, etc. The facts of the matter are that M. Pallin, the Director of Customs, has considered the possibility of using X-rays in certain special cases, but the detailed accounts and the alleged photographs of the article evidently 'originated in the brain of some reporter.'

JACOB NORTH & Company, Lincoln, Neb., announce that they have in press the *Phytogeography of Nebraska*, by Dr. Roscoe Pound, Director of the Biological Survey of Nebraska, and Mr. F. E. Clements, assistant instructor in botany in the University of Nebraska. It is the first volume of a series intended to present in a number of volumes the results of the investigation of the floral covering of Nebraska, which has been in progress for the past five years in the Botanical Survey of that State. The volume deals primarily with phytogeographical problems in Nebraska, but gives a general treatment of the phytogeographical principles relating to distributional statistics, regional limitation, vegetation forms, habitat groups, plant formations, etc.

A CIRCULAR has been issued announcing a journal entitled *Intermédiaire des biologistes*, intended to be an international organ for zoology, botany, physiology and psychology. The journal will be edited by M. Alfred Binet, the well-known French psychologist, with the help of two of his psychological assistants, MM. Victor Henri and N. Vaschide, and will be published on the 5th and 20th of each month by Schleicher Frères, Paris. The date when the publication will begin and the price are not given. The journal proposes to cover six departments: A bulletin of notes and news, questions and answers, abstracts, preliminary notices, one short original article and new apparatus.

THE *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, edited by Professors H. Ebbinghaus and Arthur König, and published since its foundation by Leopold Voss, Hamburg, will hereafter be published by J. A. Barth, Leipzig. The same publisher will also assume the publication of the continuation of Professor J. von Kries' 'Abhandlungen zur Physiologie der Gesichtsempfindungen' and of Helmholtz's 'Vorlesungen über Theoretische Physik,' of which latter work they hope to publish two further volumes during the coming year.

WE are glad to note the establishment of a monthly scientific journal at DeLand, Fla., entitled *Studies from Nature*. Although the subscription price is only 50 cents per annum, we fear that the publishers will not succeed in securing the 50,000 subscribers that they expect. Such local journals devoted to the natural sciences as they appeal to amateurs are healthful signs of an interest in what the conductors of this journal call 'The Wonders and Beauties of Nature.'

DR. W. FLINDERS PETRIE, the Egyptologist, has sent, according to the daily papers, to Dr. Breasod, of the University of Chicago, a valuable collection of relics excavated along the Nile. Among these are statues of Nen Khefa, a wealthy nobleman, and his wife, which are said to be nearly 5,000 years old. They are of limestone and are remarkably well preserved. They will go to the Haskell Oriental Museum of the University.

WE learn from *Natural Science* that the Zoological Museum of the Royal Academy of Science, St. Petersburg, has acquired thirty-three specimens of fossil bones and numerous remains of Post-Tertiary mammals collected by J. Savenkov at Krasnoyarsk. Among them are some bones and a piece of skin of *Rhinoceros tichorhinus*, which were taken from a well-preserved specimen of a rhinoceros, covered with skin, found 60 versts east of Kasatschje, on the bank of the Charaula, a left tributary of the Tomskaia. Dr. G. Stefanescu, the eminent Roumanian geologist, has discovered two portions of the mandible of a species of *Camelus* in an undoubted Quaternary gravel, six meters below the surface on the river bank of the Olt

at Milcovul-de-jos, near Slatina, Roumania. He regards the species to which they belong as new, and names it *Camelus alutensis*.

WE learn from *Nature* that at a meeting of the Essex Field Club, on July 21st, a discussion was held for the consideration of practical methods for the protection of our native fauna and flora from the destruction and actual extermination which now threaten many interesting species. Mr. C. G. Barrett (Hon. Secretary to the Committee of the Entomological Society for the Protection of Insects in danger of extermination) opened the subject by a short address on 'Insect protection; its necessity, means and objects.' Mr. J. E. Harting spoke with respect to birds and mammals; Professor Boulger referred to the wholesale collecting which was exterminating many rare plants; and Professor Meldola urged that children should be taught to respect the sacredness of life. The following resolution of Professor Boulger's was adopted unanimously, and the Club resolved to assist the scheme of the Entomological Society in every possible way: "That in view of the danger of extermination threatening many beautiful, rare and interesting plants, all lovers of nature should do their best to avoid this danger: (a) By abstaining from wholesale collecting, collecting for merely individual private collections, needless rooting-up of specimens, attempting to cultivate wild specimens of refractory species, and purchasing such wild specimens from itinerant or other dealers; (b) by endeavoring to persuade others, especially school children, cottage gardeners, and dwellers in large towns, to a similar abstention."

A REUTER telegram from Stockholm says that in a letter to the *Aftonblad*, Dr. Nils Ekholm, who accompanied Herr Andréé to Spitzbergen last year with the intention of taking part in his aerial voyage, offers some remarks on the prospect of the expedition based on the full details now received of Herr Andréé's ascent. Herr Ekholm declined to go this year because he considered that the impermeability of the balloon was unsatisfactory. In his letter he points out that from the day the balloon was fully inflated it lost 51 cubic meters of gas every 24 hours, representing a diminution in

carrying capacity of 56 kilogrammes per day. This, he says, shows that the imperviousness of the balloon had not been essentially increased since last year. Besides this daily escape, various circumstances led to a certain loss of gas in the ascent itself, necessitating a corresponding sacrifice of ballast. After making allowance for these losses of gas, and taking into consideration the fact that in the ascent part of the dragropes were lost and that the balloon at once rose to a height of 15,000 ft. to 25,000 ft., which was more than had been reckoned upon, Dr. Ekholm comes to the following conclusions: The longest time for which the balloon would remain in the air would be from 22 to 24 days, and less if mountains exceeding the height attained at the start had to be crossed. As the duration of the projected voyage may be estimated in ordinary conditions as regards wind at 24 days, remarkable good fortune would be necessary for success.

LIEUTENANTS VANNUTELLI AND CATERNI, the surviving officers of the Bottego expedition, have sent in a report to the Italian Geographical Society, which is summarized in a dispatch to the *London Times*. The expedition set out on February 2, 1895, from Sancurar, and after touching Vollamo visited Pogadesen (?), and arrived on June 1, 1896, at Omo. In consequence of continuous fighting with the warlike tribes inhabiting these regions, the members of the expedition were obliged to spend the months of July and August, 1896, on the shores of Lake Rudolf. At this point Dr. Sacchi left the expedition, taking with him some valuable mineralogical and zoological collections and proceeded to Lugh. The main expedition proceeded up to the Ethiopian plateau, stopping at Sajo, whence a letter was forwarded to the Galla chief Degiasmac. In consequence of the friendly assurances given by the latter, the expedition continued its forward march, arriving on March 16th of the present year in the neighborhood of Gabo. The chief, notwithstanding his friendly assurances, behaved treacherously and caused the party to be surrounded, so that they had no course left but to attempt to cut their way out. Of the 86 members of the expedition, 66, including its leader, were killed, the survivors being taken prisoners and having many hard-

ships to endure. On June 6th last the captives were sent by order of the Emperor Menelik to Shoa, where they arrived on June 22d and were handed over to Major Nerazzini. The documents belonging to the expedition were saved, only the collections intrusted to Dr. Sacchi having been lost. It is thought probable that the latter was killed.

THE British Society of Inspectors of Weights and Measures recently held its annual general meeting in London. The total membership of the Society is now upwards of three hundred, and sixty cities and towns were represented at the meeting. Sir Henry Roscoe, the Vice-President, made an address on the subject of the metric system of weights and measures. He reminded the members that he was the Chairman of the Select Committee of the House of Commons, appointed two sessions ago, to report on the question of how far it was desirable to alter our system of weights and measures and adopt the metric system, which, he said, was almost universal throughout civilized, and to some extent uncivilized countries. He joined with the members of the Society in the hope that the bill would soon pass into law. It did not do all that they had hoped for, but they must, he thought, accept it as an installment. Sir John Hutton reported that of one and three-quarter million scales examined in London, one-third had proved defective. The members of the Society visited the Victorian Exhibition of the Crystal Palace, where a Section of Weights and Measures had been organized by the Society, and subsequently went to Paris to view the standards and appliances of the French government at the Bureau central.

THE Berlin Town Council has decided to appoint a municipal 'hydrologist' for the hygienic supervision of the water supply of the city.

SIGNOR CESARESCO writes to the *London Times* asking for the suppression of the export of quails and small birds from Italy to England. It is said that millions are sent to England from Egypt and from the south of Italy, part of which are caught in defiance of such protective laws as exist, while the rest are netted in the spring and autumn and are kept in more or less

misery till the time comes for their despatch to meet the requirements of the London season, which coincides with the natural nesting time. The French government for some years prohibited the transit of quails through France in the close season, but as this simply led to their being sent through Germany and Belgium the prohibition has been removed, notwithstanding the protests of the Union des Sociétés des Chasses. Millions of small birds called 'larks,' though they include every variety, and especially robins, killed largely during the breeding season, are also annually exported to England, and it is feared that they will be entirely exterminated in Italy.

UNIVERSITY AND EDUCATIONAL NEWS.

A LARGE majority of the professors of Brown University have signed an open letter addressing to the corporation a protest against attempting to curtail the freedom of speech of the President. The letter gives a straightforward expression to the views which university professors should unite in maintaining and removes from Brown University the stigma put by the corporation in claiming that they can control the freedom of speech of its faculty. President Andrews, however, in accepting the presidency of a magazine 'university' confuses the friends of academic freedom.

THE London University Commission bill has been postponed by the government until next year.

It is reported in the daily papers that Mr. Washington Corrington, of Peoria, Ill., now eighty-five years old, has appointed trustees to have control of his property, to be used after his death to found a university at Peoria. His property is estimated at over \$1,000,000.

THE Bradley Polytechnic Institute, of Peoria, will be dedicated on October 8th, the principal address being made by the Secretary of the Treasury, Hon. Lyman J. Gage.

THE trustees of the University of Illinois have decided to admit women to the College of Physicians, Chicago.

At a recent meeting of the Council of the

University of Paris it was resolved that, as soon as financial resources permitted, the following courses should be added: Experimental physiology, objective psychology and astronomical physics, and additional courses in paleontology and histology.

It is intended that the name of Croom Robertson, late Grote professor in University College, London, to whom psychology in England is greatly indebted, shall be connected in some way with the new psychological laboratory established at University College. The principal contributors to the fund are Mr. Haldane, Q. C., Mr. A. J. Balfour, Professor H. Sidgwick, Mr. F. Galton, Dr. Savage, Sir John Lubbock and Mr. Shadworth Hodgson.

THE London *Times* reports that at Dewsbury, after the funeral of Dr. Hinchliffe, it was announced that the deceased, after providing for his housekeeper and servants, had bequeathed property and shares, with about £50,000, toward higher education, but the purposes of the bequest are not stated.

DR. H. V. NEAL, Harvard University, has been elected professor of biology at Knox College, Galesburg, Ill.

M. IZOLET has been appointed to the newly established professorship of social philosophy in the Collège de France.

MR. W. W. WATTS, Assistant Geologist at the British Geological Survey, has been appointed assistant professor of geology at Mason College, Birmingham.

DR. HERMANN THOMES, docent in pharmaceutical chemistry in the University of Berlin, has been promoted to a professorship. Professor George Ruge, of Amsterdam, has been appointed professor of anatomy and director of the Anatomical Institute at Zurich. Dr. Ossan, associate professor of mineralogy at Heidelberg, has been called to a chair in the School of Chemistry at Mühlhausen.

DISCUSSION AND CORRESPONDENCE.

THE ANTECEDENT COLORADO.

TO THE EDITOR OF SCIENCE: In addition to the doubts brought forward by Davis (SCIENCE,