

custom is the theme of a thorough study by Dr. Paul Sartori in the *Zeitschrift für Ethnologie*, Heft I., 1898.

Having demonstrated its wide extension he seeks for the psychical motives which prompt it. They are complex. Sometimes the offering was to the spirit of the place or to the gods for the undertaking; or it was to obtain a guardian divinity in the soul of the victim; or it was magical, by the spilling of blood to drive away evil spirits; or it was a procedure in sympathetic magic, the offering or victim being eaten with joy, so that joy should abide in the house; or the sacrifice was in some way vicarious, a substitute for what fate might otherwise demand of the house owner.

The article is a good example of exposition and analysis applied to a widespread rite.

THE CUSTOM OF 'DHARNA.'

THE legal practice in India of *Dharna*, or sitting at a debtor's door and not eating until the debt is paid, still obtains in that country and is as old as the laws of Manu. The debtor must either pay up or move away, or else the creditor will starve himself to death. This would seem to us a very silly proceeding on the part of the creditor; but Dr. S. R. Steinmetz, in a study of the custom printed in the *Rivista Sociologia Italiana* for January of this year, points out that when the meaning and origin of the usage are appreciated, it is by no means so foolish as it looks. Should the creditor die from hunger, the debtor is held responsible for murder, and the terrible penalties of blood revenge will be wreaked upon him by the family of the creditor. Not only the debtor himself, but all his kin or gens will become the targets of a merciless vendetta. With this certainty in view, any sacrifice on his part would be wiser than to allow the creditor to perish.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

SCIENTIFIC NOTES AND NEWS.

THE MEETING OF THE AMERICAN ASSOCIATION.

A PROPOSITION to invite the American Association for the Advancement of Science to meet in Philadelphia in 1899 was referred by the Council of the Academy of Natural Sciences for consideration to a committee consisting of Messrs. Samuel G. Dixon, Thomas Meehan, Rev. Henry C. McCook, William Powell Wilson, Henry Skinner and Edward J. Nolan. After consultation with representatives of other scientific institutions and educational interests at a well attended meeting held in the Academy on the 22d inst., the following was unanimously adopted:

As the first meeting of the American Association for the Advancement of Science was held in Philadelphia in 1848, and as it is fourteen years since the most successful meeting in its history was also held here,

Resolved, That this meeting, in the belief that the second half century of the Association's career should begin in the city of its birth, approve of the suggestion that an invitation to meet in Philadelphia in 1899 be conveyed to the session to be held in Boston next August.

After a statement by Dr. Nolan regarding the successful methods of the local committee in 1884, and remarks in support of the proposition from Dr. Daniel G. Brinton, those in attendance signed a form of invitation to be transmitted to the Association in time to be acted on by the Boston session, and the Secretary was directed to obtain the signatures of representatives of the municipal government and others endorsing the movement but unable to be present.

The brilliant success of the meeting of 1884, and the desirability of starting the Association on its second half century under the most favorable auspices, after what will undoubtedly be a largely attended session in Boston, are sufficient reasons for the movement thus inaugurated. It is especially fitting that the preliminary steps should have been taken by the Academy of Natural Sciences, not only because of the honorable position it has always maintained in the scientific world, but also because the first meeting in 1848 was held within its walls. If the invitation to meet next year in Philadelphia be

accepted by the Association a satisfactory combination of scientific and social interest may be confidently anticipated.

AWARD OF THE LOUBAT PRIZES.*

THE undersigned, a committee appointed in 1895 to examine and report upon the various monographs submitted in competition for the Loubat prizes to be awarded in 1898, beg leave to report that they have carefully considered the different works received, and have also, in accordance with the rules governing the competition, examined such other works relating to American archæology as have been published in the English language during the three years ending with the first day of April, 1898. In their consideration of these monographs the Committee have taken into account not only the scientific value of the work, but also the importance of the subjects treated, the methods of investigation pursued by the authors, and the artistic and literary excellence of the presentation.

The monographs that were formally submitted for examination were the productions of eight different authors. Of these the committee have selected as being the most meritorious, and as most fully complying with the conditions prescribed for the competition, the treatise offered by Mr. William Henry Holmes, Curator of the Department of Anthropology in the National Museum at Washington. The title of this treatise is 'Stone Implements of the Potomac-Chesapeake Tide-Water Provinces.'

This volume may be held to mark an epoch in American archæological research, by interpreting the remarkably abundant artifacts of a typical region in the light of previous studies of actual aboriginal handiwork, and thus establishing a basis for the classification of the stone art of the entire western hemisphere. It is the result of many years of personal study, numerous experiments and close typographical analysis, and is supplied with a wealth of illustrative material that gives it most exceptional interest and value. The Committee, therefore, recommend that the first prize of \$1,000 be awarded to Mr. William Henry Holmes.

*Report of the Committee to President Low, of Columbia University.

The elaborate monograph entitled *The Social Organization and Secret Societies of the Kwakiutl Indians*, by Dr. Franz Boas, of the Metropolitan Museum of Natural History of New York City, is a remarkably complete descriptive and analytic treatise setting forth the characteristics of a well studied tribe in such a manner as to offer a model for students and raise the standards of ethnological work. Its information is derived from personal research conducted on the very best scientific principles and dealing with a wealth of carefully collected material. Your Committee, therefore, recommend that the second prize of \$400 be awarded to Dr. Franz Boas.

Of the remaining authors represented in the competition the Committee desire to single out for especial mention Dr. Karl Lumholtz, who presented a treatise entitled *Objective Symbolism of the Huichol Indians*; Mr. Frank H. Cushing, who offered a manuscript interpretive of aboriginal art and industry under the title *Tomahawk and Calumet, Shield and Gorget*; and Dr. Walter Hoffman, whose extended memoir embodies a careful study of the Menomini Indians.

The Committee desire also to mention with especial commendation a work by Alfred P. Maudslay, of London, dealing with the archæology of Central America. This work was not submitted by its author in the competition, and it has not yet been completed in publication; but its great merit is such as to demand some especial mention on the part of this Committee.

All of which is respectfully submitted.

Committee: H. T. PECK, *Chairman*.

D. G. BRINTON,

W J MCGEE.

MAY 21, 1898.

NEW GASES IN THE ATMOSPHERE.

A FURTHER communication of great interest on the occurrence of hitherto unsuspected elements in the atmosphere was made, according to the *London Times*, to the Royal Society by Professor Ramsay and Mr. Travers, on June 16th. Since the discovery of argon it has always been a question whether the gas isolated by Lord Rayleigh and Professor Ramsay was in reality a single uniform substance, a point which was very difficult to settle owing to the

impossibility of applying any ordinary chemical test. Moreover, as the molecular weight of helium—which shares with argon the peculiarity of being an entirely inert element—is four, whilst that of argon is almost 40, it appeared probable that an element of intermediate molecular weight remained to be discovered. Professor Ramsay and Mr. Travers have, therefore, prepared a large quantity of 'argon' from atmospheric nitrogen; separating this latter gas by means of magnesium, and having liquefied it by cooling with liquid air, they have then fractionally distilled the product. The first portion, consisting of less than one hundred cubic centimeters, distilled off from the liquid obtained by condensing 18 litres of argon, was found to have a density of about 13 instead of 20, which is that of argon; and its spectrum differed from that of the known gases, a yellow line, less refrangible than those characteristic of helium and krypton, being especially prominent. On continuing the distillation, after nearly the whole of the liquid argon had evaporated, a solid was obtained which only slowly volatilized. The gas into which this solid was converted was found to be of practically the same density as argon, but its spectrum was altogether different and peculiar, consisting for the most part of bands, not of lines. It is proposed to call the lighter element Neon, and that derived from the solid Metargon.

These observations, as well as those on krypton communicated to the Society the previous week, must obviously be regarded as but indications of the presence in various minute proportions of a variety of new substances, probably all elements, in the atmosphere. Further development of the investigations will be awaited with interest. The success which has thus far been obtained is striking proof of the great value of the new engine of research which liquid air affords, especially as diffusion experiments had failed to afford any evidence of the presence of such substances in our air.

CIVIL SERVICE EXAMINATIONS IN SCIENCE.

THE Civil Service Commission invites attention to the fact that no applications were filed for the examination scheduled to be held on June 7th for Assistant Curator, U. S. National

Museum (Division of Mammals), Smithsonian Institution; and it announces that July 21st has been set for examination for the position mentioned, salary \$1500 per annum. Applicants will not be required to appear before a board of examiners for examination, but they will be rated on the elements of education, experience, publications and a thesis, which are to be indicated upon special forms furnished by the Commission. These subjects will be weighted 10, 15, 50 and 25 per cent., respectively. The Department states that it is desirable that persons certified for this position shall be men not less than 25 nor more than 40 years of age and that they should possess a good general education (college graduates preferred); a general knowledge of zoology and a thorough knowledge of mammalogy, more especially as relating to the North American fauna; they should have a practical knowledge of field collecting, and of museum methods of preserving, arranging and labeling collections.

On July 14th an examination will be held to fill two vacancies in the grade of Assistant, U. S. Coast and Geodetic Survey, Treasury Department, the salaries of which are \$1,200 per annum.

The examination will consist of the subjects mentioned below, which will be weighted as follows:

Knowledge of the operations of geodesy, .	40
Experience in the work of a trigonometric survey,	40
Knowledge of field astronomy,	20

A statement of the experience in the work of trigonometric survey is to be submitted upon a special form, which will be furnished applicants with their application blanks. This statement must be filed with the application. Applicants for this examination must not be over 50 years of age.

No eligible candidates were secured from the examination held on May 6, 1898, for the position of Chief of Division of Library and Archives, U. S. Coast and Geodetic Survey, Treasury Department, and another examination will be held on July 21st and 22d. The salary of this position is \$1,800 per annum.

The examination will be as follows:

Basis examination (spelling, arithmetic, penmanship, letter-writing, copying from plain copy, copying from rough draft—first grade),	15
Library economy,	30
Bibliography,	30
French and German,	15
Experience,	10

An examination will be held on July 21st, for the position of Assistant Chief, Division of Forestry, Department of Agriculture, at a salary of \$1,800 per annum.

The examination will be as follows:

Forestry,	60
Botany,	5
French or German (translation into English of passages relating to forestry),	10
English (essay on a forestry subject), ...	5
Experience,	20

Another examination in the Division of Forestry will be held on July 28th, to fill the position of District Assistant at a salary of \$1,200 per annum. The examination will consist of the subjects mentioned below, which will be weighted as follows:

Forestry,	60
Botany,	5
English (essay on a forestry subject), ...	5
Experience,	30

GENERAL.

IN connection with the Congresses of Physiology and of Zoology, to be held in Cambridge next August, it is proposed to confer the honorary degree of Doctor of Science on Professor Bowditch, of Harvard; Dr. Anton Dohrn, of Naples; M. A. Milne Edwards, of Paris; Professor Golgi, of Pavia; Professor E. Haeckel, of Jena; Professor Hubrecht, of Utrecht; Professor Kowalevsky, of St. Petersburg; Professor Kronecker, of Berne; Professor Kühne, of Heidelberg, and Professor Marey, of Paris.

PROFESSOR K. VON RÖNTGEN, of Würzburg, has been awarded the Elliot-Cresson medal of the Franklin Institute of Philadelphia.

DR. H. MOLISCH, professor of plant physiology of the German University of Prague, has returned after a trip around the earth for purposes of research, having made special studies in Java.

DR. J. HANN, professor of meteorology in the

University of Gratz, has been made honorary member of the Geographical Society of Lima, Peru.

DR. SIMON SCHWENDENER, professor of botany in Berlin, has been made a knight of the order *pour le merite* in science and art.

THE freedom of the city of Edinburgh was conferred on Lord Lister on June 15th.

WE regret to record the death, on June 28th, at Munich, of Dr. George Bauer, associate professor of paleontology in the University of Chicago.

DR. THEODOR EIMER, the eminent zoologist, professor in the University of Tübingen, died on May 30th, aged 30 years.

THE death is also announced of M. Souillard, professor of astronomy in the University of Lille, and a corresponding member of the Paris Academy of Sciences.

MR. C. W. A. HERMANN, a mineralogist, died in New York on June 21st, at the age of 97 years.

AFTER all public works in New York City had been stopped, under the new city administration, we are glad to learn that the Board of Estimates and Apportionment has authorized the reissue of \$375,000 in bonds for the construction of buildings for the Botanical Garden in Bronx Park. Work on the Museum Building is being carried forward, the contract calling for its completion early next year.

IN addition to the comet discovered photographically by Mr. E. Coddington, of the Lick Observatory, and observed on June 11th, the light of which is said to be equal to that of a star of the magnitude of 7.7, Professor Perrine, of the Lick Observatory, discovered a faint comet on June 14th, and Mr. Hussey discovered Wolf's periodical comet on June 16th. The positions have been telegraphed by Professor Keeler, Director of the Lick Observatory, and are published in a special circular of Mr. Ritchie's Science Observer, issued on June 20th.

THERE is nothing in America corresponding to the civil list pension in Great Britain. There have been given during the past three years twenty-seven pensions under the British government, of which the following were in re-

cognition of scientific work: Mrs. Henrietta Anne Huxley, widow of Right Honorable Professor Thomas H. Huxley, scientist, £200. Dr. John Thomas, Arlidge, hygienist, £150. James Hammond, mathematician, 120. Oliver Heavyside, electrician, 120. Miss Anne Walbank Buckland, anthropologist, 80. Mrs. Fanny Hind, widow of Dr. John R. Hind, F.R.S., astronomer, 70. Mrs. Margaret Anne Houghton, widow of Rev. William Houghton, scientific writer, 50. Samuel Alfred Varley, electrician, additional, 50. Aug. Henry Keane, F.R.G.S., ethnologist, 50. Misses Frances Elizabeth, Mary and Julia Dobson, sisters of the late Surgeon-Major George E. Dobson, F.R.S., zoologist, each 25.

SURGEON-GENERAL STERNBERG has written as follows to the *Army and Navy Journal* regarding the danger of yellow fever in Cuba: "In your issue of April 23d, page 642, the statement is made that General Sternberg 'expresses confidence in the excellent sanitary provisions of the military service, and does not fear that yellow fever will prove more harmful to the troops than diseases which are common in the Northern latitudes,' etc. I have not expressed any such optimistic opinion, and regret to say that it is not justified either by my studies relating to yellow fever or by my personal experience. History teaches that when a considerable number of unprotected persons are exposed in a yellow-fever-infected locality during the months when this disease is most prevalent (May 1st to November 1st, in the latitude of Havana) an epidemic almost infallibly results. In the last week of April of last year there were 17 deaths and 70 new cases of yellow fever in the city of Havana. Now, suppose that we had a similar number of cases at the same season in New Orleans and that 20,000 strangers from the North should go there to spend the summer, what would be the result? All past experience supports the belief that a majority of them would have yellow fever, and that from 20 to 40 per cent. of those taken sick would die. This is what I anticipate would happen if we should send an army to occupy Havana, or any other infected seaport on the coast of Cuba during the summer months. If, however, these troops could be camped upon high land in the interior,

and circumstances were such as to enable them to comply with all of the exactions of modern sanitary science, I am of the opinion that our loss from yellow fever would not be serious. But in time of war military commanders are expected to take their troops to the points occupied by the enemy, and a picnic in the interior with frequent changes of camp, etc., is perhaps not exactly what we may expect. I am not an alarmist, but I believe in looking facts fairly in the face and cannot allow your statement of my opinion to have currency at such an important moment in our country's history without a protest."

UNIVERSITY AND EDUCATIONAL NEWS.

Two of the conditional gifts of \$50,000 offered by Dr. D. K. Pearsons have been secured by the colleges collecting the additional sums required. The endowment of Beloit College is thus increased by \$200,000 and that of Mt. Holyoke College by \$150,000.

THE sum of \$50,000 has been given from a source not named to Amherst College for an academic hall, to be built in honor of President Seelye. The class of '95 of Amherst has collected \$24,000, with which a laboratory building will be erected.

THE University of Virginia has received \$20,000 from Henry L. Higginson, Treasurer of the J. W. and Belinda Randall Charities Corporation of Monson, Mass., to be used for the erection of a building or as a permanent fund.

A BENEFACTOR of Edinburgh University, who desires for the present that his name should be withheld, has given the University such a sum as may be necessary, but not exceeding £10,000, to build and equip a laboratory and class-room to be used for the teaching of public health.

DR. MERRILL E. GATES has resigned the presidency of Amherst College.

DR. CHARLES HARRINGTON has been appointed assistant professor of hygiene, and Dr. Franz Pfaff instructor in pharmacology and physiological chemistry, in Harvard University.

ROLLINS A. EMERSON, of the Department of Agriculture, and a graduate of the University of Nebraska, has been elected to the assistant professorship of horticulture in his *alma mater*.