

tion, on the River Darling, the mean temperature for twenty-four days, from January 1 to January 25, was 120° in the shade. The cause of the protracted hot spell was the persistence of monsoonal conditions over the interior during the month, with weak gradients and light winds, there being no depressions of sufficient energy to drive the cool southerly winds inland.

THE seventh annual bibliographical number (for 1897) of the *Annales de Géographie* contains the usual short notes on climatological and meteorological publications issued during that year.

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CURRENT NOTES ON ANTHROPOLOGY.

ON INSPIRATION.

THE curious phenomenon of trance, voluntary or involuntary, plays the leading rôle in the ethnology of religions. In it all faiths have their origins, and by it most are sustained. A phase of it is known to psychologists as 'suggestion,' but this does not exhaust its aspects. Undoubtedly, both a physiology and a philosophy lie behind its superficial manifestations.

Some striking examples of it among the Slavic peoples are given in the 'Archiv für Religionswissenschaft' (Bd. I., Heft, 3) by Dr. Krauss, of Vienna. They are not surpassed by the Yogin of India or the high-priest of Nagualism, and have been studied by scientific observers.

That wholly exceptional, really inexplicable physical powers are obtained in the 'Yogâ' none can deny; and that equally anomalous psychical faculties are developed under its influence is just as certain. We still await a sympathetic, clear, unbiased study of this pregnant topic.

RELICS FROM THE ULOA VALLEY.

THE Uloa Valley opens into the Gulf of Honduras about Puerto Cortes. Attention

was first directed to its archæological remains about 1888 by a German planter, Mr. E. Wittkugel, who opened a number of mounds and made a large collection of pottery, etc. In 1896 and 1897 Mr. George Byron Gordon conducted explorations there under the direction of the Peabody Museum, Cambridge. His results have appeared in the *Memoirs of the Museum*, Vol. I., Nos. 4 and 5. It is amply illustrated, and presents a clear and succinct narrative of the work. The art-remains plainly show the influence of Mayan culture; but there is a residuum which, in the opinion of both Professor Putnam and Dr. Seler (whose report may be found in the 'Verhand. der Berliner Anthropol. Gesell.' 1898, p. 133), should be assigned to some other people.

In the same cover with Mr. Gordon's report on the Uloa Valley is his brief statement about cave exploration near Copan. The results were somewhat negative, not indicating extreme antiquity, though signs of a special art-development were not wanting.

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SCIENTIFIC NOTES AND NEWS.

A PRICE-LIST of the reprints of the papers of the late Professor E. D. Cope has been drawn up, and can be secured from Mrs. E. D. Cope, Haverford College, Haverford, Pa. Owing to Professor Cope's method of work and untimely death many of his important contributions to science exist only in these reprints, and the list should be secured by all those interested in paleontology, zoology and psychology.

WE are sorry to learn that the editor of *Natural Science* feels compelled to discontinue the editing of the journal after December. He is prepared to hand it over to any competent man of science who will relieve him of all responsibility and continue it as an independent journal. Students of the natural sciences are under very great obligations to the editor of *Natural Science*, whose desire to remain anonymous during the continuance of the journal

should be respected, for conducting through thirteen volumes a journal that has always proved interesting, independent and profitable. It is to be hoped that arrangements can be made for the continuation of *Natural Science* on the same general lines as at present.

PROFESSOR BEHRING has replied, in the *Deutsche Medicinische Wochenschrift*, to those who have criticised his action in securing in the United States a patent for his antitoxin. He states that he is no longer a physician and that it is necessary to adopt business methods to secure money to proceed with his investigations. He further states that his manufacturers will supply the antitoxin in America at the same price as hitherto and in a more reliable form. The question as to how far men of science should patent their discoveries is evidently one of great difficulty, but the case of Professor Behring is complicated by the fact that he was not the sole discoverer of the antitoxin treatment of diphtheria.

THE Board of Trustees of the University of Pennsylvania, at their monthly meeting on October 5th, appointed a committee to arrange a memorial meeting in honor of the late Provost Pepper. Other institutions with which Dr. Pepper was connected will be invited to take part in the meeting.

WE regret to record the death of M. Gabriel de Mortillet, the eminent anthropologist. He was born at Meylan (Isère) in 1821. After holding positions in the museums of Geneva and elsewhere, he organized the prehistoric section of the Paris Universal Exposition of 1867. A year later he was appointed curator of the Museum of Antiquities at St. Germain. He was at one time a member of the French House of Deputies, being an extreme radical. His anthropological publications are numerous and important.

WE regret also to record the death of Mr. William Wilson, a distinguished railway engineer, in London on September 28th; of Dr. Charles L. Fox, bacteriologist of the Lowell Health Department, and of Dr. David e Toscani, professor of legal medicine in the University of Rome and for twenty years director of the Municipal Office of Hygiene in Rome.

PROVOST HARRISON, of the University of Pennsylvania, has been elected to the presidency of the Wistar Institute of Anatomy, held by the late Dr. William Pepper at the time of his death.

DR. F. M. BRAUER has been appointed curator of the zoological collections at the Royal Museum in Vienna, and M. Albert Gailard, curator of the Lloyd Herbarium of Angers.

AN archæological map of New York State is in preparation for the Regents of the University, and will be published soon. Hundreds of sites are already described and located, but fuller information is desired, especially along the Hudson River, except in Westchester County. Notes should be sent to Rev. W. M. Beauchamp, Baldwinsville, N. Y., as soon as possible, and should include area and character of site, direction and distance from some village or town, on which side of any large stream or pond, and nature of relics. Full accounts will be prized, but brief notes will often suffice. To insure attention promptness is desired. The Iroquois country is well covered, but the Algonquin much less adequately.

THE Herbarium of the U. S. National Museum has acquired from Dr. W. H. Forwood the collection of plants made by him in western Wyoming in 1881-2.

THE Sixth International Otological Congress will be held in London at the Hall of the Royal Colleges of Physicians and Surgeons, from August 8th to 12th of next year. The last meeting of the Congress was held three years ago at Florence, under the presidency of Professor Grazi.

THE Central Committee for a Pasteur Institute in India has met at the office of the Director-General, Indian Medical Service, Simla, under the presidency of Surgeon-General Harvey. We learn from the *British Medical Journal* that it was decided that any attempt to start an institution for the sole purpose of antirabic treatment was out of the question, owing to the insufficiency of the funds at the disposal of the Committee, and that the most practical course would be to await the eventual outcome of the proposed Institute of Public Health to be founded by the generosity of the Indian chiefs.

It was, therefore, resolved that the Government of India be asked whether it could give any information as to when the Chiefs' Institute of Public Health was likely to take practical shape. Until a reply is received nothing definite will be done. Lieutenant-Colonel Roe, Secretary of the Institute, is proceeding on leave, and Major C. J. Bamber has taken up the officiating appointment.

THE Rev. E. C. Hallett, British Chaplain at St. Vincent, writes on September 17th last, that the steam barque *Southern Cross*, of Sir George Newnes's Antarctic expedition, called in at St. Vincent on September 13th for the purpose of coaling, when very cordial visits were exchanged between the ship and the shore. Captain Borchgrevink and his staff, who were in excellent spirits, most hospitably afforded the the officials and residents of St. Vincent every opportunity of inspecting the vessel before she started again on the 14th on her voyage to the to the South Polar regions.

A TELEGRAM to the daily papers from San Francisco states that Messrs. W. A. Woodruff and C. L. Cleghorn, of Washington, D. C., have sailed for Samoa. They are said to be heading a government expedition to collect rare plants, shrubs and other specimens in the interior of the Samoan Islands.

THE New York *Evening Post* reports that M. Viger, French Minister of Agriculture, has delegated M. d'Anvina, an engineer, and MM. Dubray and Minotier, to come to this country to study the American machinery and tools used in the manufacture of flour, and to ascertain their prices and the cost of transportation to France.

HERR G. WITT, of the Urania Observatory, Berlin, has made an important discovery while searching photographically for minor planets. On August 14th last he found, says *Nature*, on the plate he had exposed, in addition to the trail of the minor planet he was hoping to catch, a second trail which indicated the presence of another of these small bodies moving round the sun with a more than usual velocity. Herr Witt was not content, however, to let the matter rest thus, so he undertook a series of eye observations and measurements which are

necessary for the determination of the elements of the body in question. Herr Berberich undertook the task of investigating its motion from these observations, and the result, as far as is known, is surprisingly interesting. Instead of the object being a new or a previously observed member of that system of bodies which travels round the sun between Mars and Jupiter, it proves to be quite an exception, its orbit lying *within* that of Mars; in other words, it travels in a path which is nearer to the earth than that of Mars. It completes its revolution in a period of about 600 days; that is, roughly, 80 days less than Mars takes; both the eccentricity and inclination of the orbit are considerable. This small body thus becomes our nearest neighbor after the moon, and, although small, will shine when closest to us as a star of the sixth magnitude. No doubt the discovery of this new planet will incite afresh observers of these small bodies; and who will say that this new object is the only member of its kind that performs its revolution round the sun in an orbit between the earth and Mars?

DR. FLORENTINO AMEGHINO has made a remarkable discovery, an account of which we take from *Natural Science*. Details of a nocturnal quadruped have been brought to him from time to time by the Indians, and a few years ago the late Ramon Lista actually saw and shot at a mysterious creature in the interior of Santa Cruz. Apparently bullet-proof, it disappeared into the brushwood, and all search for it proved futile. Lista described the creature as a pangolin, without scales and covered with reddish hair. Despite the fact that Lista was known to be a good observer, Dr. Ameghino could not help feeling that he was deceived. Lista, however, has now been proved correct, for Ameghino received recently from South Patagonia some fresh bony ossicles and a partially destroyed skin. The ossicles were comparable to those of *Myiodon*, but smaller, and they were embedded in the skin, like 'paving stones in a street.' The skin itself is two cm. thick, and of such toughness that it could only be cut with a hatchet. The surface of the skin itself shows an epidermis, not scaly at all, but covered with coarse hair, four to five cm. in length, and of a reddish gray shade. This

Ameghino considers was the animal described by Lista, and as that naturalist unfortunately lost his life while exploring Pilcomayo, and was the only civilized man who had seen it in the flesh, he names it *Neomylodon listai*. The importance of the discovery need not be emphasized here.

PROFESSOR KOCH, with his assistants, Professor Kossel and Dr. Pfeiffer, is, says the *British Medical Journal*, at present in Rome studying the malarial question in all its aspects. The Italian government has placed the state laboratories at his disposal, and the Minister of the Interior entrusted Professor Santiliquido, the head of the laboratories, to welcome him on behalf of the government. Permission has also been granted him to study the cases of malaria admitted into the military hospital and into the hospital of Santo Spirito. Professor Koch has found only a small number of cases of malarial fever in these institutions, particularly in the military hospital, although September as a rule is the month in the year when the greatest number of cases of malaria are received in the hospitals from the Roman Campagna. Professor Koch and his assistants work daily in the laboratory of the Sancto Spirito hospital, and they make occasional visits to the most malarial districts around the city. He has stated that he was led to study malaria in Italy because the Italian school had written and investigated much about it, and the views of the leaders differ so much in many important points that he was anxious to come to a definite conclusion on the whole subject, if possible. In discussing Ross's work in India in connection with Manson's mosquito theory, he spoke in the highest terms of Ross's investigation. Professor Koch intends to leave Rome about the end of September, when he and his assistants most probably will go to Greece to continue their malarial studies in that country.

THE report of the Keeper of the Manchester Museum, says *Natural Science*, refers to the installation of electric light, which has been rendered possible by the generosity of Mr. Reuben Spencer, who contributed £500 to the expense. The Museum is at present in the hands of the painters, and it is to be hoped that the committee

will sanction the general whitening of the ceilings asked for by Mr. Hoyle, in order that the electric light may have a good start. Professor Hickson has been doing good work on the plankton of Lake Bessenthwaite, and some of the rarer forms will shortly be placed on exhibition. Miss Nördlinger, the keeper's secretary, has taken entire charge of the library. The committee have undertaken the printing of Mr. Sherborn's index to the 10th and 12th editions of the 'Systema Naturæ' of Linnæus, which should prove of value to zoologists, as these books form the starting-point of zoological nomenclature. A series of lectures will be delivered by Professor Boyd Dawkins on certain Saturdays and Sundays between October and June, and other lectures will be delivered by the staff as usual. Mr. Hoyle closes his report with an appeal for more funds, Manchester spending only £2,785 a year on its Museum, while Liverpool spends £5,700.

THE *Scientific American* gives the following statement of space at the Paris Exposition of 1900 as arranged by the Commissioner-General, Mr. F. W. Peck :

	Sq. ft.
Agriculture and food products.....	20,000
Army and navy.....	3,300
Chemical industries.....	5,160
Education, instruments, practical sciences, and arts.....	11,470
Fine arts.....(not yet known)	
Forestry, hunting and fisheries.....	3,300
Heating apparatus.....	4,500
Horticulture.....(not yet known)	
Machinery and electricity.....	50,000
Manufactures.....	25,000
Mines and mining.....	7,700
Textiles.....	13,000
Transportation and civil engineering	20,000
Total.....	163,430

It has been decided, as we learn from the *London Times*, to hold an exhibition in Coolgardie next year, and the government of Western Australia has resolved substantially to support the undertaking by a money and land grant. The proposal has been warmly taken up by the people of Western Australia, by whom a representative executive commission has been elected. The original proposition was

to hold a mining machinery exhibition, and to open the same in October, 1897, but the proposal received so much support in the colony, and was responded to so freely by manufacturers in all parts of the world, that it became necessary to fix upon a later date, and to make the exhibition more comprehensive. The scope of the exhibition was therefore enlarged, and it was determined to call it the Western Australian International Mining and Industrial Exhibition, the objects of which should be to obtain the fullest and best possible display of mining and other machinery, and of all kinds of manufactures suited to the requirements of the mining, timber and agricultural industries of the colony, and to its growing population, in order generally to promote and foster industry, science and art, to encourage invention, and to stimulate commerce in the goldfields and throughout the colony.

THE Commissioners of Fisheries, Game and Forest, of the State of New York, have issued their Second Annual Report. Nearly 200,000,000 fish were placed in public waters upon the application of local authorities. Atlantic salmon fry and yearlings, American brook trout (*Salmo fontinalis*), rainbow trout (*Salmo irideus*), Sunapee trout, Swiss lake trout obtained from the Swiss government, and Labrador whitefish, are among the species introduced, and in addition various streams and lakes have been stocked with different forms of fish food. The report contains articles by Professor J. D. Quackenbos, on the American saibling, a member of the Salmonidæ, which has only recently attracted attention; by Mr. G. W. Rafter, on stream-flow in relation to forests; by Mr. Surface, on the game birds of the State, and other matters of scientific interest.

THE U. S. Fish Commissioner has presented to Cornell University a collection of fresh-water and salt-water fishes, numbering between four and five hundred thousand specimens. The collection, in so far as it consists of living fishes, will be of great value not only to the zoological department, but also to the College of Forestry, in which a course in pisciculture and venery is to be introduced. It is understood that duplicates of this collection are to be presented to other institutions.

UNIVERSITY AND EDUCATIONAL NEWS.

THE will of the late Col. Joseph M. Bennett, who during his life-time had made generous gifts to the University of Pennsylvania, leaves to the University property valued at \$400,000. The money is to be used for the higher education of women.

A SUM of money, said in the daily papers to be \$158,000, has been given by friends of Barnard College to pay the entire indebtedness of the College due to its removal to the new site adjacent to Columbia University.

A DONOR whose name is withheld has given Wellesley College an astronomical observatory and a telescope, said to be of large size.

VASSAR COLLEGE receives \$10,000 by the will of the late Adolf Sutro, of San Francisco. The same College has been given \$1,000 by Senator Coleman, of Michigan, the income to be used to purchase books and instruments for the astronomical observatory.

THE estimates of the Navy Department for the ensuing year include \$2,120,000 for the reconstruction of the Naval School at Annapolis.

THE annual report of President Low was presented to the Trustees of Columbia College on September 24th. During the year the University received \$346,409 for permanent endowment and \$43,909 for current uses. President Low urges the building of dormitories, both upon the grounds of the University and adjacent to them. The following account is given of the cost for land, buildings and equipment of the new site:

Cost of land.....	\$2,000,000 00	
Legal expenses	3,637 95	
		\$2,003,637 95
Library :		
Construction.....	1,100,542 09	
Equipment.....	97,037 38	
		1,197,579 47
Schermerhorn Hall :		
Construction.....	457,658 17	
Equipment.....	35,786 35	
		493,444 52
Fayerweather Hall :		
Construction.....	274,113 67	
Equipment.....	14,645 43	
		288,759 10