

sphere of intellect or of other gratification. But the numerical increase of the race is and must be inversely to the effort of the individual to develop himself personally. Republican civilization, he claims, contains a toxic principle. The more intense and general it becomes in a community, the more acute becomes individualism, and this will finally destroy the race and its culture. There may, however, be a democracy directed by science which can escape this poison. With this cheering but vague intimation the article closes.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

SCIENTIFIC NOTES AND NEWS.

PRESIDENT MCKINLEY has, as had been feared, nominated the person from Martinsburg, W. Va., named Bowers for United States Fish Commissioner. Efforts should still be made to prevent confirmation by the Senate, but that talkative body has no time to listen, and only irrelevant accidents are likely to intervene. It is within the limits of possibility that a man chosen by lot from a penitentiary would make a better chief executive than the present 'incumbrance,' and it is quite possible that Mr. Bowers may become a competent Fish Commissioner. His record should not be prejudged and he should be given all possible assistance by men of science. No subsequent events can, however, excuse Mr. McKinley. Those having knowledge of his flabby character will not be surprised when he does a weak and foolish thing, but it is humiliating to know that the President of the United States can deliberately and with full knowledge perform an illegal act.

At the annual public meeting of the Paris Academy of Sciences held on January 10th the numerous prizes in the gift of the Academy were awarded. Among these we may mention, in addition to the *Cuvier* prize of 1,500 francs awarded to Professor Marsh, and the *Lalande* prize of 540 francs awarded to Professor Perrine, previously announced in SCIENCE, the *Poucelet* prize of 2,000 francs awarded to M. R.

Liouville for his work in mathematics and mechanics, the three *La Caze* prizes of 10,000 francs each, in physics, to Professor P. Lenard for his researches on the cathode rays, in chemistry to M. Paul Sabatier for his chemical researches, and in physiology to Professor Röntgen for his researches on the properties of X-rays and their application in therapeutics; the *Parkin* prize of 3,400 francs to Professor Augustus Waller for his researches on the effects produced by certain gases and vapors on the nerves, the *Grand prix des sciences physiques* of 3,000 francs to M. Joseph Vallot, founder of the observatory near the summit of Mt. Blanc, for his researches on the conditions of animal and vegetable life in high altitudes; and the *Petit d'Ormay* prize to the late M. Tisserand for his researches, and especially for the *Traité de mécanique céleste*.

It is stated in *Nature* that the Council of the Royal Astronomical Society have awarded the gold medal of the Society for this year to Mr. W. F. Denning, 'for his meteoric observations, his cometary discoveries and other astronomical work.'

It is reported that a prize of \$10,000 is offered by the Belgian government for the discovery of a chemical that will take the place of phosphorus in the manufacture of matches.

THE U. S. National Museum has recently received, by bequest, the 'I. H. Harris Collection,' composed of fossils and archæological material. Mr. Harris, a graduate of Yale in 1846, was born in Waynesville, Ohio. This village, like many other settlements in southwestern Ohio, is situated upon the Cincinnati formation, widely known for its abundant and well preserved Lower Silurian fossils. These attracted his attention about 1846, and up to his death, last October, Mr. Harris was constantly in search of new or better preserved material. The collection has more than 20,000 specimens, of which about one-third are prehistoric stone implements. Many of the latter are from the vicinity of the interesting locality, Fort Ancient, a short distance south of Waynesville. Crinoids, trilobites and starfishes are the distinguishing characteristics of this collection. Other Cincinnati group fossils are also well represented, par-

ticularly brachiopods and mollusca. This is the second large collection of fossils which has been given to the U. S. National Museum during the past five years, the other being the 'R. D. Lacoe Collection' of fossil plants.

DR. THOMAS EGGLESTON, emeritus professor of mineralogy and metallurgy at Columbia University, has presented the government of France with the sum of \$5,000, in aid of the mineralogical collection of the School of Mines at Paris, from which he graduated in 1860.

THE will of the late Andrew M. Moore, of Philadelphia, bequeaths his entire estate, estimated at \$5,000,000, to his three sons, to be held in trust during their lifetime. On the death of the last surviving son the trustees are empowered 'to found and maintain such charitable or educational institution or establishment in my name as they desire or may deem wise or proper.' Directions are also given that the charities to be founded shall be absolutely non-sectarian.

WE learn from the *Philadelphia Medical Journal* that the Second Quinquennial Prize of one thousand dollars under the will of the late Samuel D. Gross, M. D., will be awarded on January 1, 1900. The conditions annexed by the testator are that the prize 'shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens.' The prize essay must subsequently be published in book form and one copy of the work deposited in the Samuel D. Gross Library of the Philadelphia Academy of Surgery. The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut street, Philadelphia, before January 1, 1900. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

WE regret to record the death of Dr. Eduard Wiederhold, the chemist, of Cassel, on January

the 11th, and of Jean Linden, the botanist, in Brussels, on January 12th, aged eighty-one years.

PROFESSOR F. B. CROCKER, of Columbia University, President of the American Institute of Electrical Engineers, has accepted the position of consulting engineer of the Electrical Exhibition to be held in Madison Garden, New York, next May.

WE learn from the *Lancet* that a meeting of the local executive committee of the British Association was held in Bristol on January 10th. It was mentioned that between £3,000 and £4,000 will be required in connection with the forthcoming meeting of the Association in Bristol, and the Mayor is sending out an appeal to the citizens for this amount. Arrangements are being made for the proposed Biological Exhibition. Several excursions have been planned, among these being visits to Bath, where the Mayor and citizens will entertain the visitors; to Aust, Tortworth, where Lord Ducie will entertain a party; to the Severn Tunnel, Stanton Drew, Cheddar, Glastonbury, Stonehenge, Salisbury, Longleat, Raglan Castle, etc. There are also committees at Montreal and Toronto (at the former city Dr. Bovey and at the latter Dr. Macallum are the Honorary Secretaries), and it is expected that a considerable number of Canadian visitors will be present at the meeting.

AT the monthly general meeting of the Zoological Society of London held on January 20th it was reported that the total number of visitors to the Society's gardens during the year 1897 had been 717,755, showing an increase of 52,751 over that of the previous year. The amount of money received at the gates during the year was £17,261, being nearly £1,600 more than the total amount received in the year 1896.

AN International Photographic Exhibition, to be held at the Crystal Palace, Sydenham, from April 27th to May 14th, is announced in the English papers. The Exhibition, which will be held under the auspices of the Royal Photographic Society, will be divided into eight sections: (1) history of photography; (2) pictorial photography; (3) portraiture and general

technical photography; (4) apparatus and material; (5) photo-mechanical processes; (6) scientific applications of photography (including medical photography and the application of the X-rays); (7) photography in color; (8) photography as a science. With such an excellent and comprehensive program in view, the success of the enterprise should be guaranteed. Further particulars can be obtained from the Secretary of the Royal Photographic Society at 12 Hanover Square, London, W.

At the annual meeting of the Indiana Academy of Sciences, held on December 29th and 30th, the President, Professor Thomas Gray, of Rose Polytechnic Institute, delivered an address on 'The Development of Electrical Science.' A full program of 80 papers was presented. These were distributed as follows: General subjects, 9; mathematical and physical, 17; botanical, including bacteriological, 15; chemical, 8; zoological, 20; geological, 11. The following officers were elected for the year 1898: President, C. A. Waldo, Purdue University; Vice-President, C. H. Eigenmann, Indiana University; Secretaries, John S. Wright, Indianapolis; A. J. Bigney, Moore's Hill College; Geo. W. Benton, Indianapolis; Treasurer, J. T. Scovell, Terre Haute. The volume of the Proceedings of the Academy is a public document, a limited number being printed by the State. Copies are distributed under the direction of the Academy.

THE first annual meeting of the Audubon Society of the District of Columbia was held at the Columbian University, Washington, on January 31st, under the presidency of Surgeon-General George M. Sternberg.

PROFESSOR W. B. SCOTT, of Princeton University, read before the American Philosophical Society, of Philadelphia, on February 4th, a paper on 'The Exploration of Patagonia,' giving the results of the Princeton expedition of 1896-97, under the direction of Mr. J. B. Hatcher.

At the meeting of the Council of the British Medical Association on January 19th, Dr. Dawson Williams, assistant editor of the *British Medical Journal*, who has been connected with the editorial department of the *Journal* for seven-

teen years, was unanimously appointed editor. At the same time Mr. C. Louis Taylor, who has been sub-editor for the last eleven years, was appointed assistant editor.

DR. H. C. WOOD, of Philadelphia, has accepted the editorship of the *American Medico-Surgical Bulletin*.

THE bill advocated by the State Medical Society regarding expert testimony was introduced in the Assembly at Albany, on January 31st, by Mr. Kelsey. According to the reports given in the daily papers the bill provides that upon the trial of all indictments for felonies, whenever it is made to appear to the Court that the trial of issues will probably require the introduction of medical expert testimony, the Court may, upon application of either party, appoint such number of experts as the Court shall deem proper, not less than three nor more than five. Such experts shall be persons skilled in medical or surgical science, or in both, and shall be duly admitted to the practice of medicine in the State of New York; but in special and extraordinary cases the Court may appoint experts living in other States. Such expert witnesses shall receive such compensation as the Court shall prescribe, which shall not be less than \$10 nor more than \$100 a day, while in actual attendance upon the trial, which shall be paid by the county. The expert witnesses may be examined and cross-examined in the same manner and subject to the same rules as other expert witnesses; and if, on preliminary cross-examination at the trial with reference to his qualifications, it shall appear that any such witness has, either before or after his appointment, expressed an opinion as to the merits of the action, his appointment shall be revoked and he shall receive no compensation as an expert, but he shall not, therefore, be prevented from testifying as a witness. The party applying for the appointment of expert witnesses is not to be bound by the testimony of such witnesses, but may rebut the same by counter testimony. The act is not to be construed to limit or affect the right of either party to summon other expert witnesses.

SENATOR VEST, from the Senate Committee on Public Health, has made a report on the

bill providing for the creation of a department of public health. The report is adverse to the proposition, and it recommends, as a substitute, the bill for the enlargement of the powers of the Marine Hospital service by giving the President, through this service, the right to resort to measures to prevent the spread of contagious diseases from one State to another.

SECRETARY BLISS has sent to the Public Land Committees of the Senate and House a bill prepared by Colonel Young, the acting Superintendent of the Yellowstone National Park, for an extension of the limits of that reservation by about 3,000 square miles.

PRESIDENT SKIRM has introduced in the Senate of New Jersey a bill entitled 'An act to prevent the introduction into and spread of injurious insects in New Jersey, and to provide a method for compelling their destruction.' The bill has the endorsement of the State Board of Agriculture.

PROFESSOR ALFRED C. HADDON contributes to the issue of *Nature* for January 20th an account of the plans for a proposed Cambridge Expedition to Torres Straits and Borneo. A committee of members of the University of Cambridge is acting in cooperation with Professor Haddon, and part of the cost of the expedition will be defrayed by a grant from the Worts' Fund, which is administered by the University. The expedition will be almost entirely anthropological in character, but the land flora and fauna will not be neglected, and certain geographical observations will also be made. Its main object is to continue and, as far as practicable, complete the earlier observations made in Torres Straits; but, for the sake of comparison, it is hoped that observations will be made on Australians, Papuans, Melanesians and Polynesians, as opportunities present themselves. After spending a few months in the Straits a short visit will be paid to the mainland of New Guinea, in order to trace the relationship of the islanders. In addition to Professor Haddon the members of the expedition are Dr. W. McDougall, Fellow of St. John's College, Cambridge, and of St. Thomas Hospital, London; Dr. C. S. Myers, Caius College, Cambridge, and

St. Bartholomew's Hospital, London; Mr. S. H. Ray, Dr. W. H. R. Rivers, St. John's College, Cambridge, lecturer on experimental psychology at Cambridge and at University College, London; Dr. C. G. Seligmann, of St. Thomas's Hospital, and Mr. A. Wilkin, of King's College, Cambridge. In describing the work assigned to each member of the party Professor Haddon writes: Drs. Rivers, McDougall and Myers will initiate a new departure in practical anthropology by studying comparative experimental psychology in the field. They will test the senses and sensibility of the natives as far as it will be possible under the local conditions, and make whatever observations they can on the mental processes of the natives. Besides the ordinary instruments for anthropometry, there will be a small, carefully selected collection of apparatus for experimental psychology. Two mechanical phonographs will be taken to record the native songs, music and languages. There will also be a complete photographic equipment, including a cinematograph for reproducing native dances, ceremonies and certain characteristic actions. At the close of the article Professor Haddon expresses his willingness to make any special inquiries that any ethnologist may require. The expedition will start about March 2d, and will return early in the summer of 1899.

It is reported in the *New York Evening Post* that, at a recent meeting of the Quebec Geographical Society, Capt. Bernier explained his proposal for the discovery of the north pole. He plans to go by ship to the point north of Siberia where Nansen's vessel, the *Fram*, crossed the eightieth parallel of latitude. Here he intends to leave the vessel and take to the ice, with eight men, fifty dogs and fifty reindeer, carrying 36,000 pounds of provisions, for two years. He will also have sleds, kyacks and a portable boat made of aluminum and wood. By crossing the ice-floes he expects to reach the pole from the vessel in a little over a hundred days, afterwards making for Spitzbergen or Franz Josef Land. Capt. Bernier is applying to the government for assistance, and his demand will be supported by the Society, which adopted a resolution to that effect. He proposes to proceed by Bering Sea,

starting in June from Victoria, B. C. ; he will reach the Siberian islands by September.

THE London *Times*, quoting the *Turkestan Gazette*, announces the arrival at Tashkent of two German professors, whose names are not given, for the purpose of fitting out a scientific expedition to Tibet and Kashgar, in which the Grand Duke of Baden has interested himself. The Russian authorities are giving every assistance, and the party will start from Osh with an escort of Cossacks.

IN commenting on the epidemic of plague in India the *Lancet* states that it has apparently gained such a hold that its proportions in the affected districts are calculated to give rise to serious alarm. The latest reports from Bombay quite bear out this view. The epidemic in that city has been greatly aggravated of late ; the type of the disease is of a more virulent character than that of last year, and the mortality is reported to average more than 200 daily. It is scarcely necessary to add that trade is paralyzed, and that there is a renewed exodus of natives from Bombay. The disease also largely prevails in Poona and in the Deccan.

THE Annual Horticultural and Agricultural Exhibition at Cairo was opened on January 14th. According to the report in the London *Times* the exhibits of timber-woods showed the great capabilities of Egyptian soil and climate for their production, and the Finance Ministry is now making experiments in forestry on a considerable scale, and planting out 190,000 young trees of about 100 varieties, all exotic and chiefly from India. A novelty was seen in a substance called cerosie, of which a French local chemist claims to be the discoverer. It is extracted from the scum which rises to the surface of liquid sugar after the cane is crushed. The resulting substance is stated to possess the qualities of ordinary beeswax, which it resembles in appearance, though darker in color.

AT a recent meeting of the British Ornithologists' Club, the Chairman, Mr. P. L. Sclater, F.R.S., gave an account of ornithological journals, giving a history and description of the three principal journals—the *Journal für Ornithologie*, founded in 1853 by Dr. Jean Cabanis and becoming in 1894 the organ of the Deutsche

Ornithologischen Gesellschaft ; *The Ibis*, founded by the British Ornithologists' Union in 1859 ; and *The Auk*, established by the American Ornithologists' Union in 1884 and edited by Dr. J. A. Allen. There are, it appears, five ornithological journals in Germany, three in Great Britain, two in Austria, two in America, one in Hungary and one in Italy. There is none in France.

ACCORDING to *Industries and Iron*, the 'Crane' carried out at Portsmouth on the 26th of November her second three hours' speed trial, at which she was required to maintain a mean of 6,000 h.p. and a speed of 20 knots. The mean h.p. of the three hours was, however, 6,267, and the speed 30.347 knots. The revolutions were 397.4. During the six runs on the measured mile the h.p. gave a mean of 6,480, the speed being 30.724 knots, and the revolutions 404½. The mean air pressure for the entire run was 3 in. At the first three hours' trial the coal consumption, which was required not to exceed 2½ lb. per unit of power per hour, has been ascertained to have been 2.4 lb.

A PROPOSAL was made some time ago for the introduction of the seeds of certain trees from India and Ceylon into British Central Africa for the purpose of supplying shade for the coffee plants in the numerous plantations which are now being opened up in the protectorate. The Foreign Office, says the London *Times*, requested Mr. Thiselton-Dyer, the Director of Kew Gardens, to report on the subject. As a result of Mr. Thiselton-Dyer's reports, her Majesty's Commissioner has determined to rigidly enforce the regulations for the prevention of coffee disease in Central Africa, which prohibit the importation of seeds from India and Ceylon. In his report Mr. Thiselton-Dyer says : "The coffee disease was introduced into Fiji through the instrumentality of tea seeds from Ceylon. Notwithstanding the splendid attempts of Sir William MacGregor to stamp it out, it ultimately completely destroyed the coffee industry, which was the most promising planting enterprise in the colony. The Germans, by some unknown means, have succeeded in introducing the disease into their African territories. In the face of these undoubted facts, it would, in my

opinion, be the height of folly to run the smallest risk of introducing the disease into British Central Africa, where its presence would be an irreparable disaster. Knowing the mechanical way in which such work is carried out by native officials in India, I do not think that any stipulation as to locality is of the smallest value. Whatever was stated to the contrary, the first parcel of seed would, in all probability, come from a plantation reeking with disease. The present request is the more unnecessary as, according to a coffee planter in Nyassaland who is well acquainted with coffee cultivation in Ceylon, a local African tree, *Albizza fastigiata*, is admirably adapted for a shade tree for coffee. If this is not sufficient, the rain tree, *Pithecolobium saman*, might be tried. The seed can be obtained in abundance from Jamaica, and this would be perfectly safe."

MESSRS. G. P. PUTNAM'S SONS will begin early in the present year the publication of a new series of scientific books, 'The Science Series,' edited by Professor J. McKeen Cattell, Columbia University, with the cooperation of Frank Evers Beddard, Esq., F. R. S., in Great Britain. It is expected that the following will be among the earlier volumes to be in readiness: *The Stars*. By PROFESSOR SIMON NEWCOMB, U. S. N., Nautical Almanac Office and Johns Hopkins University.

The Earth as a Planet. By PROFESSOR C. A. YOUNG, Princeton University.

The Measurement of the Earth. By PRESIDENT T. C. MENDENHALL, Worcester Polytechnic Institute, formerly Superintendent of the U. S. Coast and Geodetic Survey.

Earth Structure. By PROFESSOR JAMES GEIKIE, F. R. S., University of Edinburgh.

Volcanoes. By PROFESSOR T. G. BONNEY, F. R. S., University College, London.

Earthquakes. By MAJOR C. E. DUTTON, U. S. A.

Physiography: The Forms of the Land. By PROFESSOR W. M. DAVIS, Harvard University.

The Groundwork of Science. By DR. ST. GEORGE MIVART, F. R. S., Chilworth, Surrey.

The History of Science. By C. S. PIERCE, Milford, Pa.

The Study of Man. By PROFESSOR A. C. HADDON, Royal College of Science, Dublin.

General Ethnography. By PROFESSOR DANIEL G. BRINTON, University of Pennsylvania.

Recent Theories of Evolution. By J. MARK BALDWIN, Princeton University.

The Animal Ovary. By F. E. BEDDARD, F. R. S., Zoological Society, London.

The Reproduction of Living Things. By PROFESSOR MARCUS HARTOG, Queen's College, Cork.

The Structure of Man. By A. KEITH.

Heredity. By J. ARTHUR THOMSON, School of Medicine, Edinburgh.

Life Areas of North America: A Study in the Distribution of Animals and Plants. By DR. C. HART MERRIAM, Chief of the Biological Survey, U. S. Department of Agriculture.

Age, Growth, Sex and Death. By PROFESSOR CHARLES S. MINOT, Harvard Medical School.

UNIVERSITY AND EDUCATIONAL NEWS.

THE sum of \$50,000, necessary to secure a gift of \$10,000 from the Baptist Educational Society of America, has been raised by subscription for Colby University. It is stated that this money will be in part used for the erection of a chemical laboratory.

THE attempt to break the will of William Sauser, of Hannibal, Mo., who died in 1892 and bequeathed all his property, valued at \$200,000, to Westminster College, Hannibal, Mo., a Presbyterian institution, has failed.

THE Town Council of Aberdeen has voted £5,000 to the University buildings extension scheme, on condition that the same be completed.

AT the meeting of the Edinburgh University Court on January 17th intimation was made of a donation of £1,000 by Sir William Overend Priestley, M. P., for the Universities of St. Andrews and Edinburgh. The very Rev. Dr. William Charles Lake, late Dean of Durham, has bequeathed £1,000 to the Durham College of Science, at Newcastle-on-Tyne.

THE Geological Laboratory of King's College, London, has received a valuable gift of minerals and recent shells from Miss A. Mallet in aid of the equipment for teaching purposes in the faculty of natural science and engineering.

AT the first meeting of the governors of Mason University College, Birmingham, which has recently been incorporated, the President of the College (the Right Hon. J. Chamberlain, M. P.) made an important speech on the subject of a Midland University.

DR. FRANK M. McMURRY, Dean of the