

consider the later forms as descendants of older forms. No form of living being has remained the same through the ages. The evidence of past times is corroborated by the structural and developmental analogies observed in related forms, proofs of a gradual differentiation from common ancestral forms.

The minute structure of all living matter is alike and shows that all organisms, from the lowest to the highest, must be considered as a unit.

Man has succeeded in producing a variety of forms of domestic animals and cultivated plants which differ from their ancestors. Our success, accomplished in a very short period, indicates that in long periods nature will produce more fundamental changes.

Man is part of the animal world. In all respects his anatomical structure conforms to that of the rest of the animal world. His prenatal life closely parallels that of the higher mammals. The same influences that control their development after birth control him and he responds in a like manner to the environment in which he is placed. Prehistoric archeology has shown that, in the course of the ages, man has undergone great changes in physical type and that ancient man differed from modern races, the more so the more ancient the remains.

Local types of man have developed on every continent and their existence proves that changes in the heritable characteristics of racial groups are effected in the course of time.

We must conclude that the bodily form of man as well as that of animals and plants has changed and is still changing, not in the course of centuries, but in long periods.

The exact cause of changes in the form of organisms and the conditions under which they occur, as well as the causes making for stability, are still imperfectly known. The principle of change has been so well established that it should become the common property of mankind.

THIRD PAN-PACIFIC SCIENCE CONGRESS

IN response to the invitation of the Japanese National Research Council to participate in the Third Pan-Pacific Science Congress which will be held at Tokyo, October 27 to November 9, 1926, a number of American scientific men have already decided to attend. Among these are:

- President Wallace W. Atwood, Clark University, and Mrs. Atwood.
- Dr. Caroline E. Furness, chairman of the department of astronomy, Vassar College, Poughkeepsie, New York.
- Dr. Herbert E. Gregory, professor of geology, Yale University.
- President F. S. Harris, Brigham Young University, Provo, Utah.
- Dr. Andrew C. Lawson, head of the department of geology, University of California.
- Dr. C. K. Leith, professor of geology, University of Wisconsin, and Mrs. Leith.
- Dr. G. W. Littlehales, U. S. Hydrographic Office, Washington, D. C.

Dr. George F. McEwen, Scripps Institution of Oceanography, La Jolla, California.

Dr. George H. Parker, professor of zoology, Harvard University, and Mrs. Parker.

Rev. Father Roque Ruaño, faculty of civil engineering, University of Santo Tomas, Manila, P. I.

Dr. W. A. Setchell, head of the department of botany, University of California.

Dr. T. Wayland Vaughan, director, Scripps Institution of Oceanography, La Jolla, California.

Dr. Victor C. Vaughan, chairman, division of medical science, National Research Council, Washington, D. C., and Mrs. Vaughan.

If there are others who are planning to go to Japan for this congress next fall, it is requested that word be sent to the National Research Council, Washington, D. C., to be forwarded to the National Research Council of Japan.

SCIENTIFIC NOTES AND NEWS

THE council of the British Association for the Advancement of Science will nominate Sir Arthur Keith, Hunterian professor in the Royal College of Surgeons and secretary of the Royal Institution, as president of the association for the meeting in Leeds in 1927. At the Oxford meeting this year Professor F. O. Bower will preside over the botanical section in place of the late Dr. William Bateson.

DR. MICHAEL I. PUPIN, professor of electromechanics at Columbia University, was awarded the honorary degree of doctor of laws by the University of California on March 23, at the annual charter day exercises of the university. Dr. Pupin gave the principal address on this occasion.

DR. SIMON FLEXNER, director of the Rockefeller Institute for Medical Research, has been elected an honorary member of the Microbiological Society of Leningrad, Russia.

DR. MONTROSE T. BURROWS has been elected to succeed Dr. W. B. Cannon as chairman of the committee on protection of medical research of the American Medical Association. Expressions of appreciation were recorded by the board of trustees "for the very valuable service rendered by Dr. Cannon in the position which he held so long."

THE John Burroughs Bronze Medal will be formally presented to William Beebe, the naturalist and author, at the annual meeting of the John Burroughs Memorial Association, to be held on April 3, at 3 P. M. in the auditorium of the American Museum of Natural History.

PROFESSOR ERNEST H. WILSON, assistant director of Arnold Arboretum, has received the Veitch Memorial gold medal awarded to him by the British Royal

Horticultural Society. He is the first American to receive this honor.

JEAN CHARCOT, explorer, has been elected a member of the French Academy of Sciences in the place made vacant by the death of François-Felix Tisserand.

PROFESSOR CHARLES RICHTER, emeritus professor of physiology at Paris, has recently been nominated Grand Officer of the Legion of Honour.

DR. F. A. BATHER, keeper of the department of geology, British Museum (Natural History), has been elected a foreign member of Halle Academy of Sciences.

DR. A. C. MOORE, of the University of South Carolina, was elected president of the South Carolina State Academy of Science at a meeting of the academy on March 18.

E. F. BEAN has been appointed state geologist of Wisconsin and director of the State Geological and Natural History Survey. Mr. Bean has been acting state geologist since last September, when Dr. W. O. Hotchkiss resigned the position to become president of the Michigan School of Mines. Mr. H. R. Aldrich, formerly director of field parties on the survey, has been appointed assistant state geologist.

SIDNEY PAIGE, chief of the areal geology section of the U. S. Geological Survey, has accepted an appointment with the Amerada Corporation for work in South America. W. R. Smith has resigned as geologist in the Alaska branch of the survey.

LIEUTENANT-COLONEL CHARLES F. CRAIG, Medical Corps, U. S. Army, has been appointed director of laboratories and of the department of clinical pathology and preventive medicine at the Army Medical School, Washington, D. C.

PROFESSOR GEORGE O. HIGLEY, head of the department of chemistry at Ohio Wesleyan University, has been appointed health officer of Delaware, to succeed the late Dr. Cyrus W. Chidester.

DR. F. O. ANDEREGG has resigned as associate professor of physical chemistry in Purdue University to accept the industrial fellowship on Portland cement at Mellon Institute of Industrial Research, University of Pittsburgh. T. R. LeCompte (M.S., Louisiana State) and Dr. J. J. Enright (Ph.D., Yale) have been appointed fellows of the institute. Mr. LeCompte will be engaged in research on problems in felt hat technology. Dr. Enright will carry on a biochemical-bacteriological study of dental caries, in co-operation with faculty members of the school of dentistry, University of Pittsburgh.

THORNE L. WHEELER, of Arthur D. Little, Inc., has been appointed by General Amos A. Fries as one of

the consultants for the U. S. Chemical Warfare Service.

DR. E. H. SELLARDS, professor of geology in the University of Texas, has been given leave of absence in order to attend the International Geologic Congress at Madrid and to visit some localities of geologic interest in Europe.

DR. LYMAN C. NEWELL, of the department of chemistry at Boston University, has been granted a leave of absence for the next academic year which will be spent in visiting laboratories in this country and Europe.

EMERY C. LEONARD, botanist of the Smithsonian Institution, has returned from botanical exploration in the Republic of Haiti lasting four months.

PROFESSOR SAMUEL J. RECORD, of the Yale Forestry School, has returned from an absence of two and a half months spent on a collecting trip through the forests of Central America.

DR. J. M. ALDRICH, associate curator of insects in the U. S. National Museum, will leave for Guatemala, on April 1, to study and collect parasitic diptera.

DR. ROBERT CUSHMAN MURPHY, assistant director of the American Museum of Natural History, writes that the statement that he planned to go on a collecting trip to the Dutch East Indies is incorrect.

At the University of Texas Professor Charles Schuchert has completed his service as visiting professor of geology in the graduate faculty for the winter term and will shortly return to New Haven. Professor Arthur Keith, of the United States Geological Survey, has accepted a similar appointment for the spring term of the present year and will give a course in structural geology.

SIR ARTHUR SMITH WOODWARD has left England for Beirut, Syria, where he will be engaged for the next three months in the preparation of a work on the Cretaceous fishes of Mount Lebanon.

SIR JAGADIS CHANDRA BOSE, the Indian plant physiologist, is leaving for Europe to lecture before the Academy of Sciences at Brussels, on the special invitation of the King of the Belgians. He will also lecture before British and Continental universities.

PROFESSOR ACHARD, general secretary of the Paris Academy of Medicine, is soon to leave on an official mission to visit the universities and scientific societies of Japan.

PROFESSOR THEODORE W. RICHARDS, director of the Wolcott Gibbs memorial laboratory at Harvard University, will read a paper entitled "Internal Pressures, Chemical and Cohesive, which determine the Exist-

ence of Solids and Liquids," at a meeting of the Northeastern section of the American Chemical Society to be held at the Massachusetts Institute of Technology on April 9.

THE first course of two lectures under the Morris Herzstein lectureship on diseases of the Pacific Basin, including tropical diseases, will be given by Dr. Henry S. Houghton, director of the Peking Union Medical College, at Lane Hall of the Stanford University Medical School. Monday, April 26, and Wednesday, April 28, have been tentatively selected as the dates for the lectures, which will be given at 8:00 P. M.

DR. B. BROUWER, professor of neurology at the University of Amsterdam, will deliver the seventh Harvey Society lecture at the New York Academy of Medicine on Saturday evening, April 17, on the subject of "Comparative Anatomy and Nerve Pathology."

DR. GEORGE N. STEWART, professor of experimental medicine, Western Reserve University School of Medicine, will deliver the Mellon lecture of the Biological Society at the Carnegie Institute, Pittsburgh, on April 30 on "Studies on the Adrenal Glands."

DR. R. B. SOSMAN, of the geophysical laboratory, Carnegie Institution of Washington, will give a series of ten lectures at the Massachusetts Institute of Technology during the first two weeks of April on the subject of "Elastic Waves and the Earth's Structure."

DR. S. B. WOLBACH, professor of pathology at the Harvard Medical School, addressed the scientific staff of the Rockefeller Institute for Medical Research on March 26 on "A Résumé of Rickettsia Research."

DR. EDWIN E. SLOSSON, editor of Science Service, gave an address entitled "The Chemical Interpretation of History" at a joint meeting of the Washington Academy of Sciences, the Philosophical Society of Washington and the Chemical Society of Washington on March 18.

DR. FRANCIS G. BENEDICT, director of the Nutrition Laboratory of the Carnegie Institution of Washington, Boston, Mass., gave a lecture on March 15 before the Physiological Society of Philadelphia on "Perspiration Insensibilis: Its Significance in Physiology and Pathology and its Relationship to Skin Temperature and Heat Loss." On March 19 this same address was given by Dr. Benedict at Teachers College, Columbia University, New York City.

DR. ALDO CASTELLANI, professor of tropical medicine at Tulane University of Louisiana Medical School, gave the Gehrmann memorial lectures at the University of Illinois College of Medicine on "Fungi as Causative Agents of Disease in the Tropics and in the Temperate Zone" on March 23, 24 and 25.

DR. JOHN C. MERRIAM, president of the Carnegie Institution of Washington, gave a lecture on March 26 before the Columbia University chapter of Sigma Xi. The subject of the lecture was "Cave Exploration in California and its Bearing upon Problems of Pleistocene History."

DR. HERBERT OSBORN, of Ohio State University, gave a lecture on "Early History of Entomology" before a joint meeting of the Agriculture Club and Gamma Sigma Delta, the honor society of agriculture, at the Alabama Polytechnic Institute during the week of March 7.

HUGH D. MISER, state geologist of Tennessee, gave an illustrated address on "Erosion in the San Juan Canyon, Utah," at the University of Cincinnati, on March 10.

PROFESSOR A. S. EDDINGTON will deliver the Bakerian lecture of the Royal Society on May 6, taking as his subject "Diffuse Matter in Inter-stellar Space." The Croonian lecture will be delivered by Professor A. V. Hill on the "Laws of Muscular Motion," on May 20. On March 4, a discussion on "The Electrical State of the Upper Atmosphere" will be opened by Sir Ernest Rutherford.

PROFESSOR ARNOLD SOMMERFELD, professor of physics at the University of Munich, delivered the first of a course of three lectures on "Atomistic Physics" at the Imperial College of Science and Technology, under the auspices of the University of London, on March 3.

DR. J. LUCIEN MORRIS, professor of biochemistry in the school of medicine of Western Reserve University, died on March 19, aged forty years.

BENJAMIN PICKMAN MANN, examiner in the United States Patent Office and at one time assistant entomologist in the U. S. Department of Agriculture, died on March 22, aged seventy-eight years.

PROFESSOR DAVID SING CAPPER, for twenty years professor of engineering in the University of London, died on February 12, aged sixty-one years.

DR. O. STOERK, professor of pathology and director of the institute for pathologic histology and bacteriology at Vienna, has died, aged fifty-six years.

At the meeting of British botanists held in the rooms of the Linnean Society of London on March 10, it was resolved to send an invitation to the members of the fourth International Botanical Congress (Congress of Plant Sciences) meeting at Ithaca, New York, in August, 1926, to meet for the fifth International Botanical Congress, in London, in 1930.

EXERCISES installing a chapter of Sigma Xi at New York University took place on March 20. Pro-

fessor F. K. Richtmyer, head of the department of physics at Cornell University, presided and later gave the chapter its charter. Professor C. E. McClung, head of the department of zoology at the University of Pennsylvania, addressed the members. After the ceremonies a formal dinner was held in the Faculty Club. Dr. Holmes C. Jackson, head of the department of physiology and dean of the College of Dentistry, presided. Speakers were Clarence E. Davies, acting secretary of Sigma Xi; Chancellor Elmer Ellsworth Brown, Dean Marshall Stewart Brown, Dean Archibald L. Bouton, of the college of arts and pure science, Dean Charles Henry Snow, of the college of engineering, and Professor Arthur F. Hill.

DR. WM. A. FELSING, professor of chemistry at the University of Texas, visited the University of Arizona on February 18-20, and installed the Phi Chapter of Phi Lambda Upsilon. Dr. Felsing addressed the Sigma Xi Club on Thursday, February 18, on the topic "Low Temperature Research," and the following Friday he spoke before the Arizona Section of the American Chemical Society on "The Corrosion of Iron."

IN accordance with a request made by the United States Bureau of Soils and approved by the director of the budget, there has been included in the bureau's appropriation for the fiscal year 1927 an item of \$185,000 which will enable the Secretary of Agriculture to continue the research work of the Fixed Nitrogen Research Laboratory under the bureau.

SAMUEL AUGUSTINE COURTAULD has given £30,000 to the Middlesex Hospital, London, for the erection of a research and training department in connection with the medical school. This is to be known as "The Courtauld Institute of Bio-Chemistry." Plans provide for a new seven-story building to be erected on a site adjacent to the Middlesex Hospital and its medical school premises. The Courtauld Institute will be a complete department of medical chemistry. In 1924 Mr. S. A. Courtauld endowed the chair of anatomy at the Middlesex Hospital Medical School with £20,000.

THE Department of Mines, Ottawa, Canada, would be grateful for any information that might lead to the discovery of Mr. Frederick W. Waugh, for many years an assistant-ethnologist on its staff. Mr. Waugh, who was in very poor health, disappeared mysteriously in Montreal on September 20, 1924, when returning from Seven Islands, on the north shore of the Gulf of St. Lawrence. It is thought possible that he may have suffered from loss of memory, and sought employment with some other scientific organization in America or Europe. In addition to ethnology, he was greatly interested in the biological sciences, and had

made a close study of spiders and mushrooms; he was also an expert gardener. Mr. Waugh was born in 1872, was five feet ten inches in height, of spare build, with grey eyes, dark brown hair turning grey, and walked with a slight stoop. His native tongue was English, but he read both French and German.

A BILL has been introduced into the New York State Assembly by James R. Robinson to provide the State College of Agriculture, Ithaca, with \$1,250,000, to come out of the \$100,000,000 bond issue voted last fall, of which \$10,000,000 is to be spent yearly. The million and a quarter was allotted to the college by an agreement between Governor Smith and the republican leaders, but the necessary legislation had not been started previously. It is planned to use the money for the construction of the plant industry building.

THE Lehn and Fink Products Company, of New York, have established at Columbia University a research fellowship for the investigation of problems in the field of essential oils, perfumes and related products, the work to be carried out in the organic laboratories under the direction of Professor Marston T. Bogert.

MONTEFIORE HOSPITAL for Chronic Diseases, New York City, announces the establishment of the Hilda Stich Stroock research fellowship with an honorarium of \$1,200 a year. The fellowship may be taken in the medical, neurological, tuberculosis or cancer divisions.

ACCORDING to the London *Times*, the vice-chancellor of Cambridge University (Dr. A. C. Seward, master of Downing College), has received the following decision of the judges delegate who heard the appeal of Mr. J. B. S. Haldane on March 17 at the Royal Courts of Justice (SCIENCE, p. 298): "The majority of the court is of opinion that, in view of all the circumstances of this particular case, which have been more fully before us than they were before the vice-chancellor and the *sex viri*, the appeal should be allowed, but this decision is not to be taken as any expression of opinion that adultery may not be gross immorality within the meaning of the statute."

THE scientific expedition under Professor Matthew W. Stirling, of Berkeley, Calif., which intends to penetrate the unknown interior of Dutch New Guinea to study pigmy and other primitive tribes, will leave Java on April 4. The first party, consisting of the American members and a detachment of Dutch infantry, will sail on that day. The second party, consisting of 130 natives and two detachments of infantry, will leave Java on April 20. Dr. Hoffman, a Dutch army surgeon, and three helpers will accompany the scientists. Measures have been taken to en-

able the expedition to proceed even if an accident happens to its airplane.

AN expedition, under the auspices of the American Museum of Natural History, will leave this summer to collect specimens in Greenland. Captain Bob Bartlett, Peary's captain, will command the ship, the *Morrissey*. Knud Rasmussen, the explorer, will accompany the trip if his health permits. Arthur Young, who has shot big game in Africa and the Arctic with bow and arrows, will be a member of the party. In addition several scientific men will go with the expedition. The general advisory committee of the expedition will be composed of Harrison Williams, Junius S. Morgan and Cleveland E. Dodge, trustees of the American Museum of Natural History; Professor Henry Fairfield Osborn, president of the museum; Frederic C. Walcott, of the New York Zoological and American Geographical Societies; George H. Sherwood, of the American Museum of Natural History; Fitzhugh Green, Arctic explorer and author, and Colonel E. Lester Jones, chief of the Coast and Geodetic Survey. Pictorial records of the expedition's experience and accomplishments will be made with motion and still cameras, especially the wild life.

ACCORDING to an announcement by the U. S. Department of Agriculture, the Mexican government will send four forestry students to this country to study methods of the United States Forest Service as soon as arrangements now being negotiated by Senor Jose Alcaarez, director of the Mexican forest service, and William B. Greeley, chief forester of the United States Department of Agriculture. The men being sent to this country by Mexico are from among the first graduates of the newly established forest school conducted by the Mexican government. They will pay special attention to reforestation, silviculture, forest administration and forest utilization policies and methods.

A MESSAGE from Vladivostok reports the return of the scientific expedition led by the geologist Dobrovsky in Inner Mongolia. The expedition has explored the district of the Okhrona River where large deposits of combustible clays were discovered, and the central part of Mongolia where large deposits of fossilized bones of marine animals were found. Many interesting discoveries were made by the expedition in the Gobi Desert. The work of the expedition will be resumed next year.

HONORING the state and the University of Illinois, the name "Illinium" has been given to the newly discovered chemical element No. 61 by its discoverer, Dr. B. S. Hopkins, of the department of chemistry of the University of Illinois.

THE American Society of Swedish Engineers, founded in 1888, has announced the establishment of an annual award of a gold medal for contributions to science and engineering by persons of Swedish birth or extraction. It will be known as the John Ericsson Medal, in honor of the engineer and scientist of that name.

UNIVERSITY AND EDUCATIONAL NOTES

THE University of California has announced gifts totaling approximately \$2,000,000, including \$1,000,000 from William Randolph Hearst for a women's gymnasium, as a memorial to his mother.

DR. JAMES NATHANIEL JENNE, Burlington, professor of clinical medicine and therapeutics at the college of medicine of the University of Vermont, has been appointed acting dean to succeed the late Dr. Henry C. Tinkham.

DR. VICTOR RAY, Sr., Cincinnati, has been appointed head of the department of ophthalmology of the University of Cincinnati College of Medicine, to succeed Dr. Robert Sattler, resigned. The trustees of the university voted unanimously to appoint Dr. Sattler, who has been head of the department since 1882, as emeritus professor of ophthalmology.

DR. GEORGE W. HUNTER, head of the department of biology at Knox College and author of the widely used text-book "Civic Biology," has resigned.

PROFESSOR CHARLES A. ISAACS, head of the department of mathematics at Washington State College, has resigned to enter business.

PROFESSOR W. W. RANKIN, head of the department of mathematics at Agnes Scott College, Decatur, Ga., has been appointed to a professorship in Duke University and will begin work there next September.

DR. A. L. MELANDER, professor of entomology at the State College of Washington and entomologist of the experiment station, has been appointed to a position at the College of the City of New York.

DR. E. C. EDGAR, head of the school of chemistry at the Polytechnic, London, has been appointed principal of the Rutherford Technical College, Newcastle.

PROFESSOR THEODOR MOLLISON, of Breslau, has been called as successor of Rudolf Martin at Munich.

DISCUSSION AND CORRESPONDENCE

SENSITIVE FLAMES

I HAVE recently happened on a means of obtaining a tall sensitive flame without using a pressure higher than that in the gas mains. The new part