News and Notes

Anatomical Terminology

A long chapter of international cooperation is nearing completion by the anatomists of the world, who have been working for several decades toward modernization of the nomenclature of human anatomy. The first concerted effort to create a standard terminology was the *Basel Nomina Anatomica* of 1895, prepared by a learned group of German anatomists with some international help. This was promptly adopted in many countries, including the U.S.A. In Britain however it was never fully established, and in France and other Latin-language countries it was scarcely used at all.

In 1933 the Anatomical Society of Great Britain and Ireland brought out a revision of the *BNA* in English (BR), which included many improvements. At about the same time a German commission prepared the *Jena Nomina Anatomica* (*JNA*). This list was very radical with respect to the terms indicating directions and positions, abandoning the conventional "anatomical position" so that the terms would apply to animals and embryos with reference only to internal coordinates. It spoke only of *cranial* and *caudal, ventral* and *dorsal* instead of *superior* and *inferior, anterior* and *posterior*; it referred, for example, to the maxillary and mandibular lips. However, many of its individual alterations were admirable.

The American Association of Anatomists, which was invited to adhere to each of these proposals, chose to move slowly in the hope of ultimate international action. Its committee put a great deal of work into the preparation of its own (unpublished) list in anticipation of discussion at a congress in 1940. This meeting was prevented by World War II, and for the time nothing could be done. Meanwhile the *BNA* was continued in use in the U.S.A.

By 1950, when a congress was held at Oxford, the situation was clearer. German, Scandinavian, and Dutch anatomists who had used the Jena system were dissatisfied with it. The American-Canadian committee had concluded, after much work and reflection, that a moderate revision of the *BNA* was desirable; and the British, finding that their vernacular modification of the *BNA* was working rather well, were eager to join in an international revision. The congress therefore directed its president, Le Gros Clark, to set up a 30-member international committee. From this a smaller working group was drawn, consisting of Ara (Buenos Aires), Beau (Nancy), Beccari (Florence), Ingelmark (Gothenburg), Stark (Frankfort), Woerdeman (Amsterdam), Johnston (London, secretary), and Corner (Baltimore, chairman). A request for Russian participation sent through diplomatic channels was not even acknowledged.

Meeting in London in 1952 under UNESCO auspices, with the generous hospitality of the Ciba Foundation, this group agreed completely on general principles. It apportioned the preliminary work of revision to seven subcommittees made up of 23 anatomists in 10 countries. Four of these men were in the U.S.A., namely, Boyden, Sam L. Clark, Corner, and Greulich, all of whom are members of the American standing committee. The drafts thus prepared were reviewed, coordinated, and edited at a second meeting of the same group held in London, 1–5 June 1954. Ogawa of Tokyo also came to this meeting, bringing with him a thoughtful memorandum from Japanese colleagues. With remarkable good will and unanimity, the committee adopted a final draft for submission to the next congress, which is to take place in Paris 25–30 July 1955.

This document fulfills the directive to create a moderate revision of the *BNA*, and it has become increasingly evident that such action is the only kind that could win general acceptance. Because anatomists everywhere have had time to study and test the various competing proposals, their views have been converging more than anyone realized. Thus, the London committee holds strong hope that its work will be favorably received. Of course, not everyone will be satisfied with every detail; neither the human body nor human language is logically constructed, and many preferences have to be overruled and some compromises must be made.

Because the problem is so largely one of detail, it is difficult to give in limited space an idea of what has actually been proposed by the committee. The terminology is in Latin as before, because it is still the most useful international language for scientific purposes. The committee realizes, however, that the various vernaculars will be more and more frequently used and, wherever possible, it chose from competing terms the one that is most generally translatable into modern languages. On moot questions of spelling, gender, and so forth, the committee has usually chosen to accept established usage rather than to make pedantic corrections. It is, however, difficult to be consistent in these matters, because Latin itself during its long span as a living language has developed variable usages.

The terms of relative position follow in general the *BNA* usage; but the words *ventral* and *dorsal* are used of the spinal nerve-roots and in some other places where usage has established them. Many generally accepted specific changes are adopted, for example *submandibularis* in place of *BNA submaxillaris* for the gland and its cognominal structures, *rectalis* for *BNA haemorrhoidalis,* of the arteries. Structures discovered or explained since 1895 have been added, notably the carotid sinus and the parathyroid glands. The terminology of certain regions of newly acquired importance has been expanded; the segments of the lung and the corresponding bronchi have been recognized following the ideas of Jackson-Huber and the International Thoracic Surgeons' list. Some of the more fanciful

names of cerebellar lobules have been deleted. Important internal structures of the sense organs on the borderline between gross and microscopic anatomy have been admitted. A list of major cerebral and spinal nerve tracts is provided. The glands of internal secretion are grouped together, and the major subdivisions of the hypophysis named. The spleen is placed at the end of the section on "Angiology."

Eponymic titles, which the makers of *BNA* had to retain for optional use, are unanimously excluded by the London committee. Even the Wolffian and Muellerian ducts appear only under informative names (*Ductus mesonephricus, paramesonephricus*).

As happened with the *BNA* 50 yr ago, the committee's desire to avoid all use of alternative terms could, for various reasons, not be fulfilled. For example, the instructive term *Lamina visceralis pericardii* cannot altogether replace *Epicardium*; both are retained as synonyms. Inflexible national preferences required retention of the time-honored *BNA peroneus* for the muscles originating on the fibula, along with the more informative term *fibularis,* which was favored by half of the committee. A dozen or more such pairs of synonyms were allowed for the sake of the larger agreement.

Every effort will be made to get the committee's draft printed before the April 1955 meeting of the American Association of Anatomists. Meanwhile the undersigned will answer inquiries from those who are interested in particular items.

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Science News

Clinical studies with an ultrasonic device at Columbia University's School of Dental and Oral Surgery give promise of widespread acceptance of an entirely new kind of **tooth drilling technique** that may ultimately affect the practice, the teaching, and even the economics of dentistry. It may also be one answer to the long search for a painless and vibrationless dental drill. The studies, described in a preliminary report in the July issue of the *New York State Dental Journal,* indicate that the new tool is also quicker, quieter, more maneuverable, and far more adaptable than the dental bur.

The new instrument, known as the Cavitron, is an application to dentistry of a machine tool widely used by industry for precision cutting of metals, hard minerals, and other difficult-to-work materials. It has been developed by the Cavitron Equipment Corp., Long Island City, N.Y., which began experiments on extracted teeth in 1947. The first clinical investigations were undertaken in 1952 at Columbia. Subsequently the U.S. Navy and the Royal Air Force in England conducted preliminary work. The pioneering Columbia project has been carried out by Carl R. Oman, professor of dentistry, and a colleague, Edmund Applebaum. Their report is the first concerning the use of the new process on human subjects.

In engineering terms, the Cavitron process makes use of a tool that vibrates with a frequency of 29,000 cy/sec and in turn sets up vibrations in a special cutting solution. The tool contains a ferromagnetic metal that, activated by an alternating magnetic field, expands and contracts; this vibratory motion is transmitted to the rest of the tool and thereby to the cutting liquid.

Damage to vegetation by smog, estimated to exceed $500,000 yearly in Southern California, may be identified by simple test, if preliminary findings of Stanford Research Institute are substantiated. In a paper to appear in a forthcoming issue of *Science,* J. P. Nielsen, H. M. Benedict, and A. J. Holloman, of the Institute's Air Research Laboratories, report the use of techniques involving ultraviolet light to observe the characteristic bright pale blue fluorescence of lesions and other markings on smog-damaged plants. The fluorescence has been definitely associated with leaf damage through experiments with plants exposed to actual smog, to synthetic atmospheres, and to a variety of cultural conditions.

The continued alarming decline of the population of the Atlantic **walrus** despite the abolition of commercial hunting by white men will be the subject of a paper by M. J. Dunbar, chairman of the board of governors, Arctic Institute of North America, to be presented at the annual meeting of the Danish Nature Conservancy. This symposium, scheduled for August in Copenhagen, will consider various problems relating to arctic flora and fauna. Dr. Dunbar, who is also associate professor of zoology at McGill University, departed on 10 July for zoological studies in the Hudson Bay area; his paper, which represents the contribution of the Arctic Institute to the Conservancy proceedings, will be read in his absence.

Although walrus hunting as far south as the Gulf of St. Lawrence was common practice as recently as 200 yr ago, the range of the Atlantic walrus is now sharply limited to areas north of Hudson Bay and Hudson Strait. While citing recent studies indicating that we are now at the height of a 400-yr climatic "amelioration," Dr. Dunbar nevertheless does not ascribe the decrease in walrus to the progressive warming of the North Atlantic, but to the depredations of commercial hunting prior to 1950 and to present Eskimo hunting methods; these last he describes as rivaling the fairy-tale hunters of "Peter and the Wolf," "coming through the forest and shooting as they come." The resultant loss in walrus is not known, but loss of seal under similar hunting methods is estimated at three animals lost for every one landed.

In view of the importance of walrus conservation to the rehabilitation of the Eskimo economy in Canada, steps are being taken by the Department of Northern Affairs to supervise and control the Eskimos' annual walrus kill. However, Dr. Dunbar points out, it is

necessary to know considerably more about the biology of the walrus before the yearly take can be rationally controlled, and this study has now been started by the Fisheries Research Board of Canada. Migratory habits are especially worthy of study, he says, because of indications that the Hudson Bay and Hudson Strait animals may be parts of a large population which joins the walrus of West Greenland for an annual winter migration to the neighborhood of the ice edge in Davis Strait. Dunbar suggests that winter spotting from aircraft might assist in settling this question of a possible connection between the Canadian and Greenland walrus population, with all the economic ramifications involved for the native peoples of both areas.

David M. Greenberg, chairman of the University of California's department of physiological chemistry, and his Egyptian associate, Mostafa S. Mohammed, have been studying the effect on cancer tissue of arginase, an enzyme that plays an important part in the utilization of nitrogen by the body. Some of the **arginase,** which they extracted from horse liver, had a curious blue-green color, an indication of the presence of an impurity. But upon finally crystallizing the supposed impurity, the investigators found that they had isolated a new, copper-containing liver protein, the function of which is unknown.

On 30 June, the **UNESCO Science Cooperation Office** for South East Asia, Manila Branch, was discontinued. The work for the Pacific area will be carried on from the mian office for South East Asia at Djalan Diponegoro 76, Djakarta, Indonesia. Jan Smid, scientific director in charge of the Manila branch, will join Alexander Wolsky in the Djakarta office.

A **new comet** near the constellation of Virgo was discovered on 29 June by Leslie C. Peltier of Delphos, Ohio, an amateur astronomer, and a day later by L. Kresak and M. Vozarova, both of Skalnate Pleso Observatory in Czechoslovakia. The comet is of the ninth magnitude, therefore too faint to be seen without a telescope. Its motion is south-southwest, according to the Harvard College Observatory.

Frank M. Strong and E. D. Schilling, biochemists at the University of Wisconsin, recently identified and isolated a substance from common sweet pea seeds that causes the deforming disease known as **lathyrism.**

The Atomic Energy Commission has announced that **stable isotopes** produced in the Commission's facilities are now available for foreign distribution. Radioisotopes have been sold abroad since 1947, but stable isotopes generally have been released only to users within the U.S. About 175 stable isotopes of nearly 50 elements are produced by the AEC.

Forty-eight countries have been authorized to receive AEC produced radioisotopes and approximately 2500 foreign shipments have been made. The terms and conditions for obtaining stable isotopes will be the same as those that now apply to foreign requests for radioisotopes. The applicant must agree to use the isotope only for the purpose stated in the application and to report research results to the AEC.

Interest in **Interlingua** as a means of scientific communication has resulted in students of Christ Church College in Kanpur, India, organizing a campaign for the support of this international language. L. Singh, professor of physics at Kanpur, has reported that more than one-fifth of the 1500 students of the college have contributed to a fund to help finance wider use of the language. No student was allowed to contribute more than the equivalent of 5 ct in American money.

Interlingua came to the attention of the college in India through the receipt of *Spectroscopia Molecular,* the first scientific journal to be published in the language, of which Forrest F. Cleveland, professor of physics at Illinois Institute of Technology, is editor. The development of Interlingua has been undertaken by a division of Science Service headed by Alexander Gode at 80 E. 11 St., New York.

A 100-mi-long canal system paralleling the Euphrates River in **ancient Mesopotamia** has been uncovered after having been hidden by desert sands for 6000 yr. The find was announced by Albrecht Goetze, a professor at Yale University and also director of the Baghdad School of the American Schools of Oriental Research. The canals, discovered during an expedition to Iraq headed by Thorkild Jacobsen of the University of Chicago's Oriental Institute, furnished water for cultivated areas that supported the Mesopotamian civilization of 4000 to 5000 B.C. The canals also were used for navigation between towns.

Scientists in the News

Karl von Frisch, professor of zoology at Munich University, has recently been elected to the Royal Society (London). Dr. von Frisch is well known for his work on the sense organs of insects and fishes—notably, on how bees exchange information on feeding-places and on their manner of orientation in flight.

At Harvard University, **Eric Lindemann,** associate professor of psychiatry, has been appointed professor of psychiatry in the medical school and psychiatrist-in-chief at Massachusetts General Hospital; and **Raymond DeLacy Adams,** associate clinical professor of neurology has been named Bullard professor of neuropathology in the medical school and continues as chief of the Neurological Service of the Massachusetts General Hospital. The appointments create a new professorship in psychiatry in the Faculty of Medicine and fill two posts vacated by **Stanley Cobb,** who has retired as Bullard professor of neuropathology and as chief of the Psychiatry Service at the Massachusetts General Hospital.

New head of the mathematics department at Washington University, St. Louis, is **Holbrook M. MacNeille,** who has been executive director of the American Mathematical Society since 1949.

Rev. James B. Macelwane, S.J., dean of the Institute of Technology, Saint Louis University, has been designated by the State Department as chief of the U.S. official voting delegation to the International Union of Geodesy and Geophysics, which will hold its 10th General Assembly in Rome, 14–25 Sept.

The other eight voting delegates are Leason H. Adams, Carnegie Institution; J. A. Bjerknes, University of California; Walter H. Bucker, Columbia University; Beno Gutenberg, California Institute of Technology; Joseph Kaplan, University of California in Los Angeles; Walter D. Lambert, Ohio State University; and F. W. Reicheldefer, chief, U.S. Weather Bureau.

Three members of the University of California Medical Center, San Francisco, retired 1 July.

Karl F. Meyer, a leader in infectious disease research and director of the Hooper Foundation, completed 41 yr of service. Before going to California, he spent 2 yr in Transvaal, South Africa, and 3 yr at the University of Pennsylvania. He was born and educated in Switzerland. Dr. Meyer always worked vigorously to translate his laboratory results into usable public health measures. He is credited with the development of methods for controlling botulism.

Robert Wartenberg retired as clinical professor of neurology after 18 yr of service. He was educated at the universities of Rostock and Freiburg, and became a member of the faculty of the latter institution in 1919. He went to California in 1936.

Michael Hobmaier, associate professor of comparative pathology, joined the Hooper Foundation in 1930. Born and educated in Germany, he formerly held posts at the universities of Munich, Berlin, and Dorpat.

W. T. Payne of the physics department at Michigan State College has been appointed associate professor of physics at Hofstra College, effective 1 Sept.

The Endocrine Society has announced the presentation of the Ciba award of 1954 to **Isador Nathan Rosenberg** of New England Center Hospital, Boston, and Tufts College Medical School. This award, which was established in 1942 and provides research support, is given annually to an investigator, not more than 35 yr of age, in recognition of outstanding contributions to clinical or preclinical endocrinology.

Oldest of 9000 Parke, Davis & Co. employees in point of active service, **George S. Sherman** retired 30 June after spending 53 yr with the firm. He joined the organization as a messenger when he was 14 yr old, and for the past 40 yr has handled the makeup of all Parke-Davis catalogs. The company has had seven presidents since its establishment in 1866, and he has served under six of them.

Noel Hudson Stearn, vice president of W. C. McBride, Inc., St. Louis, is retiring to California where his address will be 128 Goya Rd., Menlo Park, after 1 Aug. Dr. Stearn took his M.A. at Stanford in 1918, and his Ph.D. at the University of Wisconsin in 1926 after having served in World War I. He joined McBride that same year on a special geophysical research assignment in connection with the development of the Hotchkiss Superdip magnetometer. In 1930 he was made chief geologist, in 1940 vice president in charge of exploration, and in 1950 comanager of the company.

Conrad P. Straub, a senior sanitary engineer of the U.S. Public Health Service assigned to Oak Ridge National Laboratory, has received the Fuertes alumni medal of Cornell University, which is given annually by the faculty of the Civil Engineering School to a graduate of that school or to a recipient of a Cornell advanced degree. Dr. Straub was honored for an outstanding article on the treatment and disposal of radioactive wastes.

Arthur G. Thorp, II, formerly supervising engineer of advanced mechanical and instrument development at the aircraft gas turbine division of Westinghouse Electric Corp., Lester, Pa., has joined the staff of the Edison Research Laboratory as a senior mechanical engineer.

Milton V. Veldee, for 30 yr a medical officer with the U.S. Public Health Service, is now on the staff of Stanford Research Institute as chairman of the biology department. During most of his career Dr. Veldee has been engaged in medical research with special emphasis on infectious maladies and disease distribution. He has served on a number of committees of the World Health Organization, and before accepting his current appointment was vice president and medical director of Hyland Laboratories in Los Angeles.

Paul Weiss, who has been on the faculty of the University of Chicago for 21 yr and professor of zoology since 1942, has been appointed a member of the Rockefeller Institute for Medical Research. He will organize and direct a laboratory of developmental biology.

Walter T. Whitney, second chairman of the Pomona College astronomy department in the college's 66-yr history, retired in June on completion of his 25th year at the college. He succeeded the late Frank P. Brackett, founder of the department, in 1929. Dr. Whitney is also retiring from the faculty of Claremont Graduate School, on which he has served many years. Dr. Whitney received bachelor and master of science degrees at Pomona College and his doctorate in physics and astronomy at the University of Chicago. At Chicago he worked with the late Robert A. Millikan and went with him in 1917 to the California Institute of Technology, then known as Throop College. He joined Pomona from Caltech 12 yr later. He has been a member of the staff of Mt. Wilson Observatory on two oc-

casions. For the last 8 yr he has been intermittently engaged in research on the polarization of light from nebulae, work he started at MacDonald Observatory in west Texas and has continued at Pomona and at Mt. Wilson Observatory.

Dr. Whitney helped plan construction of the Seaver Laboratory at Pomona, which houses the Cassegrain reflector telescope given in memory of his aunt, Mrs. Clara Whitney Shatto. A Shatto memorial scholarship also provides $250 annually to an upperclassman or graduate student majoring in astronomy.

Harley A. Wilhelm, associate director of the Institute for Atomic Research and research professor of chemistry at the Iowa State College of Agriculture and Mechanical Arts, will receive the 1954 Iowa medal of the American Chemical Society's Iowa Section at a banquet on 12 Nov. He is a coinventor of the process adopted by the Manhattan Project during World War II for large-scale production of uranium metal and has also done work leading to more than 60 other inventions connected with the atomic energy program. His contributions have added to the knowledge of rare metals and their alloys, particularly the metallurgy of uranium, thorium, zirconium, and beryllium.

The American Museum of Natural History has announced the appointment of **John Todd Zimmer** as chairman of the department of ornithology. He has been with the museum since 1930, and succeeds **Robert Cushman Murphy,** who retains the post of Lamont curator of birds, but is resigning the chairmanship of the department to prepare for his retirement next year.

The appointment of **Harold A. Zintel** as attending surgeon and director of surgery at St. Luke's Hospital, New York, has been announced.

Meetings

On 28–29 June approximately 50 scientists met in Cambridge, Mass., to participate in a symposium on **aero-thermoacoustics.** The Massachusetts Institute of Technology acted as the host organization, and the opening address was delivered by C. Richard Soderberg, dean of the M.I.T. School of Engineering. The participants were recruited among aerodynamicists, acousticians, meteorologists, astrophysicists, and applied mathematicians.

Ten papers were presented on various phases of the connection of aerodynamics and thermodynamics to sound. In addition, four discussion panels were conducted to summarize and criticize our state of knowledge on various aspects of this growing field. The discussions that occurred during the meeting were of great help in clarifying several of the difficulties encountered and also in breaking down the technical language barrier between workers in different disciplines. The proceedings of the symposium will appear in the *Journal of the Acoustical Society of America.*

The **American Heart Association's Council for High Blood Pressure Research** will meet in Cleveland, 22–23 Oct. The scientific program will be on the metabolism of muscles and nerves as related to high blood pressure; the general program will feature a discussion on retirement problems. Irving S. Wright, of New York City, past president of the association, is chairman of the annual meeting.

Some 600 communications engineers attended an **Institute of Radio Engineers** technical session in Washington, 23–24 June. Featured speakers were Maj. Gen. Rex V. D. Corput, Jr., director of communications-electronics for the Defense Department's Joint Chiefs of Staff; Haraden Pratt, former telecommunications adviser to the President; and George W. Gilman, director of systems engineering for the Bell Telephone Laboratories.

New developments in **light and electron microscopy** will be discussed at coordinated conferences to be held at the Moraine hotel in Highland Park, Ill. The Armour Research Foundation of Illinois Institute of Technology will hold a symposium on light microscopy, 11–13 Oct., followed by a 3-day symposium on electron microscopy sponsored by the Electron Microscope Society of America.

The 35th summer meeting of the **Mathematical Association of America** will convene at the University of Wyoming 30–31 Aug. L. H. Loomis of Harvard University will moderate the three sessions of the meeting. Participants in the opening session, dealing with the educational aspects of computers, are W. F. Atchison, University of Illinois, "Education impact of the Illiac"; C. B. Tompkins, UCLA Numerical Analysis Project, "Effects of large digital computers on numerical analysis curricula"; and D. H. Lehmer, University of California, "A machine's-eye view of numerical analysis."

The second session, to be held jointly with the Canadian Mathematical Congress, will include P. Scherk, University of Saskatchewan, "Some geometric applications of Taylor's formula"; M. Wyman, University of Alberta, "Asymptotic expansions"; and B. M. Stewart, Michigan State College, "Systems of congruences."

The final session will deal with the preparation of college mathematics teachers, by P. V. Reichelderfer, Ohio State University; integral transformations and differential equations, by R. V. Churchill, University of Michigan; and metrics and matrices A. T. Lonseth, Oregon State College.

Infections and their management will be the subject of the 27th annual graduate fortnight of the **New York Academy of Medicine,** to be held 18–29 Oct. The program will include 21 evening lectures, 6 morning panel meetings, 10 hospital clinics, and a scientific exhibit. For programs and other information, address the Secretary, Graduate Fortnight, 2 E. 103 St., New York 29. Nonfellows of the Academy may register.

Southern women will contribute much toward implementing the recent Supreme Court decision against **racial segregation** in schools. This was the opinion of 25 leading American anthropologists and educators at a 4-day conference in Carmel Valley, Calif., held early in June. Presiding over a seminar, Solon T. Kimball of Columbia University, expressed the view that Southern leaders must be given the opportunity to define for themselves the way to meet the problem. The Stanford University School of Education, sponsor of the conference, made possible by a $10,400 Carnegie Foundation grant, will publish the results in conjunction with the American Anthropological Association.

"Our changing forests" is the theme of the 54th annual meeting of the **Society of American Foresters** to be held in Milwaukee, Wis., 24–27 Oct. E. L. Demmon of Asheville, N.C., president will open the general session. All foresters and friends of forestry, whether members of the Society or not, are welcome to attend.

Eleven technical sessions have been scheduled. Papers will be presented and discussed on the subjects of forest management, silviculture, forest products, private forestry, forest economics, watershed management, forest recreation, forest-wildlife management, range management, public relations, and professional education in forestry. For information, write the Society, 425 Mills Bldg., Washington 6, D.C.

Society Elections

Alpha Chi Sigma: pres., Walter T. Schrenk, University of Missouri; 1st v. pres., Ronald M. Warren, American Chemical Society; 2nd v. pres., L. Reed Brantley, Occidental College; 3rd v. pres., Frank Zvanut, firm of Godfrey L. Cabot, Cleveland; sec.-treas., John R. Kuehler, Indianapolis, Ind.

American Neurological Association: pres., Percival Bailey; pres.-elect, J. M. Nielsen; 1st v. pres., A. R. Vonderahe; 2nd v. pres., Paul C. Bucy; sec.-treas., H. Houston Merritt; asst. sec., Charles Rupp.

The **American Society of Mammalogists:** pres., William H. Burt; v. presidents, Robert T. Orr and William B. Davis; rec. sec., Randolph L. Peterson; treas., Caroline A. Heppenstall; corres. sec., George C. Rinker.

Chairman of the **Federation of American Societies for Experimental Biology** is D. Murray Angevine; secretary is M. O. Lee. The following, representatives of member organizations, will serve on the Federation board in 1954–55:

American Physiological Society: pres., H. E. Essex; pres.-elect, W. F. Hamilton; past pres., E. F. Adolph.

American Society of Biological Chemists: pres., C. G. King; sec., Philip Handler; past pres., D. W. Wilson.

American Society for Pharmacology and Experimental Therapeutics: pres., Charles M. Gruber, Sr.; sec., Carl C. Pfeiffer; past pres., Harvey B. Haag.

American Society for Experimental Pathology: pres., Russell L. Holman; sec., C. C. Erickson; past pres., D. Murray Angevine.

American Institute of Nutrition: pres., George R. Cowgill; sec., Rueben W. Engle; past pres., C. A. Elvehjem.

American Association of Immunologists: pres., A. M. Pappenheimer; sec., F. S. Cheever; past pres., Thomas P. Magill.

Education

Permanent headquarters for the **George Vanderbilt Foundation,** a newly formed scientific research organization, have been established in the Natural History Museum at Stanford University. The Foundation is now engaged primarily in fish studies, for which Stanford has been a center since the days of its first president, David Starr Jordan, an outstanding ichthyologist.

Gifts totaling $275,000 have been made to the Massachusetts Institute of Technology to establish a professorship in aeronautical engineering honoring **Jerome C. Hunsaker,** founder and for many years head of the department at M.I.T. The present endowment, received from many donors throughout the aircraft industry, is expected to be increased to $500,000 by further contributions. At the recent alumni luncheon James R. Killian, Jr., president of the Institute, commented: "This fund is a magnificant example of the kind of support which all private educational institutions must have to maintain their high standards of education supported by pioneering research studies."

Medical genetics, while still largely integrated with other courses, is now being taught in about 55 percent of the medical schools in the United States and Canada, writes C. Nash Herndon of Bowman Gray School of Medicine, Wake Forest College, in the July issue of *The Journal of Medical Education.* Dr. Herndon states that at Bowman Gray "we try to make our students aware of genetic factors in disease." The subject, taught in two sections under the department of preventive medicine, consists of a course in basic principles combined with pathology, physiology, and microbiology and a course called "hereditary disease."

Forty-two U.S. engineering schools and six in Canada will this year distribute a total of $19,200 in scholarships sponsored by the American Society for Metals Foundation for Education and Research to support students pursuing **metallurgical studies.**

Michigan State College will celebrate its 100th anniversary next year. Delegates from more than 500 universities and learned societies will be invited to the formal opening of the centennial on 12 Feb. 1955, which is Founders' Day at the college. An industrial

exposition will be held 11–14 May and the Centennial of Farm Mechanization will take place 16–20 Aug. Academic symposia will feature such topics as "Administering human affairs, 1955–2000"; "Nutrition of plants, animals, and man"; and the "New view of man—a synthesis and forecast."

Sterling Morton, chairman of Morton Salt Co., recently laid the cornerstone of the new **Morton Medical Research Building** at the Northwestern University Medical Center. The seven-story structure will be occupied by research personnel who have carried on their work in laboratories of the Montgomery Ward Memorial Building. The new laboratory is scheduled for completion in May 1955, and is the first medical building erected by Northwestern since the Ward building was finished in 1926. Construction is being financed by a $2 million bequest left to the University by Margaret Gray Morton, widow of the founder of the Morton Salt Co.

Grants and Fellowships

The following grants and fellowships administered by the **National Academy of Sciences–National Research Council,** have recently been announced.

American Cancer Society Fellowships in Cancer Research

P. Berg, dept. of microbiology, Washington University.

F. Dituri, dept. of medicine, University of Pennsylvania.

E. Farber, dept. of pathology, Tulane University School of Medicine.

H. R. Garner, dept of biological sciences, Purdue University.

C. Gilvarg, dept. of biochemistry, Bellevue Medical Center.

R. D. Griesemer, dept. of dermatology, Massachusetts General Hospital.

J. M. Price, dept. of clinical pathology, University of Wisconsin.

J. F. Scott, dept. of medicine, Massachusetts General Hospital.

P. Talalay, Ben May Laboratory for Cancer Research, University of Chicago.

J. M. Weiss, dept. of anatomy, Washington University.

American Cancer Society Fellowships in Cancer Research

P. Aisen. Columbia University, with I. M. London. 1. Origins of bile pigment from sources other than the hemoglobin of mature circulating erythrocytes; 2. Metabolic behavior of various constituents of the erythrocyte.

A. C. Aisenberg. University of Wisconsin, with V. R. Potter. 1. Conversion of acetate and glucose to CO_2 and investigation of the Pasteur effect; 2. Conversion of glucose to nucleoprotein ribose.

J. B. Alpers. Sloan-Kettering Institute, with R. W. Rawson. Hydrolysis of thyroglobulin by intrinsic enzyme systems.

E. P. Anderson. National Institutes of Health, with H. L. Kalckar and B. L. Horecker. Role of the purine and pyrimidine nucleotides in nucleic acid synthesis and transglycosidation.

R. S. Benua. Western Reserve University, with B. M. Dobyns. Functional nature of thyroid tissues with special emphasis on radioiodine radiated thyroids and thyroid tumors.

D. P. Bloch. Columbia University, with A. W. Pollister. Synthesis of desoxyribonucleic acid and histone during the course of the mitotic cycle.

L. N. Caston, Jr. University of Cambridge, with D. Keilin. Photochemical action spectrum of CO inhibited respiration.

H. M. Davidson. Tufts College Medical School, with G. Schmidt and W. H. Fishman. 1. Metabolism of phosphoprotein; 2. Characterization of purified prostatic acid phosphatase.

G. W. deVillafranca. Institute for Muscle Research, Woods Hole, with A. Szent-Györgyi. Some biochemical and biophysical properties of the myosin proteins about the time of first contraction in embryonic mammalian muscle.

R. J. Doisy. University of Wisconsin, with H. A. Lardy. Protective actions of cholesterol or pantothenic acid on induced hyperthyroidism in rats.

R. M. Franklin. California Institute of Technology, with R. Dulbecco. Quantitative studies on the Rous sarcoma virus.

N. Freinkel. Thorndike Memorial Laboratory, Boston, with W. B. Castle. Transport of inorganic iodide.

J. A. Gladner. Massachusetts Institute of Technology, with J. M. Buchanan. Cofactors involved in purine and nucleotide biosynthesis.

D. P. Groth. Université Libre de Bruxelles, with J. Brachet. Use of biochemical methods in the study of growth, differentiation, and cellular physiology.

I. M. Harary. National Institutes of Health, with E. Stadtman. Acyl thiol ester transfer enzymes.

R. B. Hurlbert. University of Copenhagen, with H. Kalckar and H. Klenow. Enzymatic mechanisms and intermediates in the biosynthesis of nucleic acids.

J. Hurwitz. National Institutes of Health, with B. L. Horecker. Glucose-6-phosphate oxidative cycle.

M. E. Jones. Massachusetts General Hospital and Harvard Medical School, with F. Lipmann. Mechanism of various synthetic reactions involving energy-rich enzyme-substrate complexes.

B. H. Judd. University of Texas, with W. S. Stone. Role of heterochromatic rearrangements as modifiers of the variegated-type position effect in *Drosophila melanogaster.*

D. Kahn. Norwegian Cancer Institute, Oslo, with J. Baarli. Effect of heavy ion elastic scattering and inner shell ionization on complex organic molecules.

R. H. Kahn. University of California, with K. B. DeOme. *In vitro* action of hormones on secondary sex accessories.

A. D. Kaiser. Pasteur Institute, Paris, with A. Lwoff and F. Jacob. Genetic analysis of the temperature bacteriophage "Lambda."

J. C. Kaltenbach. Wenner-Grens Institut, Stockholm, with J. Runnström. Antigens during embryonic development.

R. Kimmelstiel. Harvard Medical School and Boston Lying-In Hospital, with A. B. Hastings and C. A. Villee. Utilization of carbon-14 labeled amino acid by the human placenta *in vitro.*

A. J. Ladman. Harvard Medical School, with G. B. Wislocki. Histochemical studies of the anterior pituitary and the adrenal medulla of rodents under normal and experimental conditions.

K. G. Lark. State Serum Institute, Copenhagen, with O. Maaløe. Cytological, physiological and biochemical properties of *Salmonella typhimurium* in relation to the mitotic cycle of this organism.

I. Lewin. Royal Cancer Hospital, London, with A. Haddow. Effect of steroid hormones on xanthine oxidase in normal and neoplastic tissue.

S. A. Luse. Washington University School of Medicine, with E. W. Dempsey. Investigation of the histologic anatomy of the nervous system by means of electron microscopy and histochemistry.

W. S. Lynn. University of Pennsylvania, with S. Gurin. Cholesterol catabolism.

J. Marmur. Pasteur Institute, Paris, with A. Lwoff and J. Monod. Genetic studies associated with bacterial transformations.

M. P. F. Marsden. Harvard University, with R. A. Wetmore. Use of *in virto* culture techniques as a tool in studying normal and abnormal growth in vascular plants.

H. T. Meryman. Yale University, with E. C. Pollard. Genetic components of hydrated microorganisms in the solid state by particulate and electromagnetic radiations.

J. F. Migliarese. University of Kansas, with R. E. Stowell and C. G. Bly. Chemicarcinogensis: tumor-host relations.

M. W. Noall. Tufts College Medical School, with H. N. Christensen. Mode of production of endocrine influences upon nitrogen metabolism.

C. R. Partanen. Columbia University, with A. W. Pollister. Comparative quantitative determinations of nucleic acids in organized and unorganized plant growth *in vitro.*

D. M. Prescott. Carlsberg Laboratories, Copenhagen, with H. Holter. Role of the nucleus in interphase activities of the cytoplasm of amoeba proteus.

H. V. Rickenberg. Pasteur Institute, Paris, with J. Monod. Nature of the induction process in the formation of induced enzymes and interactions between enzyme-forming systems.

R. M. Rosenbaum. Beth Israel Hospital, Boston, with J. Fine. *In vivo* study of the phagocytic blood elements in the normal state and in shock.

H. Rubin. California Institute of Technology, with R. Dulbecco. Life cycle of the Rous sarcoma virus.

K. J. Ryan. Massachusetts General Hospital, with F. Lipmann. Mechanisms in enzymatic reactions.

S. A. Sand. Brookhaven National Laboratory, with A. H. Sparrow. Somatic mutation and chronic irradiation.

R. B. Schultz. Harvard Medical School and The Children's Hospital, Boston, with J. F. Enders. Tumor-virus relationships.

S. K. Shapiro. Yale University, with D. M. Bonner. Genetic control of enzyme formation.

J. E. Smith. Purdue University, with H. Koffler. Molecular architecture of the cell walls of *Penicullium chrysogenum* Q176.

J. Straus. Harvard University, with K. V. Thimann. Factors affecting the rooting response of excised cotyledons of red and black radish.

A. R. Terepka. University of Rochester, with E. H. Keutmann and C. Waterhouse. Clinical and metabolic observations during forced-feeding of cancerous patients.

R. S. Thomas. Carlsberg Laboratories, Copenhagen, with H. Holter. Function and intracellular localization of macromolecules of rat liver cell homogenates.

K. Tryon. University of Wisconsin, with F. Skoog. Comparative physiological studies of differentiating and nondifferentiating tobacco tissue *in vitro*.

J. E. Whitney. University of Cambridge, with F. G. Young. Influence of pituitary hormones on growth and metabolism.

British American Exchange Fellowships in Cancer Research

S. Gelfant. University of London, with W. S. Bullough. *In vitro* studies of the growth effects of gonadal hormones on sexual and nonsexual tissues.

G. D. Shockman. Oxford University, with D. D. Woods. Some aspects of amino acid and protein synthesis by living microorganisms.

E. L. Smith. University of Cambridge, with D. Keilin. Reactions of the cytochrome system.

National Tuberculosis Foundation Fellowships in Tuberculosis

R. H. Shepard. Johns Hopkins University, with J. L. Lilienthal, Jr., and R. L. Riley. Estimation of oxygen tension in whole blood: Application to assessment of pulmonary function.

G. M. Turino. Columbia University and Presbyterian Hospital, with D. W. Richards. Evaluation and separation of resistive forces to lung ventilation in states of normal and abnormal pulmonary function.

James Picker Foundation Fellowships in Radiological Research

M. G. Smyth, Jr. University of Pennsylvania, with R. H. Chamberlain. Distribution and dosage of colloidal and particulate sources of radioactivity.

K. Subbarao. Bellevue Hospital, with M. H. Poppel. Regional ileus as a roentgenological manifestation of disease.

Miscellaneous

In April 1953 a supplement to Vol. 13 of *Cancer Research* was published in order to present a backlog of negative data on compounds tested in experimental **cancer chemotherapy** programs. A second supplement, made possible by a grant from the National Cancer Institute of the U.S. Public Health Service, is planned for publication early in 1955. This will present additional negative data, and also data from clinical cancer chemotherapy programs. Material for inclusion in the supplement is invited; it must be received by one of the editors *before 15 Oct.* For information regarding preparation of data for submission, communicate with C. Chester Stock, Sloan-Kettering Institute for Cancer Research, 410 E. 68 St., New York 21.

Prevention of Deterioration Center—A Service for the Department of Defense is the title of the new brochure recently issued by the Prevention of Deterioration Center, Division of Chemistry and Chemical Technology, National Research Council. Designed to supplant the so-called "Red Book" of June 1949, this 20-page booklet outlines the deterioration problem in its broad aspects, traces the history, origin, and organization of the Prevention of Deterioration Center, and describes present services and professional activities of this Academy–Research Council group. Interested persons may obtain a copy gratis from the Prevention of Deterioration Center, 2101 Constitution Ave., Washington 25, D.C.

The August issue of ***The Scientific Monthly*** features the following articles: "Army Medical Museum and Armed Forces Institute of Pathology in historical perspective," Morris C. Leikind; "Armed Forces Institute of Pathology: retrospect and prospect," Hugh G. Grady; "New building facilities for Armed Forces Institute of Pathology," Colin F. Vorder Bruegge; "Views on the Amazon Valley," F. A. Carlson; "Dust explosion in coal mines and industry," Irving Hartmann; "Importance of rhythm in songs for the treatment of the sick by American Indians," Frances Densmore; "The pseudomath," Tobias Dantzig; "Computers: 1954," Mina Rees; "The economics of power reactor processing," D. E. Ferguson; "Spotting forest fires with television," Ed. Kerr.

The Women's Bureau of the U.S. Department of Labor has prepared a new bulletin on the Opportunities for Women series, entitled ***Professional Engineering.*** It gives an over-all view of engineering as a career for women, and is an excellent reference source for those interested in obtaining authoritative information on the subject.

Developments in the physical sciences which have taken place in the past two decades are reflected in the 9th revised edition of the **Smithsonian Physical Tables.** For more than a century this has been a standard reference book in American laboratories; it is revised about once every 20 yr. Entirely new sections have been added, including one on nuclear science. The new edition, prepared for the Smithsonian Institution by William E. Forsythe, retired General Electric Co. physicist, includes 901 tables.

Tropical Woods is again being published on a regular basis. It will appear semiannually, but it is hoped that in the near future enough articles will be forthcoming to justify increasing the number of issues. Published by the Yale University School of Forestry, *Tropical Woods* was founded in 1925 by Samuel J. Record, who served as its editor until his death in 1945. The journal is designed to furnish a suitable publication medium for writings on wood anatomy, tropical woods, woody plants and the promotion of forestry in the tropics.

The subscription rate will be $1.50 annually or $1.00 for a single issue. Subscriptions should be sent to the Assistant to the Editor, *Tropical Woods,* 205 Prospect St., New Haven, Conn. Information concerning submission of manuscripts is available from the editor, William L. Stern, at the same address.