The annual business meeting and election of officers will be held on Wednesday morning. At this time the award of the Frank Nelson Cole Prize in Theory of Numbers will be announced, and the recipient will give a brief talk on the paper for which the prize is awarded. Following this, Professor Oscar Zariski will give an address entitled "Normal Varieties and Birational Correspondences."

The joint dinner (informal) for the four organizations will be held at the Hotel Bethlehem on Wednesday, December 31, at 8 P.M., followed by a New Year's Eve party which will continue until midnight, and will include a number of musical and entertainment features suitable to the occasion.

There will be a luncheon for members of Pi Mu Epsilon on Thursday.

THE DALLAS MEETING OF THE AMERICAN ASSOCIATION

THE American Association for the Advancement of Science and its Associated Societies meet next week at Dallas, Texas. A full preliminary announcement of the program by the permanent secretary, Dr. F. R. Moulton, will be found in the issues of SCIENCE for November 28 and December 5.

The Executive Committee of the Council meets on Sunday, December 28, and the council meets on the afternoon of Monday. The Academy Conference will be held on the adjournment of the council; the Secretaries Conference, beginning with a dinner, will be held on Wednesday. The annual Science Exhibition will be held in the Baker Hotel from Monday to Thursday, inclusive.

At the first general session of the association on Monday, Dr. Albert F. Blakeslee, of the Station of Experimental Evolution of the Carnegie Institution, will give the address of the retiring president entitled "Individuality and Science."

Three other general sessions will be held. On Tuesday, Dr. Edwin P. Hubble, astronomer of the Mt. Wilson Observatory of the Carnegie Institution, will give the annual lecture under the joint auspices of Sigma Xi and the association. On Wednesday evening at five o'clock the seventh annual Pi Kappa Phi lecture will be given by Dr. Rufus B. Von KleinSmid, president of the University of Southern California; the seventh Phi Beta Kappa address will be given in the evening by Dean Christian Gauss, of Princeton University.

During the week, each of the fifteen sections and the Sub-sections of Dentistry and Pharmacy will hold meetings addressed by the chairmen, who are vice-presidents of the association. There will be numerous meetings of thirty affiliated and associated societies.

The association had in 1900 about twelve hundred members. In that year SCIENCE was made the official journal, and the membership increased rapidly. When the association met in New Orleans in 1905 there were 4,321 members and 211 papers were read. There are now over 22,000 members. It is expected that at Dallas about fifteen hundred papers will be presented. In spite of war conditions it is hoped that the meeting will be of special interest and will demonstrate the fundamental importance of science for the national welfare.

SCIENTIFIC NOTES AND NEWS

REAR ADMIRAL RICHARD E. BYRD has named a coastline area of the Antarctic Continent extending to a thousand miles "Hobbs Land" in honor of Professor William H. Hobbs, emeritus professor of geology at the University of Michigan. Hobbs Land includes the area formerly known as Ruppert Land, the Ruppert name having been given to a cape.

THE Edison Medal for 1941 has been awarded by the American Institute of Electrical Engineers to Dr. John Boswell Whitehead, director of the school of engineering of the Johns Hopkins University, "for his contributions to the field of electrical engineering, his pioneering and development in the field of dielectric research, and his achievements in the advancement of engineering education."

THE Institute for Aeronautical Sciences has awarded the Octave Chanute Award for 1941 to Melvin N. Gough, senior test pilot for the National Committee for Aeronautics Laboratories at Langley Field, Va., in recognition of "his fundamental aeronautical researches conducted on airplanes in actual flight."

SIR HENRY DALE, director of the National Institute for Medical Research, London, and president of the Royal Society, was presented with the Gold Medal of the Royal Society of Medicine at a recent meeting of the council. The medal is awarded every three years "for valuable contributions to the science and art of medicine."

DR. FRANCIS PEYTON ROUS, of the Rockefeller Institute for Medical Research, has been elected an honorary fellow of Trinity Hall, Cambridge. Dr. Rous holds the honorary degree of Sc.D. from Cambridge and was Linacre lecturer at the university in 1929.

DR. JOHN E. WEEKS, professor of ophthalmology emeritus, of the New York University College of Med-

icine, was guest of honor at a dinner given on October 6 attended by eighty friends and students.

DR. M. G. MELLON, professor of analytical chemistry at Purdue University, has been elected president of the Indiana Academy of Science.

DR. ALFRED H. WHITE, chairman of the department of chemical and metallurgical engineering at the University of Michigan, has resigned, his resignation to take effect at the end of the present semester. He will remain in the department as professor of chemical engineering. Dr. George Granger Brown has been appointed his successor.

DR. MARSHALL SCHALK has resigned as assistant geologist in the Pittsburgh office of the Gulf Oil Corporation in order to become assistant professor of geology and geography at Smith College.

DR. HOWARD A. MEYERHOFF, professor of geology and geography at Smith College, has been appointed by Governor Saltonstall a member of the Massachusetts Committee on Public Safety to serve as regional director for the region that includes seventy-two towns in Hampshire, Hampden and Franklin Counties and six towns in Worcester County.

DR. F. C. BARTLETT, professor of experimental psychology in the University of Cambridge, has been appointed a member of the British Medical Research Council to succeed the late Professor A. J. Clark.

MAURICE HOLLAND, for eighteen years director of the Division of Engineering and Industrial Research of the National Research Council, has been appointed research adviser to the Pillsbury Flour Mills Company, Minneapolis.

THE *News Edition* of the American Chemical Society states that G. J. Callister, formerly vice-president of the American Potash Institute, has been appointed for the duration of the war general secretary of the Canadian Society of Technical Agriculturalists, Ottawa.

DR. NATHAN W. SHOCK, formerly research associate, Institute of Child Welfare, and assistant professor of physiology, Medical School, University of California, has been appointed senior psychophysiologist in the National Institute of Health, U. S. Public Health Service. He will be in charge of the experimental program of the unit on gerontology of the institute, which has established a laboratory in the Baltimore City Hospitals.

THE Hoffman Scholarship of the Chemists' Club has been awarded for the year 1941–1942 to Robert T. Olsen, a candidate for the Ph.D. degree in the department of chemistry at the Massachusetts Institute of Technology. His Ph.D. dissertation will be in the field of syntheses of coumarones. This scholarship, founded by the late Dr. William F. Hoffman, is available in alternate years; the stipend is $800.

DR. T. DALLING, professor of animal pathology at the University of Cambridge, has retired to become the director of the British Ministry of Agriculture's Veterinary Laboratory at Weybridge.

DR. ZING-YANG KUO, director of the Institute of Physiology and Psychology at Chungking, is visiting England at the request of the Minister of Education for China and by invitation of the Universities' China Committee in London.

Nature reports that Bjorn Helland-Hansen, the hydrographer, head of the Meteorological Institute of Bergen, was arrested some six months ago and is still in prison.

DR. ROBERT D. GILLESPIE, London, chief psychiatrist of the British Royal Air Force, delivered on November 30 the ninth Weir Mitchell Oration of the College of Physicians of Philadelphia. His topic was "Psychoneuroses in Peace and War and the Future of Human Relationships."

DR. J. J. GALLOWAY, professor of geology at Indiana University, spent the week of October 27 to 31 as visiting lecturer in the department of geology at Smith College. On October 27 he gave a general college lecture on "Ancient Rulers of the Earth," and during the week conducted a series of seminars within the department on the following subjects: Opportunities for Women in Geology, Geologic Fallacies, Origin of Petroleum, Biologic Principles in Paleontology, Major Trends in Foraminiferal Evolution.

THE Herzstein Lectures, given in alternate years under the auspices of the School of Medicine of Stanford University and the Medical School of the University of California, will be given by Professor E. Braun-Menendez, of the Physiological Institute of the University of Buenos Aires. He will speak on March 9, 11 and 13 on "Experimental Renal Hypertension." The Morris Herzstein Lectures were established in 1929, under a provision of the will of the late Dr. Morris Herzstein, of San Francisco.

AN Associated Press dispatch states that the University of Leyden, founded in 1575, will be closed in answer to a student strike which protested against the dismissal of a Jewish professor.

A DIRECTORY of schools of agriculture in Latin America, the first publication of its kind, has been completed by the U. S. Office of Education. The publication lists by countries 182 institutions and 38 experiment stations.

SEVENTEEN physicians, specialists in various fields

in medicine, arrived recently in New York. They have been sent by the Government of Chile for a four-month course of study in American hospitals.

THE Australian government has under consideration the establishment of a National Medical Service to provide free medical treatment for every one. To put the plan into effect the expenditure of $17,000,000 will be required, and the estimated annual cost is expected to be $22,000,000.

The British Medical Journal states that the Pavlov laboratories in Leningrad are conducting research on the effect of various pharmaceutical substitutes on the higher nervous system. The work is going on regularly and systematically despite the proximity to the front.

THE American Society for X-ray and Electron Diffraction will meet at Boston on December 31. In the morning a joint session will be held with the Mineralogical Society of America in the Hotel Statler.

THE fiftieth anniversary of the founding of Drexel Institute of Technology, Philadelphia, was celebrated on December 17 at the Founder's Day ceremonies held in the college auditorium, followed by the traditional students' Christmas exercises. Members of the Drexel family, educators from neighboring colleges and schools, members of the Drexel board of trustees, and the entire faculty and student body of the college attended to pay tribute to the memory of Anthony Joseph Drexel, the Philadelphia financier and philanthropist, who founded the college in 1891. President Parke R. Kolbe presided at the exercises.

A SPECIAL tuition-fee defense course, designed to train radio technicians, is being conducted at New York University. The course, subsidized by the U. S. Office of Education, is open to twenty-five selected high-school graduates with a background of physics, chemistry and mathematics. It began on November 10 and will continue for nineteen weeks.

ACCORDING to the *Journal* of the American Medical Association, the Chicago Cancer Committee, Inc., has been organized as a liaison educational agency; Dr. Ludvig Hektoen, executive director of the National Advisory Cancer Council, is chairman. The purpose is to disseminate information on the symptoms, diagnosis, treatment and prevention of cancer, to aid indigent cancer patients to obtain treatment and to work toward the establishment of hospital and other necessary facilities. Dr. William F. Petersen, chairman of the board of governors of the Institute of Medicine of Chicago, is treasurer of the committee; the directors include Dr. John A. Wolfer, chairman of the cancer committee of the Illinois State Medical Society; Dr. Bowman C. Crowell, associate director of the American College of Surgeons; Mrs. Arthur I. Edison, state commander of the Women's Field Army of the American Society for the Control of Cancer, and Alexander Ropchan, director of the health division, Council of Social Agencies, secretary.

THE department of medicine of the Medical School of the University of California has instituted a course on the cyclotron and its products. This course is probably the first of its kind given for a large group of medical men. Instructors are members of the staff of the Radiation Laboratory of the University of California in Berkeley, of which Dr. Ernest O. Lawrence is director. Development of the cyclotron in medical and biological research has been under the direction of Dr. John H. Lawrence, assistant professor of medicine in the Medical School, and a brother of Dr. Lawrence.

IT has been the practice for professional societies in the various fields to encourage students of these professions to participate in the work of the societies, while still in college. The Institute of Radio Engineers recently took a step in this direction by appointing representatives at sixty-five educational institutions. These representatives are authorized to use the name of the institute in connection with activities caried on by student members, with the cooperation or under the supervision of the institute representative.

ACCORDING to the *Journal* of the American Medical Association the national government of Ecuador, aided by grants from the Rockefeller Foundation, has established a National Institute of Hygiene in Guayaquil as a part of the national department of health. A building has already been constructed by the government, and the Rockefeller Foundation will provide funds for equipment and contribute to the salaries of the personnel and to the general expenses. The foundation will continue its support on a decreasing scale for five years until the government takes over full responsibility. It will also provide fellowships for the training of personnel. The first director will be Dr. Atilio Macchiavello of Chile, who will hold the position for two years to complete the organization. Dr. Juan A. Montalván, a member of the staff of the health department, will then become the director. Dr. Montalván is now in the United States in training for the position. There will be departments of tropical pathology, bacteriology and immunology, epidemiology, pathology and diagnosis, chemistry and food analysis, control of biologic products, production of biologic products and a number of general services. The Rockefeller Foundation has granted fellowships for the present year to José Crusellas Ventura, who is to take charge of the department of chemistry and

food analysis, and to Dr. V. Mosquera Ferrés, who will be director of the department of pathology and diagnosis.

THE Trustees of Oberlin College recently awarded contracts for the construction of a Physics Laboratory. This is one unit of a proposed science quadrangle. A second unit, a Biology Laboratory, is in early prospect. The structural steel for both units was purchased some months ago and is on the ground. The quadrangle will be "anchored" to the present Chemistry Laboratory, chemistry being the only science at present in permanent quarters. On July 22 President Wilkins and Professor Taylor shared the ceremony of breaking ground for the physics unit, the construction of which is now under way. The laboratory will cover a space 59×194 feet and will consist of two floors and basement. The estimated cost of the building and its furnishings is $390,000. The architect is Edward J. Schulte, of Cincinnati. Besides unusually thorough provisions, designed under the direction of Professor C. E. Howe, for electrical distribution to student positions throughout the laboratory, this unit will house a well-equipped instrument shop, including glass-blowing facilities, serving all the science departments of the college.

CONDITIONS in Russia prevented the attendance of any Russian delegates at the International Congress of Genetics held in Edinburgh in August, 1939. According to *The Journal of Heredity* up to the last minute it was expected that there would be a considerable Russian delegation at the congress. The papers or abstracts submitted by the Russian delegates were on file with the Secretariat of the congress at the time it was held. Since these papers were not read by the authors they were not included in the proceedings, which have recently been published. It is the wish of many of the Russian workers that these papers somehow be made available as a matter of permanent record. The papers dealing with Drosophila are being issued by the Drosophila Information Service and thus will be available. Through the instrumentality of the American Documentation Institute the other contributions are being afforded supplemental publication so that genetic workers can obtain them as microfilms or as photoprints.

DISCUSSION

MEAN SEA-LEVEL AND SAND MOVEMENTS

A RELATION between mean sea-level and the height of sand along the pier at the Scripps Institution of Oceanography at La Jolla, Calif., was shown by La Fond.[1] He stated: "It should not be concluded that the rise in sea-level alone causes a building up of the sand, but many of the factors which influence the sea-level must likewise affect the sand movements." The conclusion that the rise in sea-level in any way causes the change in sand level can not be sustained; however, the factors which cause the changes in sea-level likewise change the shore-line shape so that a retreat or advance of the mean high-tide line (used for convenient reference only) will appear as a depth change along a fixed reference line, such as the La Jolla pier, where accurate measurements of position are easily made.

Fig. 1 shows the height of mean sea-level on the La Jolla tide staff, and the average height of the sand at fifty equally spaced stations along the pier. The data of La Fond are not included; the additional data were furnished by Dr. H. U. Sverdrup, director of Scripps Institution of Oceanography.

The flow of water past a headland projecting into the stream will induce an eddy current to form in the bight in the lee of the headland, causing the shore-line to take the form of a logarithmic spiral.[2] When sea-level is high along the Pacific Coast of the United States, it is low along the South American coast, necessitating an interchange of water between the hemispheres. Upwelling and prevailing winds also influence currents.[3]

The shore-line shapes resulting from current reversals will then be similar to those shown in Figs. 2A and 2B; when those two forms are superimposed, as in Fig. 2C, the retreat and advance of the high-water lines become apparent. La Jolla is situated in a position similar to the area marked "X." Had simultaneous observations been taken at position "Z," an increase in the sand height would have been noted during the *fall* in the sea-level height, while in the vicinity of "Y" no change in sand height would have been found, other than minor oscillations. This can be shown more easily by a survey of the shore-line in the bight during March and another in September, accurately locating a particular contour near the high-water line.

The seasonal travel of sand between the rocky headlands which form the California coast has long been observed, although no adequate explanation has been given. However, competent observers have noted the summer and winter oscillations and have concluded that but little sand passes the headlands, the quantity on each section of beach remaining approximately constant, recognizing that stream additions of sand occur in some bights and wind denudations in others. This view is reached by examination of the rock

[1] Eugena La Fond, SCIENCE, July 29, 1938.

[2] Harry Leypoldt, *Shore and Beach*, January, 1941.

[3] *Ibid.*, *U. S. Naval Institute Proceedings*, May, 1939.