Anderson, of the California Institute of Technology; to the late Dr. Julius A. Nieuwland, of Notre Dame University, and to Dr. E. V. McCollum, of the Johns Hopkins University.

THE SOUTHWESTERN DIVISION OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE eighteenth annual meeting of the Southwestern Division of the American Association for the Advancement of Science will meet in association with the Southwestern Section, Mathematical Association of America, at Albuquerque, New Mexico, from April 25 to 28. The University of New Mexico will be the host institution for this meeting. Dr. John D. Clark, University of New Mexico, is chairman of the general committee in charge of local arrangements.

On Monday evening, April 25, the John Wesley Powell Lecture will be given by Dr. E. R. Hedrick, provost of the University of California at Los Angeles, on "The Relation of Science to Economics and to War." This lecture is sponsored by the Southwestern Division as a courtesy to the community in which the meeting is held, and is open to the general public.

On Wednesday evening the presidential address will be delivered on the topic of "The Origin of Subterranean Carbon Dioxide" by Dr. F. E. E. Germann, University of Colorado.

On Thursday, April 28, an all-day excursion is planned which will be of general interest to all the sections of the division. The route of the excursion will include the historic camping site of Coronado, present-day and prehistoric Indian villages and some of the most interesting geological formations of the state. Much of the trip lies through national forests, and the Forestry Service staff, located at Albuquerque, is cooperating with the division in the matter of guides and transportation.

The opening general session of the meetings will be held on Monday morning at eleven o'clock, and sectional meetings start at two o'clock of the same day. A feature of Monday afternoon will be the reception tendered to the association and its guests by Dr. F. J. Zimmerman, president of the University of New Mexico, at his home. Sigma Xi is planning a dinner and address for Tuesday evening, April 26. In addition several other sectional dinners and luncheons are being planned. Numerous scientific and commercial exhibits are being scheduled which will place more than the usual emphasis upon this aspect of the program.

Titles of papers to be read at the meetings should be sent directly to the following section chairmen or secretaries:

Biological Science Section:
Chairman: R. J. Gilmore, Department of Biology, Colorado College, Colorado Springs, Colo.
Secretary: R. H. Canfield, Las Cruces, New Mexico.

Mathematics Section (Southwestern Section, Mathematical Association of America):
Chairman: R. F. Graesser, Department of Mathematics, University of Arizona, Tucson, Ariz.
Secretary: W. C. Risselman, Department of Mathematics, University of California, Los Angeles, California.

Physical Science Section:
Chairman: W. M. Craig, Department of Chemistry, Texas Technological College, Lubbock, Texas.
Secretary: C. W. Botkin, Department of Chemistry, New Mexico College of Agriculture and Mechanic Arts, State College, New Mexico.

Social Science Section:
Chairman: D. D. Brand, Department of Anthropology, University of New Mexico, Albuquerque, New Mexico.
Secretary: W. H. Hill, Department of Anthropology, University of New Mexico, Albuquerque, New Mexico.

VEON C. KIECH,
Secretary

SCIENTIFIC NOTES AND NEWS

THE Bruce Gold Medal of the Astronomical Society of the Pacific has been awarded to Dr. Edwin P. Hubble, of the Mount Wilson Observatory. The Board of Directors of the society each year selects the recipient of the award from the nominations of the directors of six observatories: Greenwich, Paris, Córdoba, Harvard, Yerkes and Lick.

THE cross of the Order of Leopold II has been conferred by King Leopold III of Belgium on Dr. Hugh S. Taylor, chairman of the department of chemistry of Princeton University, in appreciation of his services to education while occupant in 1937 of the Francqui chair at the University of Louvain.

THE gold medal of the International Faculty of Sciences, London, given in recognition of contributions to scientific advancement, was awarded on January 21 to Dr. Ellice McDonald, director of the Biochemical Research Foundation of the Franklin Institute, for his contributions to cancer research.

DR. EDWARD L. KEYES, JR., professor of urology in the Cornell University Medical School, in recognition of his "outstanding service to humanity," was presented with the William Freeman Snow medal of the American Social Hygiene Association at the twenty-fourth annual dinner meeting in New York City on February 3.

DR. THOMAS CHARLES POULTER, since 1936 director of the Research Foundation of the Armour Institute of Technology, Chicago, senior scientist and second-in-command of the Byrd Antarctic expedition of 1933–35, was presented on January 19 with a Congressional Medal "for scientific accomplishment unequalled in Polar exploration." His special field was auroral and meteor observations and geophysics. A dinner in his honor was given in the evening at the Palmer House, at which, in the presence of four hundred people, addresses were made by Rear Admiral Hayne Ellis, commandant of the Ninth Naval District; Brigadier General Philip B. Peyton, commanding general at Fort Sheridan; Major Chester L. Fordney, U. S. Marine Corps; Brigadier General Charles Gates Dawes, formerly ambassador to England and formerly Vice-President of the United States; Dr. Arthur H. Compton, of the University of Chicago; James D. Cunningham, chairman of the board, and Dean Henry Townley Heald, acting president of the Armour Institute.

DR. DOUGLAS JOHNSON, professor of physiography at Columbia University, was elected a foreign member, and Dr. Eugene Van Cleef, professor of geography at the Ohio State University, a corresponding member of the Geographical Society of Finland on the occasion of the celebration of the fiftieth anniversary of the founding of the society.

DR. E. D. MERRILL, Arnold professor of botany, administrator of botanical collections and director of the Arnold Arboretum of Harvard University, has been elected an Académico Honorario of the Instituto del Museo, Universidad de la Plata, Argentina.

AT the Indianapolis meeting of the American Society of Plant Physiologists two Charles Reid Barnes life memberships were awarded, one to Dr. H. L. Shantz, of the U. S. Department of Agriculture, already recorded in SCIENCE, and one to Dr. Alexander P. Anderson, of the Tower View Laboratories, Red Wing, Minn. Professor H. H. Dickson, of Trinity College, Dublin, who developed the cohesion theory of sap ascent in plants, and Dr. Alfred Ursprung, of Fribourg, Switzerland, who developed accurate methods of measuring osmotic relations in plant cells, were elected corresponding members.

AN American Academy of Dermatology and Syphilology was organized at a meeting held in Detroit on January 14 and 15. The following officers were elected: Drs. Howard Fox, New York, *president;* Paul A. O'Leary, Rochester, Minn., *vice-president;* Earl D. Osborne, Buffalo, *secretary,* and Clyde L. Cummer, Cleveland, *treasurer.*

CROSBY FIELD, president of the FlakIce Corporation, Brooklyn, was elected at the recent New York meeting president of the Society of Refrigerating Engineers to succeed H. M. Williams.

THE new president and council of the Society of American Foresters, elected for the two-year period 1938–39, have taken office. Dr. Clarence F. Korstian, director of the Forest of Duke University, is president; William G. Howard, director of the Division of Lands and Forests of the Conservation Department, Albany, New York, is vice-president.

AT the annual meeting of the Harvey Society, held on January 28, 1938, the following officers were elected for the year 1938–1939: *President,* Dr. Philip E. Smith; *Vice-president,* Dr. Herbert S. Gasser; *Treasurer,* Dr. Kenneth Goodner; *Secretary,* Dr. McKeen Cattell (reelected). Dr. Hans T. Clarke, Dr. James D. Hardy and Dr. William S. Tillett were elected members of the council.

DR. HENRY F. HELMHOLZ, Rochester, Minn., was elected president of the International Congress of Pediatrics, which met in Rome in September, and Dr. Kenneth D. Blackfan and Dr. Charles F. McKhann, both of Boston, have been elected general secretary and treasurer, respectively. The next meeting will be held in Boston, probably in August or September, 1940.

The Cornell Alumni News reports that Dr. Wilder D. Bancroft, professor of chemistry emeritus, is recovering from serious injuries received when struck by an automobile on January 12.

DR. ROBERT WILLIAMS WOOD, professor of experimental physics at the Johns Hopkins University since 1901, and Dr. Herbert Spencer Jennings, professor of zoology since 1906, will retire in June. President Bowman has invited them to continue their researches at the university and has obtained grants to aid them in their experiments.

PROFESSOR WILLIAM N. BARNARD has been appointed director of the Sibley School of Mechanical Engineering in the College of Engineering of Cornell University. He has been head of the department of mechanical engineering for eighteen years and during the past year and a half has been acting director of the school.

DR. JOHN MULHOLLAND has been appointed assistant dean of the College of Medicine of New York University. He succeeds Dr. Currier McEwen, who was made dean after the death of Dr. John Wyckoff in June.

DR. KARL KORNBLUM, assistant professor of radiology in the Graduate School of Medicine of the University of Pennsylvania and director of the x-ray-radium department of the Graduate Hospital, has been elected professor of roentgenology in the Jefferson Medical College of Philadelphia.

DR. SIEGFRIED VON CIRIACY-WANTRUP, authority on land utilization, has been appointed to a professorship at the Giannini Foundation of the University of California. He has been working in the College of Agriculture for the past six months under a fellowship of the Rockefeller Foundation.

PROFESSOR ALBERT E. PARR, a graduate of the Royal Observatory of Oslo, who has been director of marine research at Yale University and curator of the Bingham oceanographic collection, has been appointed director of the Peabody Museum. He had been associated with the Marine Biological Station of Norway and the Norwegian Bureau of Fisheries, joining the faculty of Yale University in 1927. He succeeds Dr. Richard S. Lull, Sterling professor of paleontology, who has been acting director since his retirement from the directorship of the museum in 1936. Dr. Lull has been for thirty years a member of the faculty.

W. M. H. GREAVES, chief assistant at the Royal Observatory, Greenwich, has been appointed Astronomer Royal for Scotland and professor of astronomy in the University of Edinburgh. He succeeds Professor R. A. Sampson, who recently retired.

AT the Office of Cancer Investigations of the U. S. Public Health Service at the Harvard Medical School, Dr. H. B. Andervont, biologist since 1930, has been promoted to the rank of senior biologist. Dr. M. J. Shear, biochemist at this station since 1931, has been promoted to the rank of senior biochemist.

DR. E. W. RUSSELL has been appointed Goldsmiths' Company's soil physicist at the Rothamsted Experimental Station, in succession to Dr. G. W. Scott Blair, who has been appointed head of the department of dairy chemistry at the National Institute for Research in Dairying at Reading.

DR. J. A. PRESCOTT, professor of agricultural chemistry in the University of Adelaide, has been appointed director of the Waite Institute, succeeding Professor Richardson, who has been appointed deputy chief executive officer of the Commonwealth Council for Scientific and Industrial Research.

DR. ARTHUR H. COMPTON, professor of physics at the University of Chicago, has accepted the Protestant cochairmanship of the National Conference of Jews and Christians. Dr. Compton succeeds the late Newton D. Baker. The Catholic cochairman is Professor Carlton J. H. Hayes, of Columbia University, and the Jewish cochairman is Roger W. Straus, of New York, industrialist and philanthropist.

DR. C. I. BLISS, who returned to America in December, following two years of study with Professor R. A. Fisher at the University of London and two years as foreign specialist at the Institute of Plant Protection in Leningrad, is spending the months of February and March at the Lilly Research Laboratories in Indianapolis as consultant on the design and analysis of biological assays.

DR. PHILIP BARD, professor of physiology at the School of Medicine of the Johns Hopkins University, will deliver the fifth Harvey Society lecture of the current series at the New York Academy of Medicine on February 17. He will speak on "Studies on the Cortical Representation of Somatic Sensibility."

THE Jesup Lectures, given under the auspices of the department of zoology at Columbia University, will be delivered by Dr. John H. Northrop, of the Rockefeller Institute, on February 25, March 1, 4, 8, 11 and 15, in Schermerhorn Hall, at 5 P. M. The subject is: "Chemistry of Proteolytic Enzymes and Bacteriophage."

THE fourteenth Ludvig Hektoen Lecture of the Frank Billings Foundation of the Institute of Medicine of Chicago will be delivered by Dr. William C. Rose, professor of biochemistry at the University of Illinois, on February 25 at the Palmer House. His subject will be: "The Physiology of Amino Acid Metabolism."

RECENT visitors at the School of Tropical Medicine of the University of Puerto Rico include: Dr. E. G. Nauck, of the Institute of Tropical Medicine at Hamburg, who stopped at San Juan for a few days, *en route* to Santo Domingo, Venezuela and Colombia. Dr. Elíseo Ramírez, who is at present director of the Laboratory of the Federal Health Department and professor of pathology at the Military Medical School of Mexico City and who is to direct the new Institute of Tropical Medicine there, arrived with Dr. P. Varela, formerly fellow of the Medical Section of the League of Nations. Dr. Dana W. Atchley, of the department of preventive medicine, and Dr. Ramón Castroviejo, of the Institute of Ophthalmology of the College of Physicians and Surgeons in New York City, attended as guest speakers the annual meeting of the Puerto Rico Medical Association held on December 17, 18 and 19. Dr. Atchley spoke at a weekly conference of the school on "The Rôle of Sodium in Clinical Medicine." Dr. Robert M. Yerkes, director of the Laboratories of Primate Biology of Yale University, arrived on a short visit to see the work of the Free Range Primate Colony on the Island of Santiago. He lectured at the school on "Morphine Addiction in the Chimpanzee." Dr. H. D. Tate, of the Bureau of Animal Industry at Washington, is at the school for the winter working on the problem of tick eradication. Dr. Donald S. Martin, of Duke University, is spending the winter in Puerto Rico and will work with Dr. Arturo L.

Carrión, of the department of mycology and dermatology of the school.

THE ninth annual meeting of the American Association of Physical Anthropologists will be held at the University of Pittsburgh in conjunction with the American Association of Anatomists from April 14 to 16.

DISCUSSION

"LODI MAN"

REWRITINGS in the press of the authenticated University of California release on "Lodi Man" have resulted in certain unintended emphases which the present statement is intended to correct. It may be said at the outset that the findings positively established relate to cultural sequence only. Conclusions as to geology, skeletal human type and age are as yet only tentative.

It has long been known that the region of Stockton, Lodi and Galt, and in part north to Sacramento, about the middle of the Great Valley of California, contained some distinctive archeological forms, such as crescentic obsidian blades and decorated clay balls. But interest at first was in typological rather than chronological problems. In 1929 Schenck and Dawson hesitantly distinguished an earlier and a later cultural horizon.[1] From about 1933 on, Sacramento Junior College, under the leadership of President Lillard, excavated in a series of mounds, and in 1936 published a compact report in which the two periods (plus a recent one) were positively separated.[2] though without the itemized grave-by-grave listing of artifacts which would have rendered an independent check possible.

During 1936–37, R. Heizer and A. Krieger were in charge of intermittent explorations of the area for the University of California. Heizer had previously participated in the Sacramento College diggings, while a student there. In the summer and fall of 1937 he headed a group which excavated further, partly with support from Mr. and Mrs. Beverly Blackmer, whose assistance is gratefully acknowledged. President Lillard also generously put at Heizer's disposal the full field notes recorded during several years of work by Sacramento, thus multiplying several fold the data available to the university. An analytic comparison of individual grave finds established the following conclusions:

There were two native cultures in the area. Certain types of artifacts occur only with certain others. A second class of artifact types occur only with one another, not with types of the first class. The second class is occasionally found with Caucasian objects, hence this culture continued into the historic period and must be the later of the two. Most sites contain material of only one of the two cultures, which are therefore mainly mutually exclusive and separate in time. In a few sites both cultures occur, but in separate graves. These two classes of graves differ less in absolute depth or superposition—all the culture-bearing levels are rather shallow—than in the soil in which they were made and with which they were refilled; indurated clay for first-period graves, alluvium for second. First-period burials are normally extended, second-period flexed.

The cultural differences are of three degrees. First, there are fundamental types exclusively peculiar, such as pencil-shaped slate rods in the earlier culture and clay balls and magnesite cylinders in the later. Second, there are types which carry through, such as charmstones, beads of *Olivella,* disks of *Haliotis,* but with a consistent alteration of form or subtype. Third, a minority of artifacts are common to the two cultures. So far as the purely cultural evidence goes, there may accordingly have been a time gap between the two cultures, but need not have been one. It is conceivable that sites with a transitional culture may yet be discovered. The significance of the results lies in the fact of a cultural succession—the second time, only, that such a succession has been fully established in California—the first being the two (or three) horizons independently recognized in the Santa Barbara channel region by David Rogers and Olson. In Heizer's opinion it is the earlier of the two Lodi-Galt or delta cultures which has the greater affinity to the Santa Barbara cultures.

As regards racial type, the present preliminary indications are that skulls from graves of the earlier culture are narrower and of "pseudo-Australoid" or "Palaeo-American" type. However, the indurated clay matrix has prevented intact recovery of many of the earlier skulls. Of those which are measurable, some are in Berkeley, some in Sacramento, some in Washington. They have not been assembled for systematic study and comparison with the later-period skulls. Until this has been done, all findings as to racial type should be regarded as impressionistic and provisional. That two races should eventuate seems likely enough in view of Gifford's having previously separated out a minority "Buena Vista type" from the Indian skulls of the San Joaquin valley.[3]

Another problem is raised by the soil formations involved. This is now being investigated by C. O. Sauer, geographer, and H. Jenny, soil chemist, at

[1] *Univ. Calif. Publ. in Am. Arch. Ethnol.,* 25: 289–413; see especially p. 402.

[2] J. B. Lillard and W. K. Purves, *Sacramento Junior College, Dept. Anthrop. Bull., 1.*

[3] *Univ. Calif. Publ. in Am. Arch. Ethnol.,* 22: 217–390, 1926, especially pp. 246–7.