

kaolinite; however, x-ray diffraction analysis of both systems showed that the new phosphate phase was the only one present, the kaolinite having been completely dissolved. It can be seen then that the formation of aluminum phosphates at the expense of kaolinite is a solution-precipitation phenomenon involving dissociation of aluminum from the kaolinite surface and destruction of the kaolinite crystal, which is in accord with the aluminum-dissociation and solubility-product

principles advanced (5, 6) to explain phosphate fixation by soil minerals. Further studies are being conducted with kaolinite and other minerals to find the effects of the phosphate solution concentration, pH , and temperature.

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References and Notes

1. L. E. Ensminger, *Soil Sci. Soc. Amer. Proc.* **13**, 170 (1949).
2. J. F. Haseman, E. H. Brown, and C. D. Whitt, *Soil Sci.* **70**, 257 (1950).
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4. E. D. Glover, *master's thesis*, Univ. of Wisconsin (1952).
5. C. V. Cole and M. L. Jackson, *Soil Sci. Soc. Amer. Proc.* **15**, 84 (1951).
6. P. F. Low and C. A. Black, *ibid.* **12**, 180 (1948).
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12 July 1954.



Association Affairs

Programs of the Berkeley Meeting, 26–31 December 1954

Advance indications last spring that this year's 121st meeting of the Association at the University of California at Berkeley would be the largest diversified scientific meeting ever held on the Pacific Coast are being realized. In addition to the programs of the Association and its 18 sections, 59 societies and other scientific organizations have scheduled more than 300 sessions; another 30 societies will cosponsor appropriate symposiums. It will also be one of the largest meetings in the long history of the AAAS, now in its 107th year.

The size of the attendance, however, is only one aspect of a successful meeting. It assures that one will find friends and coworkers in one's specialty also attending the meeting, but the physical arrangements, the quality of the programs, the opportunities to meet scientific leaders from other parts of the world, the impact of new concepts, and the general stimulation of informal discussions are all factors of importance. In these respects, too, the Berkeley meeting should be particularly satisfactory.

The campus of the University of California, which is remarkably compact for so large an institution, has an adequate number of well-equipped session rooms. With the exception of the National Geographic Society's annual lecture and accompanying film, to be held in the Berkeley High School auditorium, and the sessions of Section P at the Hotel Claremont, all sessions for papers, symposiums, and evening addresses will be held on the campus. Center of the meeting is the large Gymnasium for Men, which will house the one AAAS Registration-Information Center, the Visible Directory of Registrants, the AAAS Science Theatre, and the AAAS Annual Exposition of Science and Industry—with 114 booths. Directly across the street, the University of California Alumni Association has generously made available its new luxuriously furnished Lounge for all who attend the meeting. A variety of university laboratories and museums will be of interest to scientists in all principal fields.

An unusual variety of housing accommodations are available, ranging from the university dormitories—two persons to a room at the nominal charge of \$2 each the

first night, \$1 per night thereafter—and International House, to hotels and motels. Although single rooms near the campus are now scarce, there are ample accommodations in Berkeley, at moderate rates, if colleagues will share a twin-bedded room. Four university cafeterias grouped in one central location will be particularly convenient for luncheons and dinners. The California Academy of Sciences in Golden Gate Park, San Francisco, has issued an invitation to all visitors to tour the Science Museum with its science library and research departments, the Steinhart Aquarium, and its new Morrison Planetarium (admission free to all registrants).

The 121st meeting will have a decidedly international aspect resulting from the concurrence of the Third Berkeley Symposium on Mathematical Statistics and Probability, a 4-day International Conference on Animal Venoms, and the program of the International Union for the Study of Social Insects. The American Physical Society has arranged for the presence of Fritz Zernike, 1953 Nobel prize winner from the Netherlands. Besides the scientists from Europe and the Eastern Hemisphere, a heavy representation from Hawaii, the Philippines, and other Pacific areas is anticipated. In addition to the annual Academy Conference, made up of delegates of the 42 academies of science affiliated with the Association, there will be the recurrent Conference on Scientific Editorial Problems and the Conference on Scientific Manpower. The following data on participating organizations and programs indicate the scope and quality of the meeting.

AAAS as a Whole

General symposium, *Science and Society*: I. "Natural resources: power, metals, food," arranged by Louis B. Slichter; II. "Population problems," by Curt Stern; III, "Impact of science on society," by Roger R. Revelle, 27–29 Dec.

AAAS presidential address by E. U. Condon, and reception, 28 Dec.

AAAS Council meetings, 27, 30 Dec.

Biologists' smoker (for all registrants), 30 Dec.

(Note: For brevity, except for certain joint programs, official cosponsorships have been omitted in the following tabulation.)

A—Mathematics

Section A and the *American Mathematical Society*—Five sessions for contributed papers and invited addresses, arranged by R. E. Langer and D. H. Lehmer, 30, 31 Dec.

American Statistical Association and *Pacific Coast Committee on Statistics of the Social Science Research Council*—Arranged by Maurice I. Gershenson: "Contributions of statistics to physics," and "Regional indexes of business activity," 27 Dec.; "Regional unemployment estimates," 28 Dec.

Institute of Mathematical Statistics—Sessions for papers, arranged by Leo Katz and Evelyn Fix, 26 Dec.

Third Berkeley Symposium on Mathematical Statistics and Probability, sponsored by the Statistical Laboratory of the University of California, arranged by Jerzy Neyman, director, and Elizabeth L. Scott—"Mathematical statistics" and "Statistics in biology and genetics," 27 Dec.; "Statistics in medicine and public health," 28, 29 Dec.; "Mathematics" and "Statistics in psychology," 30 Dec.; "Statistics in industrial research" and "Statistics in physics," 31 Dec.

There will be a joint beer party and dinner for all statisticians and mathematicians.

B—Physics

American Physical Society—About 30 sessions of contributed and invited papers, on nuclear physics, arranged by A. C. Helmholz; high-energy machines, by E. J. Lofgren; solid-state and microwave physics, by Charles Kittel; electron physics, by W. P. Dyke; theoretical physics, by Edward Teller; astrophysics, by Otto Struve; and instrumentation, arranged by Joseph Kaplan, 28–30 Dec.; physicists' dinner, cosponsored by *Section B* and *Sigma Pi Sigma*, 30 Dec.

American Meteorological Society—Symposium, "Climatology," 28 Dec.; and six or more sessions for contributed papers, arranged by Kenneth C. Spengler.

C—Chemistry

Section C and the *American Chemical Society, California Section*—Symposium, "Petroleum chemistry," arranged by John W. Givens, 27 Dec.; symposiums, "Viruses" and "Nucleic acids," arranged by Wendell M. Stanley, 28 Dec.; symposium, "Chemistry in the harnessing of biological resources," arranged by J. C. Lewis, 29 Dec.; sessions for contributed papers, 26, 30 Dec.; chemists' dinner and vice presidential address by Wendell M. Latimer, 29 Dec.

Alpha Chi Sigma—Chemists' luncheon, 28 Dec.

Pacific Southwest Association of Chemistry Teachers—Sessions for contributed papers, arranged by Mother Agnes Schmit, 28 Dec.

D—Astronomy

Section D and the *Astronomical Society of the Pacific*—Symposium, "Nebular red shifts," 27 Dec.; symposium, "Spatial distribution of galaxies," 28 Dec., and symposium, "Distribution of stars in the Russell-Hertzsprung diagram," 29 Dec., arranged by Louis G. Henyey, Jerzy Neyman *et al.*; sessions for contributed papers, 27–29 Dec.; society dinner and vice presidential address, "The new science of radio astronomy," by Bart J. Bok, 29 Dec.; trip to Lick Observatory, 30 Dec.

Meteoritical Society—Sessions for contributed papers, arranged by John A. Russell, 28, 29 Dec.

E—Geology and Geography

Section E—Contributed papers in general geography, cosponsored by the *Association of American Geog-*

raphers, Pacific Division and the *Association of Pacific Coast Geographers*, 28 Dec.; symposium, "Earth sciences from the air," arranged by Parker D. Trask, and geologists' smoker and vice presidential address by Meredith F. Burrill, 29 Dec.; contributed papers in general geology, cosponsored by the *Geological Society of America*, 30 Dec.

Arctic Institute of North America—Sessions for papers on arctic science, arranged by John L. Mohr and Joseph T. Flakne, jointly with the Western Society of Naturalists, 28–30 Dec.

Division of Mines, State of California—Mineral exhibit of the Division and large relief map of California, in Ferry Building, San Francisco, open daily, 9 A.M. to 4 P.M. Geologic field trip of the Bay Area and central coast ranges, arranged by Olaf P. Jenkins and Gordon B. Oakeshott, 28 Dec.

National Geographic Society—Annual illustrated lecture with AAAS by W. Robert Moore, "Five-star Burma," 27 Dec.

National Speleological Society—Session for papers and business meeting, arranged by Burton Faust, 28 Dec.

F—Zoological Sciences

International Conference on Animal Venoms, arranged by Nandor Porges, jointly sponsored by *Sections F* and *N*—10 or more sessions on all phases of all groups of venomous animals, 27–30 Dec.

Cooper Ornithological Society—Session for contributed papers, arranged by Frank A. Pitelka, 29 Dec.

Herpetologists League—Arranged by Angus M. Woodbury and Joseph Gorman: symposium, herpetologists' dinner, 29 Dec.; and sessions for contributed papers, 29, 30 Dec.

International Union for the Study of Social Insects—Symposium, arranged by T. C. Schneirla, 28 Dec.

Society of Systematic Zoology and *SSZ Pacific Section*—Arranged by R. E. Blackwelder and Robert C. Stebbins: council meeting, symposium, "Animal courtship," film and public lecture on African animals, 27 Dec.; session for papers, open house at California Academy of Sciences, council meeting, 28 Dec.; business meeting, panel on museums, symposium, "Desert evolution," 29 Dec.; session for entomological papers, jointly with the *Pacific Coast Entomological Society*, symposium, "Australian mammals," 30 Dec.; zoologists' dinner and vice presidential address by H. W. Stunkard, cosponsored by *Section F*, 30 Dec.

FG—Biological Sciences

American Society of Limnology and Oceanography—Sessions for contributed papers and business meeting, 28–30 Dec.; symposium, "Recent advances in biological oceanography," arranged by Robert W. Hiatt, 30 Dec.

Beta Beta Beta—Special meeting of Western Region, arranged by Lloyd M. Bertholf, 30 Dec.

Biometric Society, WNAAR—Sessions for papers, arranged by Douglas G. Chapman and Elizabeth Vaughan, 27 Dec.

Ecological Society of America and *ESA Western Section*—Arranged by Russell K. LeBarron and E. C. Stone: sessions for contributed papers and ecologists' dinner, 27 Dec.; session for papers and symposium, "Dew as an ecological factor," 28 Dec.; field trip to Muir Woods (redwoods) and Stinson Beach State Park, 29 Dec.

National Association of Biology Teachers—Arranged by Brother H. Charles: business meetings, 27, 28 Dec.; films and panels, "Biology for pleasure" and

- "Biology for living," 28 Dec.; panel, "Biology for survival," NABT luncheon, and panel, "Biology laboratory problems," 29 Dec.; field trip to Muir Woods and Stinson Beach State Park, 30 Dec.; business meetings, 30, 31 Dec.; conservation education, 31 Dec.
- Society of General Physiologists*—Sessions for invited papers, arranged by John Buck, 30 Dec.
- Western Society of Naturalists*—Symposium, "Natural resources of the West," arranged by Arthur C. Giese, and invited papers in natural history, arranged by John L. Mohr, 27 Dec.; invited papers on "Photochemical effects in biological and biochemical systems," arranged by A. D. McLaren, 27, 28 Dec.; contributed papers in parasitology and business meeting, 28 Dec.; symposium, "The cell," arranged by Daniel Mazia and Roger Y. Stanier, invited papers on "Teaching problems in biology," contributed papers in histology-embryology, contributed papers in ecology, naturalists' banquet and presidential address, 29 Dec.; contributed papers in physiology, 30 Dec.
- G—Botanical Sciences**
- Section G and Botanical Society of America, Pacific Section*—Symposium, "Modern views on tissue differentiation," cosponsored by the *American Society of Naturalists*, arranged by Adriance Foster, and botanists' dinner and vice presidential address by Stanley A. Cain, 30 Dec.; cosponsorship of symposiums of following G societies.
- American Phytopathological Society, Pacific Division*—Arranged by William B. Hewitt: conference on control of soil microorganisms, 27 Dec.; symposium, "Crop sequence and plant disease control," and phytopathologists' banquet, 28 Dec.; demonstrations, sessions for invited papers on soil-borne virus diseases, sessions for contributed papers and symposium, "Mode of survival of plant pathogens in the soil," 29 Dec.
- American Society of Plant Physiologists, Western Section*—Symposium on mineral nutrition, arranged by Perry R. Stout, 29 Dec.
- Mycological Society of America*—Symposium, "Physicochemical control of structural differentiation in the fungi," arranged by Ralph Emerson, 28 Dec.; session for contributed papers, 29 Dec.
- H—Anthropology**
- Section H*—Arranged by Gabriel Lasker: symposium, "Indians of western North America" and session for contributed papers, 28 Dec.; symposium, "Culture change in the Pacific region," and session for contributed papers, 29 Dec.; symposium, "Impact of industrialism," and session for contributed papers on demography and human evolution, 30 Dec.
- I—Psychology**
- Section I*—Sessions for invited papers on learning, arranged by John P. Seward, and on highway safety, arranged by T. W. Forbes, 28 Dec.; sessions for invited papers on brain function, arranged by Donald B. Lindsley, and on human engineering, arranged by Arnold Small, and vice presidential address by Donald B. Lindsley, 29 Dec.
- Society for Research in Child Development*—Sessions for contributed papers, arranged by Lois Meck Stoltz, 27 Dec.
- Western Psychological Association*—Arranged by Rheem F. Jarrett: symposiums, "Present status of psychoanalytic theory" and "Sex differences in personality and intellectual development," 27 Dec.; symposium, "Perception," 30 Dec.
- K—Social and Economic Sciences**
- Section K, Western Economic Association et al.*—Panels, "Regional economic analysis," arranged by David Revzen, and "Cost-benefit analysis for natural resource development," arranged by M. L. Upchurch, 28 Dec.; panels, "Trends in urbanization," arranged by Calvin F. Schmid, and "Structure of cities," arranged by Leonard Broom, 29 Dec.; panel, "Organization of research for western development," arranged by Ernest A. Engelbert and social sciences dinner and vice presidential address, "International consequences of scientific research," by John B. Condliffe, 30 Dec.
- AAAS Committee for Social Physics*—Arranged by Stuart C. Dodd: sessions for invited papers on "Diffusion theory," "Human values measurement," and "Isomorphisms," 27, 28 Dec.
- National Academy of Economics and Political Science* with the collaboration of *Pi Gamma Mu*—Symposium, "National defense against atomic attack," arranged by Donald P. Ray, 27 Dec.
- Society for the Advancement of Criminology*—Symposium, "Education in criminology," arranged by William Dienststein, business meeting, and dinner, 28 Dec.
- (Note: The programs of the *American Statistical Association* and other groups in statistics will be found under A—Mathematics.)
- L—History and Philosophy of Science**
- Section L and Philosophy of Science Association*—Three sessions for contributed papers, 28, 29 Dec.; symposium, "Induction," arranged by E. W. Barankin, and vice presidential address of Chauncey D. Leake, "National loyalty and security in relation to scientific idealism," 29 Dec.
- M—Engineering**
- Section M*—Symposium, "Air pollution," arranged by Lauren B. Hitchcock, 29 Dec.; symposium, "Prosthetic devices," arranged by Eugene F. Murphy and Howard D. Eberhart, 30 Dec.
- N—Medical Sciences**
- Section N*—Four-session symposium, "Physiology of growth—normal and abnormal," arranged by Howard R. Bierman, and including the vice presidential address of Charles Huggins, 27, 28 Dec.
- Alpha Epsilon Delta*—Arranged by Maurice L. Moore: symposium, "Preparation for medical education in the liberal arts college," luncheon, and round-table discussions on premedical education, 30 Dec.
- American Academy of Forensic Sciences*—Symposium on forensic sciences, arranged by Ralph F. Turner, 29 Dec.
- American Association of Hospital Consultants*—Symposium on hospital problems, arranged by Jack Masur, 30 Dec.
- American Psychiatric Association*—Symposium on recent advances in psychiatry, arranged by Jacques S. Gottlieb, 30 Dec.
- Bay Counties Veterinary Medical Association*—Arranged by Joseph M. Arburua: sessions for invited papers on animal diseases, luncheon, and social hour, 28 Dec.
- Donner Laboratory of Biophysics, University of California*—Symposium, "Recent advances in biophysics and medical physics," arranged by Cornelius A. Tobias, 30 Dec.

Pacific Slope Biochemical Conference—Sessions for submitted papers, arranged by David M. Greenberg, 30 Dec.

Society for Experimental Biology and Medicine, Southern California and Pacific Coast Sections—Symposium, "Adrenal-pituitary relationships," arranged by Robert H. Dreisbach, and session for contributed papers, 28 Dec.

Society of American Bacteriologists, Southern California and Northern California-Hawaii Branches—Sessions for contributed papers, arranged by Frances A. Hallman and H. J. Phaff, 28 Dec.

Section Nd—Dentistry

Section Nd, American College of Dentists, American Dental Association and North American Division of International Association for Dental Research—Symposium, "Growth and development," arranged by Wendell L. Wylie, luncheon, symposium, "Radiation hazards in the dental office," arranged by Gordon M. Fitzgerald, 28 Dec.

Section Np—Pharmacy

Section Np, American Association of Colleges of Pharmacy, American College of Apothecaries, American Drug Manufacturers Association, Scientific Section of American Pharmaceutical Association, American Pharmaceutical Manufacturers Association, and American Society of Hospital Pharmacists—Arranged by Donald C. Brodie: symposium, "The pharmacy internship" and three sessions for contributed papers, 28, 29 Dec.

O—Agriculture

Section O—Symposiums, cosponsored by the *Western Society of Soil Science*, "Soil management problems in western agriculture," arranged by H. B. Cheney, and "Water supplies and irrigation," arranged by F. J. Veihmeyer, 27 Dec.; symposiums, "Seed production in the western states," arranged by Frank G. Parsons, and "Problems in horticultural crops," arranged by John H. MacGillivray, 28 Dec.

P—Industrial Sciences

Section P—Arranged by Allen T. Bonnell: round-table sessions on "Basic research—contributions of government, industry, and the university," and luncheon, 30 Dec.

Q—Education

Section Q—Sessions for contributed papers, 27–29 Dec.; concurrent sessions, jointly with *American Educational Research Association*, 27 Dec.; symposium on visual performance, arranged by N. Franklin Stump, 28 Dec.; symposium, jointly with the *International Council for Exceptional Children*, on the exceptional child, and vice presidential address by George C. Kyte, 29 Dec.

AAAS Cooperative Committee on the Teaching of Science and Mathematics—Arranged by John R. Mayor: papers, panel, and evening lecture on "Science teachers for tomorrow," 30 Dec.

National Science Teachers Association—Arranged by Robert Stollberg: panels, "Role of science in the education of youth," "Keeping up to date in science," informal luncheon, buffet supper and social mixer,

27 Dec.; work-discussion groups on "Some problems science teachers must solve," 28 Dec.; session on "Recent research in science" and six concurrent demonstration groups on "Here's how I do it," 29 Dec.

X—Science in General

AAAS Pacific Division—Meeting of executive committee, 31 Dec.

Academy Conference—Business meeting, panel discussion of Academy of Sciences problems, and Academy Conference Dinner, 27 Dec.; Junior Scientists' Assembly—a special program for young scientists—at San Francisco State College, 29 Dec.

American Nature Study Society—Arranged by Ruth E. Hopson: sessions, 26, 27 Dec.; annual meeting and showing of kodachromes, 27 Dec.; joint sessions with NABT, 28, 29 Dec.; field trip to Muir Woods and Stinson Beach State Park, 30 Dec.; sessions, 31 Dec.

Conference on Scientific Editorial Problems—Three sessions for invited papers and discussion, one on "Technical manuals for complex instruments," arranged by Marian Fineman, 29 Dec.

Conference on Scientific Manpower, cosponsored by the *Engineering Manpower Commission, National Research Council, National Science Foundation*, and the *Scientific Manpower Commission*—Sessions for invited papers and discussion, arranged by Thomas J. Mills, 28, 29 Dec.

Honor Society of Phi Kappa Phi—Special program, 29 Dec.

National Association of Science Writers—Symposium, arranged by John Pfeiffer, 28 Dec.

Pacific Science Board—Public Lecture by Alexander Spoehr, 30 Dec.

Scientific Research Society of America—Annual convention and luncheon, annual RESA address by Vannevar Bush and award of William Procter prize, 30 Dec.

Society of the Sigma Xi—Annual Sigma Xi address by Edwin M. McMillan, 29 Dec.; annual convention and luncheon, 30 Dec.

United Chapters of Phi Beta Kappa—Annual address, by Conway Zirkle, 27 Dec.

AAAS Travel Arrangements

A page on AAAS Travel Arrangements has appeared at intervals in the advertising sections of both journals of the Association; a gratifying number of coupons has been received and acknowledged. Group flights to Oakland or San Francisco, 26 Dec., and return, 31 Dec.—either by chartered *first-class* DC 6B or 7 planes (at rates approaching those for coach flights) or as extra sections of existing flights are in the final stage of arrangements. (As on all scheduled flights, individual insurance may be carried.) *All persons east of the Rockies who plan to fly to the meeting and have not sent in a AAAS Travel Coupon are urged to do so immediately.*

Associate Administrative Secretary

RAYMOND L. TAYLOR

