things remarkable. . . . It may bee worth your reading." Libelous is the comment,—"the time-killing dilettante, almost philatelic, quality of Leeuwenhoek's investigations is, as Becking says, too obvious to be overlooked." But Leeuwenhoek has been vindicated by Dobell, and the reviewer recalls the session of the American Association at which Dr. Welch read passage after passage from Dobell's new book until reluctant adjournment near midnight. Dr. Needham says "Dobell's book on Leeuwenhoek, though marred by certain lapses of taste, is probably the most considerable and ingenious study of any seventeenth century biologist extant."

Embryology in the eighteenth century, with which this history concludes, is no climax. There are indeed Haller, Wolff, Buffon and Réaumur with his incubators, but "he nowhere gives any indication of his percentage hatch." (Après avoir vû naître des poulets de plus de trois quarts des œufs d'une couvée, etc., Réaumur, 1749, T. 1, p. 256). The fundamental questions remain unsolved while the observational and experimental data accumulate. Dr. Needham, in his conclusions, presents the limiting factors in a diagram. He has written an excellent book, attempting to clear his own mind, teased with the problems of teleology and the final cause.

That he writes as an Englishman and a chemist is clear from his selection of portraits to illustrate the history of embryology till 1815. William Harvey is the frontispiece; Coiter, fortunately, in excellent full page half-tone; and Leeuwenhoek, but no Malpighi; Robert Boyle, Sir Kenelm Digby, Sir Thomas Browne and his wife Dorothy; with smaller line drawings of De Graaf, Nathaniel Highmore and a group vignette including Buffon to complete the list. English also in his spelling *foetus,* sanctioned by the Oxford Dictionary, which contains this entry:

Latin, *fetus,* incorrectly written *fœtus.* The etymologically preferable spelling with *e* in this word and its cognates is adopted as the standard form in some recent Dicts., but in actual use is almost unknown.

Not so in America! The incorrect diphthong appearing several times on sundry pages is an unnecessary blemish in a book so commendable.

FREDERIC T. LEWIS
HARVARD MEDICAL SCHOOL

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

MEETING OF THE SOUTHWESTERN DIVISION

THE fifteenth annual meeting of the Southwestern Division and associated societies was held in Santa Fé, New Mexico, from April 29 to May 2, 1935, with the Laboratory of Anthropology, the Museum of New Mexico and the School of American Research as the host institutions. The meeting was the largest in the history of the division, with 220 registrants and 142 scientific papers, and the local committee, under the chairmanship of Jesse L. Nusbaum, director of the Laboratory of Anthropology, planned especially well for the smooth and efficient running of the meeting. The New Mexico Public Health Association met with the division, holding its own sessions for papers, and six other organizations, including the Ecological Society of America, were officially represented on the program, especially in the symposium on "The Ecological Aspects of the Emergency Activities of the Government." The second annual conference of investigators engaged in the interpretation of tree rings or in their technology, as developed by Dr. A. E. Douglass and his associates, organized itself on a permanent basis as the Tree Ring Society, with Dr. Douglass as president and H. T. Getty, of the Department of Archeology, University of Arizona, as secretary.

The sixth annual John Wesley Powell lecture was delivered on Monday evening, April 29, at the Museum of New Mexico by Dr. Edgar Lee Hewett, director of the Schools of American Research, on the title: "The Social Sciences in the Program of Education." On May 1 at the Laboratory of Anthropology occurred an important and enthusiastically attended symposium on "Trees: Recorders of History and Climate." The topics and speakers were: I. "Factors Influencing Tree Growth," G. A. Pearson, director of the Southwestern Forest and Range Experiment Station, Tucson. II. "Tree Rings: the Archeologists' Time-Piece," Dr. E. W. Haury, assistant director of Gila Pueblo, Globe, Arizona. III. "Tree Rings: Indicators of Nature's Depression Cycles," Dr. A. E. Douglass, director of the Steward Observatory, University of Arizona, Tucson.

Other general and public lectures were delivered by Dr. W. B. Pietenpol, of the University of Colorado, on "Atomic Nuclei," and by Dr. Walter H. Brown, of Stanford University, on "The Outlook for Public Health Programs in the United States." Under the charge of Colonel C. M. Adams, of the U. S. Public Health Service, there was an exhibit of methods of malaria control in New Mexico, in part illustrated with motion pictures. The annual banquet of the division was held at La Fonda Hotel on Wednesday evening, May 1, following which the retiring president

of the division, Dr. D. S. Robbins, of the New Mexico State College, Las Cruces, made his address on "Science and Religion."

Several brief trips were available to points of interest in and near Santa Fé, and on Thursday, May 2, there was an all-day excursion, of interest especially to archeologists and geologists, to the Bandelier National Monument.

The division as a whole elected officers as follows:

President: Harold S. Colton, director of the Museum of Northern Arizona, Flagstaff.

Vice-president: Jesse L. Nusbaum, Laboratory of Anthropology, Sante Fé, New Mexico.

Secretary-treasurer: Veon C. Kiech, Department of Chemistry, University of New Mexico.

Members of the Executive Committee for 3 years: Stuart A. Northrop, University of New Mexico; E. F. Carpenter, University of Arizona.

Officers of the sections are as follows:

Biological Sciences: Chairman, J. R. Eyer, State College, New Mexico; *Secretary,* R. H. Canfield, Jornade Experimental Range, Alamogordo, New Mexico.

Mathematics: Chairman, F. W. Sparks, Texas Technological College, Lubbock; *Secretary,* W. C. Risselman, State Teachers College, Flagstaff, Arizona.

Physical Sciences: Chairman, S. B. Talmage, New Mexico School of Mines, Socorro, New Mexico; *Secretary,* W. M. Craig, Texas Technological College, Lubbock, Texas.

Social Sciences: Chairman, E. W. Haury, Gila Pueblo, Globe, Arizona; *Secretary,* J. H. Provinse, University of Arizona, Tucson, Arizona.

The sixteenth meeting of the division will be held at Flagstaff and the Grand Canyon, Arizona, from April 27 to 30, 1936, and the seventeenth meeting at Denver, Colorado, jointly with the Pacific Division and the entire association, in June, 1937.

E. F. CARPENTER,
Secretary

STATE ACADEMIES

THE NEW HAMPSHIRE ACADEMY OF SCIENCE

THE seventeenth annual meeting of the New Hampshire Academy of Science was held at McKenzie's Hotel, Franconia, N. H., on Friday and Saturday, May 31 and June 1. The meeting was called to order on Friday at 7:45 P. M. by President Harold A. Iddles. After the presidential address, "The Development of Some Recent Chemical Processes," papers were read by members.

Papers by members were read on Saturday morning, followed by the business meeting. On Saturday afternoon an excursion was made to Wildwood C.C.C. Camp, Lost River, and Franconia Notch. After a banquet on Saturday night, Mr. Richard P. Goldthwait, of the Geology Department of Dartmouth College, gave the invitation lecture, "Living Glaciers in Alaska."

Resolutions were adopted by the academy favoring: (1) A careful and sane revision of the Pure Food and Drug Act; (2) only such advertising as contains statements not misleading; (3) the adoption of legislation adequate to control pollution of public waters, soil erosion and hydraulic development; (4) continued government support of scientific investigation along sane lines; and (5) preventative measures of research and community cooperation in problems of juvenile delinquency.

The following officers were elected for 1935–36:

President, Albert L. Clough, Manchester Institute of Arts and Sciences; *Vice-president,* Professor George M. Robertson, Dartmouth College; *Secretary-treasurer,* Professor George W. White, University of New Hampshire; *Member of Council,* Professor Harold A. Iddles, University of New Hampshire; *Councillor to American Association for Advancement of Science,* Professor Walter C. O'Kane, University of New Hampshire.

GEORGE W. WHITE,
Secretary-treasurer

SPECIAL ARTICLES

THE LUMBAR LOCALIZATION OF PARALYSIS IN EXPERIMENTAL POLIOMYELITIS AFTER INTRANASAL INOCULATION

IN a recent review of the pathogenesis of poliomyelitis[1] I concluded that the available evidence pointed to a spread of the infection from an entering point in the olfactory mucosa of the nose up to the olfactory bulb and thence downwards through the brain-stem to and through the spinal cord. In the same year (1933), Faber and Gebhardt[2] were able to furnish experimental corroboration of such a direction and pathway of invasion in monkeys, by showing the locations of virus after intranasal instillation on successive days of the incubation period. Since then Schultz and Gebhardt[3] and Brodie and Elvidge[4] have shown that intranasal inoculation (which involves

[1] H. K. Faber, *Medicine,* 12: 83, 1933.

[2] H. K. Faber and L. P. Gebhardt, *Jour. Exp. Med.,* 57: 933, 1933.

[3] E. W. Schultz and L. P. Gebhardt, *Proc. Soc. Exp. Biol. and Med.,* 31: 728, 1934.

[4] M. Brodie and A. R. Elvidge, SCIENCE, 79: 235, 1934.