

which reach the public are those of a few individuals whose views are not necessarily representative and in some instances grossly misleading.

The methods and purposes of the association are stated as follows:

(1) To bring scientific workers together to promote an understanding of the relationship between science and social problems.

(2) To organize and express their opinions on the steps to be taken towards the solution of these problems.

(3) To promote all possible action on these conclusions.

These aims may be brought about:

(1) By holding meetings at which speakers will present various social problems and the attitude of scientists toward them.

(2) By organizing informal study groups to examine some of these problems more closely.

(3) By giving expression to the collective opinions of scientific workers, and by taking appropriate action either individually, jointly or through collaboration with existing organizations.

The association will conduct its first open meeting in Emerson Hall, Harvard University, on December 19, when President K. T. Compton, of the Massachusetts Institute of Technology, will speak on "The Social Implications of Science." The association is also sponsoring an informal discussion group on the state of science under various social régimes. It is hoped soon to affiliate with other similar groups in Philadelphia and elsewhere. Communications should be addressed to the Secretary of the Association of Scientific Workers, Harvard Biological Laboratories, Cambridge, Mass.

#### THE ANNUAL MEETING OF THE UNION OF AMERICAN BIOLOGICAL SOCIETIES

THE annual meeting of the Council of the Union of American Biological Societies will be held on Wednesday afternoon, December 28, at 4:00 P. M., in the Salon of the Jefferson Hotel, Richmond, Virginia.

During the past year the union has continued to support projects of broad interest as promotion of *Biological Abstracts* and the teaching of biological sciences. Beginning with volume 13 (1939) *Biological Abstracts* will abandon the emergency subsidy plan which enabled it to maintain publication during 1938. The new plan adopted by the Board of Trustees provides for the usual monthly issue, but in addition this issue will be broken up into five sections as announced earlier,<sup>1</sup> which sell for \$4-\$9 a section together with a complete index. Other details of the plans for 1939 will be discussed at this time.

The Union's Committee on Biological Science Teach-

ing is under the chairmanship of Dr. Oscar Riddle and includes the following members: E. V. Cowdry, F. L. Fitzpatrick, H. B. Glass and B. C. Gruenberg. It has undertaken two projects, one of which is already well advanced and is worthy of record here. This project is concerned with the formation of a national association for that group of more than 20,000 who teach biological subjects in secondary schools, and to the establishment of a journal to serve their special needs. Following meetings of the National Education Association in New York City on July 1, 1938, a National Association of Biology Teachers was formally established at a meeting called and largely financed by the committee. Fifteen delegates selected by members in twelve states took part in this organization meeting and elected officers. The first issue of the association's new journal, *The American Biology Teacher*, appeared in October, 1938. The committee continues its efforts to form local (city, regional or state) units of this national association, and thus to extend the association membership to teachers in all the forty-eight states and to a majority of all teachers of secondary biology. The present membership of approximately 1,500 comes largely from fifteen states, though forty states are represented. During much of 1938 Professor D. F. Miller, of the Ohio State University, has served as committee representative in the active promotion of this work. A grant of funds (\$10,000 during 3 years) from the Carnegie Foundation for the Advancement of Teaching provides necessary and substantial support for work undertaken by this committee.

The promotion of *Biological Abstracts* and the integration of teachers of biology in a national association are activities which are obviously of interest to all member societies of the union. All living things age, and consequently the phenomena of aging are likewise basic. In 1937 the union secured the cooperation of the National Research Council and with the aid of a generous grant from the Josiah Macy, Jr., Foundation arranged a conference on the biological and medical aspects of aging at Woods Hole on June 25 and 26. The constructive exchange of ideas between the biologists and medical men who attended this conference was of assistance in the preparation of a comprehensive report on aging financed by the Macy Foundation, which will be published about January 1.

Privately endowed and operated biological institutions are at an increasing disadvantage compared with city, state and federal organizations. It has been suggested that a very important problem for the union is to formulate ways and means whereby the Federal Government may come to their support.

The union is eager to serve the member societies in any matters which are of interest to them collectively

<sup>1</sup> SCIENCE, 88: 294, 1938.

or individually. Consequently the secretary of the union will welcome suggestions from individuals as well as from officers of its member societies as to matters which could profitably be discussed at the next meeting which, as heretofore, will be open to all interested persons, even though they may not be official representatives of the member societies. It is hoped that all member societies will be represented by official delegates.

GEORGE W. HUNTER, III,  
*Secretary*

### GEOPHYSICS AS APPLIED TO CONTINENTAL STRUCTURE

ON December 27, at the meetings of the American Association for the Advancement of Science, a symposium on "The Importance of Geophysics to the Study of Continental Borders" will be presented by the American Geophysical Union before the astronomers of Section D and the geologists and geographers of Section E—this symposium having been arranged by the A. G. U. Special Committee on the Geophysical and Geological Study of Continents at the request of Section E. The purpose of this symposium will be both to define the functional relationship of geology and of geophysics in the determination of structural and dynamic conditions within the invisible portions of the earth's crust; and to illustrate how enormously the opportunities for the advancement of structural geology have been increased by geophysical research methods and appliances now existing.

Chester R. Longwell, of Yale University, will introduce the series of papers in a discussion of the relative roles of geology and geophysics in modern studies of the earth's crustal structure. Lieutenant Paul A. Smith, of the U. S. Coast and Geodetic Survey, will describe the nature and precision of the sounding methods, whereby submarine canyons have been traced along a part of the Atlantic margin of North America by Dr. A. C. Veatch and himself, under a project grant from the Geological Society of America. The geologic fate of the old continent or subcontinent of Appalachia will next be discussed by Wilbur A. Nelson, of the University of Virginia, after which Maurice Ewing, of Lehigh University, will describe the methods whereby the ocean-ward slope and depth of submergence of this old land area are being discovered. The delineation of deep-seated structural features of the earth's crust in continental border belts will then be the topic of papers by C. H. Swick, of the Coast and Geodetic Survey; G. P. Woollard, of Princeton, N. J.; and Perry Byerly, of the University of California. Mr. Swick will mention the modern methods used for gravity measurements, and will describe the recent programs of gravity observation in which the Coast and Geodetic Survey has been collaborating. Dr. Wool-

lard will describe how geologic analyses of this evidence have shown that the visible structural features of the Appalachian Mountains are paralleled by invisible (but equally great) linear structural features, deep within the crust underlying the Piedmont and Atlantic Coastal Plain regions. And Dr. Byerly will show how seismic information can be used to determine the nature and dynamic condition of some of these deep-seated structural features of coastal areas. H. T. Stetson, of the Massachusetts Institute of Technology, will next discuss how the roles of extra-terrestrial forces in inducing crustal deformation may be tested, and how certain structural problems may possibly be solved by collaborative, astronomic-geophysical-geological studies, involving the use of the crystal chronometer and of other devices for the exact determination of time and of geodetic position. W. T. Thom, Jr., of Princeton University, will conclude the symposium by summarizing the results thus far achieved through geophysical research, as well as the opportunity (and need) for further collaborative study of continental borders—which are the thresholds to the "great unknowns" of the sub-oceanic lithosphere. A discussion period will follow the last paper.

The symposium, which will begin at 2 P.M. in the Mosque, will be preceded by a morning program on the "Geology of the Coastal Plain and Continental Shelf." The twenty-four contributors taking part in these two sessions will give a searching and comprehensive review of problems which are currently under active investigation along the eastern seaboard.

H. A. MEYERHOFF, *Secretary, Section E*  
H. T. STETSON, *Secretary, Section D*  
J. A. FLEMING, *Secretary, American Geophysical Union*

### RECENT DEATHS AND MEMORIALS

DR. CHARLES E. MUNROE, emeritus professor of chemistry at the George Washington University, died on December 7 at the age of eighty-nine years.

DR. JAMES PIERPONT, since 1898 until his retirement with the title emeritus in 1933 Erastus L. De Forest professor of mathematics at Yale University, died on December 9 at the age of seventy-two years.

DR. DANIEL L. WALLACE, from 1920 to 1931 professor of chemistry at the University of Pennsylvania, with which he had been associated for fifty-one years, died on December 5 at the age of seventy-eight years.

ELLEN LOUISA BURRELL, head of the department of pure mathematics at Wellesley College, who retired in 1916, died on December 3 at the age of eighty-eight years.

DR. HERBERT U. WILLIAMS, who retired in 1915 as