

burden of preventible disease more and more intolerable. As the army of active workers diminishes, its working power must be conserved if disaster is to be avoided. Longer working lives and stronger working lives can alone discount the loss of numbers of working lives.—The London Times.

RESOLUTIONS CONCERNING GEOPHYSICS

The following resolutions were adopted by the American Geophysical Union during its Seventh Annual Meeting, April 30, 1926.

RESOLUTION ON THE VARIATION OF LATITUDE (Submitted by Section of Geodesy)

WHEREAS, The problem of the variation of latitude concerns not only astronomy, but also geophysics in its broadest sense, as is evidenced by the appointment by the International Astronomical Union and the International Geodetic and Geophysical Union of a joint committee consisting of astronomers, geodesists and geophysicists to confer with and advise the officers of the organizations conducting the present latitude-variation stations on an international cooperative plan, and

WHEREAS, The accepted method of studying this problem is by the operation of a chain of latitude stations on the same parallel, all using a common program of observations, and

WHEREAS, The great extent of the United States in longitude suggests that its contribution to this important piece of international work should include more than the maintenance of the present single station at Ukiah, California, and

WHEREAS, The original number of latitude-variation stations on the thirty-ninth parallel of latitude has been reduced from six (three of which were in the United States) to three, a number found to be too small for the adequate study of the many elements that are now known to enter into this problem, and

WHEREAS, Of the abandoned latitude stations that at Gaithersburg, Maryland, would be the easiest to reestablish and the most useful, and

WHEREAS, The importance of reoccupying this station is recognized by experts and has been urged many times in the unanimous reports of committees of the American Section of the International Astronomical Union, duly adopted by the section, and

WHEREAS, The International Astronomical Union, meeting at Cambridge, England, in 1925, has urged the Director of the United States Coast and Geodetic Survey to endeavor to secure the reoccupation of Gaithersburg; therefore, be it

Resolved, That the American Geophysical Union strongly recommends that observations be resumed at the Gaithersburg latitude station, preferably under the direction of the United States Coast and Geodetic Survey, which now supervises the work at the latitude station at Ukiah, California; and, be it further

Resolved, That copies of this resolution be sent to the President of the United States, to the Secretary of Commerce, to the Director of the United States Coast and Geodetic Survey, to the President of the National Academy of Sciences, to the President of the American Astronomical Society, to the President of the Geological Society of America and to the President of the Seismological Society of America.

RESOLUTION CONCERNING THE TOPOGRAPHIC MAPPING OF THE UNITED STATES

(Submitted by Section of Geodesy)

WHEREAS, Accurate knowledge of the geographic positions, elevations and configurations of the ground is essential to the efficient carrying on of geophysical investigations, and

WHEREAS, The results of these investigations have great scientific and practical value; therefore, be it

Resolved, That the American Geophysical Union heartily endorses the plan of the United States Government to complete the topographic mapping of this country in the near future; and, be it further

Resolved, That copies of this resolution be sent to the President of the United States, the President of the Senate and the Speaker of the House of Representatives.

RESOLUTION ON GREATER UNIFORMITY IN PYRHELIOMETRIC MEASUREMENTS

(Submitted by Section of Meteorology)

WHEREAS, In the interest of convenience to investigators, greater uniformity in pyrheliometric measurements is desirable; therefore, be it

Resolved, That the Meteorological Section (c) of the International Union of Geodesy and Geophysics be requested (1) to authorize its Commission on Solar Radiation to encourage in every way possible the maintenance of an international network of pyrheliometric stations for obtaining directly comparable measurements of the intensity of solar energy, (2) to include as many high-level stations as practicable in this network and (3) to provide that especially at high-level stations attention be given to the measurement of the ultra-violet radiation and the ozone content of the atmosphere, and

Resolved, That the above-named commission be authorized to cooperate with the Commission on Solar Radiation of the International Meteorological Committee in arranging for the intercomparison of sub-standard pyrheliometers for use in different countries, in preparing a program to be recommended for daily observations and in securing prompt publication of monthly summaries of results, and

Resolved, Further, that a copy of these resolutions be sent to the General Secretary of the International Geodetic and Geophysical Union (Colonel H. G. Lyons) and to the Chairman of the Committee of the International Research Council for the Study of Solar and Terrestrial Relationships (Dr. S. Chapman, Imperial College of Science, London, England).

RESOLUTION ON SOLAR-RADIATION STATIONS AND RESULTS

(Submitted by Section of Meteorology)

WHEREAS, In view of the probable early completion of arrangements in southwest Africa for determining the constant of solar radiation and the availability thereafter of such data from three stations, one each in North America, South America and southwest Africa, and

WHEREAS, It is claimed that the provisional values of these determinations are an aid in weather forecasting; therefore, be it

Resolved, That the American Geophysical Union expresses its great pleasure and satisfaction in the purpose of the Smithsonian Institution and the National Geographic Society to maintain the stations above-mentioned for a period of at least four years; and, be it further

Resolved, That the Astrophysical Observatory of the Smithsonian Institution be, and hereby is, requested to make the data of these stations available at the earliest practicable moment to all organized weather services, and

Resolved, Further, that a copy of these resolutions be sent to the Secretary of the International Meteorological Committee (Th. Hesselberg, Oslo, Norway), for transmission to the various governmental weather services adhering to that Committee with a request for cooperation in the attempt to correlate data of solar radiation with terrestrial weather, and a copy also to the General Secretary of the International Geodetic and Geophysical Union (Colonel H. G. Lyons).

RESOLUTION ON GRAVITY AT SEA¹

(Endorsed by sections of Geodesy and Seismology for favorable consideration)

WHEREAS, A method for the determination of gravity at sea with an accuracy comparable to that obtainable on land has been perfected by Dr. F. A. Vening Meinesz, of the Dutch Geodetic Commission, and has been successfully used by him on two voyages on a submarine, one from Holland to Java by way of the Suez Canal and the other from Holland to the Suez Canal, and the method will again be used by Dr. Meinesz during the present summer on a voyage from Holland to Java by way of the Panama Canal; and,

WHEREAS, The deficiency in gravity observations over the ocean areas and inland seas is retarding geological and geophysical studies; and,

WHEREAS, The desirability of making gravity observations at sea has been recognized by the Section of Geodesy of the International Geodetic and Geophysical Union which, by suitable resolutions, has urged all nations having navies to make observations similar to those made by Dr. Meinesz; therefore, be it

Resolved, That the Division of Geology and Geography of the National Research Council of the United States commends in the highest terms the Dutch Geodetic Com-

¹ Adopted by Division of Geology and Geography at its annual meeting of April 24, 1926, and approved by Division of Foreign Relations of National Research Council on April 25, 1926.

mission and the Dutch Navy for making it possible for Dr. Meinesz to carry on his gravity observations at sea and expresses the hope that every maritime nation may find it possible to supplement the magnificent work of Dr. Meinesz by making additional gravity determinations at sea, especially near its own coasts. We especially commend this work to the Navy Department and to the Coast and Geodetic Survey of the United States of America; and, be it further

Resolved, That a copy of this resolution be sent to the President of the United States, to the Secretary of State, to Dr. F. A. Vening Meinesz, to Dr. J. J. A. Mueller, President of the Dutch Geodetic Commission, to the Admiral of the Dutch Navy, to the Secretary of the United States Navy, to the Secretary of Commerce, and to the Director of the United States Coast and Geodetic Survey.

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A PRESERVING FLUID FOR GREEN PLANTS

No matter how highly the commercial preparation of laboratory specimens may be developed, there will always be botanists to whom the collection and preservation of their own material will have its own attraction. Most of the current methods, however, of preparing macroscopic—and, to some extent, microscopic—material leave much to be desired. Certainly the uniformly bleached condition of the preserved specimens offered for study in many botanical courses is not an incentive to interested work. As a possible solution of this problem the results of certain experiments begun last summer at the Marine Biological Laboratory and continued through the year at the University of Wisconsin are here tentatively offered for consideration.

The preparation of museum specimens of pathological plant material by the copper acetate method is not new. The process is, however, both tedious and unpleasant. In order to simplify it, it was necessary first to find a general fixing fluid fairly adequate for preserving most plant forms. With this as a basis of experimentation it was next important to find a way to color the plastids so that they should appear as natural as possible.

The fixing fluid finally employed is a modification of that used by the supply department of the Marine Biological Laboratory for preserving zoological specimens. As a coloring agent copper acetate was first used but proved too blue for all plants except the blue-green algae. Copper chloride gave somewhat better results, but it was not until uranium nitrate was employed with it that effects somewhat approximating natural conditions were finally obtained.

The complete formula is as follows: