it seems certain that the Toronto meeting will be very successful in every way.

Burton E. Livingston,
Permanent Secretary

THE EXECUTIVE COMMITTEE ON NATURAL RESOURCES

BEING THE UNION OF THE COMMITTEES APPOINTED BY THE NATIONAL ACADEMY OF SCIENCES, THE NATIONAL RESEARCH COUNCIL AND THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

The following is the present membership of the Committee:

Representing the National Academy of Sciences
- John C. Merriam, president, the Carnegie Institution of Washington
- John M. Clarke, director, New York State Museum
- J. McKeen Cattell, Editor of Science

Representing the National Research Council
- John C. Merriam
- John M. Clarke
- J. McKeen Cattell
- Vernon Kellogg, secretary, National Research Council
- C. E. McClung, director, Zoological Laboratory, University of Pennsylvania

Representing the American Association for the Advancement of Science
- John C. Merriam
- Henry S. Graves, former chief, U. S. Forest Service
- Isaiah Bowman, director, American Geographical Society
- Barrington Moore, president, American Ecological Society
- V. E. Shelford, professor of zoology, University of Illinois

Chairman, John C. Merriam

Vice-chairman, John M. Clarke

Secretary, Albert L. Barrows, National Research Council, 1701 Massachusetts Avenue, Washington, D. C.

Assistant Secretary, Willard G. Van Name, American Museum of Natural History, New York, N. Y.

Program

The purpose in organizing this Executive Committee is to promote, by scientific effort and through education, the most reasonable use of our natural resources for the economic, industrial and social development of the country.

The American people have been richly endowed with natural wealth and have quickly availed themselves of their endowment. The first easy and quick production for the pressing needs of the growing population, followed by rapid strides toward the realization of wealth, have brought large elements of the natural resources to the danger line, some to more costly and lessened production, while others are threatened by extinction. Commercial production will of necessity be governed by economic law; use will be dependent on production, but both must be free of waste and governed by intelligent foresight. There are important natural resources whose commercial uses are less obvious but whose depletion is a grave disturbance of the balance of nature.

This is a problem of the public welfare. Its solution should marshal not only scientific knowledge and the economic interests of the country but also the moral forces of the body politic. Organized effort to safeguard our natural heritage must come quickly. As use becomes greater, abuse and wastage must be diminished.

This Executive Committee does not assume a supervisory attitude in matters of conservation but seeks to advise, coordinate and substantiate outstanding organizations. It sets forth the following program as expressive of its purpose:

1. The problem is a basic one in public welfare. It should therefore challenge intelligent attention, command public confidence and receive necessary financial support.

2. This movement is at present representative of the scientific membership and functions of its parent societies, the National Academy of Sciences, the National Research Council, and the American Association for the Advancement of Science. The committee may be enlarged from time to time by the addition of members of experience and wisdom; but its work must be of a character truly to represent its parent organizations. It

should keep in close touch with their governing bodies, and annually present a report to their councils. The results of the work will carry the weight of the associated leaders of science in America.

3. Essential to the purposes of the undertaking is a competent and vigorous executive, composed of a director or executive secretary with necessary expert and clerical assistance. The functions of this executive are provisionally outlined thus:

(*a*) To assemble, classify and correlate all outstanding activities in the scientific and industrial conservation of natural resources; with the purpose of bringing these into effective juxtaposition and concentration and thus produce an active army of organized workers directed to a common end without duplication of effort or cost. The former is essentially statistical; the latter is directive and requires a skillful exercise of judicious procedure and tactful guidance.

(*b*) To effect active cooperation with the officers and directorates of existing organizations concerned with natural resources.

(*c*) To assemble available data relating to the status of our natural resources, to enlist therefor such industrial and other agencies as are actively engaged therewith, to interpret these data in relation to protection and reserve, as well as to the economic and social welfare of the state, and to provide a broad scientific basis for legislative action by the state and the federal government.

(*d*) To initiate and judiciously enforce by education recognition of the principle underlying the protection and use of natural resources.

It is held that this recognition can be made most effective and enduring by implantation in the minds of the children of the elementary schools; that in schools of higher grade, in colleges and universities, and in schools of engineering and applied science this principle can be enforced by correct teaching in already established courses. Extravagance of statement and emotionalism must be cautiously avoided. Teachers must themselves be taught not only to inculcate this principle but to do it wisely. Advantage must be taken of existing channels of educational approach through the state educational organizations and the state executives, in which the Division of States Relations of the National Research Council may helpfully cooperate.

It is held that the proper teaching of the conservation principle is a most effective safeguard for the future of this nation. This undertaking will therefore involve uninterrupted effort with the eventual aid of proper texts, the probable establishment of a bureau of lecturers who may reach the public outside the schools, and the utilization of all modern accessories to effective educational appeal.

Supplementary

Cost of the work.—The cost of the work is estimated as $25,000 per annum, distributed as follows:

Salaries		
Executive Officer	$10,000	
First Associate	5,000	
1 Clerk	1,600	
1 Clerk	1,500	
1 Clerk	1,400	
		$19,500
Traveling Expenses		2,000
Office Rent		1,000
Office Expenses		
Including telephone, telegrams, stationery, postage, etc.		500
Printing, Drafting and Contingent		1,800
Total		$25,000

Financing.—It is desirable, if possible, to secure a permanent fund of $500,000 whose income would be available for the work in contemplation. In that event, a separate foundation could be established, or the fund could be given to the National Academy, the National Research Council, or the American Association for the Advancement of Science with provision for the use of the income for the work of this committee.

In case the funds are in the form of annual contributions, it is desirable to plan in advance for a certain income to cover a period of not less than five or ten years. Reasonable

permanence should be given the project before its formal undertaking.

John M. Clarke,
Henry S. Graves,
Barrington Moore,
Committee on Program

June 3, 1921

SCIENTIFIC EVENTS

THE INCREASING USE OF UNITED STATES GEOLOGICAL SURVEY MAPS

The project of covering the 3,000,000 square miles of the United States with accurate topographic surveys was definitely adopted by the federal government in 1882. The project was large, and the work is even now less than half completed. The standards of accuracy and refinement in topographic surveying have been constantly raised by the topographic engineers of the United States Geological Survey, Department of the Interior, with the view of meeting adequately every use to which the maps can be put. The law provides for the sale of the maps made by the Geological Survey at the cost of printing, a charge that must be considered merely nominal when it is realized that the cost of an edition of a printed map may be only a small percentage of the cost of surveying the area it represents.

The government itself is making a large and increasing use of these topographic maps, but the expenditure of public funds for these surveys is otherwise fully warranted only as the public uses the maps. To promote this use, the Geological Survey has recently given more attention to the wider distribution of the maps.

The distribution of a government map depends largely upon publicity, though the necessity of adopting commercial business methods in handling orders for the maps when a demand is created must not be overlooked. To inform the public of the existence of authoritative maps published by the federal government a special effort is now being made to reach the communities in every area that is covered by a map, and to this end every map as issued is brought to the attention of the local and state press.

Other methods of promoting wider distribution involve the cooperation of boy-scout masters, schoolboys, and hotel managers, as well as of a large number of bookstores as local agents. Helpful publicity has also been gained through the voluntary cooperation of the press. The printing in a single publication of a brief statement regarding the Geological Survey's maps often results in orders for a hundred or more maps and many inquiries for the State index maps, which are sent free, showing the areas already mapped.

The periods of maximum demand for these government maps are the beginning of the vacation period and the beginning of the school year.

THE ROYAL SOCIETY CONVERSAZIONE[1]

The annual conversazione of the Royal Society was held at Burlington House on May 11, and was so well attended that it was practically impossible to see a tenth part of the exhibits and demonstrations. Fortunately arrangements are always made for an earlier press view of the latter. This year amongst the thirty-nine demonstrations figuring in the catalogue there was none having any direct bearing on medical science, though the exhibition contained much of great general interest. Mr. L. T. Hogben, of the Imperial College of Science, demonstrated the effects on tadpoles of feeding them with pineal gland. Hitherto there has been no proof of any physiological function exercised by the pineal body, but Mr. Hogben has succeeded in showing, in tadpoles at least, that it has some controlling power over the pigment cells. Macroscopic and microscopic preparations showed that in the pineal-fed tadpoles there is a very evident contraction of the melanophores, an effect that is not produced by feeding experiments with any other endocrine organ. Mr. C. Tate Regan, F.R.S., gave a demonstration of part of the life-history of the common eel, founded on the researches of Dr. J. Schmidt, who showed that the freshwater eel of Europe breeds in the Atlantic, southeast of Bermuda. A series of larvæ, from the middle and western North Atlantic, with long and slender pointed

[1] From *The British Medical Journal.*