vestigations into the mortality of graduates from American colleges for women. Miss Hulst reports that she has completed the mortality rates for graduates from Smith and Vassar and that she has nearly completed the tabulation of the records for Wellesley College. Preliminary results indicate that graduates from women's colleges enjoy extraordinarily low death rates, consistent with their favorable economic and social status. The research was recommended by Dr. Dublin, under whose direction it is being carried on.

Medicine

Four hundred dollars to Dr. Leslie B. Arey, of the Northwestern University Medical School, in support of his study of the origin, growth and fate of the giant cells, or osteoclasts, usually held responsible for bone dissolution. It has been found that osteoclasts arise chiefly by the fusion of depleted bone-formative cells, the osteoblasts; they further increase by taking to themselves osteoblasts and bone cells, but ultimately degenerate and disappear. There is no convincing evidence that osteoclasts are the specific agents of bone resorption. That they are degenerating, fused osteoclasts accords better with the known facts.

Education

One hundred dollars to Dr. S. A. Courtis, Detroit, Michigan, toward the expenses of securing a comparison based upon a survey of Boston schools in 1845 with present-day schools from Maine to California.

JOEL STEBBINS,
Secretary

SCIENTIFIC EVENTS

THE BRITISH ASSOCIATION AND SCIENTIFIC RESEARCH

PROFESSOR JOHN PERRY, treasurer of the British Association, made some remarks before an evening discourse on September 11, at the recent Bournemouth meeting of the association which he summarizes for *Nature* as follows:

After paying printing and office expenses, the funds of the British Association are devoted to scientific research. For more than eighty years we have spent more than £1,000 a year on research, long before ordinary people had heard of research.

Every year we form many research committees; each of them is formed of the foremost men of science of Great Britain, who receive none of the money themselves, and their accounts for mere out-of-pocket expenses are carefully audited. These researches in the past have created some entirely new sciences, have led directly and indirectly to the creation of many new industries, and they have largely produced the world's present natural knowledge. And now to my point. Yesterday a very prominent member of the association asked me about our finances. I had to admit that even before the war we were meeting with difficulties due to the increased cost of printing, and other things, that since the war we have been behindhand to the extent of more than £1,000 every year, and that we have never yet asked for the help of moneyed men. The only gift we have ever received from a moneyed man was a voluntary gift from Sir James Caird, who handed me £11,000 at the Dundee meeting. My questioner said we ought to ask for help, and that he was willing to start a fund with a sum of £1,000. At this moment he does not wish to have his name mentioned.

I need not dwell on the importance of our research work, as I feel sure that every person here who has himself done original work shares my opinion that when we limit our expenditure on research, and especially on pure scientific research, we shall begin to be a bankrupt association—bankrupt, that is, morally from the point of view of science, if not actually in the financial sense.

The moneyed men of Great Britain are most willing to help any good object when they get proof that it really is a good object. We can not complain of want of their help, for they did not know the facts. At the same time, the treasurer of an association with such a record as ours does not feel happy at the prospect of begging for help.

In the two days of the meeting following that on which I made this statement, the fund was raised to a total of £1,475. I intend to publish in due course a list of names of donors and donations.

To illustrate by many instances (as I might) our claims as to the importance of our researches would unduly prolong this letter, and any selection of a few examples would be unrepresentative. I will cite a single illustration: The National Physical Laboratory, the scene of researches of which the importance to the nation during the war and earlier can not be overestimated, had its origin

(if its antecedents be traced backward) in the Kew Observatory, which was maintained by the British Association from 1842 to 1872, in which period the association spent some £12,000 on its upkeep.

THE WORK OF THE NATIONAL COMMITTEE ON MATHEMATICAL REQUIREMENTS

A PRELIMINARY report of "The Reorganization of the First Courses in Secondary School Mathematics" prepared by the subcommittee, which was authorized to publish it was issued on November 25. It is being made the basis of discussion by organizations, committees, local groups, etc., throughout the country. Over 30 such organizations are at present at work on this report.

The whole of the meeting of the Association of Teachers of Mathematics in the Middle States and Maryland in Philadelphia on November 29 was devoted to the discussion of this report; it had a prominent place on the program of the Central Association of Science and Mathematics Teachers in Chicago on November 28 and 29 and at the meeting of the Association of Teachers of Mathematics in New England in Boston on December 6.

Committees representing organizations in the following states are actively cooperating with the National Committee: Massachusetts, Rhode Island, New York, New Jersey, Pennsylvania, West Virginia, Ohio, Indiana, Illinois, Wisconsin, Iowa, North Dakota, Missouri and Texas.

Local groups or clubs are studying the report in Boston, Springfield (Mass.), Providence, New Haven, New York City, Washington, Baltimore, Cincinnati, Columbus (Ohio), Terre Haute, Chicago, St. Louis, St. Paul, Minneapolis and in several smaller cities.

Meetings in addition to those previously announced at which the work of the National Committee will be discussed are as follows: Mathematical Association of America in St. Louis, December 29 and in New York, January 2; Ohio State Teachers' Association, Columbus, December 30; Pennsylvania State Educational Association, Philadelphia, December 30; Association of Teachers of Mathematics in the Middle States and Maryland, Southern Section, Baltimore, December 13, Syracuse Section, Syracuse, New York, December 30.

The next meeting of the national committee will occur in New York City on December 30. The principal items on the program for this meeting are the consideration of the report on "The Reorganization of the First Courses in Secondary School Mathematics," the report on "The Valid Aims and Purposes of the Study of Mathematics" and the proposed revision of college entrance requirements.

The United States Bureau of Education has offered to publish the reports of the National Committee in the form of leaflets or bulletins.

A Mathematics Section of the West Virginia State Teachers' Association was organized in Fairmont on November 28. Professor John Eiesland, of the University of West Virginia, was elected chairman of the newly formed Section. Professor C. N. Moore spoke in behalf of the work of the National Committee.

CHEMICAL LECTURES AT WEST POINT AND ANNAPOLIS

THE American Chemical Society has arranged a series of lectures on the relations of chemistry to problems of interest in cadets of the United States Military and Naval Academies. The lectures to be given at West Point are as follows:

Dr. Wm. H. Nichols, New York City. Sulfuric acid, the pig iron of chemistry. January 10, 1920.

Dr. Wm. H. Walker, Massachusetts Institute of Technology, Cambridge, Mass. Manufacturing problems of gas warfare. January 17, 1920.

Dr. Chas. L. Parsons, 1709 G St., N.W., Washington, D. C. Nitrogen fixation and its relation to warfare. January 24, 1920.

Dr. Henry Fay, Massachusetts Institute of Technology, Cambridge, Mass. The amorphous state in metals. January 31, 1920.

Dr. Chas. L. Reese, E. I. du Pont de Nemours & Co., Wilmington, Del. Explosives. February 7, 1920.

The lectures at Annapolis are:

Dr. Henry Fay, Massachusetts Institute of Technology, Cambridge, Mass. Iron and steel. November 15, 1919, to post-graduate student officers.

Dr. John Johnston, Yale University, New