There has been a general desire to preserve this unique collection as a whole and to house it at the Imperial College, where it could be studied by serious students and seen under suitable conditions by interested members of the public.

"In February last the governing body of the college issued an appeal to old students and friends of the college in the hopes of raising £2,000, the sum asked for the letters, and an additional £500 which is the estimated cost of binding and housing the collection. Before issuing this appeal they consulted the authorities of the British Museum and the Friends of the National Libraries, who are favorable to the scheme. The Friends of the National Libraries issued a supporting appeal to members of their association at the same time. Altogether a sum of £1,200 has so far been collected or promised. Of this, £464 has been received through the efforts of the Friends of the National Libraries, £150 has been granted by the Pilgrim Trust, £200 from one old student of the college, and £50 from Sir Robert Hadfield.

"The governing body and the council of the Friends of the National Libraries are most anxious to secure the additional money necessary soon. Otherwise it is probable that the collection will be broken up and lost to the country. It is possible that some readers of your paper have not yet heard of the appeal and would be willing to help to preserve the collection, which includes among other items of great interest almost the whole of Darwin's correspondence with Huxley, over 400 letters to and from Hooker, in addition to many hundreds of letters from Tyndall, Lyell, Herbert Spencer, Haeckel, Agassiz and many other men of great prominence in Huxley's time. It also includes many of Huxley's original manuscripts and notebooks.

"Contributions should be sent to the Secretary of the Imperial College, Prince Consort Road, South Kensington, S.W.7, or to the Secretary of the Friends of the National Libraries, care of British Museum, W.C.1."

RESEARCH ON METALS

THE rewards of cooperation in research in the field of metals through joint investigation of fundamental problems by physicists, metallurgists and chemists were discussed by leaders in these fields at a meeting held at the Massachusetts Institute of Technology on January 28 and 29 under the auspices of the institute and the American Institute of Physics.

The meeting emphasized the promising trend toward a most productive type of research in which technical workers bring to problems of fundamental interest the specialized knowledge and methods of their several fields. The very important results of joint research are nowhere more evident than at the institute itself, where many investigations are brought to successful conclusions through interdepartmental cooperation.

The purpose of the meeting was to discuss thoroughly recent developments in the physics and chemistry of metals, as well as the opportunities for still greater advances through the combined cooperative effort of all workers whose knowledge may in some way contribute to problems of mutual interest. From a half to one hour each was allowed for the presentation of important papers and ample time was given for discussion, thus permitting an interplay of viewpoints not possible in the usual scientific meeting.

Some of the more general papers presented were: "Research Problems in the Steel Industry," by Dr. E. C. Bain, United States Steel Corporation; "Inclusions in Ferrous Alloys," by Dr. A. B. Kinzel, Union Carbide and Carbon Company; "Flow Phenomena in Heavily Stressed Metals," by Professor P. W. Bridgman, of Harvard University; "Electronic Structures in Metals and Alloys," by Professor J. C. Slater, head of the department of physics of the Massachusetts Institute of Technology; "Corrosion," by Dr. J. R. Burns, of the Bell Laboratories; "Elastic Properties of Ferrous Alloys," by Professor A. V. de Forest, of the Massachusetts Institute of Technology, and "Chromium-Nickel-Iron Alloys," discussed by Dr. V. N. Krivobok, of the Allegheny Steel Company.

In another group of papers various techniques and their applicability were presented, while in the third group some especially complex scientific problems met with in ferrous alloys were discussed.

Arrangements for the meeting were in charge of Professor John Wulff, of the institute, who acted as secretary, and Dr. Harry A. Barton, director of the American Institute of Physics.

THE NORTHWEST SCIENTIFIC ASSOCIATION

THE thirteenth annual meeting of the Northwest Scientific Association was held on December 29 and 30, 1936, at the Davenport Hotel in Spokane, Washington.

President George F. Simmons, of the Montana State University, lectured at the general meetings on "The Mechanisms of Reproductive Periodicity in Mammals" and "A Windjammer Voyage to Treasure Island." Seven section meetings were held as follows: Bacteriology-Public Health, Botany-Zoology, Chemistry-Physics-Mathematics, Education-Psychology, Forestry, Geology-Geography and Social Science.

Officers elected for 1937 were: *President,* C. C. Todd, dean of the College of Letters and Science, State College of Washington, Pullman; *Vice-president,* J. H. Ramskill, professor of forestry, Montana State University, Missoula; *Secretary-Treasurer,* O. W. Freeman, State Normal School, Cheney, Wash.

Grants for research of funds contributed by private sources and received from the American Association for the Advancement of Science were assigned to: H. P. Klug, University of Idaho, "Photographic Records of Thermal Transitions in Substances," $50; J. H. Ramskill, University of Montana, "Development of the Hypoderm of Western Yellow Pine," $35; G. A. Matson, University of Montana, "Blood Studies of Montana Indians," $25; Dr. Van A. Odle, of Spokane, Washington, apparatus and materials for experiment on "Electrokinetic Potential of Red Blood Cells," $25.

It was announced that the Howard F. Flint Memorial Fund for research amounted to $1,031.30. The income from this will be used, beginning with next year, as a grant along forestry and biological lines.

O. W. FREEMAN,
Secretary

GRANTS IN AID OF RESEARCH BY THE GEOLOGICAL SOCIETY OF AMERICA

THE following is the list of grants in support of special research projects recently approved by the Geological Society of America:

A. A. Stoyanow, Tucson, Ariz. Grant of $1,000 covering field expenses in a revision of the Mesozoic sequence at Bisbee, Ariz.

A. O. Woodford and Edward Taylor, Claremont, Calif. Grant of $780 to cover living and traveling expenses in study of longitudinal profiles of streams, to be conducted in Europe during April and May, 1937.

Horace G. Richards, Trenton. Grant of $550 covering traveling and field expenses in study of the Pleistocene deposits and faunas of the Gulf Coastal Plain.

U. S. Grant, Los Angeles. Grant of $300 to be applied against field expenses and costs of preparing manuscript covering study of changes of the California coast.

F. H. Norton, Cambridge. Grant of $1,500 covering assistance and materials in study of hydrothermal action in minerals, particularly those that change into the clay minerals.

W. Armstrong Price, Corpus Christi, Texas. Grant of $1,200 covering traveling and field expenses of a reconnaissance of Pleistocene depositional plains of the northwestern Gulf Coastal Plain.

Charles T. Berry, Baltimore. Grant of $100 covering completion of illustrations for paper on "Ophiuran Remains from Upper Senonian of South Limburg, Netherlands."

Alfred C. Lane, Cambridge. Grant of $3,000 covering chemical analyses for studies directed to the determination of ages by the helium method.

W. E. Ford, New Haven, and Charles Palache, Cambridge. Grant of $24,000 covering assistance for four years to complete the seventh edition of James D. Dana's "System of Mineralogy."

Robert T. Hill, Dallas, Texas. Grant of $1,200 to cover expenses connected with history of geological investigation in the Southwest.

Committee headed by T. S. Lovering. Grant of $3,000 covering assistance and supplies in studies of the physical-chemical relation prevailing in a system consisting of a simple silicate and two volatiles at different temperatures and pressures.

John T. Lonsdale, Ames, Iowa. Grant of $850 covering field and office expenses connected with study of the petrography and petrology of the igneous rocks of the Terlingua quadrangle, Brewster and Presidio Counties, Texas.

AWARDS OF THE JAMES F. LINCOLN ARC WELDING FOUNDATION

THE James F. Lincoln Arc Welding Foundation, which was recently established by the Lincoln Electric Company, Cleveland, and named by the trustees in honor of its president, is dedicated to providing the public and modern industry with accurate knowledge and information on matters affecting the application of electric arc welding to machinery and equipment. One of its primary functions is the stimulation of original design, to utilize this process in modern-day fabrication.

To further this object it is planned to distribute the sum of $200,000 in 446 separate prizes for papers dealing with the subject as a primary process of manufacture, fabrication or construction in eleven major divisions of industry. The principal prize winner will receive not less than $13,700. Other prizes range from $7,500 to $100, the latter sum to be awarded to each of 178 contestants who receive no other prize, but whose papers are adjudged worthy of honorable mention.

In order to assure equal competitive opportunity, similar prizes are offered in the eleven major divisions of industry covered by the contest, which are further subdivided to insure diversification of awards. An entrant is required to select in advance the particular sub-classification to which his paper will relate and must actually have participated in the work upon which the subject-matter of it is based. The classification follows:

Automotive—engines, bodies, frames and trailers, $14,200; *aircraft*—engines and fuselage, $10,500; *the railroad industry*—locomotives, freight cars, passenger cars and locomotive and car parts, $14,200; *watercraft*—commercial and pleasure, $10,500; *structural*—buildings, bridges, houses and miscellaneous, $14,200; *furniture and fixtures*—house and office, $10,500; *commercial welding*—job shops and garages, $10,500; *containers*—contents stationary and contents moving, $10,500; *welderies*—commercial and departments of plants, $10,500; *functional machinery*—metal cutting, metal forming, electrical, prime movers, conveying, pumps and compressors, business, jigs and fixtures, parts and "not otherwise