Since the Wisconsin glacier advanced northward over richly mineralized crystalline rocks, the probability that the gravel of the arctic outwash zone is auriferous is very great. These conditions are those of the Alaskan "golden heart," except that in that mountainous country there has been a further concentration in the bottoms of deep valleys.

It is already foreshadowed that in the postwar period the polar basin is to be crossed by flightroutes from North America to the Far East. Refueling stations must be set up on the coast of arctic Canada and in the American archipelago as far north as possible. The outwash belt will supply the gravel for the highways which must enter the area from the Mackenzie and Alcan routes, since the pack-ice off the arctic coast has thus far made sea communication difficult. Radio and airplane stations at close intervals and icebreakers may however later transform it into a "Northern Sea Route" like that of the Soviet arctic. Baffin and Somerset Islands at the east can be reached by sea from the Lancaster Sound west of Baffin Bay.

SAM WOODLEY

Executive Assistant of the American Association for the Advancement of Science By Dr. BURTON E. LIVINGSTON

This note is to mark the recent completion of Sam Woodley's first quarter century of service to the American Association. Although relatively few members have had the good fortune to work with Mr. Woodley for long periods, yet the many thousands who have attended our meetings in the last twenty-five years recall with pleasure how he has arranged and directed registration, how he has provided the very convenient "visible directory" of registrants, how he has cared for a general information service to answer all manner of questions, how he has arranged to provide lanterns, screens and microscopes for the numerous scientific sessions. He has been most widely known, or known of, through his genius for such details, but his long service to science and to the American Association has been much farther-reaching than observation at our meetings might indicate. I propose to present here a brief outline of Woodley's background and to mention some of the services he has been giving to the association.

Sam Woodley was born on May 25, 1889, in Coal City, Illinois. His father, William Henry Palmer Woodley, had come to this country from England, and his mother, née Ann Cooper, had come from Scotland. Attending the public schools through the grammar grades, the boy became first acquainted with commercial and office work by helping in his father's grocery and by aiding his uncle in the office of a coal company. When he was fourteen years old the family moved to Kewanee, where he worked about two years in machine shop and boiler factory, devoting much of his free time to the study of bookkeeping through a correspondence-school course. He then became bookkeeper for a drayage company, later for a grain elevator. Meanwhile, his evenings were largely given over to the study of stenography and typing at a local school. His eighteenth year found him employed in cost accounting at the Kewanee works of the National Tube Company, where he remained, with several promotions, till 1915.

Having been enrolled in the U.S. Civil Service after passing the official examination for stenographers, Woodley received an appointment in the Division of Publications of the U.S. Department of Commerce and moved to Washington, D. C., in that year. After three more years, he was placed in charge of the bookkeeping section of the division. He must have gained a great deal of valuable experience in cost accounting, budget estimating and the like, in connection with the many publications of the Department of Commerce, and by the end of 1919 he seems to have felt ready to seek some new field of employment, hoping to find opportunity for broadening his education and for further growth. So he placed an advertisement in the personal column of the Washington Star for January 31, 1920, stating some of his qualifications and asking consideration by any one who might possibly employ him. It was through that advertisement that I first became acquainted with Sam Woodley and he came within the ken of the American Association for the Advancement of Science.

It will be remembered by many that Dr. L. O. Howard was elected president of the association on January 1, 1920, when he had completed his twenty-seventh year of able and devoted service as permanent secretary, and that I was elected to succeed him in the Washington office. As the new permanent secretary, I was to devote about half-time to association affairs and I found that my first job was to try to secure a competent assistant. By good fortune, I read Mr. Woodley's advertisement, answered it and asked him for a conference. By March 1 he had become executive assistant and office manager for the association.

We began at once to revise and plan arrangements for handling association affairs. We had the benefit of advice and suggestions from such experienced men as President L. O. Howard, Treasurer R. S. Woodward, General Secretary D. T. MacDougal and Editor J. McKeen Cattell. Additional clerical help was soon

employed, as Woodley rapidly came to understand our needs. As one of the association officers once said, Woodley proved to be "a whirlwind at getting things done." From the beginning, he showed remarkable ability, capacity and reliability, not only along many lines of clerical work but also in general executive management. He showed understanding and enthusiasm and he obviously liked his new position.

For years his evenings were partly devoted to the advancement of his own formal education in his chosen field. By 1926 he had completed the high-school course and had attained the bachelor's degree and the master's degree in commercial science at Southeastern University. He rapidly developed a highly appreciative and sympathetic understanding of the ideals of professional scientists and the aims of the association.

The Woodleys were married at Kewanee in 1912. Mrs. Woodley, whose parents were of old Pennsylvania stock, was Icy Dora Miller. Since October, 1924, she has been a most valuable assistant in the Washington office of the association, having charge of the complex details of the membership and subscription records, to which she devotes precise and constant care; many members will remember her as a very busy person in the registration offices at some of the association meetings. She keeps the books, writes outgoing checks and handles annually in recent years about thirty-five thousand incoming checks for dues and other payments. Mr. Woodley always gives to her much credit for the smooth operation of the office in carrying out the instructions of the executive committee and of the permanent secretary.

The Woodleys have a convenient and attractive home near Rock Creek Park, with two devoted pet cats and a garden of both ornamental and vegetable plants. Their daughter, Priscilla, a graduate of Washington College of Music and of Wellesley College, is the wife of Charles F. Tank, a West Point graduate who is now a Lieutenant Colonel in the Corps of Engineers, U. S. Army. They have two little daughters.

Woodley has worked with four permanent secretaries of the association, to all of whom he has given loyal and affable cooperation at all times. With the growth of our organization, his responsibilities have naturally broadened and increased throughout the years. He has served as secretary of the executive committee at more than a hundred of its business sessions. In a similar way he has served the finance

committee also, which manages the association's investment portfolio. He has prepared the annual financial reports for the permanent secretary and the treasurer, and the reports made by the association to the U. S. Bureau of Internal Revenue. For the permanent secretary and the local committees, he has arranged the complex details of many association meetings, including the publication of the general programs, sizeable books that must be edited, printed and bound in the hectic hours just before a meeting opens. He has had charge of the preparation and publication of four volumes of the "Summarized Proceedings" and the accompanying directories of members. The recurring circularization for new members is another of his many jobs. The American Association has been fortunate in having Woodley on its staff for twenty-five years and we hope that his service may continue for an additional quarter century and longer.

I now add a few quotations from some of those who have worked closely with Woodley. "His outstanding characteristics are his efficiency and his unfailing good nature. He has an uncanny ability to segregate the essential from the unessential. In emergencies he never loses his head or shows irritation."-"The most prominent characteristic of Sam's personality is shown by his quiet, self-reliant, cordial cooperation with others and his generous habit of giving full credit to his associates for accomplishments toward which he has personally devoted a great deal of time and thought."-"If he ever makes a mistake he is always ready to correct it promptly, and if one of his associates makes a mistake he uncomplainingly pitches in to set things right."-"Throughout these years we have all recognized in Sam the most effective type of intelligent, informed and devoted service. Local committees for association meetings have many times expressed their admiration and their appreciation of his great contributions of study and effort to further the success of the meetings. He is a most efficient office manager."—"Both Mr. and Mrs. Woodley rank exceptionally high in intellectual integrity, in intelligence and in industry and the ability to get work done in spite of difficulties."-"Besides being constantly devoted to the larger projects and problems of the association, Sam is ever alert to care for trivial troubles before they can become important. When need arises, he gladly and ably becomes the handy man of the Washington office."

OBITUARY ·

RECENT DEATHS

Dr. Horace Clark Richards, emeritus professor of physics of the University of Pennsylvania, died on May 20 at the age of seventy-seven years.

Dr. Harold Orville Whitnall, head of the department of geology and geography of Colgate University, died on May 18 at the age of sixty-seven years.

Dr. LEE MAIDMENT HURD, since 1932 emeritus pro-