Service has made very striking progress towards the surmounting of those difficulties.

The difficulty of getting authentication for reports is no new thing to Mr. Davis or any other member of the Science Service board. I happen to know the means they use to surmount that difficulty.

The fact that Science Service has made a distinct success is perhaps not so easily recognized, unless we consider the conditions of the publication of scientific material before Science Service entered the field. We have been told there are other avenues of publication. What would happen to those avenues if Science Service ceased to be a factor in the field? Well, we know what would happen. We know what the difficulties were before Science Service became active. We agree with those who praise the newspaper men. I agree, in fact, with almost everybody. I have had experience with newspaper men. There used to be great difficulty in getting newspaper men to take scientific results seriously. That trouble is largely past because of Science Service. Science Service is struggling with very definite difficulties, but I think it does pretty well in keeping its material in good shape.

By Dr. WILLIAM H. HOWELL

VICE-PRESIDENT AND CHAIRMAN OF THE EXECUTIVE COMMITTEE OF SCIENCE SERVICE

IT is not possible for me to summarize in any adequate way the remarks made by the various speakers this afternoon, but it is a pleasure to express on the part of the Trustees of Science Service our appreciation of the helpful and friendly suggestions that have been offered from so many different points of view. All the speakers have recognized the difficulties inherent in the effort to popularize science, and at the same time they have not failed to emphasize the importance of the undertaking.

The value, if not the necessity, of providing for the instruction of the public in the progress of science is evident from two considerations. In the first place, it is vitally important for the support of scientific work. In the olden days the scientist obtained his necessary financial assistance from individual patrons, but he paid for it often times, as one may gather from the fulsome dedications of their books, by an obsequious servility that would not be acceptable under present conditions. In these days with our large and expensive undertakings the patron to whom we must apply for aid is the general public, and it follows that we must keep this public informed and interested if we hope to obtain the continued and increasing support that is necessary for our large projects.

In the second place, it is a part of the larger purposes of science to make its discoveries contribute to the advancement of civilization. While the individual worker may be driven by curiosity or a personal desire for fame or gain, the underlying aim of science as a whole is to bring benefits to humanity on both the material and the spiritual side. The material advantages are evident enough, but the spiritual gains are no less important. It is not necessary to labor the point. Only the truth can free us from the hampering prejudices and superstitions of life, and the discovery of truth is the great end and aim of scientific work. Whatever it attains should be passed over as promptly as possible to the general public to help them in the difficult task of regulating their individual and communal lives.

On the practical side, one great difficulty in popularizing science lies in the art of translating its technical terminology into the vernacular of the people in such a way as to present the story both attractively and accurately. All of us who have attempted to do it know its difficulties and dangers. One must avoid, on the one hand, the dry-as-dust language of the pedant, and, on the other, that kind of over-statement and false appeal to the emotions which in the end defeats its own purpose and of which we have so many tiresome examples in radio advertising and newspaper reporting. The art of popularizing science properly is, no doubt, a special gift. When we of the older generation think of it our minds go back to the beautiful essays of Huxley and Tyndall. We can not of course keep Huxleys and Tyndalls on our staff, but they may serve as examples, and the lucidity and charm of their style furnish an ideal to be studied and imitated. In the course of time, by the method of trial and error we may hope to discover and develop a group of writers with special talents for this kind of exposition.

Permit me to thank you again for your willingness to participate in this conference and for the many helpful criticisms and suggestions that we have derived from your discussions.

OBITUARY

JOHN WALTER GREGORY

"DROWNED by the capsizing of his canoe on the Urubamba." Thus has passed Dr. J. W. Gregory, at the age of sixty-eight, continuing to the last his brilliant career of tireless exploration. British geology has lost one of its most intrepid leaders, and his fellow scientists the world over will miss his stimulating thought.

It is not my privilege to review the varied aspects of his life as administrator, teacher, explorer and scientist. Although known to me through his observations in Africa, Australia and Chinese Tibet, he remained an impersonal thinker among my colleagues until we had both passed threescore and more. I first met him in his home at Glasgow, when on my way to Africa to study the Rift valleys, his own special subject.

We were then mutually aware of pronounced differences of opinion on theoretical questions, but the frank, cordial reception accorded me disarmed for all time any instinct of intellectual antagonism and quickly established happy relations. In long and earnest discussions, I found him a well-informed and aggressive opponent, strongly convinced of the essential soundness of the geologic philosophy of Eduard Suess.

His convictions were natural. In the fluid medium of speculation, where free-swimming facts may group themselves at will, ideas take forms determined by bent of mind and circumstance. The agreement between thinkers so unlike as Suess and Gregory illustrates the effect.

In Gregory's youth, Suess was already the master philosopher of European geology. Certain racial characteristics distinguished the younger from the older man, but there was between them an intellectual link in that both used their great powers of imagination creatively.

Suess was the embodiment of German *Gemüthlichkeit*. He loved his home above all else. He had voluntarily become sessile, early in life. His scientific thought was contemplative. He read, absorbed and moulded the observations of others to create the *Antlitz* of the world of his imagining. Gregory, by contrast, was intensely active. His habit of observation was objective. He traveled far and wide to accumulate facts. But he also possessed a creative imagination that was strong of wing.

While still a daring, enthusiastic youth (in fact, he was never any other, where danger was concerned) Gregory explored the Great Rift valley of East Africa and found it to be a tension rift. Suess, on the evidence of more casual descriptions, had conceived it to be part of a great rent, 4,000 miles long, torn through Africa and Arabia by the subsidence of that part of the suppositious Gondwana continent which occupied the site of the Indian ocean. Here was an agreement of observation on the part of Gregory with the inference on the part of Suess, which could not but be convincing. The grandeur of the concepts appealed to Gregory's poetic thought, and he became for life an advocate of Suess's ideas of the development of the Indian Ocean basin by the foundering of Gondwana land.

It is well known that weighty arguments in support of the general theory of lost continents may be adduced from paleontology, from the geologic histories of Africa, Asia and the Americas, as also from climatic changes throughout geologic time. Gregory was master of them all. The scope of his knowledge was all-embracing. An eager student, a bold investigator, a rapid thinker, endowed with a capacious memory for facts and constructive capacity for synthesis, he became, as the result of his far-flung explorations, an outstanding authority on the world as a whole.

He was, however, far from being a dogmatic theorist. Though tenacious and formidable in argument, he recognized the incompleteness of geologic evidence and appreciated the obligation to consider advances in knowledge. In 1915 he wrote in "Geology of Today":

> In order to free geology from hopeless attempts to solve problems which could not be solved with the knowledge then available and to get rid of the incubus of unscientific and premature hypotheses, a group of English geologists founded the Geological Society of London.

To that purpose he was loyal. In the words of Lyell, he conceived the ideal of the founders to have been "to multiply and record observations," and to that end he dared every risk and devoted his life unsparingly.

He passed, as he would have wished, in active service. He leaves a most eminent name in the roster of great British geologists, but it can not fill the emptiness in the hearts of his friends.

BAILEY WILLIS

WILLIAM HITTELL SHERZER

IN the death of Professor Sherzer on July 17, Michigan lost a distinguished teacher and geologist. For forty years he was head of the department of natural science in the State Normal College at Ypsilanti, and is best known throughout the state for his energetic promotion of the study of nature in the elementary curriculum. His collection of material for giving teacher training in this work is probably unexcelled.

Outside the teaching profession he is known for his geological reports in both state and federal surveys. Among the former are the surveys of Wayne and Monroe Counties, published by the State Geological and Biological Survey. His Detroit Folio of the United States Geological Atlas is a prominent contribution to that publication. Under the direction of the Smithsonian Institution he made a study of the principal accessible glaciers of the Canadian Rockies and Selkirks of British Columbia and Alberta. His account of this expedition is embodied in the reports of the institution.