variety to Basin Ranges is the occurrence of landslides on their fault fronts, as Russell years ago showed for some of the youngest ranges in the northwestern part of the Basin and Range province.[20] A large slide stretches several miles along and forward from the front of the Canyon Range, 70 miles southwest of Salt Lake City; but it is, like the range itself, so well dissected that little idea of its initial form can be gained; it is indeed of pre-Bonneville date, as bluffs of the Bonneville shore-line are cut along its outer margin. Its scar in the mountain front is completely effaced.[21] What I have taken to be a much younger slide in the northern part of the Wasatch Range, 70 miles north of Salt Lake City, has left a manifest cavity in the range front and has heaved up the piedmont alluvium in broad swells, little dissected.

It may well be that there is so great a physiographic variety displayed by the Basin Ranges that every one must be regarded as showing individual features. Hence when all the ranges have been professionally studied and made known in published reports the above-presented beginning of a collection to illustrate their variations, which might even now be enlarged by fuller reference to studies by other observers, may be extended to a comprehensive completeness. I wish some younger physiographic geologist, preferably one living in or near the Basin and Range province, might make the extension of the collection his specialty.

OPENING OF THE CANADIAN NATIONAL RESEARCH LABORATORIES

SCIENCE offers the greatest of all adventures. Science has no night, the dawn is always here. The scientific leaders of each generation open before the eyes of the world new avenues of activity, new sources of human enjoyment, new powers to be utilized in human development. May I say to the Government of Canada and to the people of Canada that we of the National Research Council are grateful for the opportunity that these laboratories will give us to take our share in the future development of our country, and will you believe me when I add that we shall regard these laboratories as a sacred trust given to us to be utilized for the upbuilding and strengthening of the nation.—*Dr. H. M. Tory, president of the National Research Council of Canada,* upon the occasion of the formal opening of Canada's National Research Laboratories.

IN the presence of more than 2,000 invited guests of the Honorable H. H. Stevens, the chairman of the Committee of the Privy Council of Canada on Scientific and Industrial Research, including the Right Honorable Stanley Baldwin, head of the Department of Scientific and Industrial Research of Great Britain, and the leaders of other delegations to the Imperial Economic Conference then in session in Ottawa, the Earl of Bessborough, Governor-General of Canada, formally declared Canada's new national research building open on Wednesday evening, August 10.

Dean J. W. Barker, of Columbia University, represented the National Research Council of the United States and the Bureau of Standards of the United States Department of Commerce. The official ceremony took place in the engineering laboratory, which, with the addition of the assembly hall, to which the addresses were carried by loud speaker attachments, provided ample accommodation. Arrangements were made for the transmission of the addresses by radio throughout the British Empire and the United States.

The Honorable Mr. Stevens, as chairman; the Right Honorable R. B. Bennett, the prime minister; His Excellency the Governor-General, and Dr. Tory, who, as president of the National Research Council of Canada, has directed its development since 1923, delivered addresses.

Following the official ceremony of opening, a reception in honor of Imperial Economic Conference visitors was held in the building, and guests inspected the exhibits prepared to illustrate the work of the four divisions into which the work of the laboratories has been divided: Biology and agriculture, directed by Dr. Robert Newton; chemistry, directed by Dr. G. S. Whitby; physics and engineering, directed by Dr. R. W. Boyle and J. H. Parkin, assistant director, and the division of research information, directed by F. E. Lathe.

The National Research Council of Canada was organized by the Government of Canada during the world war and proceeded to its work along three main lines until 1928, when the organization of National Research Laboratories at Ottawa was commenced: (1) The granting of scholarships to train research personnel; (2) the granting of assistance to individuals in university or other laboratories to make particular researches possible; (3) the coordination and stimulation of group research efforts.

In what is now known as the National Research Laboratories Annex, the division of physics and engineering and the division of chemistry commenced operations in 1929, and construction of aeronautical

[20] I. C. Russell, "Topographical Features Due to Landslides." *Pop. Sci. Monthly,* 4, 1898, 480–489.

[21] See the above-cited article on the Wasatch, Canyon and House ranges.

laboratories, consisting of wind tunnel, water test tank and engine-testing facilities, was begun. Development of the division of biology and agriculture, pending the completion of the new building, construction of which was commenced in 1930, was centered at the University of Alberta. At approximately the same time the division of research information was organized to conduct the National Research Library, now housed in the new National Research Laboratories Building, the *Canadian Journal of Research*, a monthly publication of the council, and related services.

The main building now formally in service is constructed on a flat site of ten acres at the junction of the Rideau and Ottawa Rivers and looks out, in the distance, to the valley of the beautiful Gatineau, another tributary of the Ottawa. It is four stories high, contains approximately four million cubic feet of space, is severely classic in style and built of Canadian sandstone brought from the Wallace Quarries of Nova Scotia. The plan is rectangular, enclosing two large open interior courtyards which give ample light to all laboratory rooms overlooking them. The construction contract totalled approximately $3,000,000.

In declaring the new building open, the Earl of Bessborough paid tribute to Canadian scientific accomplishments in the following terms:

> Not only does the past history of Canada record the development of educational institutions in the ordinary sense, and the application of science to practical problems, it also shows a zeal on the part of Canadian intellectual leaders to have their country share in the scientific progress of the world. The foundation of the Royal Society fifty years ago, and the growth of the many affiliated societies aiming at the development of natural knowledge, is evidence of the truth of this statement. One has but to recall the contributions to science of men like Logan and Dawson in geology, Sterry Hunt in chemistry, Osler in medicine and a score of others that might be named of the generation that has passed, to realize how much was accomplished, even in pioneering days. The tradition established by such men has been followed by a group of scientific workers of this generation in almost every field of science. Amongst these it is perhaps invidious to make distinctions, but one has only to recall such names as Miller and Adams in geology; Macallum, Banting and Collip in biochemistry; Callender and McLennan in physics; Saunders and his coworkers in agriculture, to realize that this generation has determined to hand on the torch undimmed to those who are to follow.

The Earl of Bessborough stated in opening his remarks:

> I conceive the erection of this home for scientific and industrial research to be an indication that Canada has resolved to take her place among the nations who believe that progress must rest upon knowledge, that vast resources are valuable in proportion as they are intelligently and scientifically used.

Referring to the practical accomplishments of the National Research Council, Dr. Tory spoke in part as follows:

> The Research Council of Canada can show as a result of its years of activity practical results of a far-reaching character. May I be permitted, Mr. Chairman, to say to you and His Excellency in the presence of this distinguished assembly, that, viewed from the point of view of practical results expressed in monetary returns to the nation, the Research Council has already repaid not only the cost of its current expenses, but the total cost of this building. May I be forgiven if I give one or two illustrations. One piece of research completed approximately ten years ago was estimated at that time by the fishing industry to have an annual value of $500,000. Giving it a value of only half the amount then estimated, that alone over a period of ten years is a substantial offset to the cost of the Research Council's activities. On the basis of another practical piece of scientific work an important new industry has been built in Canada, which has turned a hitherto waste material of enormous dimensions into a product which is now entering the markets of the world, being sold not only in Canada, but in the United States and Great Britain as well. The annual output of this industry to-day is at least a million dollars. The scientific results obtained in the crowded laboratories of the National Research Council have given it a value that has world-wide significance. If time permitted I might also mention to you a group of other researches of equal significance to the above, some of them completed, some in course of completion in connection with the agricultural development of our country.

A beautiful ceremony associated with the official opening occurred on the following day when, on behalf of Surgeon-Captain R. J. E. Hanson, of Fowey, England, Mr. Baldwin presented a number of paintings and photographs of distinguished men of science, including a small painting of Faraday, once the property of Sir William Crookes, which bears a statement by the late King Edward VII, who knew Faraday, that the painting is a very good likeness. Mr. Baldwin said in his address that science knew no bounds of religion or race:

> It is universal. And if there is one study more than any other for which the right spirit is reverence and humility that is it. And I will tell you why. Reverence, because your work lies all the time in the region of the profound mysteries of the universe. For even when the so-called discoveries are made they remain mysteries and will, so far as the human brain can penetrate.

And humility, because the greater the man the more he realizes how limited is the sphere in which he can work in the vastness of infinity. And he knows that, great as his genius may be, it would be nothing but for the work of those who have gone before him. The greatest man in science to-day is dependent upon the work of his predecessors. The search for truth is eternal and will last as long as the world. It was Sir Isaac Newton who declared: "If I have seen farther, it has been by standing on the shoulders of giants."

And there is one other thing about science and scientists. They are men who serve their generation in as great a measure as any, but you never heard of the scientific genius who became a millionaire by gain. That is one of their glories.

It is not the calling of every man to pursue science or research. But may it be your fortune to find here the man who is born for research, that something may be accomplished in this building, or may be discovered, which will run round the world and make his name famous. He will not then want material rewards. They can come to the exploiters. But long after we have mouldered into dust the name of such a man, as of those attached to these pictures, will be handed down from generation to generation as among the benefactors of mankind.

OBITUARY

JOHN ISAAC BRIQUET

BOTANICAL science has suffered a grievous loss in the death of Dr. John Isaac Briquet, late director of the Conservatoire Botanique of Geneva, who passed away on October 26, 1931, after a brief illness.

Briquet was born in Geneva in 1870, studied botany under Schwendener, Engler, Thury, Jean Müller and Alphonse de Candolle, and attained the doctorate in 1891. For the remainder of his life he was connected with the Conservatoire Botanique, first as assistant director and later as director. During his administration several of the large herbaria of Geneva were consolidated and housed in the convenient building of the Conservatoire, together with an excellent library. Remarkably rich in valuable historical material, the collection at once took a place among the leading herbaria of the world.

His first extensive research was in the taxonomy of the genus *Galeopsis;* this led to an interest in the family Labiatae which continued to his death. His taxonomic work naturally took him into many diverse fields and resulted in a long list of publications. He was keenly interested in the flora of the southern Alps, contributing largely to Burnat's "Flore des Alpes Maritimes," and in cooperation with Cavillier continuing this important work after the death of the founder. Perhaps his most important floristic work is his "Prodrome de la Flore Corse." The breadth of his botanical knowledge is shown by numerous papers in various other fields of botany, including such diverse subjects as comparative anatomy and statistical methods. A list of his published works will include about four hundred titles.

Briquet early became interested in the difficult problems of botanical nomenclature. At the international congress in Paris in 1900 he was appointed *rapporteur* of the nomenclature commission and continued in this position until his death. He was personally largely responsible for the international code adopted at Vienna in 1905 and revised at Brussels in 1910. When the questions of nomenclature were revived after the war, he attended the congress at Ithaca in 1926 and after it assumed the chief responsibility of the difficult preparation for the Cambridge congress of 1930, at which rules acceptable apparently to a large majority of botanists were adopted. Not only was his preliminary work of great value, but in the congress itself he was a power in directing and leading the thought and action of the delegates. Always cool and clear-headed, never confused by difficult questions, always understanding and in command of the situation, he did as much as or more than any other person to bring the nomenclatural discussion to a successful conclusion.

During his lifetime Briquet was the recipient of numerous honors. His doctorate thesis received the prize of the Academy of Sciences in Brussels. He was president of the Institut National Genèvois, of the Société de Physique et Sciences Naturelles de Genève and of the Société Botanique de Suisse; France admitted him to the Légion d'Honneur, and Cambridge conferred on him the doctorate *honoris causa.*

By the numerous Americans who have worked at his Conservatoire, his death is felt with especial sadness. Speaking English fluently, naturally genial in disposition, delighting to introduce visitors to the hospitality of his home, he invariably made their visit to Geneva pleasant as well as profiable.

H. A. GLEASON

NEW YORK BOTANICAL GARDEN

RECENT DEATHS

DR. GEORGE I. ADAMS, head of the department of geology in the University of Alabama, died on September 8 at the age of sixty-one years.

FRANCIS LA FLESCHE, ethnologist, son of the last chief of the Omaha Indian tribe, died on September 5