PRESIDENTIAL ADDRESS.

G. H. HENDERSON.

(Read October 12, 1938).

Last year I had to record with sorrow the deaths of four of our members, an unusually high number. This year, unfortunately, the number is even greater, for we have to mourn the deaths of six of our members.

Mr. D. W. Robb, of Amherst, was one of our oldest members, having been elected on March 4th, 1890. Born at Amherst on May 9th, 1856, he was long associated with the industrial life of that town. He took an active interest in public affairs and was a member of Royal Commissions concerning the eight hour day in industry and also the feasibility of the so-called Chignecto Canal.

Dr. Allan R. Cunningham was born at Dartmouth 58 years ago and died at Saranac Lake on July 3, 1938. He graduated from Dalhousie with the degrees of B.A. in 1900 and M.D. in 1904. A well known specialist in diseases of the eye, ear, nose and throat, he was keenly interested in the progress of science. He was for many years a regular attendant at scientific meetings in Halifax including the Institute, to which he was elected on Dec. 1, 1921.

Dr. G. M. J. MacKay was born in Pictou on July 29, 1883, the son of the late Dr. A. H. MacKay, formerly Superintendent of Education for Nova Scotia and one of the Institute's most esteemed members. On graduation from Dalhousie in 1905 with High Honours in Chemistry he was awarded an 1851 Exhibition Scholarship and took postgraduate work at the Massachusetts Institute of Technology. Shortly after receiving the degree of M.Sc. from that institution he joined the staff of the Research Laboratory of the General Electric Company in Schenectady where he became head of the section of Electrical Insulation. During the War he rendered valuable service in research on submarine detection devices and nitrogen fixation. In 1933 he resigned to become Director of Research for the American Cyanamid Company in the new laboratories at Stamford, Conn. In

recognition of his distinguished scientific career and of his broad-minded qualities as a citizen he was honoured by his alma mater with the degree of LL.D. in 1936. He had been a member of the Institute since Dec. 28, 1903. He died at his summer home in New York State on his fifty-fifth birthday.

An uncle of the foregoing, Dr. Hector H. MacKay of New Glasgow, died at his home on Sept. 25, 1938. He was born at Plainfield, Pictou County, 80 years ago. A graduate of Pictou Academy and McGill University he had practised his profession in New Glasgow for nearly half a century and was highly esteemed both as physician and as citizen. He joined the Institute as Associate Member on Feb. 4, 1902, and always took a great interest in our work. The Institute has indeed been fortunate in having as its members the three members of that distinguished family, A. H., G. M. J., and H. H. MacKay.

On October 2, 1938, there passed away Dr. Arthur Stanley MacKenzie. Born in Pictou on Sept. 26, 1865, he graduated from Dalhousie with honours in mathematics and mathematical physics in 1885. After acting as Instructor at Dalhousie for a time he entered Johns Hopkins University to study physics under H. A. Rowland. Receiving the degree of Ph.D. in 1894 he was for a number of years Professor at Bryn Mawr College. He came to Dalhousie as Professor of Physics in 1905 and in 1911 was made President of the University, a position which he adorned for twenty years. He published a number of important papers on physics and was active in research until administrative demands became too great. He had been a member of the National Research Council since the beginning in 1916 until retirement at his own request only a few months ago. He was Chairman of the Nova Scotia Economic Commission since its inception in 1936. Dr. MacKenzie was a very good friend of the Institute, which he joined on Nov. 7, 1905. I shall recall here only his recent service to us in securing aid in the publication of our Catalogue of Scientific Periodicals in the Maritime Provinces and in the arrangements made for our 75th An-

niversary meeting. Science and education in Nova Scotia owe an immeasurable debt to Dr. MacKenzie, the many items of which I shall not attempt to assess. His tall stately figure, his rare and engaging personality, his keen mind and wise counsel, and his spirit of high ideals and intellectual honesty will be sorely missed.

Just before this meeting, the death was announced of W. G. Yorston, a life member of the Institute which he joined on Nov. 12, 1892. Mr. Yorston died at Nevada, Miss., on Oct. 5, 1938, after a lengthy illness. He had been well known as an engineer in the service of the Government of Nova Scotia.

To the families of these our deceased members, the Institute offers its deepest sympathy.

During the past year seven ordinary meetings were held in addition to the annual business meeting. The attendance averaged over 25 per meeting. Nineteen papers dealing with original work and two demonstrations were presented at the meetings. There were four papers in the field of Biochemistry, three each in Chemistry, Physiology and Zoology, two each in Fisheries and Physics and one each in Bacteriology and Botany. The largest attendance was at a meeting which included a demonstration and a paper involving a demonstration. I would urge that our members try to introduce as many demonstrations as possible in order to increase interest and attendance.

During the year there were elected seven ordinary, one associate and nine student members. The annual Provincial Government grant of $500 was again given during this year.

Volume XIX, Part III, of our Proceedings has been issued during the year containing 78 pages. Included in it is the address on "Research in Canada" given by Major-General MacNaughton on the occasion of our 75th Anniversary. Separate copies have been sent to all members of the Nova Scotia Legislature among others. The Institute also published as a separate reprint, sent to all members, the biographical sketch of Titus Smith, the Dutch Village Philosopher, prepared by Mr. Piers as part of his Presidential Address two

years ago. Volume XIX, Part IV, of the Proceedings is already in proof and publication can be expected shortly. This is a large number and great credit is due the Editor, Dr. King, for bringing it forward so rapidly. It should be mentioned that the costs of this Part will be correspondingly high and will bear heavily on our treasury.

The Council continued for another year the policy initiated last year of paying part of the travelling expenses of outside members coming to Halifax to present a paper at one of the ordinary meetings. This privilege was again taken advantage of by a member of the Atlantic Biological Station at St. Andrew's, New Brunswick, Dr. R. H. McGonigle, who gave a very interesting paper of temperatures in certain fresh waters. This scheme has now been tried out experimentally for two years and the papers which have been given to the Institute have been well delivered and have been received with much interest and discussion. This meeting might usefully discuss the future of the scheme, for the guidance of Council.

The receipt of periodicals in the Library has been well maintained through our exchange lists. Thanks to the Provincial Grant to the Provincial Science Library a number of new books have been added and the borrowing of books has again shown a gratifying increase. It is evident, too, that the amount devoted to binding is beginning to make an inroad into the large accumulation of unbound volumes of scientific periodicals upon the shelves. We may look forward to a gradual elimination of the arrears, although the progress is not as fast as we could wish. There is practically no overlapping between this Library and other scientific libraries in the city, such as Dalhousie and the Fisheries Station. Among them there can be found, as there should be in the Capital City of the Province, most of the scientific periodicals which form so important a tool in the application of science for the good of the Province.

In retiring from the office of President of the Nova Scotian Institute of Science I wish to take the opportunity of stress-

ing another aspect of the importance of science for the common good of the Province, namely with respect to the Provincial Museum. Toward this, as toward the Provincial Science Library, the Institute has always stood in the relation of godfather, though its means have been too slender to justify the adjective of fairy. Our present Museum, under the care of its Curator, one of our oldest and most faithful members, has done fine work and attracts increasing interest both from residents and from tourists. But it is suffering from an impossible handicap. It is housed in a building designed for another purpose which is not fireproof, and it is congested beyond hope of remedy.

The idea of a Museum has undergone a complete change in the last few years, at least in the mind of the general public. It formerly meant a storehouse for the accumulated (and sometimes unwanted) treasures of the past. The very name implied something dead—a place for the elderly rather than for youth. To-day it is regarded as one of the most effective forms of education, both youthful and adult. It is alive to the needs of our present day civilization.

That this transformation of a Museum is not an opinion but a fact may be seen from the example of our sister Provinces. To go no further, the Royal Ontario Museum in Toronto, the Provincial Museum in Quebec and the Provincial Museum in Saint John have risen anew in the past ten years. Here in Nova Scotia the problem is urgent. It is not too much to hope that with or without private benefaction, civic and provincial support will fill this obvious gap.

It may not be realized that in Nova Scotia the problem is already partly solved. A Museum can be said to have two sides—the historical and the scientific—though a sharp line should not be drawn between them. Here we already have the Provincial Archives—unexcelled in Canada—which takes care of the documentary and pictorial problems of a Museum. Relieved of these responsibilities and acting in close cooperation with the Archives, much could be made of a Museum. It should be primarily scientific in the broadest sense of the

word. In it would be found exhibits of the natural resources of the Province and displays telling the story of the long civilization of Nova Scotia. Emphasis could be placed on working models of our mining, (coal, gold, gypsum and salt), of our fisheries and agriculture and industries. Also there could be working models of modern mechanisms which play so large a part in our modern life, and of some of the fundamental experiments of science—science which has transformed our way of living and threatens its disruption if not better understood.

Such a pair of institutions—Archives and Museum—working together would form an incalculable asset to our Province. It is a realizable dream and one towards whose fulfilment the whole hearted efforts of the Institute of Science should be turned.

In conclusion I wish again to express my appreciation of the honour which you have done me in electing me as President. To the officers and to members of Council of the Institute I wish to extend my thanks for their help and forbearance.