

the only meteorological service on the continent which would be regarded in Europe as standing in the first rank. At the end of one year, however, Prof. Cherryman retired and Prof. G. T. Kingston was appointed in his place, a position he occupied till the end of January, 1880, when, through ill health, he was forced to retire. The present director, Prof. C. H. Carpmael, who had been acting as deputy to Prof. Kingston for some eight years, took charge of the conduct of affairs, a position which he has occupied to the credit both of himself and the service. While the magnetic observatory dates away back to the thirties the origin of the meteorological service is much more modern. The inauguration and growth of this service in Canada may be traced to the efforts of Prof. G. T. Kingston, who, in 1870 submitted to the Hon. P. Mitchell, the Minister of Marine and Fisheries, the outlines of a scheme for its organization. He proposed that the service should exercise supervision over the observatories, that a few well equipped stations should be established for the purpose of checking the calculations of inferior stations, and that telegraphic communication for the purpose of supplying materials for storm warning should be established between a number of the stations. At this time he had opened communication with 46 stations in Quebec, Ontario, Nova Scotia and New Brunswick. In 1871 the Minister placed \$5,000 in the estimates for the purpose of procuring the necessary instruments. The Toronto Observatory having at that time facilities for the performance of the duties required of the service, not possessed by any similar institution, was made the central office of the system and has continued to discharge such duties up to the present time. Almost immediately after the Minister had signified his approval,

arrangements were made with the chief signal officer at Washington to furnish storm warnings to the Canadian ports. From then till 1876 the benefits of signal service were so keenly felt that by that time the annual grant had risen from \$5,000 to \$37,000. This year (1876) marks an era in the history of the service, as it saw the commencement of daily forecasts of the weather called probabilities. Prior to this they had not been in Toronto. Early in this year, however, arrangements were made for reports from the chief signal officer at Washington, on which calculations were based and daily forecasts sent out every morning to the papers. On the accession of Prof. Carpmael, on Prof. Kingston's retirement, to the head of affairs, this system was still further extended till every office on the line of the Great North-western Telegraph Company, which practically included the whole of Ontario and Quebec and the ports of New Brunswick, received forecasts daily. At the present time there are close upon 450 stations reporting to the central office, of which a large number report by telegram. The service now exercises supervision over all the observatories in the Dominion from the Atlantic to the Pacific. Since the establishment of the meteorological service the history of the magnetic observatory has been closely interwoven with it, the director of one being the director of the other, while the members of the observatory are also employed in the meteorological offices.

The duties of the service are :

1. To collect trustworthy statistics and to see to their arrangements in forms convenient for application to the solution of either strictly climatic questions or of other questions into which climate enters as an element.
2. To exercise by visitation and correspondence a general supervision