

growth of the forest, such as insect-pests, tree diseases, soil conditions, drainage and climatic conditions, etc.

After making very careful enquiries it was decided that of all the various European countries that had developed and made a study of forestry, Scandinavia offered the best school, as the forest conditions and climate of these countries most nearly approximated our own, accordingly Scandinavia was chosen as the place in which to carry on our studies.

The next point was to obtain a Forester, and here the question arose as to whether it was more advisable to send a man from this side to learn Scandinavian methods, or to bring a forester from Scandinavia who would have to make a study of Canadian conditions before he would be in a position to give the full benefit of his knowledge. In either case it meant a delay of several years before a man could be properly equipped to carry out this work.

The Company finally engaged Mr. H. R. Wickenden, who had just completed his Civil Engineering Course at McGill, who was fluent in both French and English, and who had in addition spent five seasons with the St. Maurice Forest Protective Association.

Mr. Wickenden was sent to Norway and Sweden, where he remained for several years attached to the Chief Foresters of such companies as the Kramfors Company, owning nearly two thousand miles, of which Baron Mannerheim, who visited Canada last year in connection with the pulp and paper industry, is Managing Director; the Uddeholm Company, one of the most important companies located in the centre of Sweden, operating over one thousand miles of territory where conditions are very similar to the St. Maurice, the Finspong Company, operating on some of the largest and oldest plantations in Sweden, also various other Government and private forests located in middle and southern Sweden and Norway, such as Baron Adelsward in Atvidaberg, Storra in Kopparbergs, Bergslag in Dalarne, completing his study with a course in the Royal Institute of Forestry, Stockholm.

Since returning to Canada, Mr. Wickenden has spent two years in the Company's forests, carefully comparing them with Scandinavia.

Appended to this article are some of the conclusions at which he has arrived as being

most adaptable to the various kinds of forests which he has touched upon, and which conclusions have had the hearty co-operation of the Chief Forester of the Province, Mr. G. C. Piche, who is on the eve of departing for Sweden, where he intends to look over the work which is being done by some of his assistant foresters whom he has sent over to study Scandinavian methods.

There are two methods of reforestation: Artificial Reforestation and Natural Reforestation.

### **Artificial Reforestation**

This has been experimented with by several of our leading paper companies in the Province of Quebec and the result of these experiments can be seen by anybody who wishes to visit the various plantations.

Mr. Wickenden is of the opinion that artificial reforestation can be carried out on a commercial basis only where land can be had cheap, of suitable soil and in close proximity to an abundant labour market.

The Companies who have experimented along the lines of artificial reforestation, today practically admit that it is not commercially successful. Were this method feasible from a cost point of view, it would be impossible to find sufficient waste or suitable land on which to plant trees to take care of the enormous annual cut of the various Companies operating in the Province, without practically turning a very large part of the farming land back into forest.

While this method may be and is practicable in some places, he is of the opinion that it cannot be carried out along the Northern St. Lawrence, and therefore, there is no object in giving very serious consideration to this first method.

### **Natural Reforestation**

After two years of careful and thorough forest research and surveys, carried on in the St. Maurice district to determine the exact conditions of the forests and what has been the effect of the previous handling, this study shows that nature here does much the same as in Scandinavia. Basing his decisions on the findings of his research, it will be possible to formulate a plan of operation by which natural reforestation and perpetuity will be practically assured, since nature when not hindered, but aided by the work of man, will effect its own regrowth.

Frank J. RITCHIE, Manager.  
Mr. Wickenden's views are hereto appended.