

where you have a saucer-like formation to retain the water on the inside without having to build expensive dykes. You have that sort of condition all through the north country, and those areas exist all over the country, but we do not know where they are. We hear rumours that suitable country is here and there and every other place, but we have not examined them. Such examination has to be done by trained men, with knowledge of that particular line. Before we started the first development, we spent \$3,500 in engineering data, that had to be accumulated and compiled on maps. You have to know where to put in your structures, and so on. After you have found these places actual construction is, in our experience, spread over the first two years, until you get the water evenly distributed over the development. Then you have a waiting period for two or three years until both the rat population and the food develop to a point where it will carry the productive capacity of the area under development. Searches of that kind, spread over five years, would only provide ten projects in Canada. That is, about one in each province, or two in four or five of the chosen provinces where we happen to find a proper terrain on which to work. The details of this plan have been worked out in the past and they will work out in the future. I remember the deputy minister in Manitoba saying to an audience one time, "If you want to know anything about developing of rat projects, come and ask us, because we have made all the mistakes there are to make and we know all the answers." Now, that is just what you do, it is purely trial and error. Now we think we have got to the point where our errors will be few, and that these things will develop pretty much according to pattern.

Mr. MACNICOL: Every province, I presume, has a branch of its government or some department doing exactly the same work?

Mr. ALLAN: Manitoba is, others have the same opportunity of doing this work, but I do not know of any other province in which they are actually doing it.

Mr. MACNICOL: Well, they are getting some assistance in Manitoba.

Mr. ALLAN: Manitoba is very much in the field; they are running their own show entirely.

Mr. MACNICOL: I am going to check each item, myself. The first is the Sipanok Rat Development—

Mr. ROSS (*Calgary East*): What is the witness's experience in connection with the place where the rat population has been greatly increased? What about disease and infections?

Mr. ALLAN: We know that there is a danger of an epidemic disease, when they become too crowded, but we have not had any experience of it that we know of. We have suspected it, but examinations failed to find any trace of an epidemic disease.

Mr. ROSS (*Calgary East*): But there are cases where the rat population becomes destroyed; the population dies off.

Mr. ALLAN: We have not had direct evidence that such a situation is caused by epidemic disease. It is caused, more frequently, by uncontrollable loss of water and the resulting freezing out, or the deep freezing of the marshes locking away the food supply, so that the rats die of malnutrition.

There are two diseases to which muskrats are subject. One is tularemia; the other sounds something like cocciditis. These things have made some ravages in Louisiana, but we have had no outbreak of them in this country although we are afraid of them because, as soon as you create a condition of over-population, you are more prone to have such diseases. But the encouraging thing about it all is that during the years of the greatest drought, we had our success. When there was not a rat taken in the wild land, you might say,