

relative to the distribution of white pine seed, and, incidentally to, be applied to other forest seeds, which I think, is very wide of the mark. Mr. Bertram says: "The seeds of the white pine get blown out of those positions....and are carried far and near over the country.....That is the only way white pine seed can distribute itself."

Now there is no doubt that a considerable distribution takes place in this way to near points, but it would only be in an exceptional hurricane that these seeds would carry a mile, or even half that distance.

I think that there is a strong similarity in the methods by which the seeds of the coniferous trees are distributed, so that what will apply to spruce or fir will apply to pine. Now, in my opinion, one important source of distribution is by animals. We know that it is a common habit for squirrels to carry their food to a fallen tree for consumption. We see this done everywhere; it is very rarely that they eat sitting on the ground. Generally they perch on a fallen log or a branch. Now I have frequently noticed a dense growth of sapling spruce or fir in the immediate vicinity of a fallen tree—in many cases you can trace this clump for the full length of a fallen trunk, showing that it has at some time been the favourite feeding ground of a family of squirrels. These squirrels are in turn devoured by owls, foxes and other carnivora, and large quantities of undigested seeds are deposited in their excreta; and as many of them roam over a large field, this method becomes an important source of distribution.

But probably the most important source of distribution, and one, the study of which will lead to the most practical results, is that effected by the spring floods. The seeds dropping on the earth or on the snow, in the early part of the season, are carried by the rivulets which form in the melting of the snow, and are distributed along their entire course, many of them being carried into the larger streams and deposited over large submerged areas in the spring.

The consideration of this mode of distribution should be an important factor in the selection of forest reserves, as, in this way, areas selected on a watershed form not only a kind of re-