

your attendance then for the day? A. These (taking up a branch of a pine tree) are specimens of the *Pinus Banksiana*. It is often called the jack pine and scrub pine.

Q. Does it grow very large? A. In the central part of its geographical distribution it sometimes grows to be a tree of two feet in diameter, but more frequently to twenty inches. You will observe that the cones adhere very closely to the wood and never seem to fall off, and they never seem to open. Some of these may have been on the tree for fifty years. It would appear as if there were no provision made by nature for getting the seeds out, but I have observed that after forest fires, when the cones become partially burned they immediately open and the seeds drop out. You can try the experiment, that is, if you scorch one of those cones for a few minutes before the fire the scales will open and the seeds fall out. After forest fires when the seeds of these cones are loosened in that way millions of them blow all over the country. In a *brulé* you will see them sticking in great clusters on the trees and the seeds blowing everywhere. A few years after a fire of that kind the young trees are seen growing in countless numbers all over the country, so that it would seem that fire must have been a natural phenomenon from the beginning. Some of those cones look fresher than others, and doubtless some of them have been on the branches a great many years. I got these specimens north of Lake Superior.

*By the Honorable Mr. McInnes :*

Q. How far south does this pine grow? A. It extends from southern New Brunswick north-westward almost across the continent. This is about the only tree in North America which we can call strictly Canadian. Both its northern and southern limits are practically in Canada. It runs thousands of miles from the south-east in New Brunswick to the North-West in a belt throughout the Dominion. All other trees which we have in Canada have the southern limit far in the United States, but this one has its southern limit in the Dominion, and its northern limit also as a matter of course.

Q. So that it is purely a Canadian tree? A. Yes, and the only purely Canadian tree we have.

*By the Chairman :*

Q. I have been requested by my honorable friend beside me to ask you whether those specimens are a mere freak of nature or whether you have noticed this peculiarity of the cones all through the pine country? A. It extends throughout the belt I have mentioned. These cones are, as you will perceive, the shape of a small horn, and grow inwards towards the tree, and in fact are fastened on it. They grow with their points turned into the tree, and this extremity also sometimes becomes embedded in the wood. It is a very abundant tree all the way from New Brunswick to Alaska.

*By the Honorable Mr. Gowan :*

Q. If they are so numerous it is evidently not a freak of nature? A. I have seen the trees myself all the way from the seaboard of the Atlantic to the Athabasca country, and they have constantly this peculiarity. No animals seem to open the cones, and the only means of propagating this species is by fire. I have scorched the cones myself, and the process has always the effect of setting free the seeds. You will see the same thing in nature after a forest fire, and cones in which the seeds have been imprisoned for half a century are then opened. Last January I brought down a quantity from Lake Superior and gave them to His Excellency the Governor General, and described to him the only way in which he could get at the seed was to burn the cones, and he followed my advice and got out the seed in that way. Some of those cones may have been one hundred years old. The cones, you will notice, adhere directly to the wood, and have no stem at all.

*By the Honorable Mr. Turner :*

Q. What height does the tree grow? A. One hundred feet and upwards.

Q. And how large in circumference? A. I have seen them six feet in circumference. The largest trees that I have seen of this species are in the upper waters of the southern branches of the Albany River. In general trees attain their greatest perfection in the centre of their geographical distribution.