ADDITIONAL COLLECTIONS OF TUBERCULINA MAXIMA ON PINE STEM RUSTS IN WESTERN CANADA

J.M.Powell[1]

Abstract

The purple mold Tuberculina maxima Rost. is recorded for the first time in Saskatchewan on a pine stem rust (Cronartium comptoniae Arth.), constituting a range extension eastward of 9 degrees of longitude. The mold was also recorded on the western gall rust, Endocronartium harknessii (J. P. Moore) Y. Hiratsuka, for the first time in Alberta. A further collection in Alberta on the stalactiform blister rust, Cronartium coleosporioides Arth., considerably extended the range on this host.

A compilation of the collections of the purple mold Tuberculina maxima Rost. occurring on pine stem rusts in western Canada was recently published (1). During 1972, collections contributing important range extensions were made on three host species and these are reported to update our knowledge of the distribution of this fungus which has potential as a biological control agent (2).

Cronartium comptoniae Arth., sweetfern blister rust.

A collection of T. maxima on this rust was obtained from Twin Lake, about 30 miles northeast of La Ronge, Saskatchewan, on jack pine, Pinus banksiana Lamb. =P. divaricata (Ait.) Dumont, on July 18, 1972 (CFB 20334). This is the first record of T. maxima on a pine stem rust in Saskatchewan, and therefore extends the known range of T. maxima in Canada about nine degrees of longitude eastward.

Endocronartium harknessii (J. P. Moore) Y. Hiratsuka, western gall rust.

A collection of T. maxima on this rust was made in a private garden in Edmonton on a lodgepole pine, Pinus contorta Dougl. var. latifolia Engelm., on June 1st, 1972 (CFB 20335). The tree was about 10 years old and the gall six years old. This tree, however, had been obtained from a local nursery, and it was ascertained that the infected tree had come that spring from a tree farm near Mackay, Alberta. It was obvious that the gall was infected by T. maxima prior to the time of shipping, since 55% of the actively sporulating 2 1/2-inch-diameter gall was covered by purple spores of T. maxima.

Visits to the tree farm showed much of the lodgepole pine stock to be heavily infected by E. harknessii and steps are now being taken to eliminate the stock. Evidence of T. maxima was found on a few E. harknessii galls when a small portion of the lodgepole pine stock was examined at the tree farm in mid-October. This is the first report of T. maxima on galls of E. harknessii in Alberta, and only the second in Canada (1).

Cronartium coleosporioides Arth., stalactiform blister rust.

During the mid-October visit to the tree farm near Mackay, Alberta, T. maxima was also found on stalactiform blister rust cankers on lodgepole pine, P. contorta var. latifolia. This is a range extension northwards of about 150 miles on this pine stem rust.

As indicated in the earlier paper (1) the real distribution of T. maxima probably closely approximates the range of the pine stem rusts, at least in western Canada. Intensive surveys in other areas of Canada may show T. maxima to be present there also.

[1] Research Scientist, Northern Forest Research Centre, Canadian Forestry Service, Department of the Environment, Edmonton, Alberta, T6H 3S5.

Acknowledgment

I wish to thank E. J. Gautreau and N. W. Wilkinson of the Northern Forest Research Centre, Edmonton, for collecting two of the specimens reported here.

Literature cited

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