

from the observations made that large numbers of apothecia are produced in wet seasons and that the asci discharge immense numbers of spores during the blossoming period. It is, therefore, reasonable to suppose that the apothecia are one of the chief sources of blossom infection which later may result in twig blight. It is also possible that the ascospores account for much of the infection of the young fruit. It also seems likely that the apothecia are produced in more or less abundance every spring, but as they wither very quickly when the weather becomes dry they have not been observed, and hence the apothecial stage has been regarded of little importance in the propagation of the fungus and the continuance of the disease.

The writer hopes to continue these observations, as it is desirable to ascertain definitely the extent of the infection due to the production of apothecia in order that proper measures may be recommended for the control of this disease. Plowing under the mummied fruits has hitherto been considered one of the best means of preventing infection but if the apothecia are produced from old fruits which have been buried a year or more in the soil and brought to the surface by fresh plowing, this method would appear to be of little value.

Observations on this fungus were continued in the spring, of 1913. The apothecial stage was found in comparative abundance in plum orchards near St. Catharines. In order to determine whether the apothecia developed from mummied plums which had been buried in the soil for a year or more, or from mummied plums of the previous season, a number of mummied plums gathered in the spring of 1912 (the plums having been destroyed by the Brown Rot during the summer of 1911) were buried in loam and sand at different depths and left outside, exposed to climatic conditions until the spring, of 1913. They were then dug up and placed in moist chambers. Not a single apothecium developed from any of them nor were there any ones of the formation of sclerotia. Some mummied plums gathered last spring, which had hung on the trees or lain on the ground under the trees for the winter, were placed in moist chambers at the same time. On one mummied plum which had lain on the ground for the winter, a number of stunted, poorly-developed apothecia appeared. This experiment, though by no means conclusive, suggests that the apothecia may be developed from mummies of the previous years. These experiments and observations will be continued with the hope of clearing up this and other obscure points in the life-history of *Sclerotinia cinerea*.